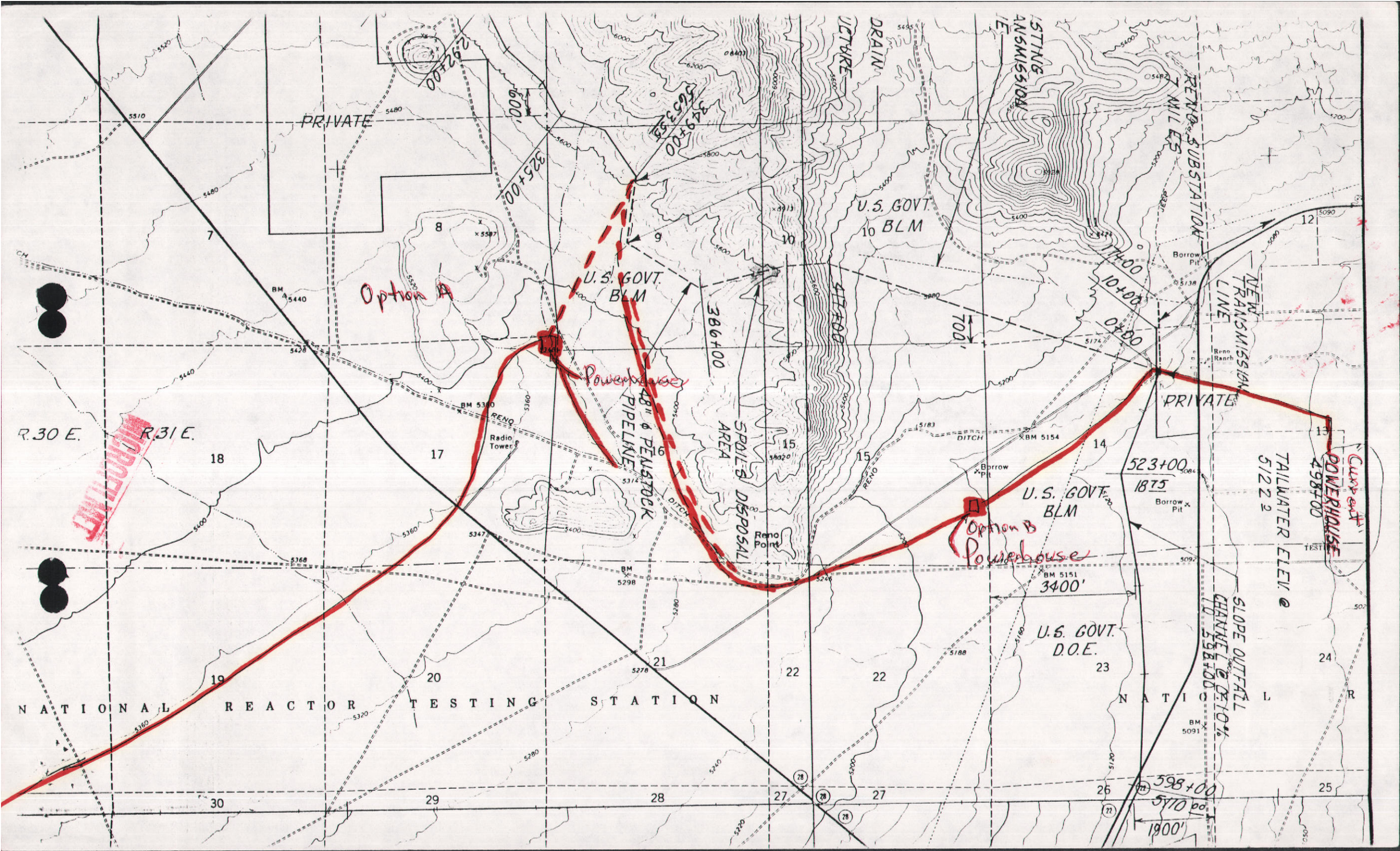
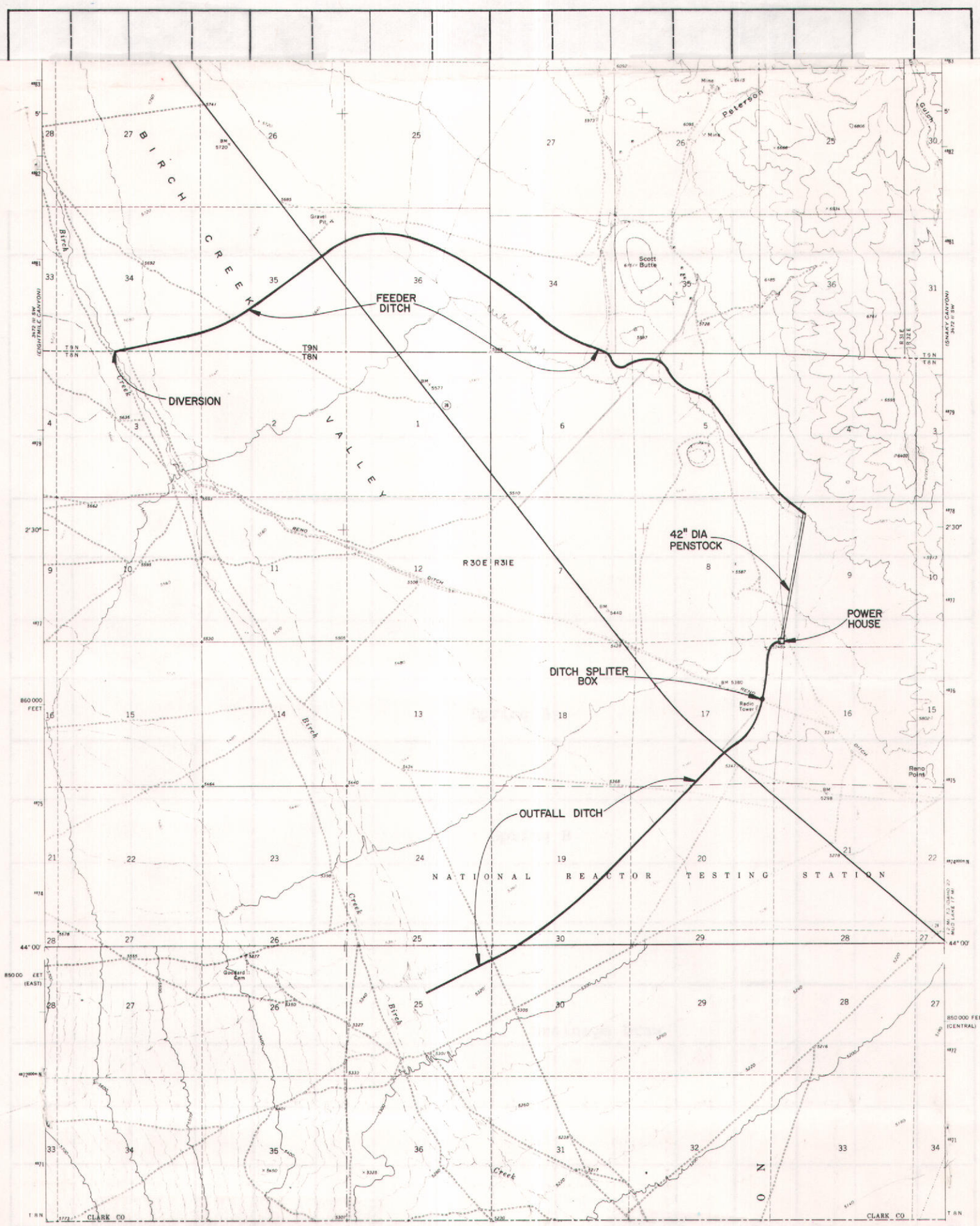

PRIVATE
Option A
U.S. GOVT. BLM
Powerhouse
48" ø PENSTOCK PIPELINE
SPOILS DISPOSAL AREA
Reno Point
Radio Tower
RENO
DITCH
Borrow Pit
U.S. GOVT. BLM
Option B
Powerhouse
U.S. GOVT. D.O.E.
PRIVATE
NEW TRANSMISSION LINE
RENO SUBSTATION
TAILWATER ELEV. @ 5122
SLOPE OUTFALL CHANNEL @ EL. 5110
Current POWERHOUSE
R.30 E.
R.31 E.
NATIONAL REACTOR TESTING STATION
325+00
349+00
386+00
398+00
523+00
1875
3400'
1900'
700'

11. Map of proposed project: show clearly the proposed point of diversion, place of use, section number, township and range number.



BE IT KNOWN that the undersigned hereby makes application for permit to appropriate the public waters of the State of Idaho as herein set forth.

Clifford Sorenson
(Applicant)

MICROFILMED

The REXBURG STANDARD and
The REXBURG JOURNAL
REXBURG, IDAHO

Affidavit of Publication

STATE OF IDAHO
County of Madison } ss.

I, Bruce Porter, being first duly sworn, depose and say, that I am the printer of THE REXBURG Journal, a newspaper printed and published weekly at Rexburg, Madison County, Idaho; and I do solemnly swear that the

Notice Of Application

a copy of which notice appears attached hereto, was published in the regular and entire issue of said newspaper, and not in any supplement issue thereof for Two consecutive issues, the first publication having been made on Setp. 23, 1982 and the last publication having been made on Sept. 30, 1982.

Further, that said newspaper is one of general circulation in said county; that it is a legal newspaper, conforming to legal specifications under the Idaho Statutes; that it has at least two hundred bona fide subscribers living within the county of publication; and that it has been continuously and uninteruptedly published in said county dur a period of seventy-eight consecutive weeks prior to the first publication of the said notice.

Bruce Porter

Subscribed to and sworn to before me this Oct. 1, 1982.

Jeri Garner
Notary Public.

(SEAL)

My commission expires Life.

RECEIVED
OCT 13 1982
Department of Water Resources
Eastern District Office

NOTICE OF APPLICATION FOR WATER RIGHT

Notice is hereby given that the following application(s) have been submitted for permit to appropriate the public waters of the State of Idaho:

32-7128
BIRCH POWER CO.
550 LINDEN DR., IDAHO FALLS, ID 83401

Source: BIRCH CREEK tributary to SINKS
Date Filed: 09/08/1982
Amount: 45.00 CFS
Diversion Point: NENW Sec 03 T 08N R 30E, CLARK Co.
Use: POWER (45.00 CFS) from 01/01 to 12/31
Place of Use: NENE Sec 17 T 08N R 31E
Diversion Means: HEADGATE, DITCH, PENSTOCK & POWER HOUSE

32-7129
CARLYLE, HOWARD &/or HEBERT
772 BIRCH, POCATELLO, ID 83201
Source: POND tributary to SINKS
Date Filed: 09/09/1982
Amount: 0.50 CFS
Diversion Point: SENW NENW Sec 13 T 10N R 29E, CLARK Co.
Use: MINING (0.50 CFS) from 03/01 to 10/30
Place of Use: NENW Sec 13 T 10N R 29E
Diversion Means: PUMP

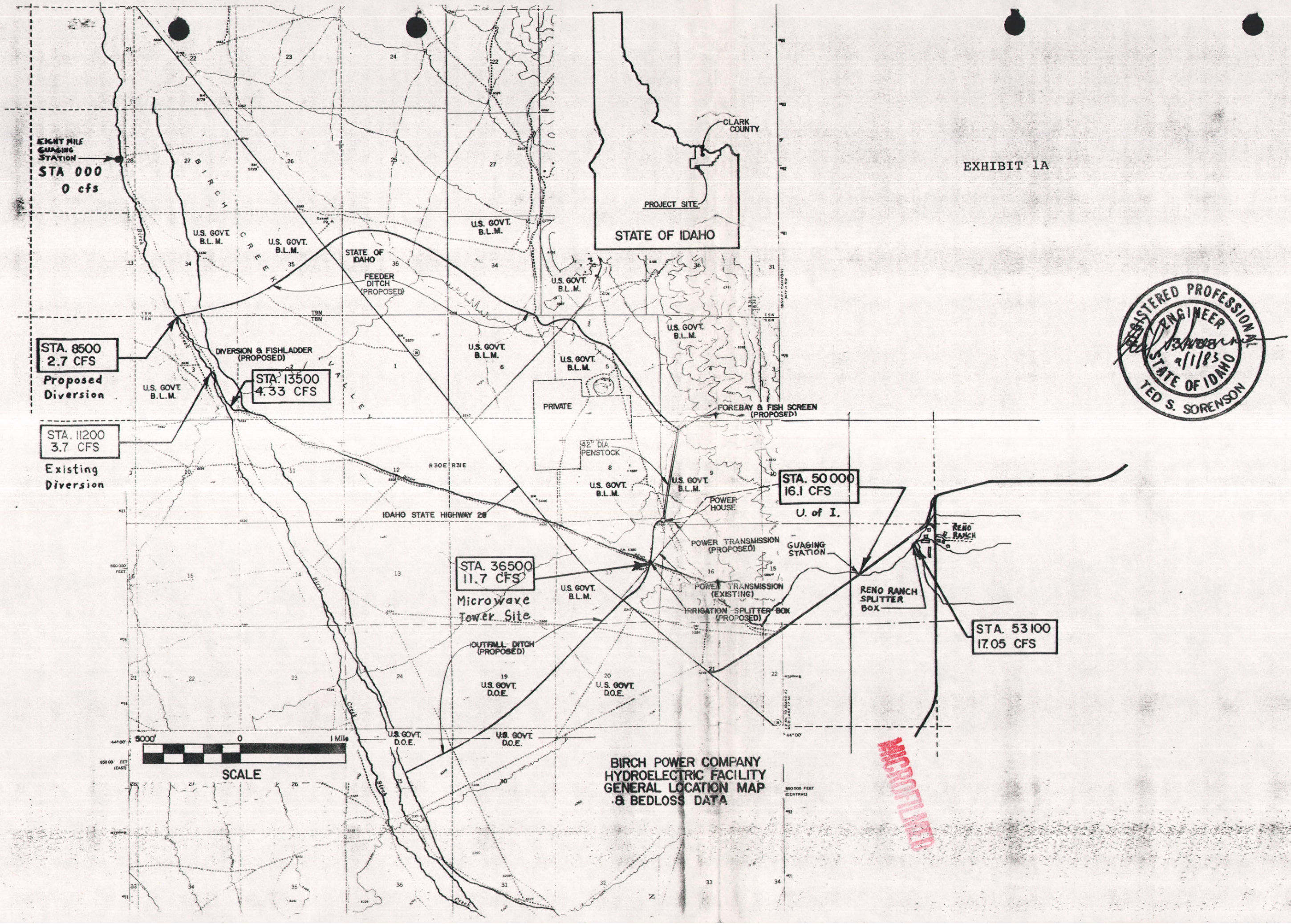
If issued, the permit(s) will be subject to all prior water rights. Protests against the granting of any permit must be filed with the Director of the Idaho Department of Water Resources, 150 Shoup Ave., Idaho Falls, Idaho 83402 on or before OCTOBER 11, 1982.

A. KENNETH DUNN
Director

Publ. Sept. 23 and 30, 1982J.

MICROFILMED

EXHIBIT 1A



REGISTERED PROFESSIONAL ENGINEER
9/1/83
STATE OF IDAHO
TED S. SORENSON

MICROFILMED

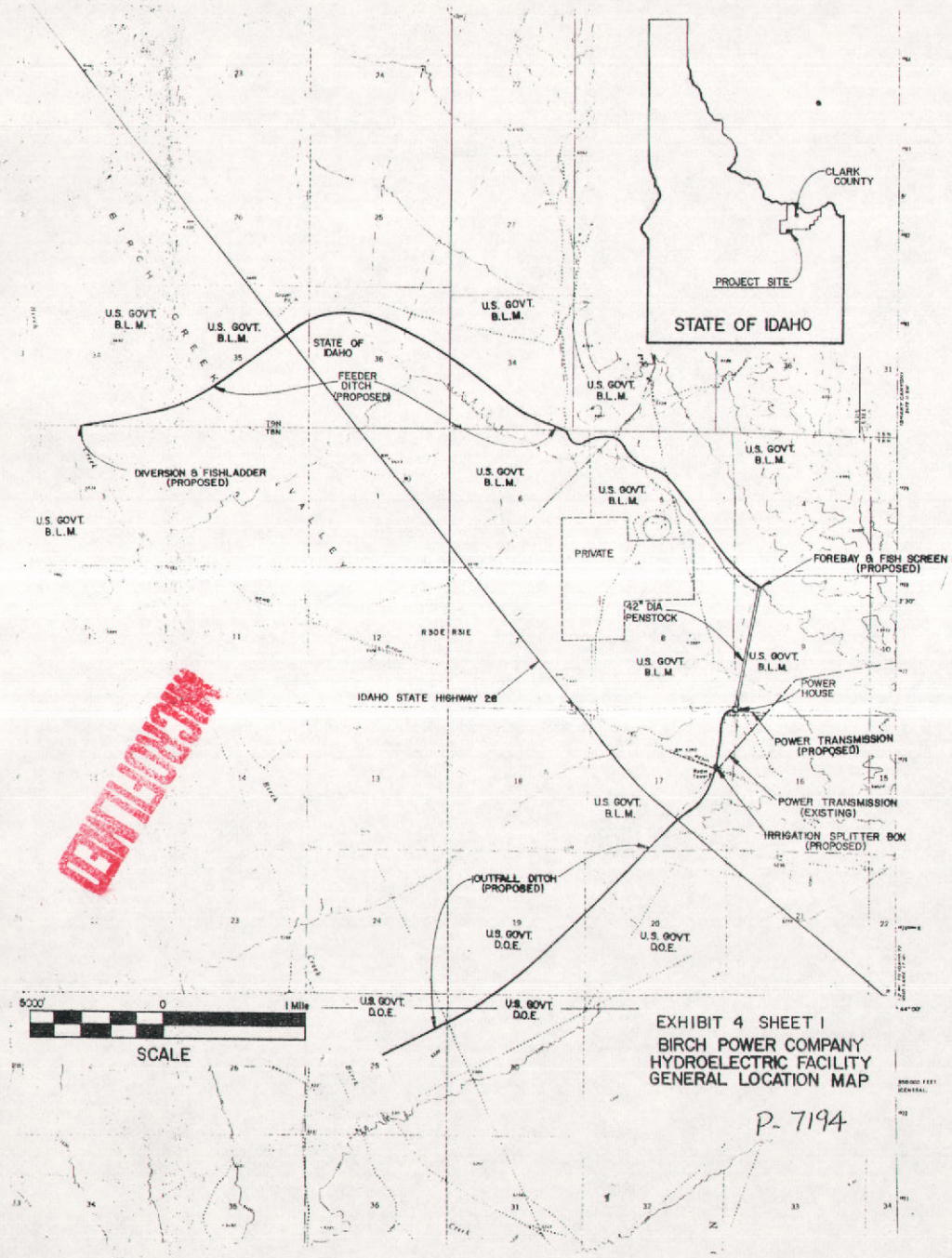
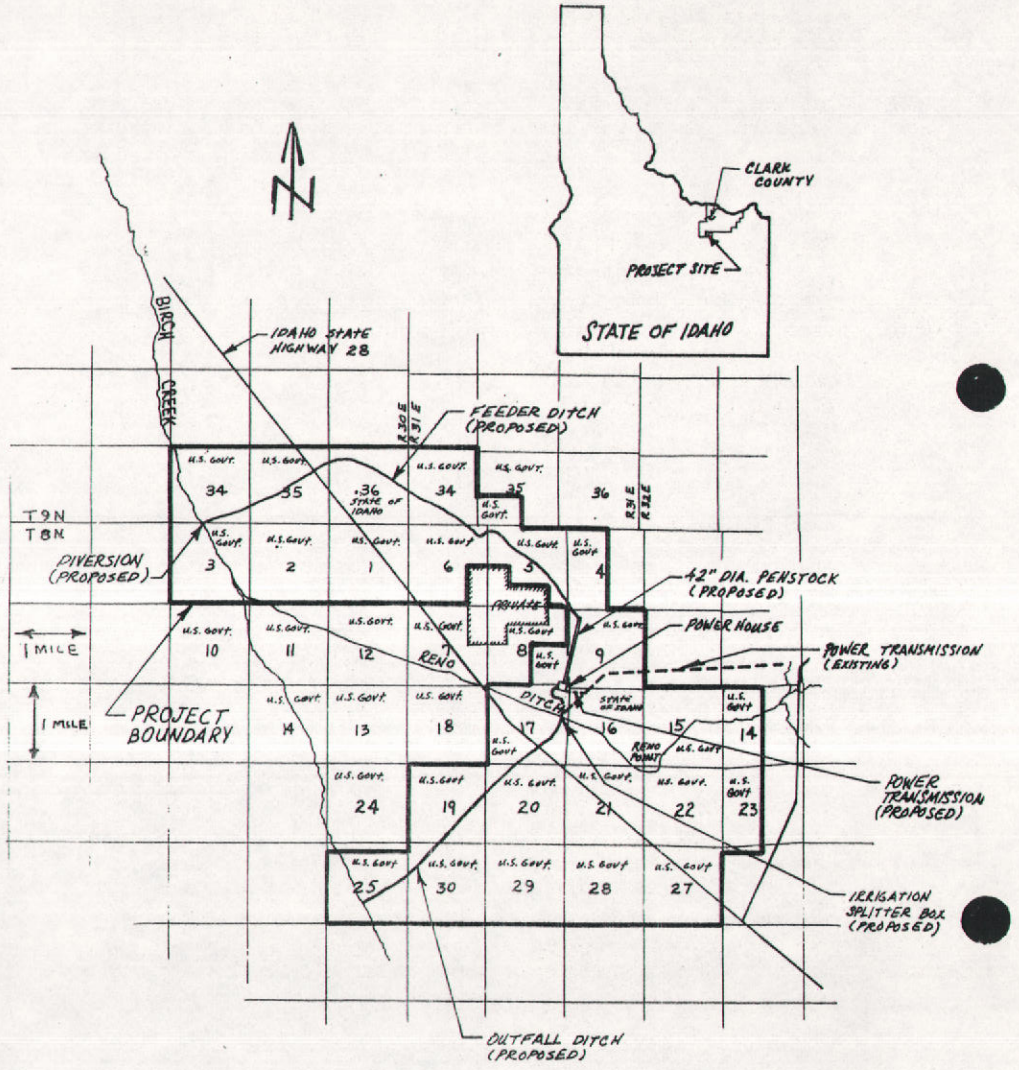


EXHIBIT 4 SHEET 1
BIRCH POWER COMPANY
HYDROELECTRIC FACILITY
GENERAL LOCATION MAP

P-7194



BIRCH POWER COMPANY
HYDROELECTRIC FACILITY

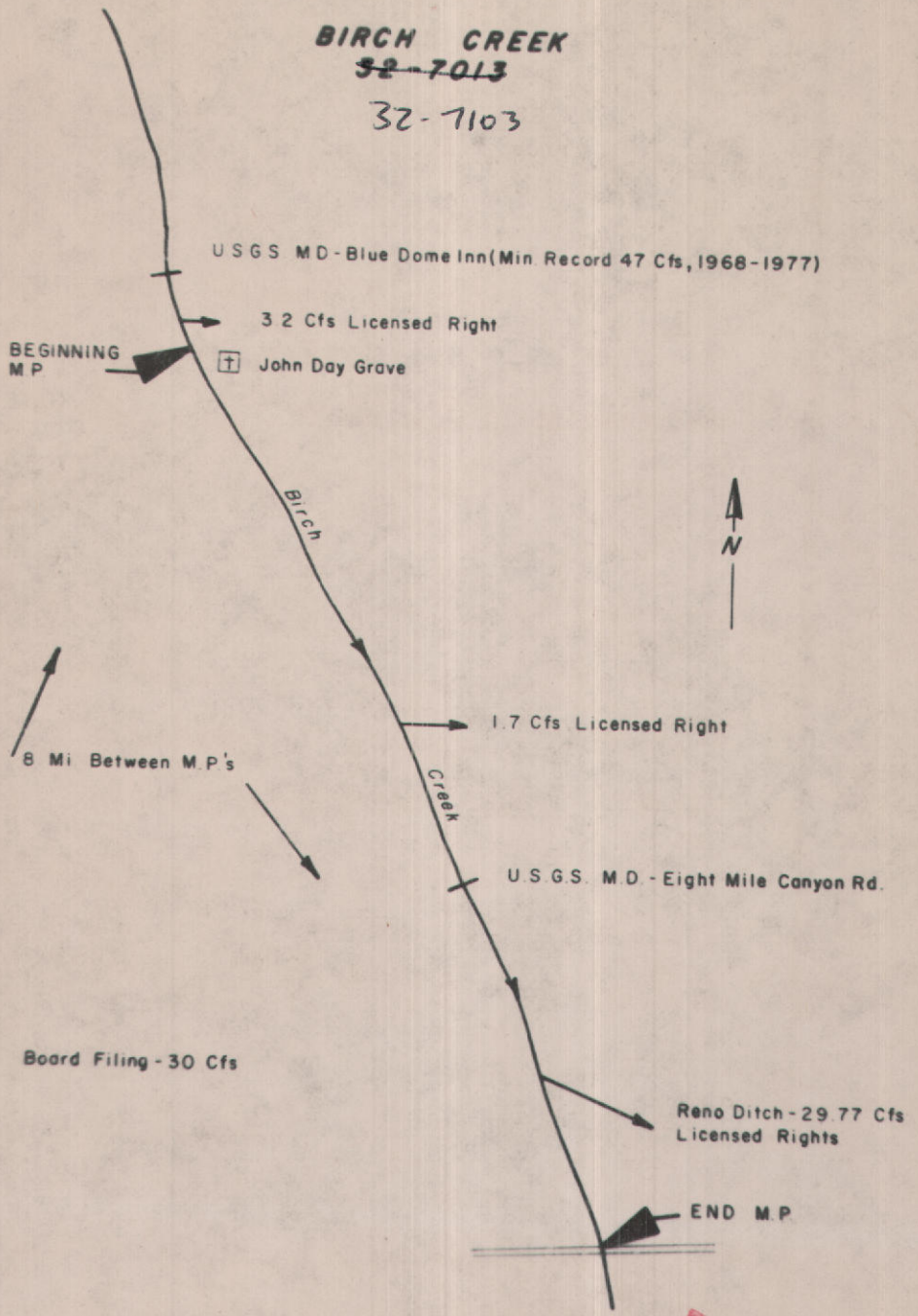
EXHIBIT 4
SHEET 2

P-7194

BIRCH CREEK

~~32-7013~~

32-7103



TITLE OF CASE: James B. Reno, et al Plaintiffs vs. J. R. Richards, et al Defendants

SOURCE Birch Creek | PAGE 1
WATER DIST 32-D | COUNTY Clark
JUDICAL DIST 2th | JUDGE James C. Quinn
DATE OF DECREE 9-6-22 | RECORDED IN BOOK NO. 5 AT PAGE NO. 499 FILE NO. 39-1

PR.	DR.	DECREED OWNER NAME PRESENT OWNER	AMT. INCHES SEC. FT.	PRIORTY	DIVERSION SUBDIV. SEC. TWP. RGE.	REMARKS, LAND TO BE IRRIGATED, ETC.	C.T.
						N.	
32	067	Wood Live Stock Co.	3.2	9-10-82	1894 Decree-Thomas and David Miller	Lots 2, 3, 4, SE¼SW¼, Sec. 19-10N-30E	3.2
32	066	Jerome F. Reno	3.2	5-10-83	1894 Decree-Frank Reno who is Jerome F. Reno	S½SE¼, SE¼SW¼, Lot 4, Sec. 10; NE¼NW¼, W½NE¼ Lot 1, Sec. 15-8N-32E	6.4
32	065	Jennie C. & Franklin A. Reno Trans. #429	0.0 (3.2)	5-10-84	1894 Decree - J. R. Richards	E½SW¼, W½SE¼, Sec. 21-7N-31E	9.6
			6.4	5-10-84	1894 Decree-W. A. Tyler	W½, Sec. 13-8N-31E	16.0
32	059	James B. Reno	3.2	5-10-86	1894 Decree-Frank Reno who is Jerome F. Reno	See Right 2	19.2
32	080	Jerome F. Reno	1.6	5-10-86	1894 Decree-½ rights of W. W. Johnson	W½SE¼, NE¼SW¼, SE¼NW¼, Sec. 23-10N-30E	20.8
32	090	C. B. Watts	1.6	5-10-86	1894 Decree-½ right of W. W. Johnson	S½SW¼, Sec. 29; N½NW¼, Sec. 32; NW¼SW¼, Sec. 29, NE¼SE¼, Sec. 30-10N-30E	22.4
32	093	Edward M. Kaufman	0.0 (3.2)	8-19-86	1894 Decree - S. Kuharski	E½SW¼, Sec. 25; E½NW¼, Sec. 36; all in 8N-30E	25.6
32	070	Clara Granger & F. E. Granger Trans. # 256 & 257	3.2	5-10-87	1894 Decree-Thomas and David Miller	NE¼NW¼, N½NE¼, Sec. 30, SW¼SE¼, Sec. 19-10N-30E Includes all waters of Miller Springs	28.8
32	068	Wood Livestock Co.	1.6 (3.2)	5-10-88	1894 Decree-Winfield A. Scott & Elizabeth Scott	SW¼SW¼ Sec. 12, SE¼SE¼ Sec. 11, W½NW¼ Sec.13-10N-29E	32.0
32	061	Jerome F. Reno Trans. #256	3.2	5-10-88	1894 Decree William Goddard	SE¼NE¼, N½SE¼, SE¼SE¼, Sec. 24-10N-29E	35.2
32	069	Wood Livestock Co.	2.5	5-10-88	1894 Decree-½ rights Ed M. & M. Kaufman	W½SE¼, NE¼SW¼, SE¼NW¼, Sec. 23-10N-30E	37.7
32	089	C. B. Watts	2.5	5-10-88	1894 Decree-½ right of Ed M. & M. Kaufman	As above priority 5-10-86	40.2
32	092	Edward M. Kaufman	4.0	5-10-88	1894 Decree same name	No land description given	44.2
32	102	Samuel Goddard	.5	5-1-01		As above priority 5-10-86	44.7
32	091	Edward M. Kaufman	3.2	4-1-04		NW¼, NW¼SE¼, Sec.1-8N-32E, Lot 6&7,Sec.6-8N-33E	47.9
32	063	Jennie C. Reno	.0 (3.2)	4-1-04		SE¼ Sec. 7, SW¼ Sec.8-8N-33E.	51.1
32	062	Franklin A. Reno Trans. #257	3.2	4-1-07		S½SE¼, SE¼SW¼, NE¼SE¼, Sec. 12-8N-31E	54.3
32	064	Jennie C. Reno	2.4	8-19-86		S½NW¼, SW¼, Sec. 11, W½W½, Sec. 14-8N-32E	
32	0070 0061	Trans. #256 Torrey A. Reno	1.6	5-10-88		SE¼ Sec. 7; SW¼ Sec. 8-8N-33E	
32	0070 0062	Trans. #257 Eva Reno	0.8	8-19-06		Nr. W½SW¼, Sec. 2-8N-33E ; N½SE¼, SE¼SE¼,Sec. 1 8N-32E	
32	0065	Trans. #429 Jennie C. Reno	3.2	4-1-04			
			3.2	5-10-84			

MICROFILMED

TITLE OF CASE: Agnes B.Reno, et al, Plaintiffs vs. J. R. Richards, et al, Defendants

SOURCE: Birch Creek — PAGE: 2

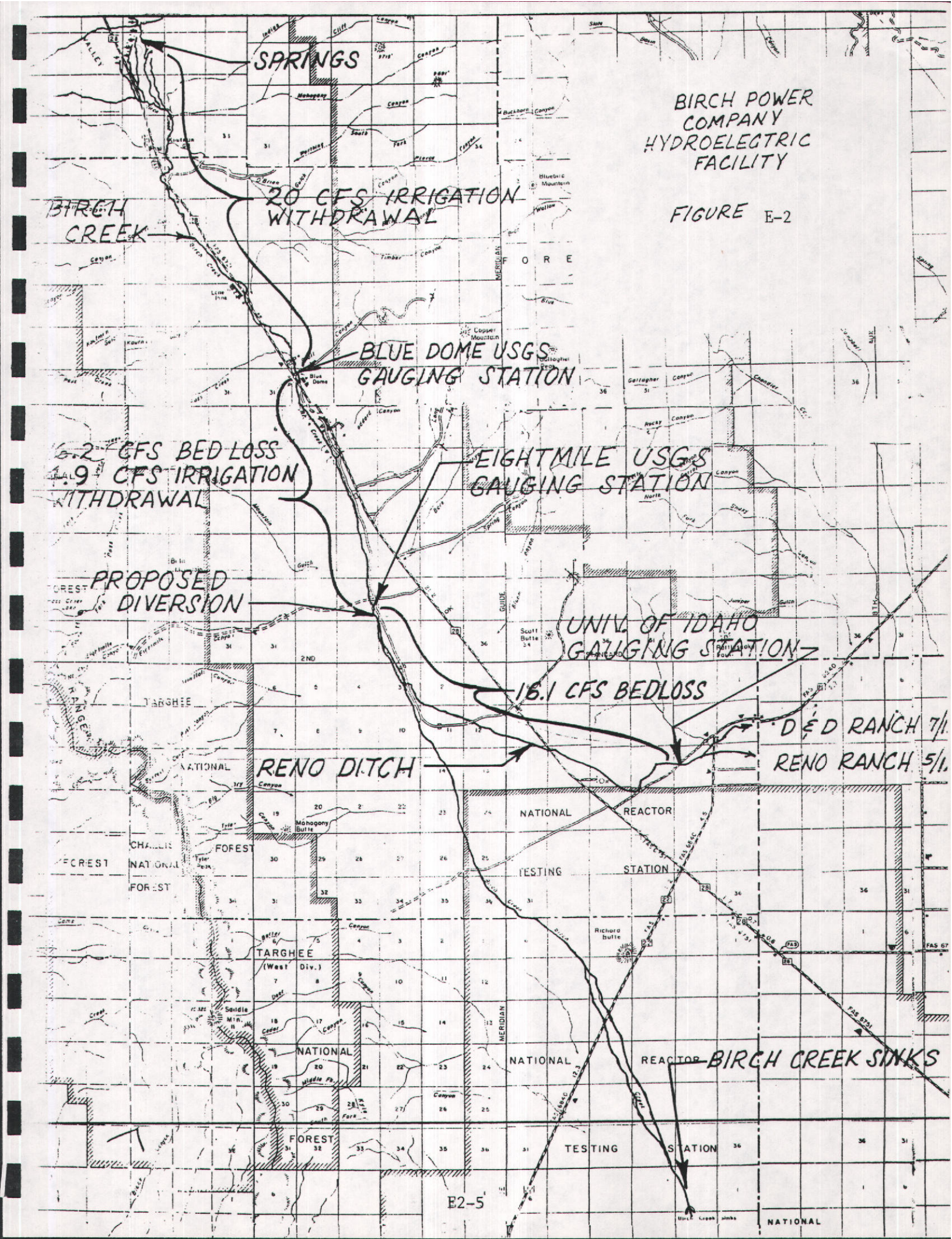
WATER DIST: 32-D — COUNTY: Clark

JUDICAL DIST: 9th — JUDGE: James J. Gwinn

DATE OF DECREE: 9-6-22 — RECORDED IN BOOK NO. 5 AT PAGE NO. 499 — FILE NO. 37-1

PR.	DR.	DECREED OWNER / PRESENT OWNER	AMT. INCHES / SEC. FT.	PRIORITY	DIVERSION SUBDIV.	SEC.	TWP.	RG.	REMARKS, LAND TO BE IRRIGATED, ETC.	CT.
32	088	Frank C. & Jessie Worthing	1.0	7-29-07					S½SE¼, Sec. 13; NE¼NE¼ Sec. 24; All 10N-29E; SE¼SE¼ Sec. 13; NE¼SE¼, SE¼NE¼ Sec. 14-10N-29E	55.3
32	073	George Goddard	.20	5-15-09					NE¼NW¼, W½NE¼, SE¼NE¼, Sec.9-9N-30E	55.5
32	101	Thomas J. Weiver	2.9	6-4-09					SE¼NE¼, E½SE¼ Sec. 3, SW¼SW¼ Sec. 2-10-N 29E	58.4
32	066	Agnes M. Reno	6.4	1-5-10					N½SE¼, N½SW¼ Sec. 10-8N-32E; S½NW¼, S½NE¼, Sec.15-8N-32E	64.8
32	058	Agnes B. Reno	1.0	4-1-10					S½NE¼ Sec. 14-8N-31E	65.8
32	085	Samuel Goddard	.20	5-10-10					SE¼NW¼, NE¼SW¼, NW¼SE¼, Sec. 9-9N-30E	66.0
32	077	George Goddard	.20	5-15-10					NE¼NW¼, W½NE¼, SE¼NE¼, Sec. 9-9N-30E	66.2
32	074	John Goddard	.14	10-1-10					W½SW¼, Sec. 5, W½NW¼ Sec. 8-8N-31E	66.34
32	081	Alfred L. Goddard	.14	10-1-10					E½SE¼, Sec. 6; E½NE¼ Sec. 7-8N-31E	66.48
32	086	Samuel Goddard	.20	5-1-11					SE¼NW¼, NE¼SW¼, NW¼SE¼, Sec. 9-9N-30E	66.68
32	078	George Goddard	.20	5-15-11					NE¼NW¼, W½NE¼, SE¼NE¼, Sec. 9-9N-30E	66.88
32	075	John Goddard	.26	5-15-11					W½SW¼, Sec. 5, W½NW¼ Sec. 8-8N-31E	67.14
32	082	Alfred L. Goddard	.20	5-15-11					E½SE¼, Sec. 6, E½NE¼ Sec. 7-8N-31E	67.34
32	087	Samuel Goddard	.20	5-1-12					SE¼NW¼, NE¼SW¼, NW¼SE¼, Sec. 9-9N-30E	67.54
32	076	John Goddard	.80	5-15-12					W½SW¼, Sec. 5; W½NW¼, Sec. 8-8N-31E	68.14
32	083	Alfred L. Goddard	.46	5-15-12					E½SE¼ Sec. 6; E½NE¼ Sec. 7-8N-31E	68.6
32	079	George Goddard	.80	5-15-13					NE¼NW¼, W½NE¼, SE¼NE¼, Sec. 9-9N-30E	69.4
32	084	Alfred L. Goddard	.20	5-15-13					E½SE¼ Sec. 6, E½NE¼ Sec. 7-8N-31E	69.6
				NICHOLIA CREEK						
32	091	Oliver Wingom	1.0	11-6-20					S½N½, SW¼ Sec. 21; N½NW¼ Sec. 28-12N-29E	

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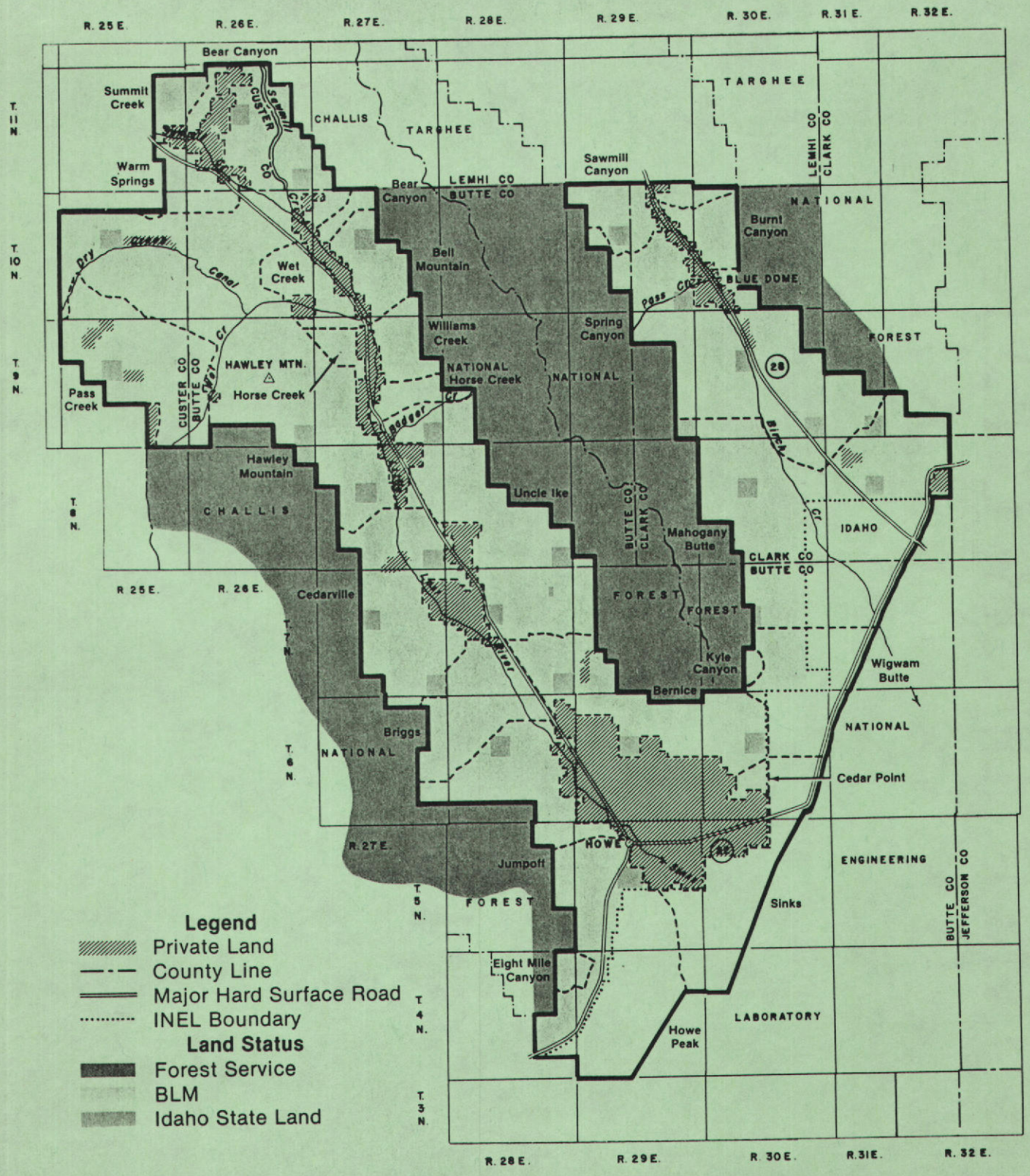

SPRINGS
BIRCH POWER COMPANY HYDROELECTRIC FACILITY
FIGURE E-2
20 CFS IRRIGATION WITHDRAWAL
BIRCH CREEK
BLUE DOME USGS GAUGING STATION
6.2 CFS BED LOSS
1.9 CFS IRRIGATION WITHDRAWAL
EIGHTMILE USGS GAUGING STATION
PROPOSED DIVERSION
UNIV. OF IDAHO GAUGING STATION
16.1 CFS BEDLOSS
D & D RANCH 7/1
RENO RANCH 5/1
RENO DITCH
BIRCH CREEK SINKS
NATIONAL REACTOR TESTING STATION
TARGHEE (West Div.)
CHALLIS NATIONAL FOREST
SALMON-CHALLIS NATIONAL FOREST
FOREST
MERIDIAN
BOISE
Mahogany Butte
Scott Butte
Richard Butte
Saddle Mtn.
Bluebird Mountain
Copper Mountain
Blue Dome
Birch Creek sinks

LITTLE LOST - BIRCH CREEK

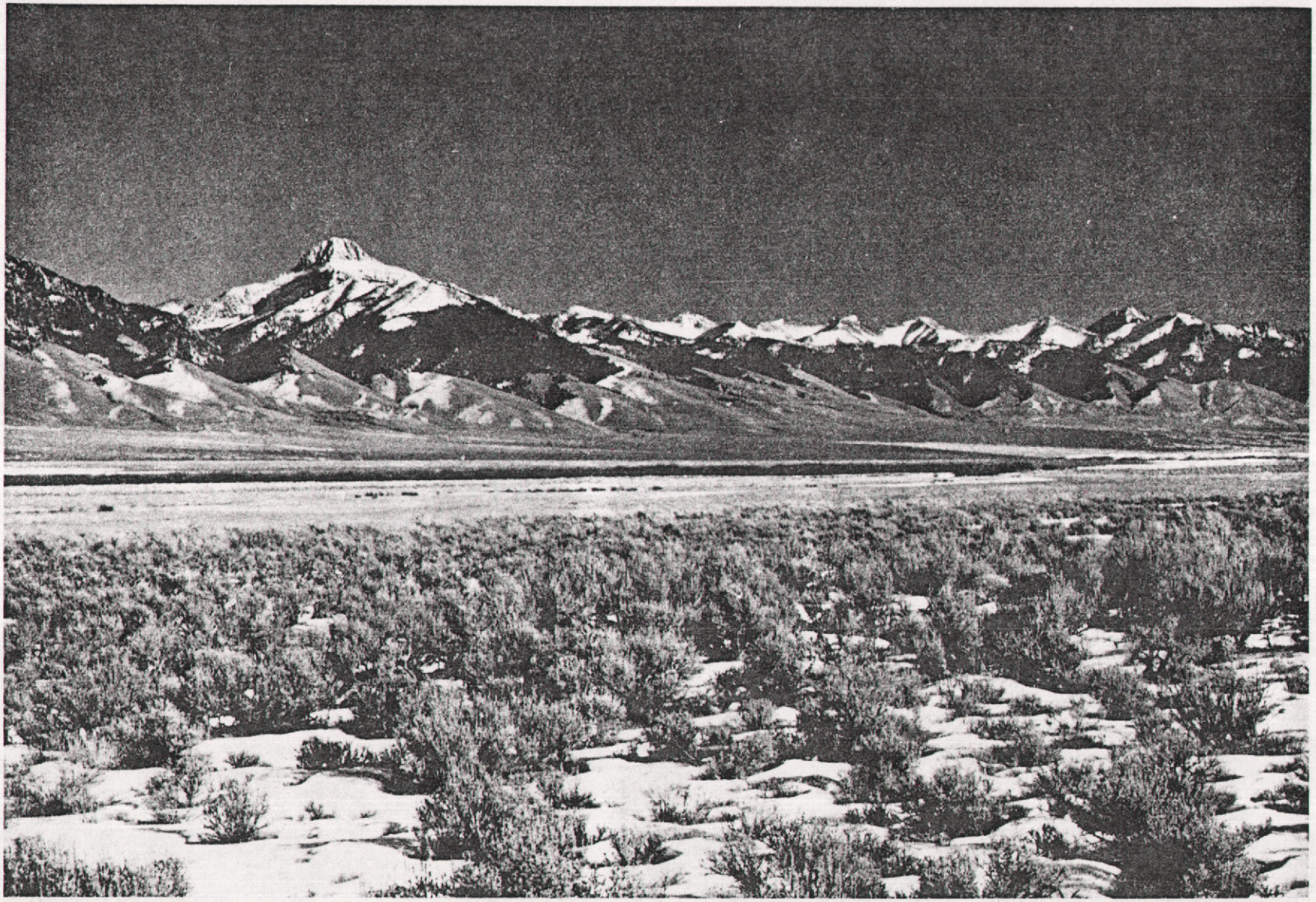


Land Use Decisions Summary

U.S. DEPARTMENT OF INTERIOR
Bureau of Land Management
Idaho Falls District
Big Butte Resource Area



MAP 1
LAND STATUS

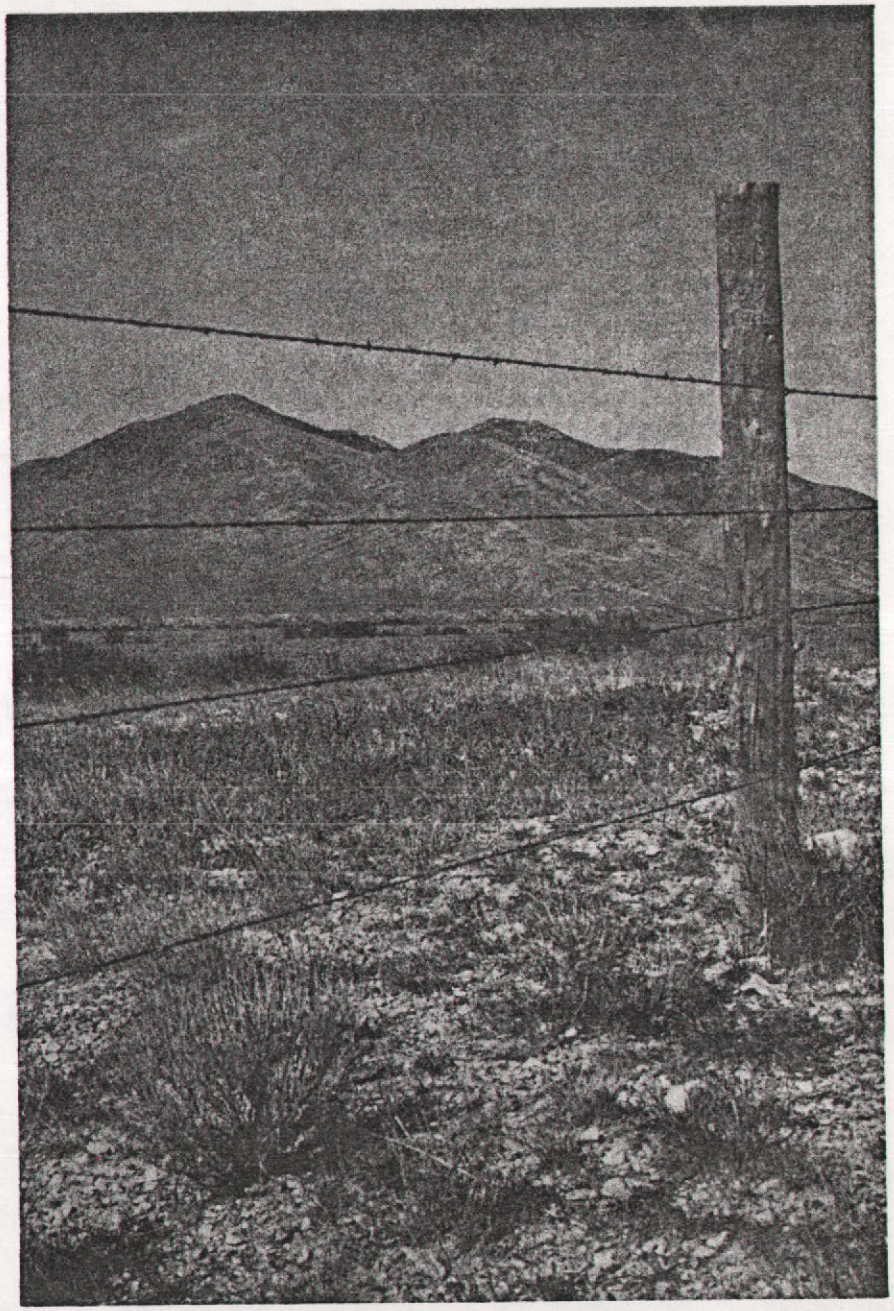


Bell Mountain in the Lemhi Mountain Range from the Little Lost River Valley. Much of this range is Forest Service land.

General Description

The Little Lost—Birch Creek Planning Unit covers portions of Butte, Clark, Custer and Lemhi counties (see Map 1 inside front cover). The unit contains 434,251 acres, broken down by ownership and allotment in Table 1. The area is rural with no major population centers. Public lands are used for livestock grazing, wildlife habitat, watershed, recreation, fisheries and forestry. Agriculture is the major income source in the area.

General vegetation types include sagebrush, saltbush, mountain shrub type, woodland and meadow. Yearly precipitation ranges from 6.4 to 10.5 inches and averages 8.7. Temperatures vary widely. The average annual temperature in Howe at the foot of the Little Lost Valley is 44° F, but temperatures range from 102° F in the summer to −30° F in the winter. Elevation ranges from 4,778 feet at the Lost River Sinks to 9,752 feet on Hawley Mountain.



Rangeland in the Little Lost River Valley. Hawley Mountain in the background has the Unit's highest elevation at 9,752 feet.

Major Issues and Problems

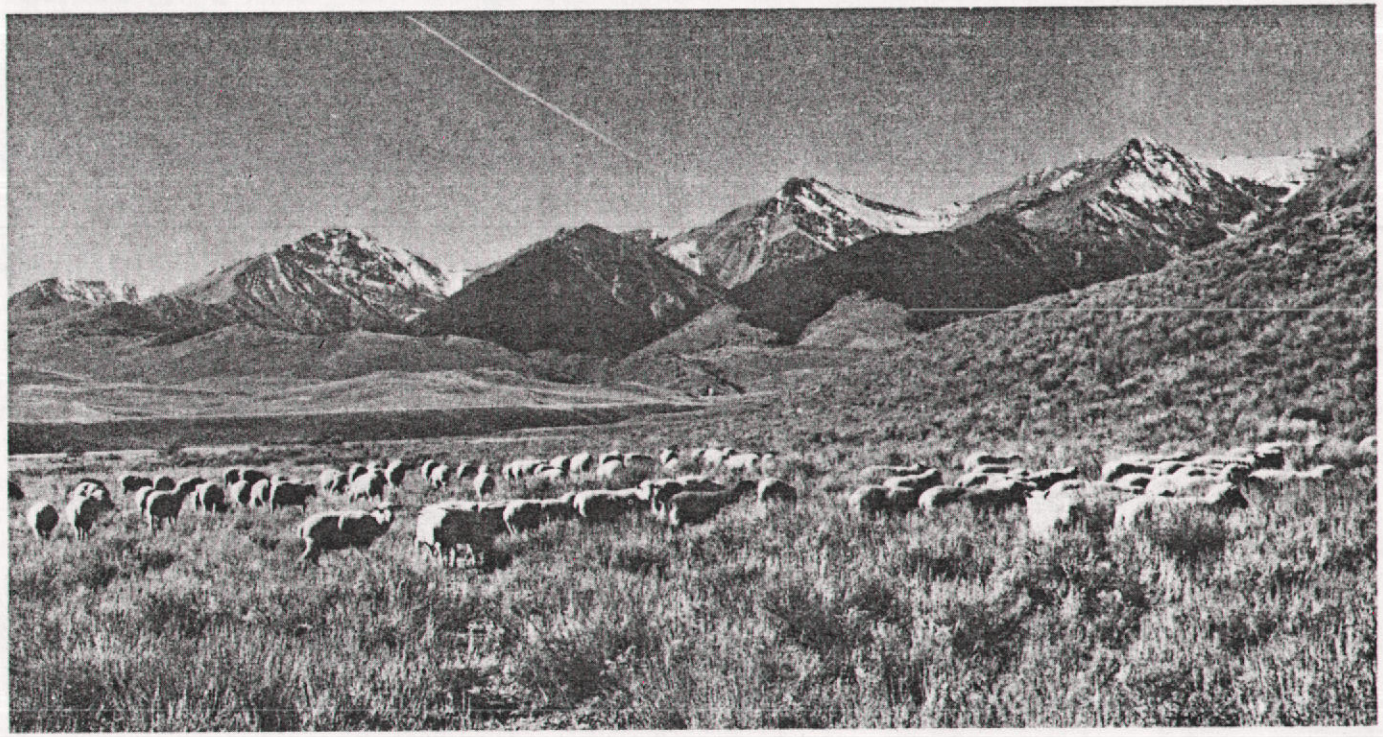
Major issues and problems result from several things: present and potential land use conflicts, unavoidable environmental impacts of resource development, and social and economic impacts on local communities and life styles.

Issues and problems were identified through the BLM's planning process and public participation. The management decisions section describes these issues or problems for each resources.

Significant Management Decisions

Resource and land uses are listed in order of decreasing importance. The ultimate basis for management decisions is the capability of the land itself. Accordingly, geology, climate, soils, topography, wildlife and vegetation along with public demand are major considerations in the Little Lost–Birch Creek MFP decisions.

The following list of decisions is not complete. Persons may examine the complete official document at the Idaho Falls BLM office.



Sheep grazing in Birch Creek Valley. Sheep constitute 38 percent of the livestock use in the unit.

Range Management

Rangeland condition is 1 percent excellent, 33 percent good, 28 percent fair, 26 percent poor and 6 percent seeded. Apparent trend in the area is 84 percent stable or upward, and less than 1 percent downward. The remaining land area consists of Douglas-fir and rock outcrops. Most condition problems are due to poor distribution caused by a lack of water.

Livestock permittees are dependent on Federal land for a large percentage of annual forage requirements for their operations. Other agricultural products, such as hay and grains, are also important in their overall operation.

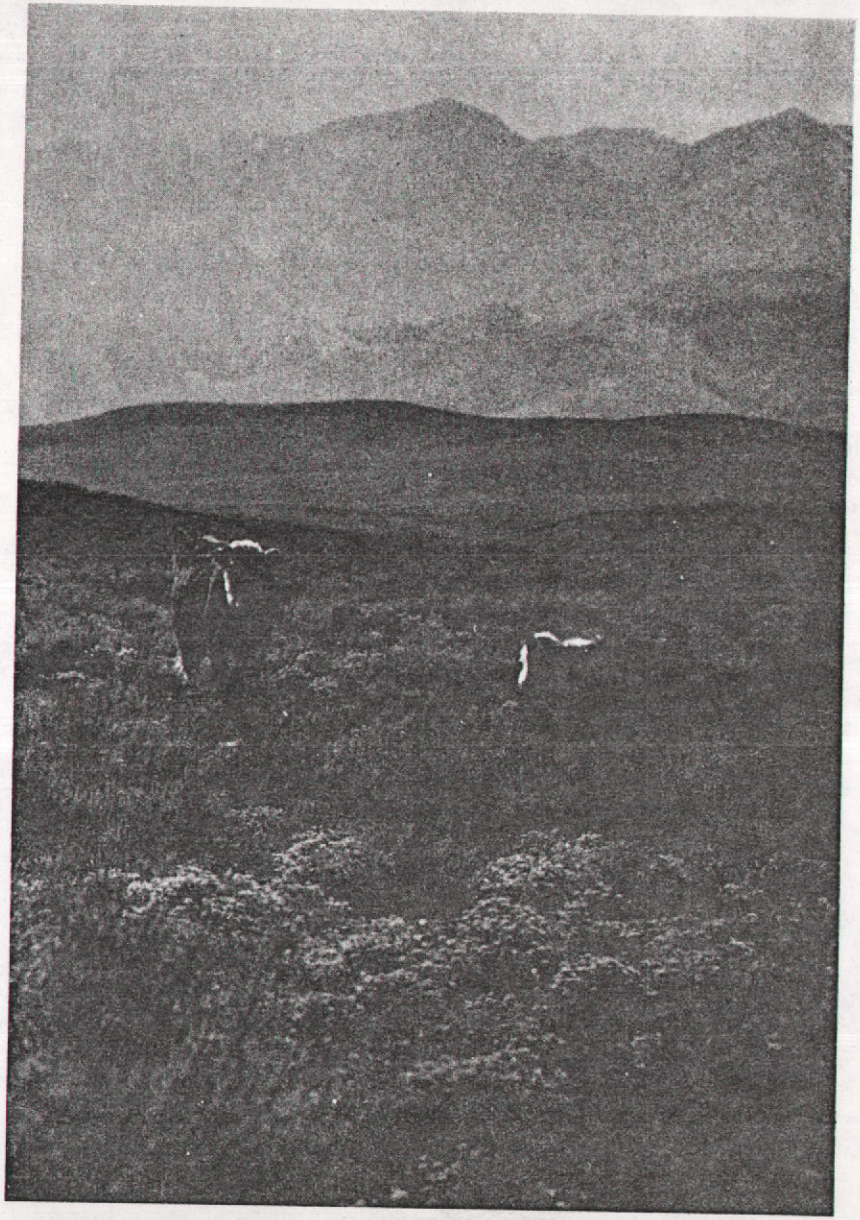
The unit is divided into 24 allotments that are used by ranchers who are primarily from the Little Lost and Big Lost river valleys. Twelve ranchers run in the Pass Creek allotment; the remaining 18 use the other 23 allotments. Eighteen permittees have herd sizes around 205 head, and 12 permittees have an average herd size of 314.

In 1977, these ranchers were authorized 29,874 animal unit months (AUMs); actual use was 21,885 AUMs. Cattle accounted for 62 percent of those AUMs, while sheep constituted 38 percent. (See Glossary for AUM definition.)

Table 2 (page 8) compares existing qualified use, 1977 licensed use and recommended AUMs for the proposed action of the Little Lost–Birch Creek Grazing Environmental Impact Statement (EIS). The livestock grazing would be adjusted from the authorized use of 29,874 AUMs for livestock to 27,800 AUMs (a 7 percent reduction). The licensed use in 1977 was 21,885 AUMs.

The major range management decisions include the following:

PROVIDE 27,800 AUMs FOR LIVESTOCK AS INDICATED IN TABLE 2.



Twelve ranchers graze cattle in Pass Creek allotment in the Little Lost. The Lost River Mountains form the valley's western edge.

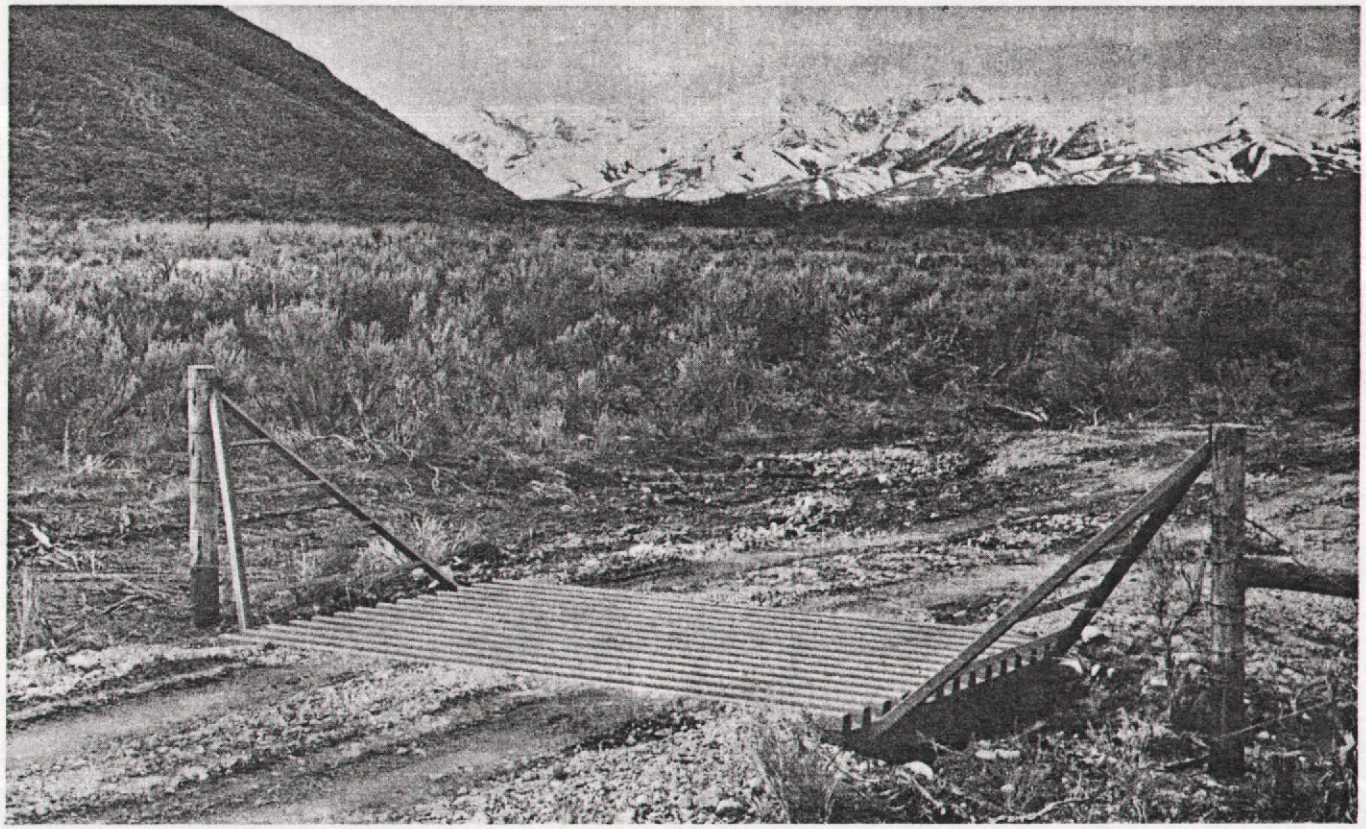
MAP 2
GRAZING SYSTEM AREAS

This forage allocation provides for the needs of existing antelope and elk populations. For mule deer, forage was allocated to accommodate a 25 percent population increase in Birch Creek Valley and a 10 percent population increase in Little Lost Valley.

IMPLEMENT REST ROTATION GRAZING SYSTEMS ON 163,283 ACRES, DEFERRED ROTATION ON 183,883 ACRES, AND SEASONAL ON 51,077 ACRES.

Some allotment boundaries will be adjusted for better management (see Map 2, page 9).

IMPLEMENT THE FOLLOWING RANGE IMPROVEMENTS: VEGETATION MANIPULATION – 18,500 ACRES, FENCING – 106 MILES, PIPELINE – 81 MILES, SPRING DEVELOPMENTS – 12, WATER TROUGHS – 48, CATCHMENT BASINS – 19, RESERVOIRS – 10, AND WELLS – 1.



Cattleguards help maintain desired livestock distribution while allowing easy access by people.

Wildlife

Deer, elk and antelope are the primary big game species. Heaviest use by all three species occurs in the fall and winter. Populations are estimated at 250 elk, 1,800 deer and 6,000 antelope, the largest antelope herd in the State (see Map 3 for antelope habitat areas). Other big game species include bear, cougar, mountain goat, big horn sheep and moose.

Sage grouse and a wide variety of other upland game inhabit the area along with small populations of waterfowl, fur bearers, and non-game species.

Seventeen streams provide about 80 miles of cold water fish habitat. Trout species include Dolly Vardin, rainbow, brook and cutthroat (see Map 4, page 14).

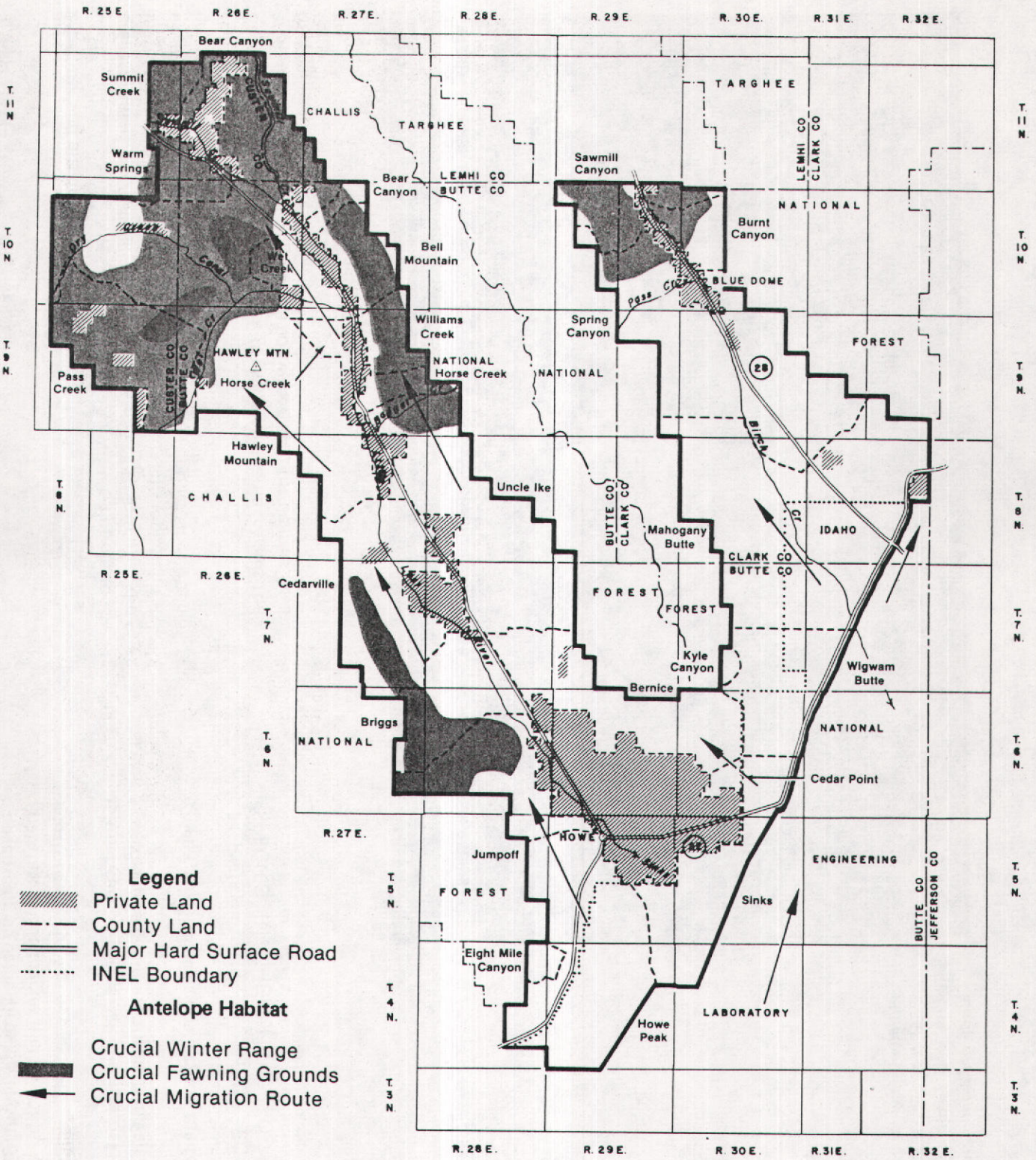
American peregrine falcons and bald eagles, classified as endangered species, migrate through in fall and winter.

Major wildlife decisions include the following:

FURNISH 10,453 AUMs OF FORAGE FOR BIG GAME SPECIES IN THE LITTLE LOST–BIRCH CREEK AREA.



Antelope fawn about 2 hours old. BLM biologists have assisted Idaho Fish and Game biologists in the study of fawning sites.



MAP 3
ANTELOPE HABITAT

Forage was allocated for existing populations of antelope and elk. For mule deer, forage was allocated to accommodate a 10 percent population increase in Birch Creek Valley and a 25 percent increase in Little Lost Valley.

Approximate forage use and animal numbers are broken down as follows:

	Animals	AUMs
Antelope	6,000	6,800
Deer	1,800	2,500
Elk	250	1,200

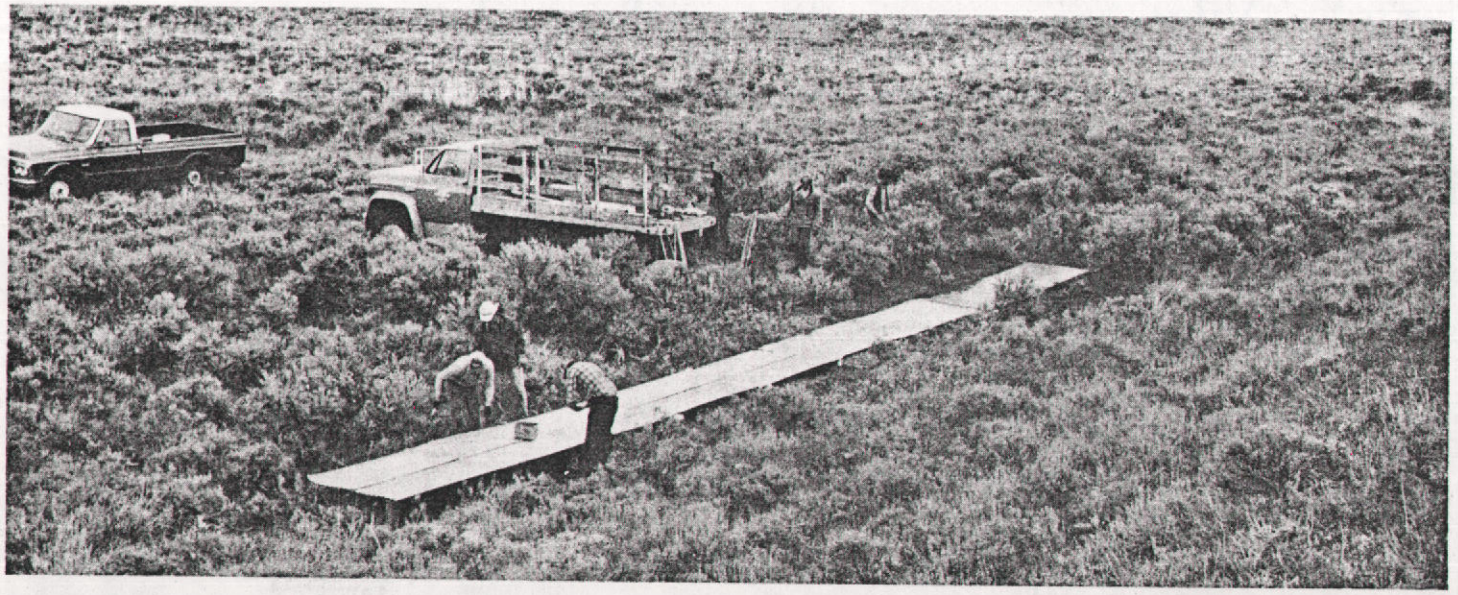
MAINTAIN AND IMPROVE 375,000 ACRES OF UPLAND GAME AND NON–GAME HABITAT BY MAINTAINING VEGETATIVE DIVERSITY, PROVIDING WATER AND CONSIDERING SAGE GROUSE NESTING AND BROOD REARING HABITAT IN ALLOTMENT MANAGEMENT PLANS.

Winter range, brood rearing areas, and permanent water sources are critical areas to sage grouse populations. Maximum diversity of native flora is necessary to provide the habitat requirements for the various upland and non-game species.

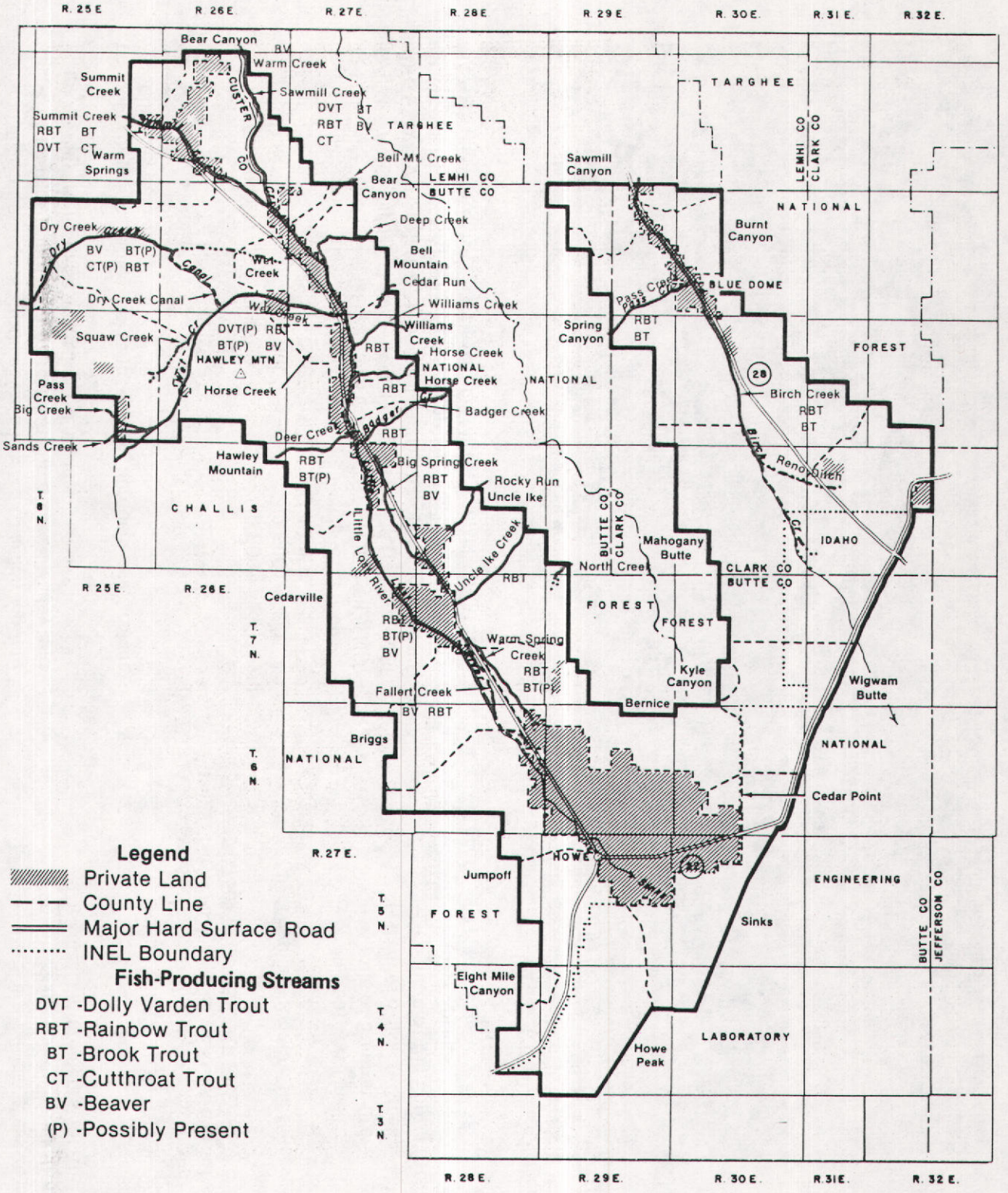
REDUCE SILTATION AND DEGRADATION OF STREAM AND RIPARIAN AREAS THROUGH PROTECTIVE FENCING TO EXCLUDE LIVESTOCK FROM CONCENTRATED USE AREAS.

These are the specific fences:

- 7 miles of Wet Creek
- ½ mile of Summit Creek
- 3 miles of Birch Creek
- 4½ miles of Big Spring Creek
- Squaw Springs.



Members of a local sportsmen's group help a BLM wildlife biologist install a wildlife waterer. The waterer or "guzzler" collects rainfall and provides a water source for many wildlife species.



MAP 4
FISH–PRODUCING STREAMS

Watershed

The unit is comprised of two separate and distinct watersheds, Little Lost and Birch Creek. Each watershed has a perennial mainstream with perennial tributaries which cross considerable amounts of public land.

Erosion ranges from stable to moderate with a few small areas of critical erosion. The relatively light erosion is due to the inherent stability of the soils, a favorable climate and the moderate topography.

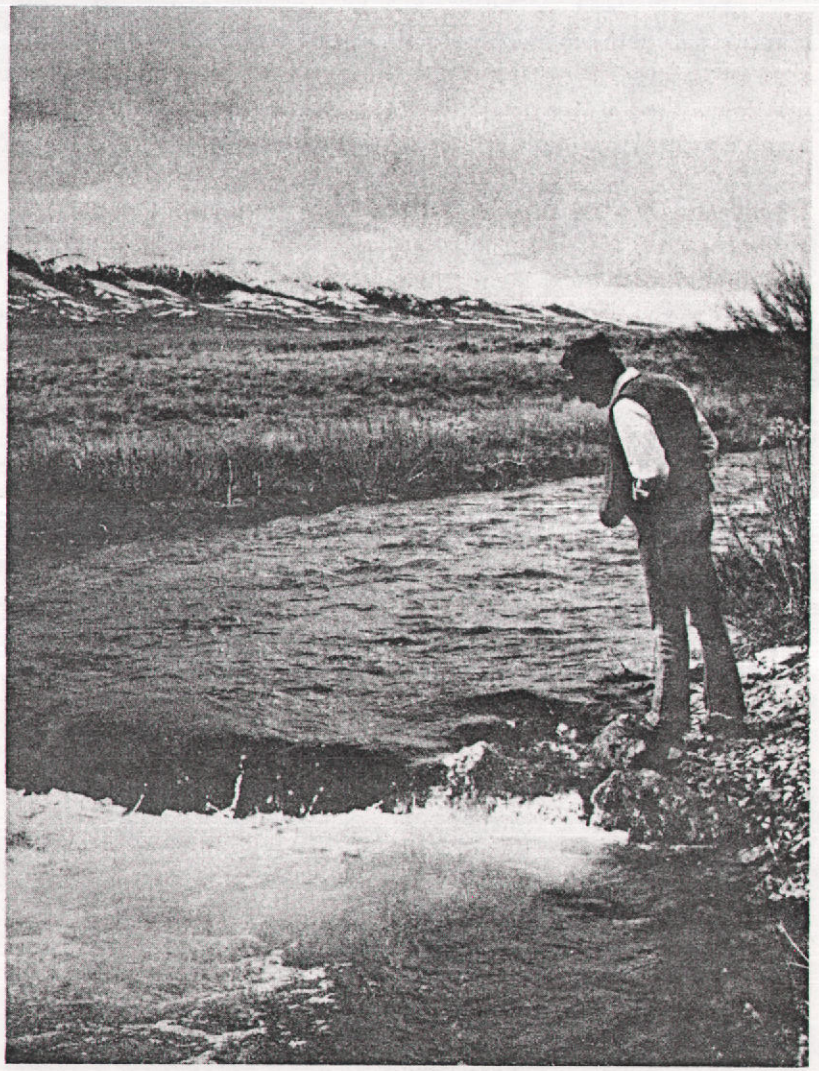
Important watershed decisions include the following:

ROTOBEAT AND SEED ROUGHLY 2,000 ACRES ON THE SECOND FLOOD PLAIN OF BIRCH CREEK.

Increased grass cover is needed to reduce erosion on this site. Grazing management alone would not reduce erosion because of the slow response of the vegetation. Rotobeating and seeding with Siberian wheatgrass and yellow sweet clover will reduce erosion while minimizing adverse impacts to antelope.

CONTROL HEADCUTS AND GULLIES IN HURST CREEK BY HAND–CONSTRUCTING ROCK DAMS IN THE GULLY.

The hand-constructed rock dams will slow water, deposit silt and build the gully floor. Water should percolate through the rocks and spill to the lower level, thus reducing the channel gradient.



A rock dam on Birch Creek was constructed to reduce the silt load and improve fish habitat.

Forest Products

The unit contains about 20,000 acres of forested land, both commercial and non-commercial. About 4,500 acres are considered productive forest land. Of these, 3,736 acres (82 percent) are considered to be problem sites because of adverse locations, slope conditions, fragile sites, and problem reforestation.

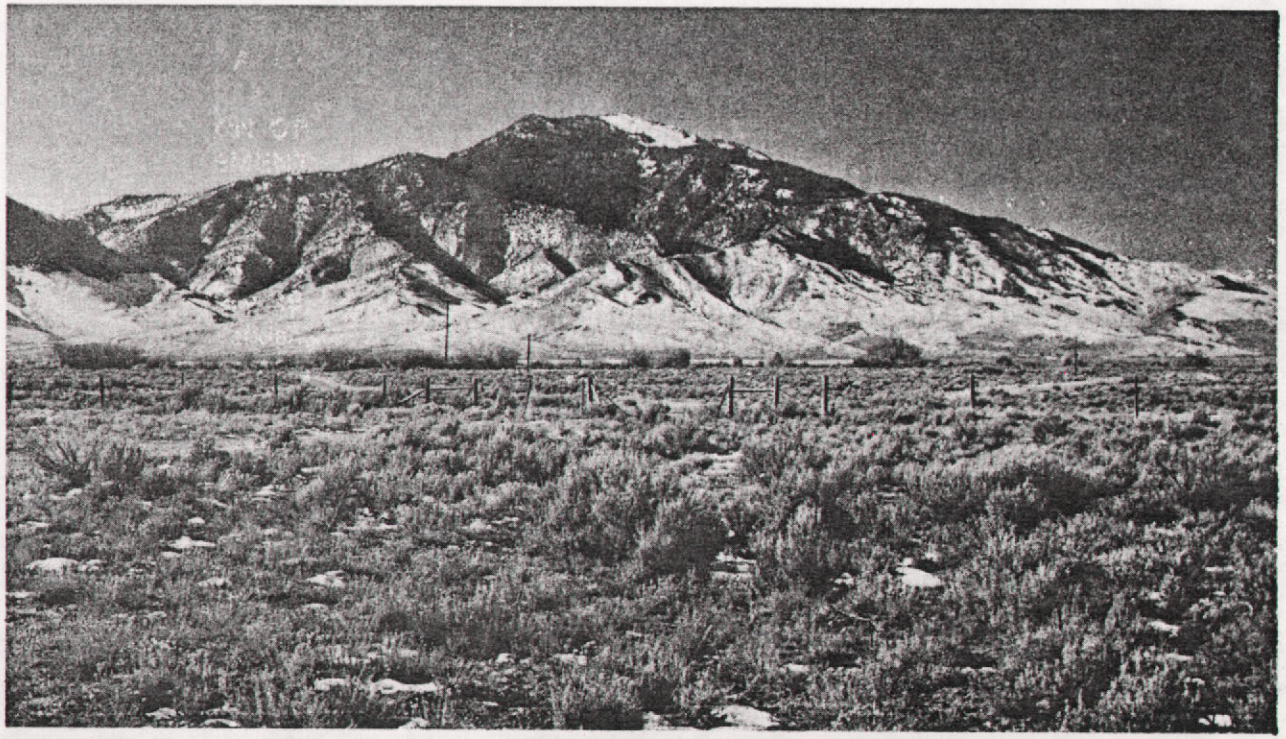
Insect and disease problems have been minor in the past, although dwarf mistletoe is prevalent throughout the unit. Past timber harvests have been small, localized, and with very little impact on the forest land.

Major forestry decisions include the following:

OFFER FOR SALE AN AVERAGE OF 60 MBF PER YEAR FROM ABOUT 1,232 ACRES OF PRODUCTIVE FOREST LAND WITHIN THE PLANNING UNIT.

Timber sale efforts will be concentrated in:

- Donkey Hills
- Sands Canyon
- Skull Canyon
- Goddard Canyon
- Long Canyon.



Hawley Mountain in the Little Lost Valley contains some of the unit's typical forested land. This area is not being harvested because of other important resource values.

Recreation

The area has one developed recreation site: the John Day site along Birch Creek with grills and picnic tables. There are seven undeveloped sites in the Little Lost Valley and two in the Birch Creek Valley. Most recreation use is associated with hunting, fishing and general sightseeing. About 200 cultural sites have been documented; 138 of them are located on public land and 45 on withdrawn lands.

Major recreation decisions include the following:

DEVELOP DAY USE AND OVERNIGHT FACILITIES AT THE CLYDE CREEK SCHOOL SITE, BIG SPRINGS CREEK SITE AND THE WET CREEK / DRY CREEK CANAL SITE.

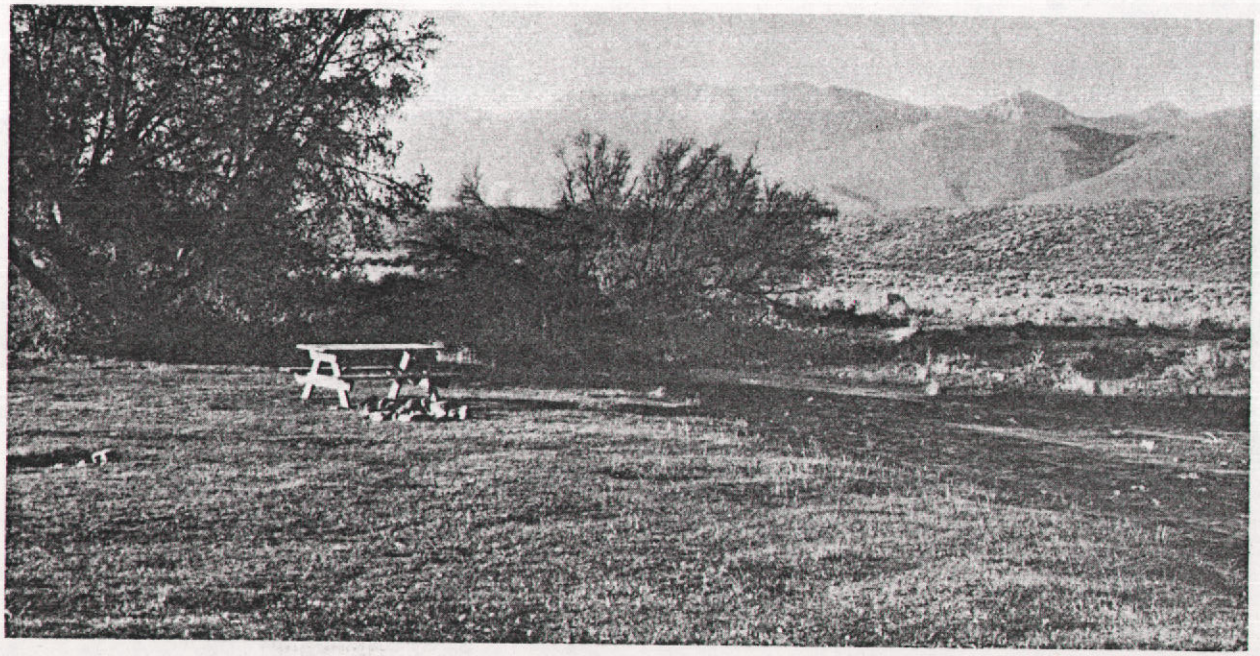
Developing recreation sites at these locations will help distribute visitor use and increase recreation opportunities. Development of these sites would also eliminate some existing damage.

DEVELOP AND MAINTAIN ADEQUATE ACCESS TO IMPORTANT RECREATION AREAS THROUGH EASEMENT ACQUISITION, ROAD MAINTENANCE AND SIGNING.

This will improve the visitor's experience and help eliminate conflicts with private landowners.

PROTECT, PRESERVE AND STABILIZE THE CLYDE CABIN AND THE WARM SPRINGS CREEK TIPI RINGS.

Measures are needed to protect cultural and historic sites from further deterioration and destruction.



John Day Recreation Site along Birch Creek is the unit's only developed site.

Lands

The lands program has served mainly as a support program to other activities and will continue to be so.

Public lands have been classified under the Classification and Multiple Use Act except for several small tracts in the Little Lost Valley. These lands were not classified because they were thought to be suitable for disposal through land law regulations.

Major lands decisions include the following:

PROVIDE PUBLIC LANDS FOR PUBLIC PURPOSES.

The specific sites are Clyde cemetery and the sanitary landfill (Blue Dome—Lone Pine).

ALLOW DESERT LAND ENTRIES WHERE DETERMINED SUITABLE BY LAND EXAMINATION.

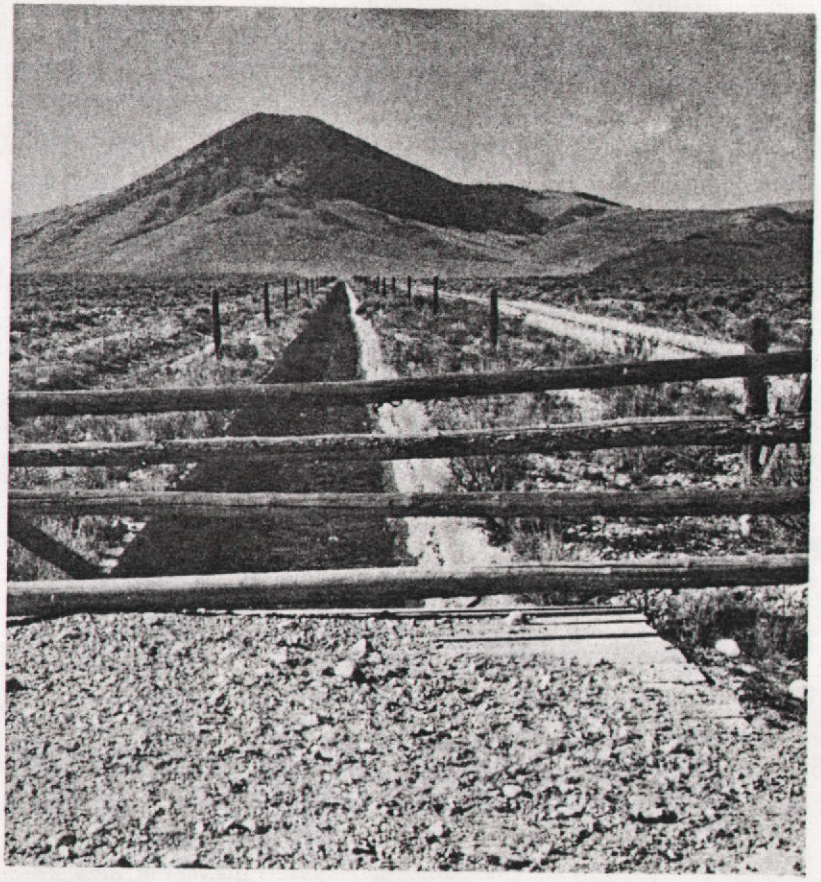
Some lands have agricultural potential; however, there may be conflicts with other uses or environmental impacts which would make them unsuitable for disposal.

FENCE AND SIGN MINE SHAFTS AND TUNNELS IN SCOTT BUTTE AREA.

The open mine shafts and tunnels are unsafe and could lead to injuries to public land users.

PROVIDE LAND FOR A DIVERSION STRUCTURE AND PONDING AREA TO BE USED BY THE LITTLE LOST FLOOD CONTROL GROUP.

Public lands are needed to mitigate a winter flooding problem around the town of Howe. The group must first apply for a right-of-way.



Providing rights-of-way is a big part of the lands program. Rights-of-way can be granted for powerlines, roads, and in this case, a water-carrying flume.

Minerals

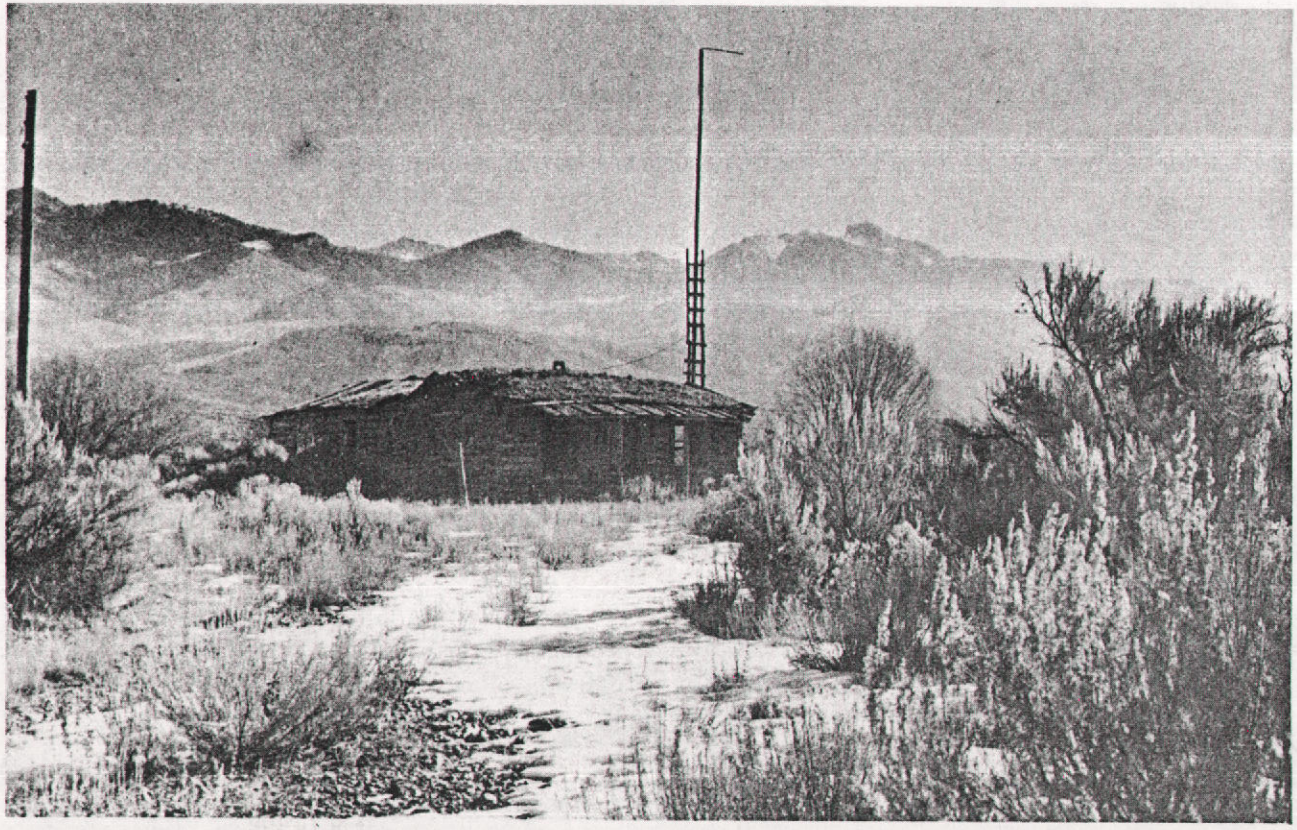
Area mineral production is minimal. Minor amounts of iron ore are extracted from Peterson Canyon, and sand and gravel are mined near most major roads. There has been exploration activity for uranium in Long Canyon and North Creek. Leasing activity indicates an interest in oil and gas, but no production or intensive exploration for any leasable mineral has yet occurred.

Historically, most production came from the Scott Mine, which produced lead, zinc and silver. Most other mineral production came from mines on national forests.

Major mineral decisions include the following:

KEEP FEDERAL MINERAL ESTATE OPEN TO MINING, MINERAL MATERIALS, OIL AND GAS, AND GEOTHERMAL ACTIVITY.

Public lands can supply important leasable and locatable minerals. There is also a continued demand for mineral materials such as sand and gravel.



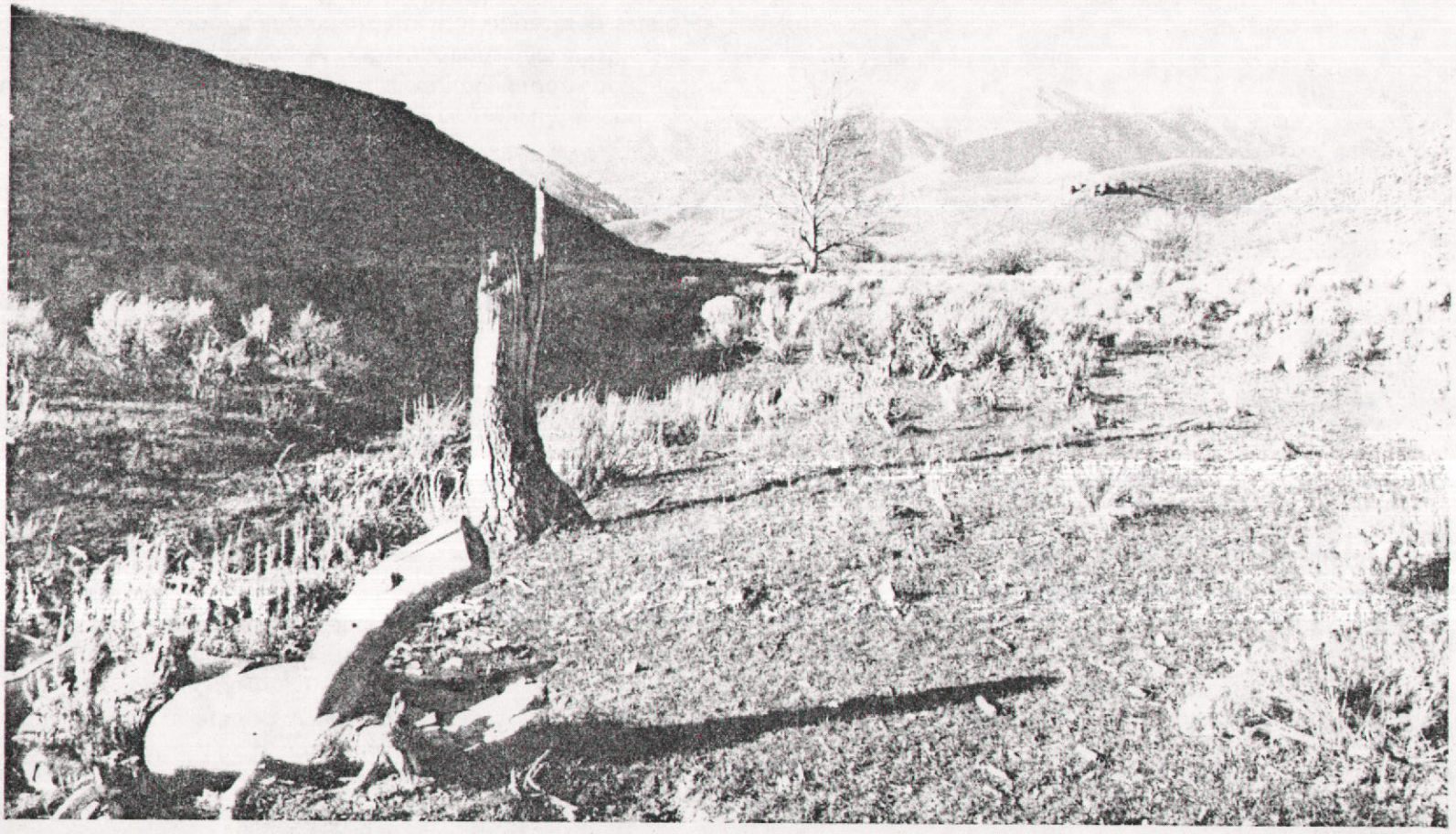
An old cabin at Clyde in the Little Lost River Valley. The cabin was built in the 1800s, about the same time that mining activity was beginning in the hills beyond.

Minerals

Most of the unit is open to mineral activities under the General Mining Laws. There is little mineral activity in the area, and the environmental impact would be slight.



Strutting sage grouse. Winter range, brood rearing areas, and permanent water sources are critical to grouse populations.



The Spring Canyon allotment in the Birch Creek Valley near Pass Creek, looking southwest to the Lemhi Mountains.

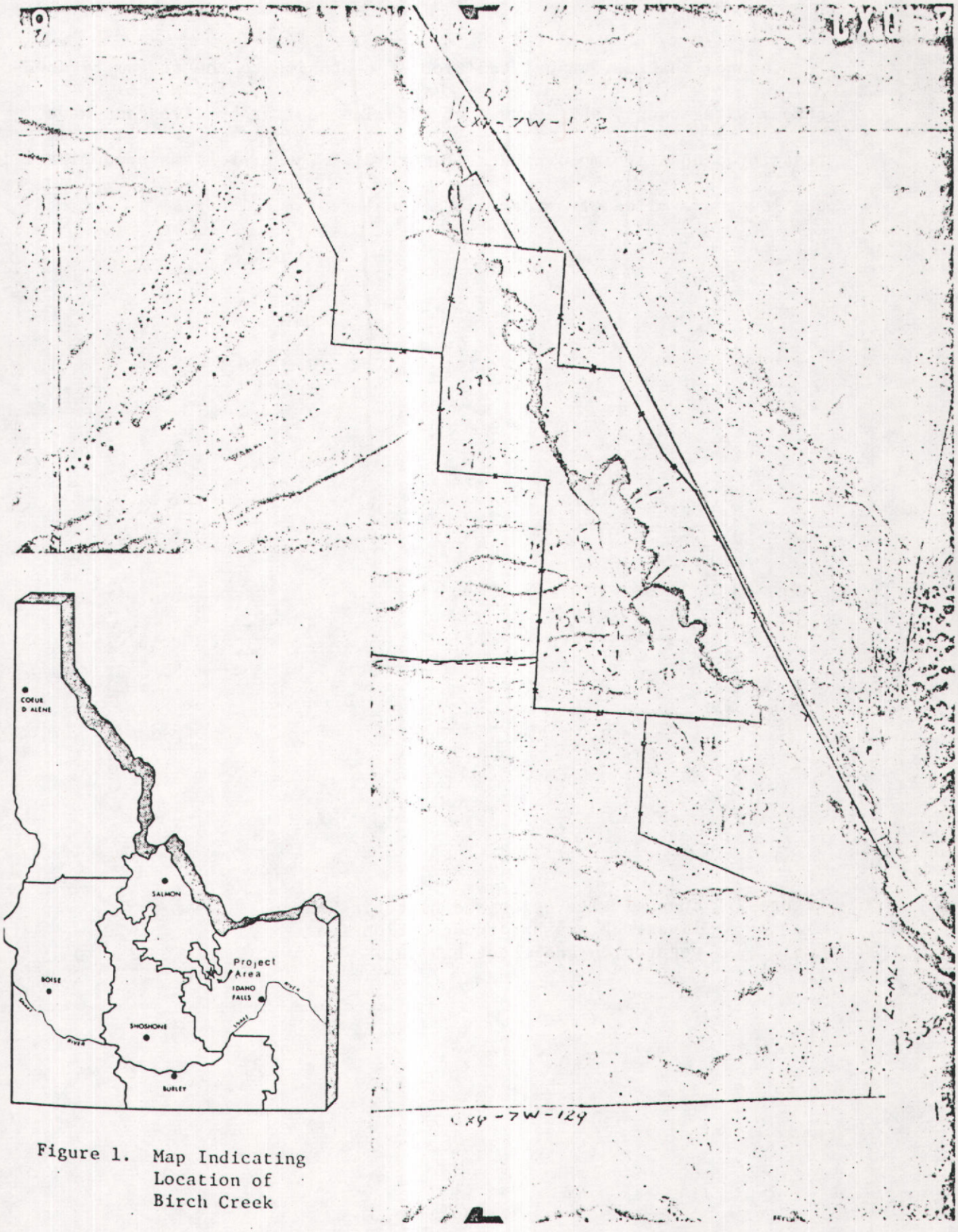


Figure 1. Map Indicating Location of Birch Creek

Channel changes, annual addition of bentonite to the stream by downstream water users, and overuse of riparian habitat by livestock have restricted aquatic improvements (Figure 2). These problems predominate in the lower six miles of stream on national resource lands.



Figure 2. Channel alteration and historic heavy livestock use has reduced riparian vegetation and trout habitat.



Figure 3. Angler access points to Birch Creek through livestock exclosure.



Figure 4. K-Dam in place on Birch Creek. Six-foot deep pool is formed below structure. Riparian vegetation response after one year of protective fencing.

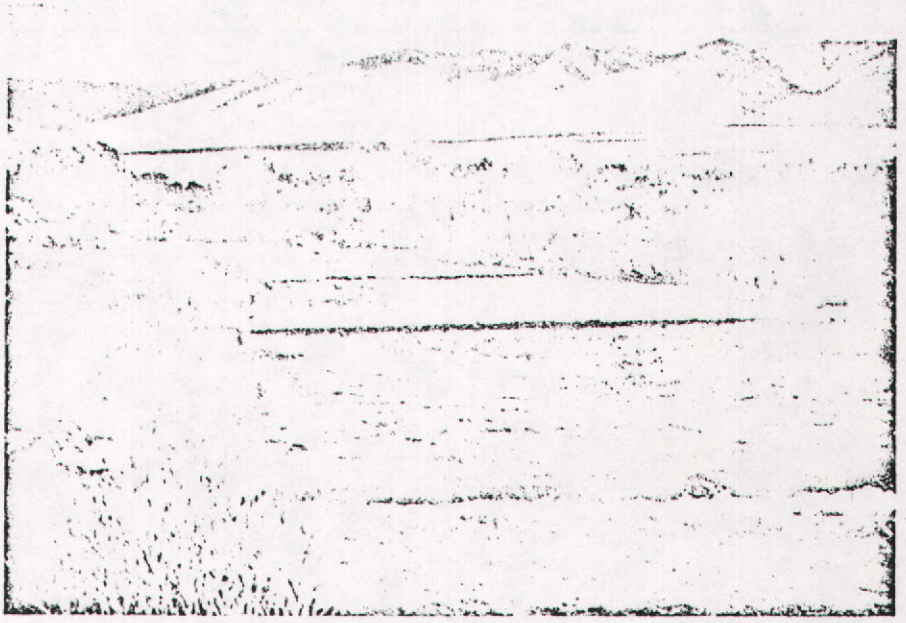


Figure 5. Digger logs placed in upper Birch Creek by Idaho Department of Fish and Game. The structures provided deeper water habitat for trout. The area has had several years' protection from use by livestock.

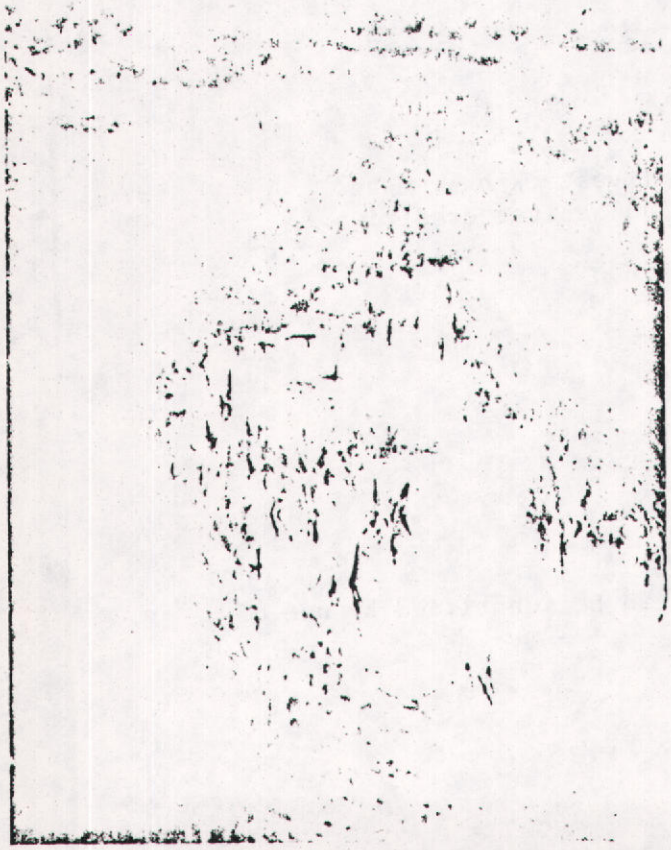


1. B-2, A major Tributary, protected from livestock use. note excellent bank stabilization and riparian habitat condition.*

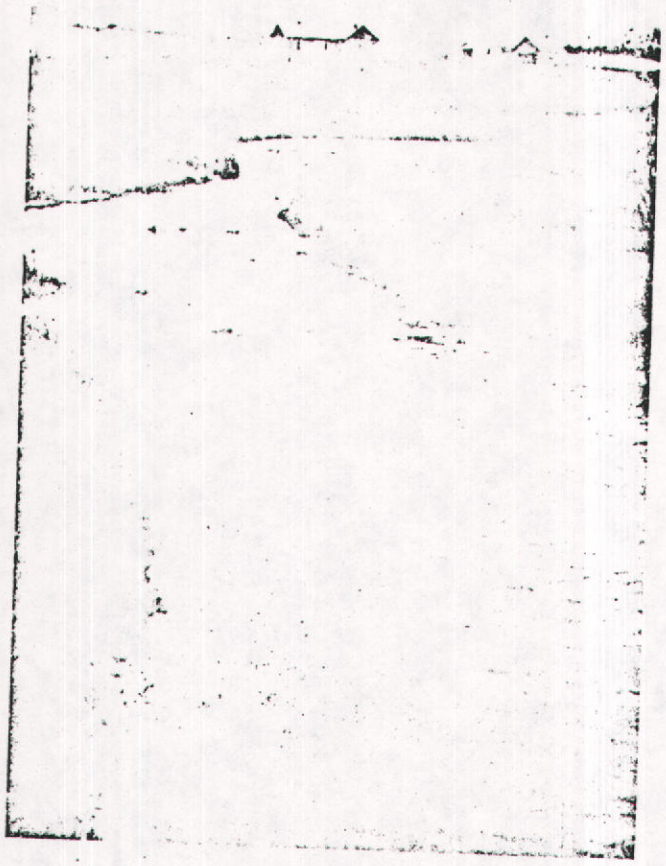
*Specific locations of areas photographed can be identified by use of maps or file in the District Office.



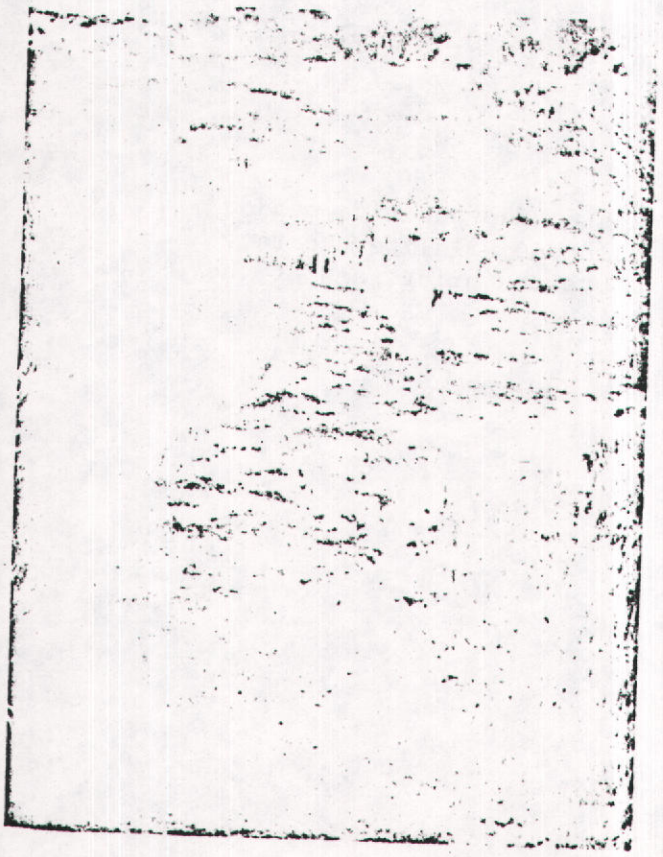
2. Tributary C. Heavy Livestock use has reduced bank "overhang". Note invasion of sagebrush due to a lowering of the water table.



3. Tributary D-2. Livestock grazing has caused siltation. Note the clogging of the tributary by emergent vegetation and the lack of gravels.



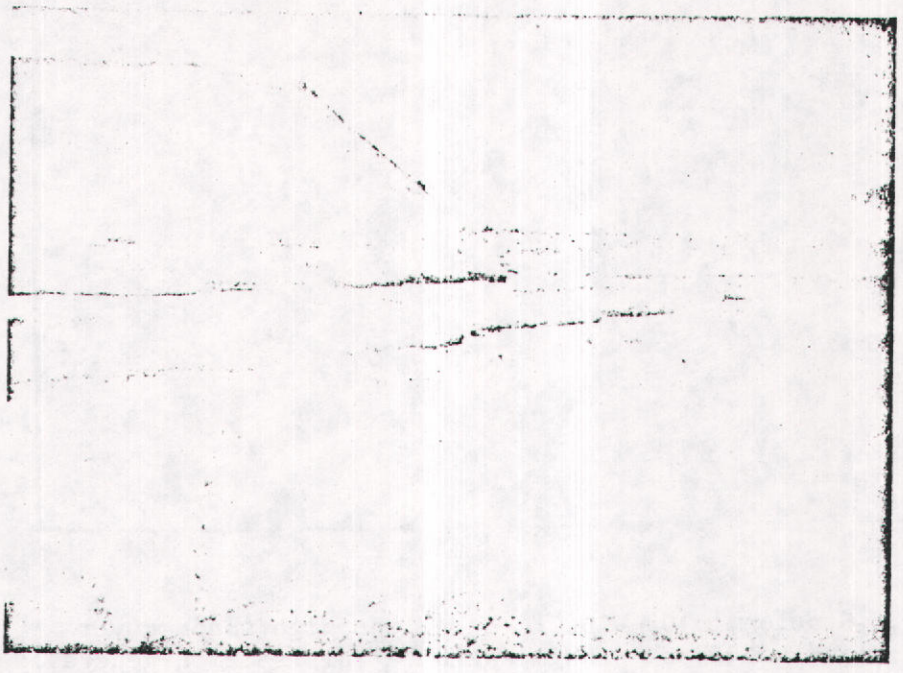
4. Tributary E-2
Good bank build up with "clean" gravel areas for spawning purposes. Area receives only moderate livestock use.



5. Tributary G.
Heavy siltation from "grazed" areas above has allowed vegetation to emerge in tributary channel.



6. Heavy livestock use on a once productive meadow area has reduced its value as wildlife habitat. Tributary F comes in above the bridge and at the left side of the photo.



7. Station 17.0 - 18.0. Portions of this section controlled by the Idaho Fish and Game Department. Protected from livestock use the area provides excellent fisheries, waterfowl and non-game habitat.



8. Station 16.0 - 17.00. The section contains good overhead cover but lacks low riparian vegetation. Note bank erosion due to livestock use.



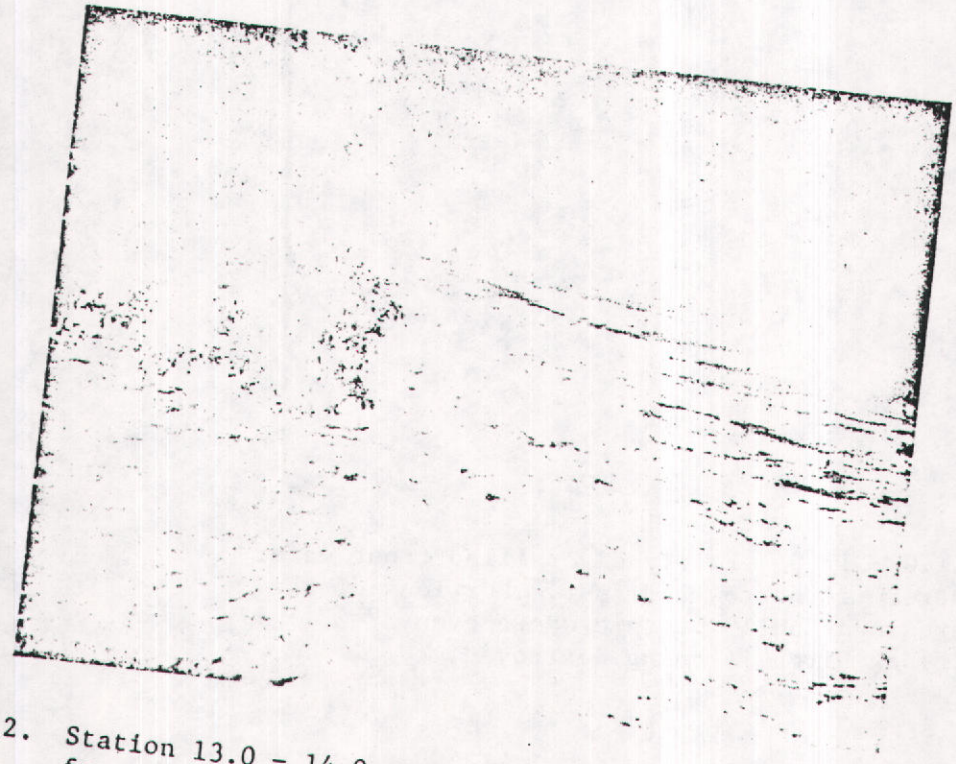
9. Station 15.0 - 16.0. Excellent high shade cover and good bank stabilization. This section generally contains some good "trout water".



10. Station 14.0 - 15.0. Birch Creek in this area contains good overhead cover and many Class A pools.



11. Station 13.0 - 14.0. Creation of a "new" channel due to highway alignment in portions of this section has created an "irrigation canal" effect. Note lack of pools for cover and resting areas. Livestock use in this area is rather restricted.



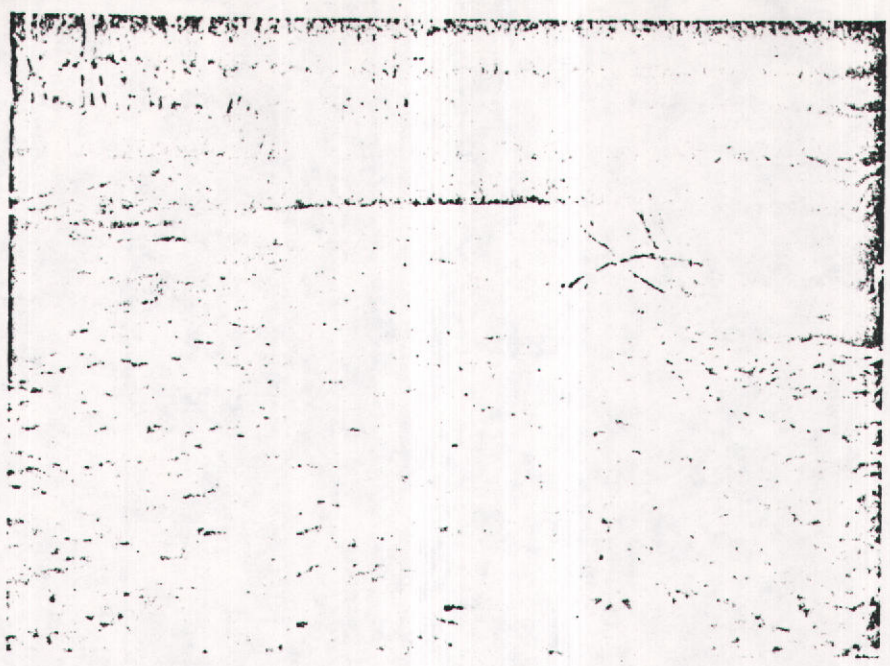
12. Station 13.0 - 14.0. This photo taken downstream from Photo #11 shows the stream as it probably before alteration.



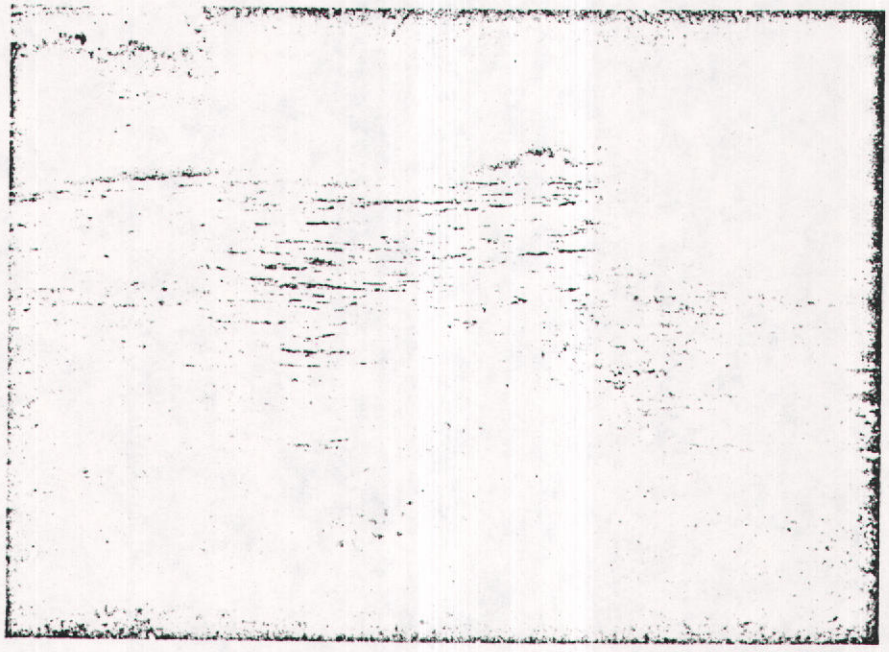
13. Station 12.0 - 13.0. Note heavy Black Birch cover, but lacks good deep pools.



14. Station 11.0 - 12.0. Fairly diversified trout water but the stream is narrow and fast. Portions of the section are in a "bull" pasture where even 2"-3" diameter Black Birch is being destroyed.



15. Station 10.0 - 11.0. Excellent trout water. Note bank stabilization and abundance of aspen. This section contains best pools in Birch Creek. Old growth aspen is dominant in this area.



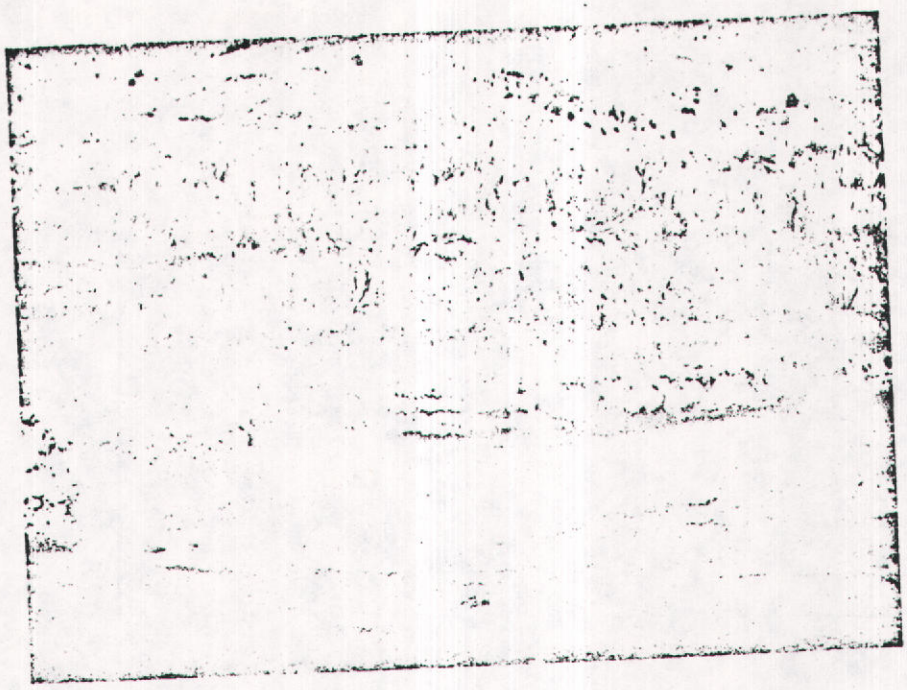
16. Station 9.0 - 10.0. Very little livestock use has allowed the persistence of good riparian habitat. Abundance of Class A pools present.



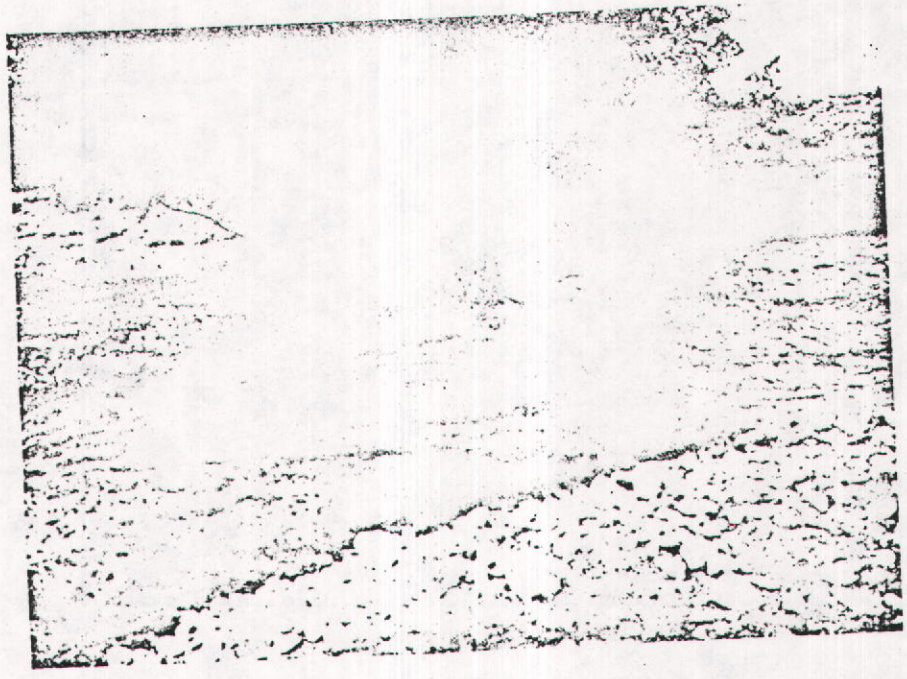
17. Station 8.0 - 9.0. Section 8. Heavy livestock has caused approximately 30% bank erosion. Note the straight fast water. Public Lands predominate.



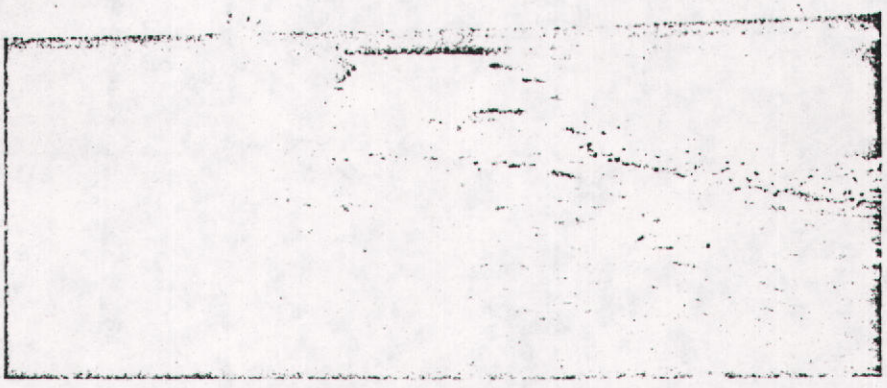
18. Station 7.0 - 8.0. Heavy livestock use has not allowed for any tree reproduction. Bank sloughing in many areas.



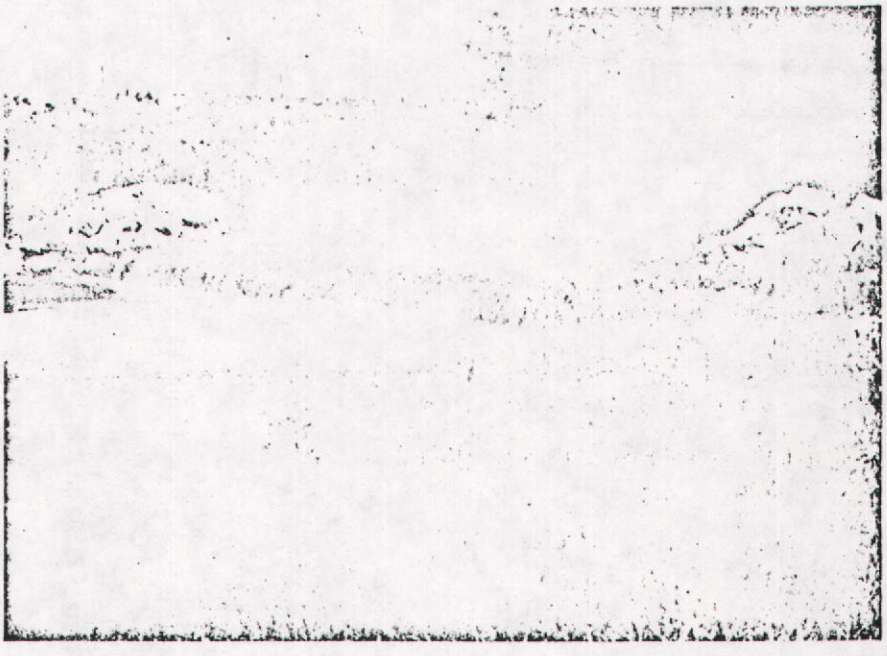
19. Station 6.0 - 7.0. Stream bank sloughing predominates. Very little holding water.



20. Station 5.0 - 6.0. Very little overhead cover. Bank sloughing a common occurence. Altered channel straight and fast.



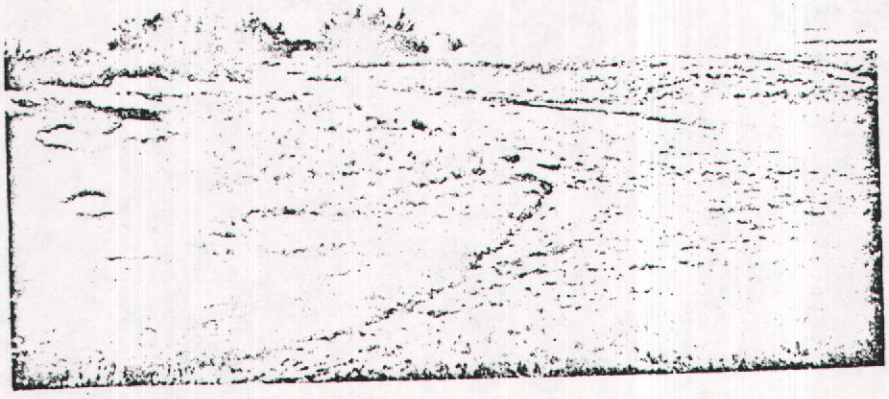
21. Station 4.0 - 5.0. Heavy livestock and recreation use has impacted this section. Very few holes, most of the holding water consists of runs.



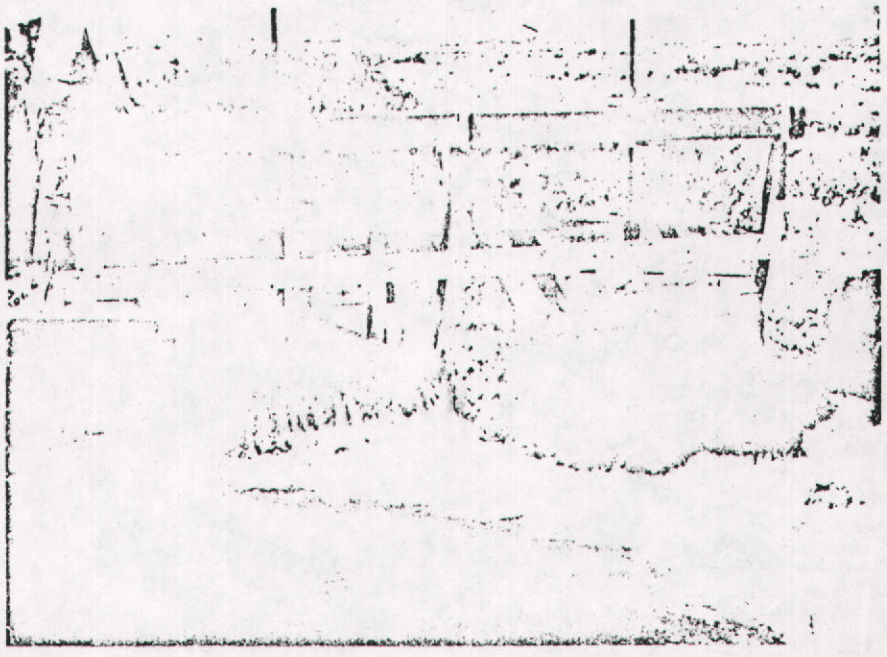
22. Station 3.0 - 4.0. With livestock excluded, the development of K-Dams shows the area's potential. Becoming established.



23. Station 2.0 - 3.0. Stream channel straight, and shallow with fast water in many locations. Poor trout habitat.



24. Station 1.0 - 2.0. Heavy to extreme bark sloughing, very little holding water and/or overhead shade cover.



25. The Reno diversion. The total flow of Birch Creek is directed here during most of the year. No fish screen to prevent down "ditch" loss.

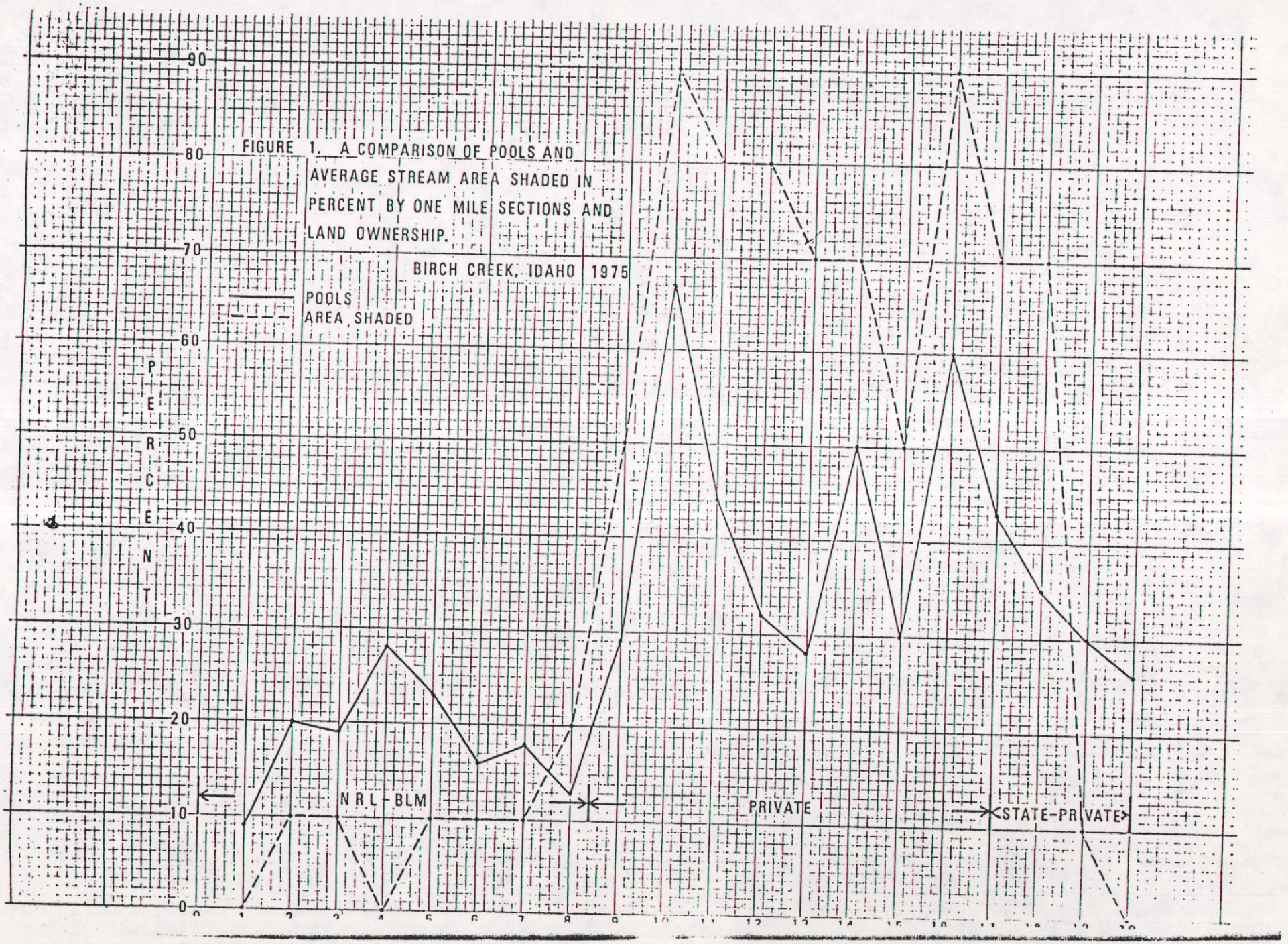
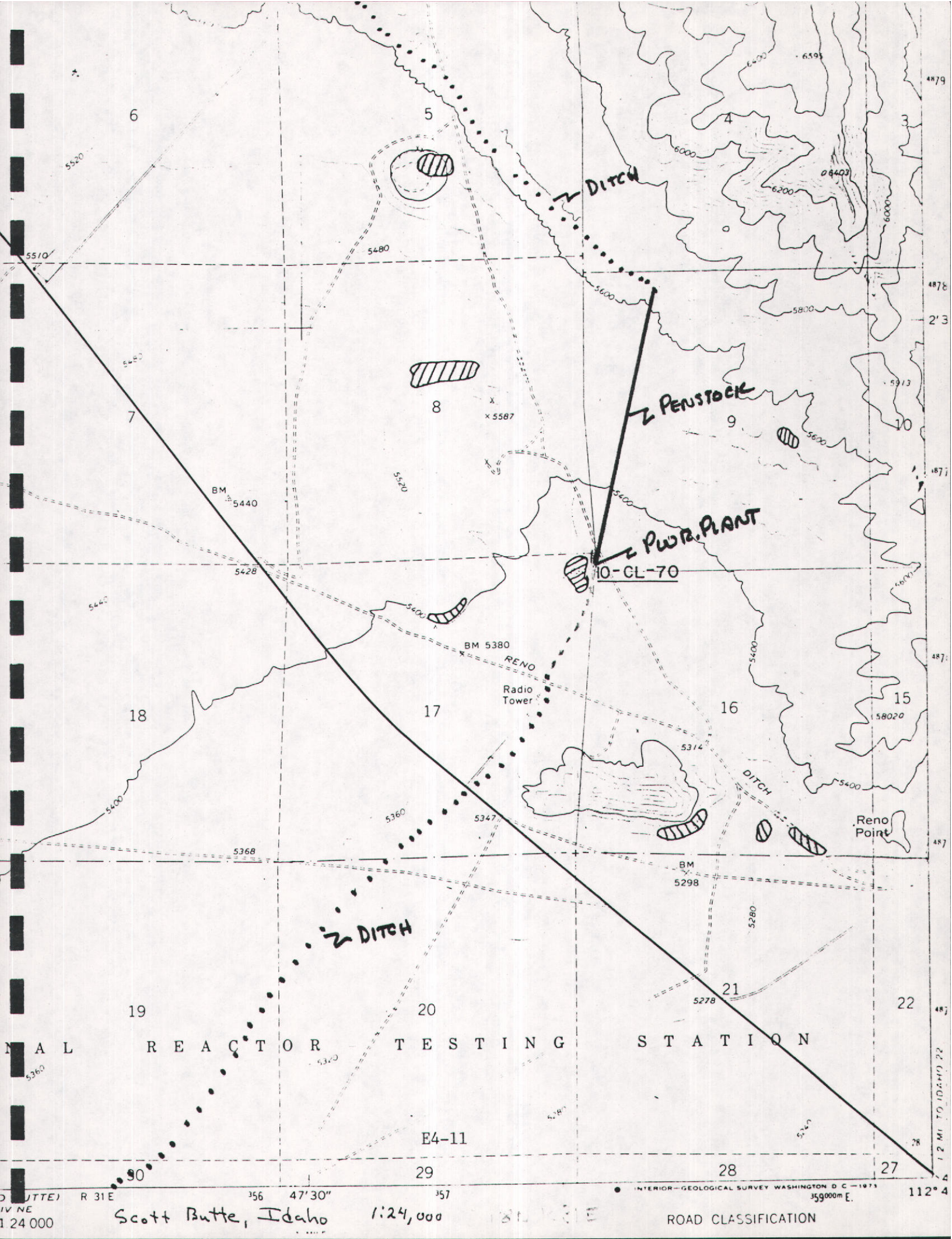


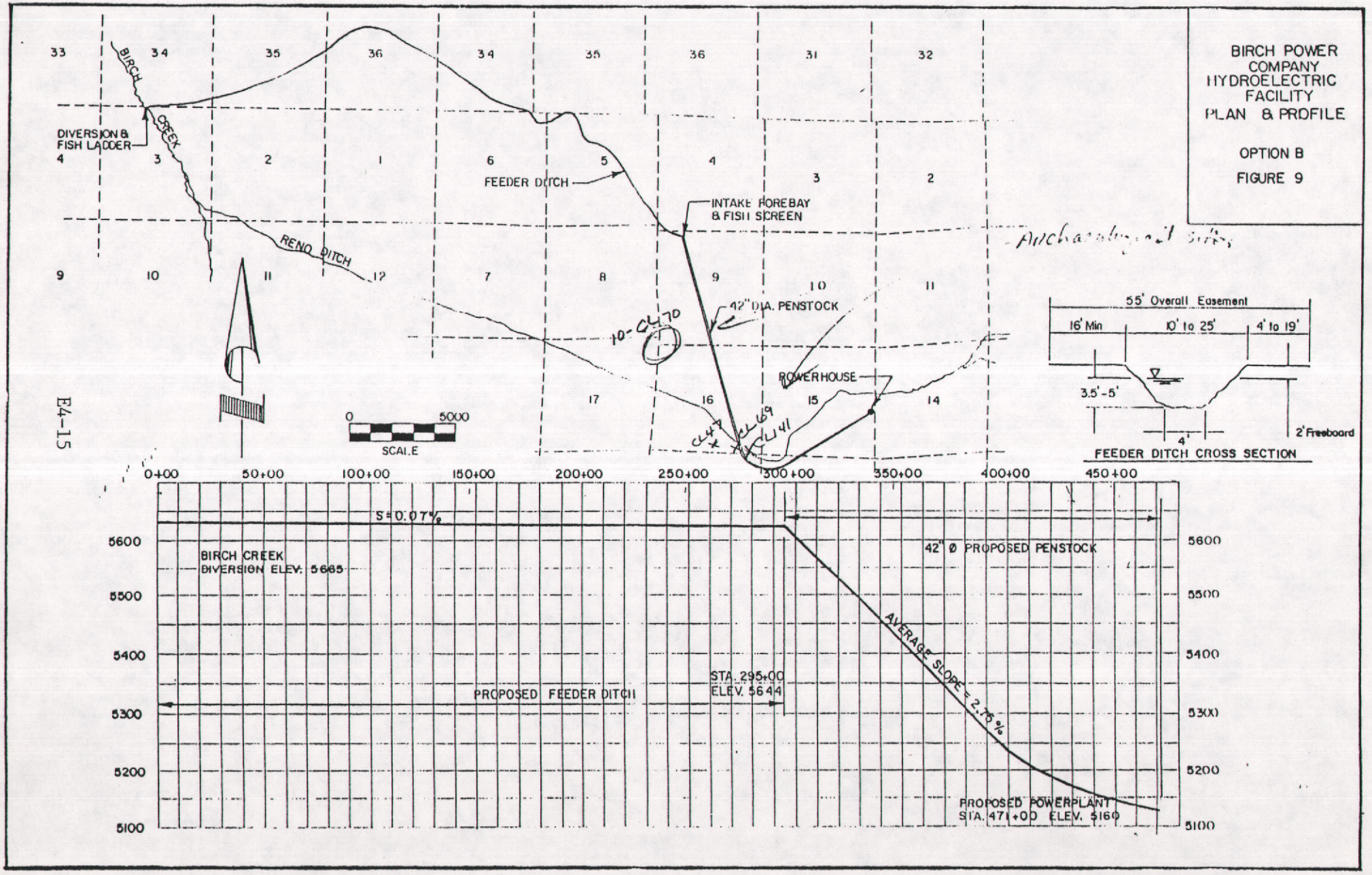
FIGURE 1. A COMPARISON OF POOLS AND AVERAGE STREAM AREA SHADED IN PERCENT BY ONE MILE SECTIONS AND LAND OWNERSHIP.

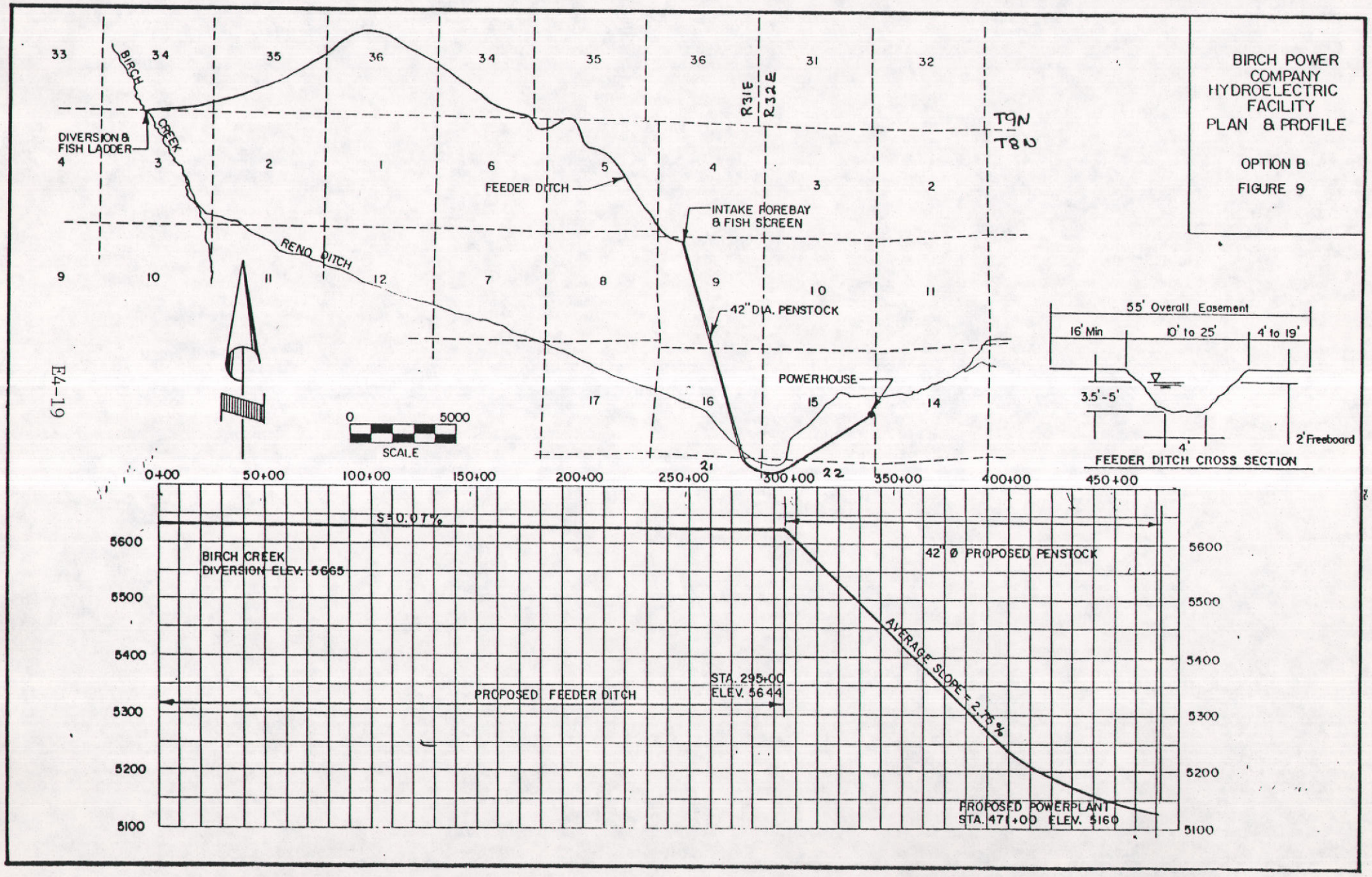


Fig. 1: Location of Birch Creek Valley, eastern Idaho. (From Swanson and Bryan, 1964: Fig. 1)

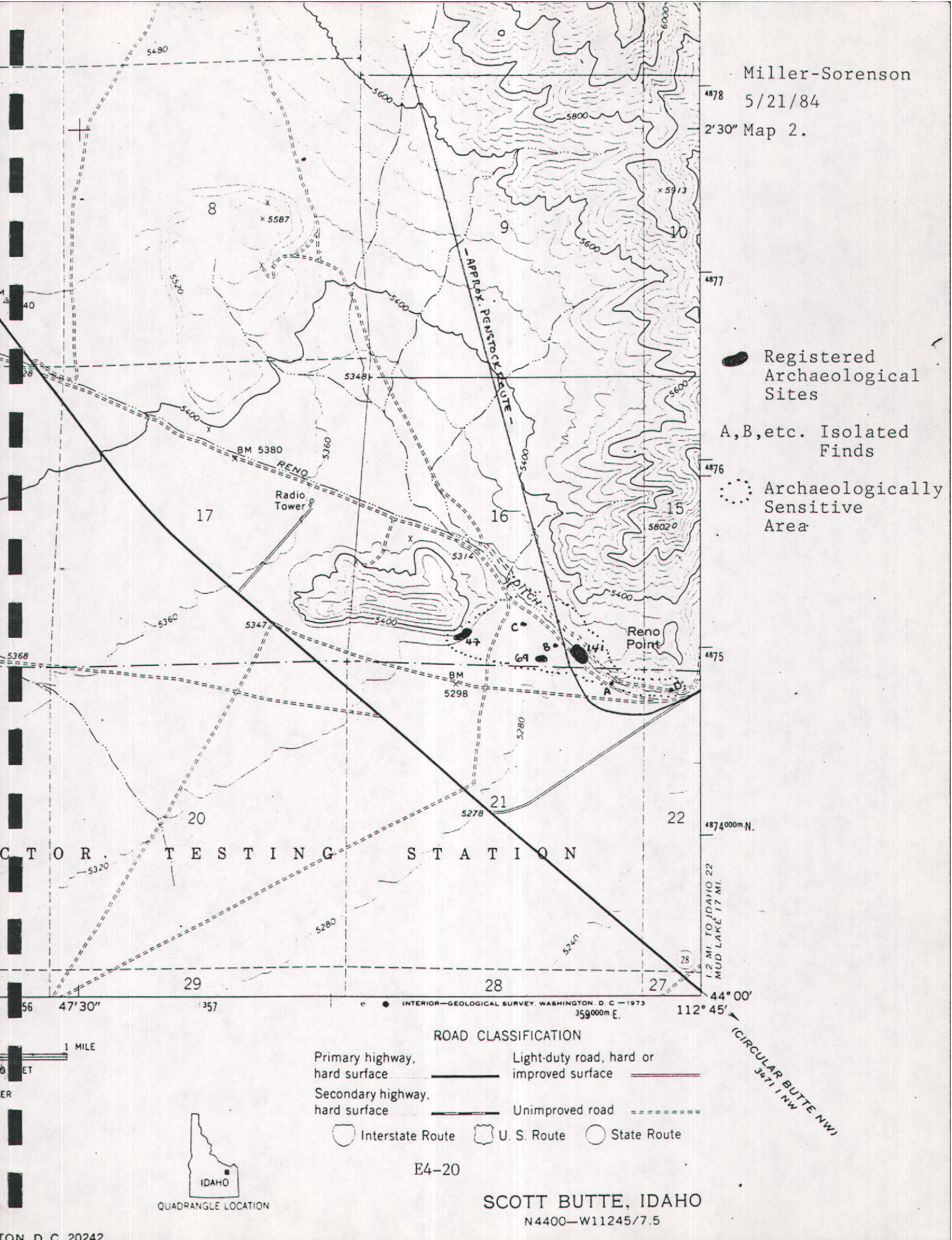
● Location of proposed facility.

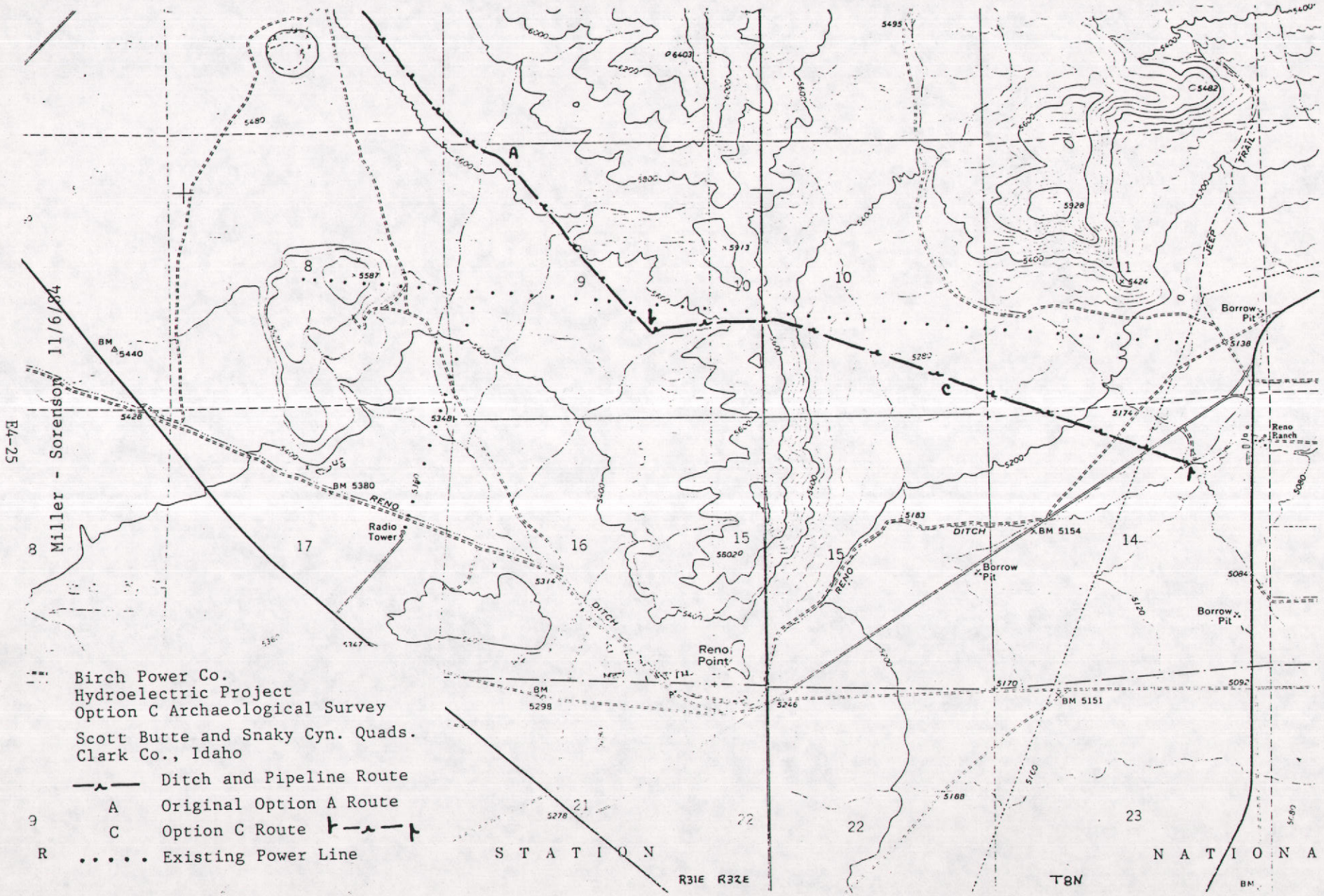

DITCH
PENSTOCK
PWR. PLANT
10-CL-70
BM 5440
BM 5380
RENO
Radio Tower
DITCH
Reno Point
BM 5298
DITCH
E4-11
NAL REACTOR TESTING STATION
Scott Butte, Idaho 1:24,000
ROAD CLASSIFICATION


BIRCH POWER COMPANY HYDROELECTRIC FACILITY PLAN & PROFILE
OPTION B
FIGURE 9
BIRCH CREEK
DIVERSION & FISH LADDER
RENO DITCH
FEEDER DITCH
INTAKE FOREBAY & FISH SCREEN
42" DIA. PENSTOCK
POWERHOUSE
10-CL70
CL69
CL41
CL47
SCALE
0
5000
55' Overall Easement
16' Min
10' to 25'
4' to 19'
3.5'-5'
4'
2' Freeboard
FEEDER DITCH CROSS SECTION
0+00
50+00
100+00
150+00
200+00
250+00
300+00
350+00
400+00
450+00
S=0.07%
BIRCH CREEK DIVERSION ELEV. 5665
42" Ø PROPOSED PENSTOCK
AVERAGE SLOPE = 2.75%
STA. 295+00 ELEV. 5644
PROPOSED FEEDER DITCH
PROPOSED POWERPLANT STA. 471+00 ELEV. 5160
5600
5500
5400
5300
5200
5100


BIRCH POWER COMPANY HYDROELECTRIC FACILITY
PLAN & PROFILE
OPTION B
FIGURE 9
BIRCH CREEK
DIVERSION & FISH LADDER
FEEDER DITCH
INTAKE FOREBAY & FISH SCREEN
RENO DITCH
42" DIA. PENSTOCK
POWERHOUSE
R31E
R32E
T9N
T8N
SCALE
0
5000
55' Overall Easement
16' Min
10' to 25'
4' to 19'
3.5'-5'
4'
2' Freeboard
FEEDER DITCH CROSS SECTION
0+00
50+00
100+00
150+00
200+00
250+00
300+00
350+00
400+00
450+00
S=0.07%
BIRCH CREEK DIVERSION ELEV. 5665
42" Ø PROPOSED PENSTOCK
AVERAGE SLOPE = 2.75 %
PROPOSED FEEDER DITCH
STA. 295+00 ELEV. 5644
PROPOSED POWERPLANT STA. 471+00 ELEV. 5160
5600
5500
5400
5300
5200
5100

E4-19


Miller-Sorenson
5/21/84
2'30" Map 2.
Registered Archaeological Sites
A,B,etc. Isolated Finds
Archaeologically Sensitive Area
APPROX. PENSTOCK ROUTE
PITCH
RENO
Radio Tower
BM 5380
BM 5298
Reno Point
47
69
141
A
B
C
D
8
9
10
15
16
17
20
21
22
27
28
29
5480
5600
5800
5587
5913
5520
5400
5348
5360
5314
5347
5368
5320
5280
5278
5240
58020
4878
4877
4876
4875
4874000m N.
359000m E.
44° 00'
112° 45'
47'30"
1 MILE
1.2 MI. TO IDAHO 22
MUD LAKE 17 MI.
(CIRCULAR BUTTE NW)
3471 I NW
INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—1973
ROAD CLASSIFICATION
Primary highway, hard surface
Secondary highway, hard surface
Light-duty road, hard or improved surface
Unimproved road
Interstate Route
U. S. Route
State Route
IDAHO
QUADRANGLE LOCATION
E4-20
SCOTT BUTTE, IDAHO
N4400—W11245/7.5
TON, D. C. 20242


Miller - Sorenson 11/6/84
E4-25
Birch Power Co.
Hydroelectric Project
Option C Archaeological Survey
Scott Butte and Snaky Cyn. Quads.
Clark Co., Idaho
Ditch and Pipeline Route
A Original Option A Route
C Option C Route
Existing Power Line
A
C
BM 5440
BM 5380
RENO
Radio Tower
DITCH
Reno Point
BM 5298
BM 5154
BM 5151
Borrow Pit
Reno Ranch
JEEP TRAIL
R31E R32E
T8N
STATION
NATIONA

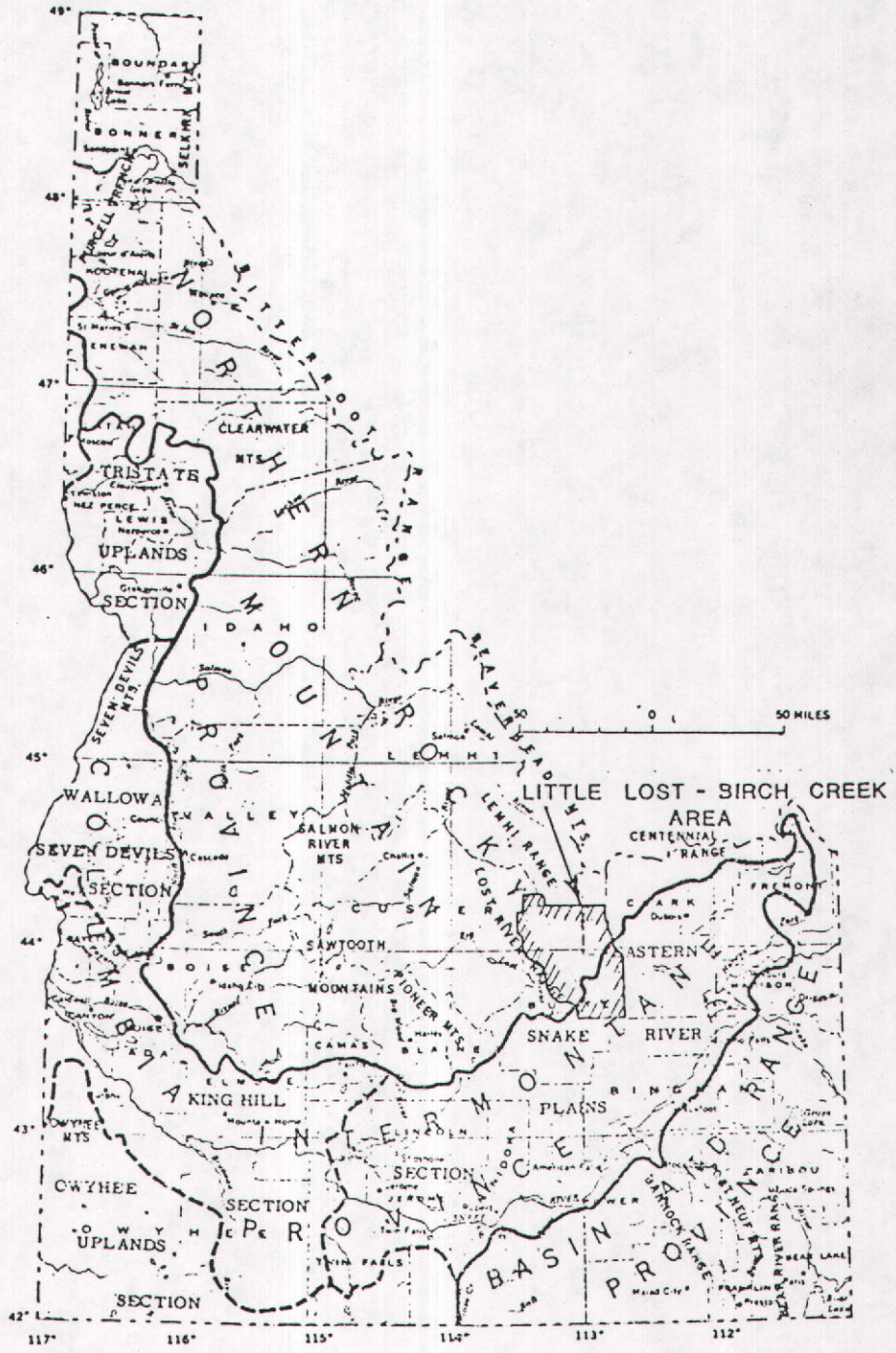


Figure 1. Physiographic provinces and features of Idaho; hatchers outline the approximate boundary of the Little Lost-Birch Creek area.

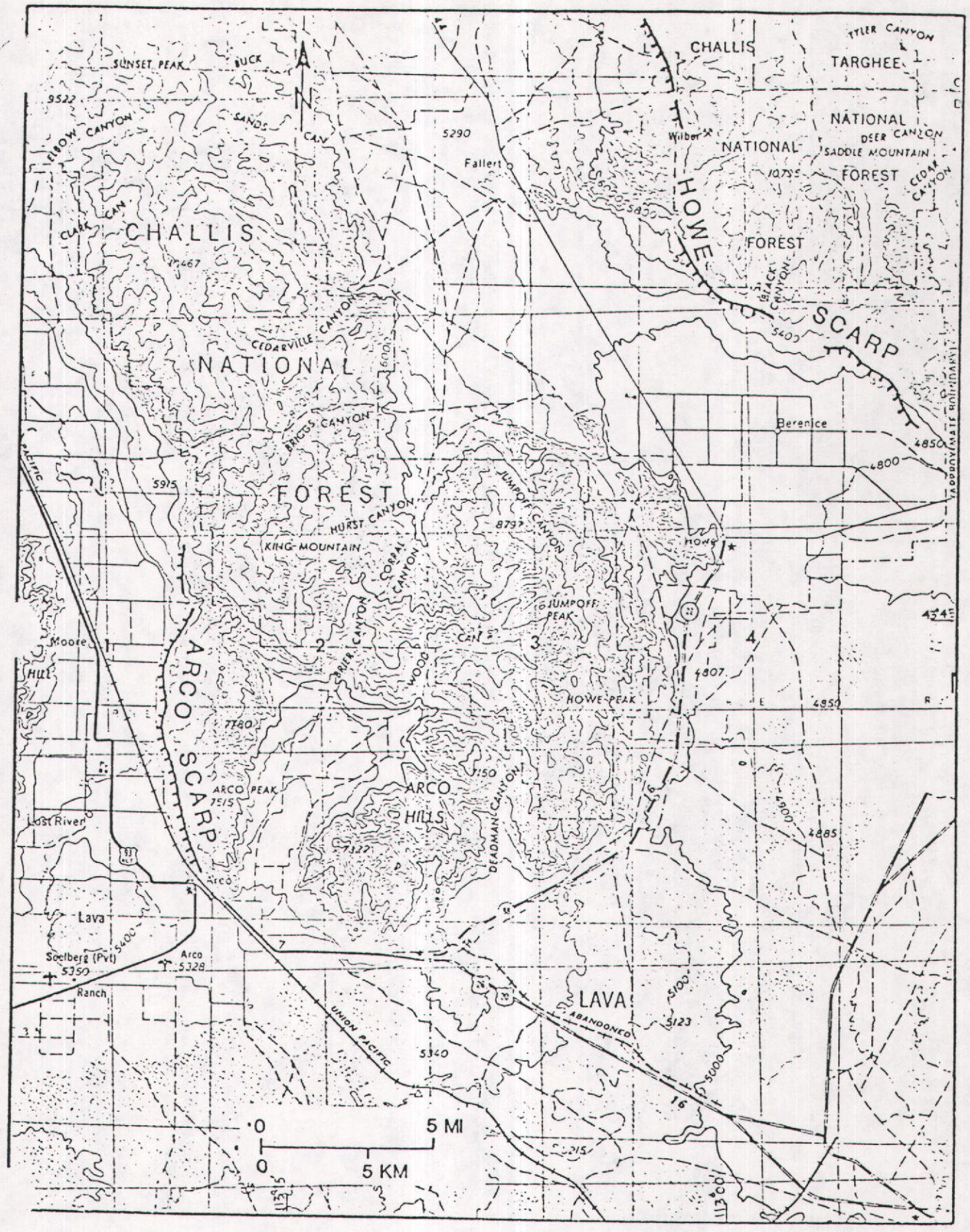
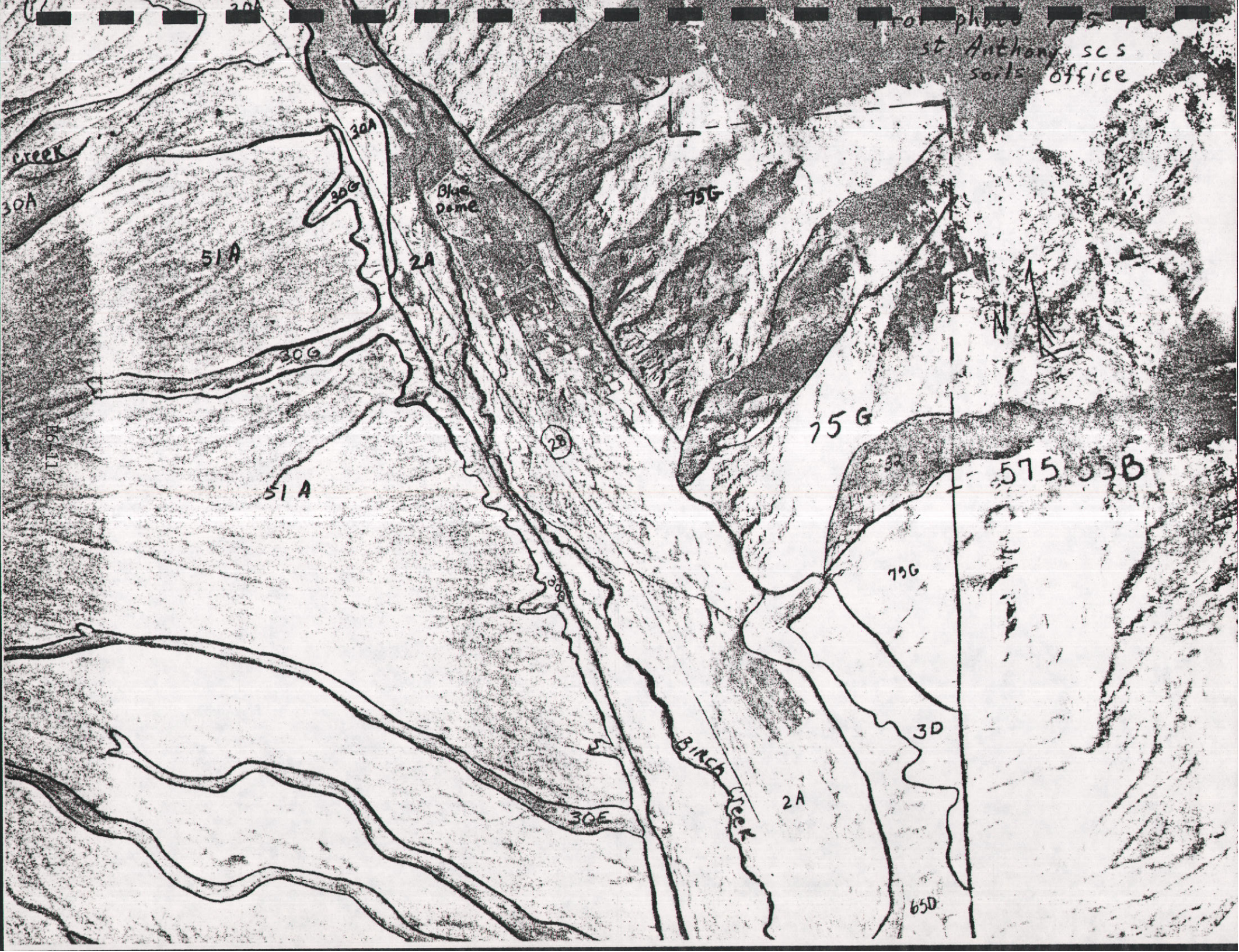


Figure 2. Map showing location of the Arco and Howe fault scarps in Little Lost-Birch Creek area, Idaho (after Malde, 1971, fig. 1).


30A
creek
30A
30G
Blue Dome
75G
51A
2A
30G
75 G
28
51 A
75G
3D
BIRCH CREEK
2A
30E
65D









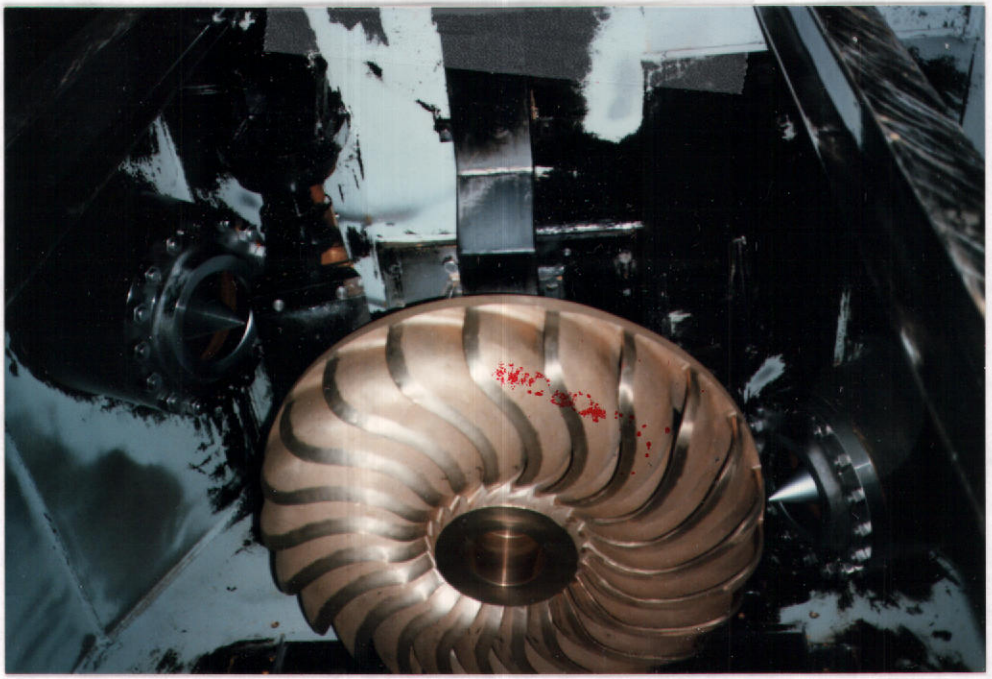




















RECEIVED

AUG 31 1990

Department of Water Resources
Eastern District Office

Howe, Idaho
8/ 30/ 90

Director
Keith Higginson
Department of Water Resources

Woodie Land and Livestock

Protest Amendments

No. 32-7128

No. 32-7136

Request to remove requirement to by pass 5 cfs or 11% of the flow of Birch Creek down the old Birch Creek channel.

Reason;

Consideration of stock water.

George Woodie

President
Woodie Land and Livestock

Hc 65 Box 1018
Howe, Idaho
83244

Withdrawn

EPTEMBER 3, 1990.
R. Keith Higginson, Director
Published: August 16, 23, 1990

NOTICE OF PROPOSED
AMENDING OF WATER PERMIT

NOTICE IS HEREBY GIVEN that TED S. SORENSON d/b/a SORENSON ENGINEERING or BIRCH POWER has applied to the Department of Water Resources to amend hydropower permits as follows:

NO. 32-7128
AMOUNT: 45 CFS
PURPOSE: POWER PRODUCTION
SOURCE: BIRCH CREEK tributary of BIRCH CREEK SINKS TO GROUND-WATER AQUIFER.
POINT OF DIVERSION: NENW SEC 3 T 8N R 30E, CLARK COUNTY
The water is used for power generation within the NENE SEC 14 T8N R 31E, B.M.

NO. 32-7136
AMOUNT: 30 CFS
PURPOSE: POWER PRODUCTION
SOURCE: BIRCH CREEK tributary of BIRCH CREEK SINKS TO GROUND-WATER AQUIFER.
POINT OF DIVERSION: NENW SEC 3 T 8N 30E, CLARK COUNTY
The water is used for power generation within the NENE SEC 14 T8N R 31E, B.M.

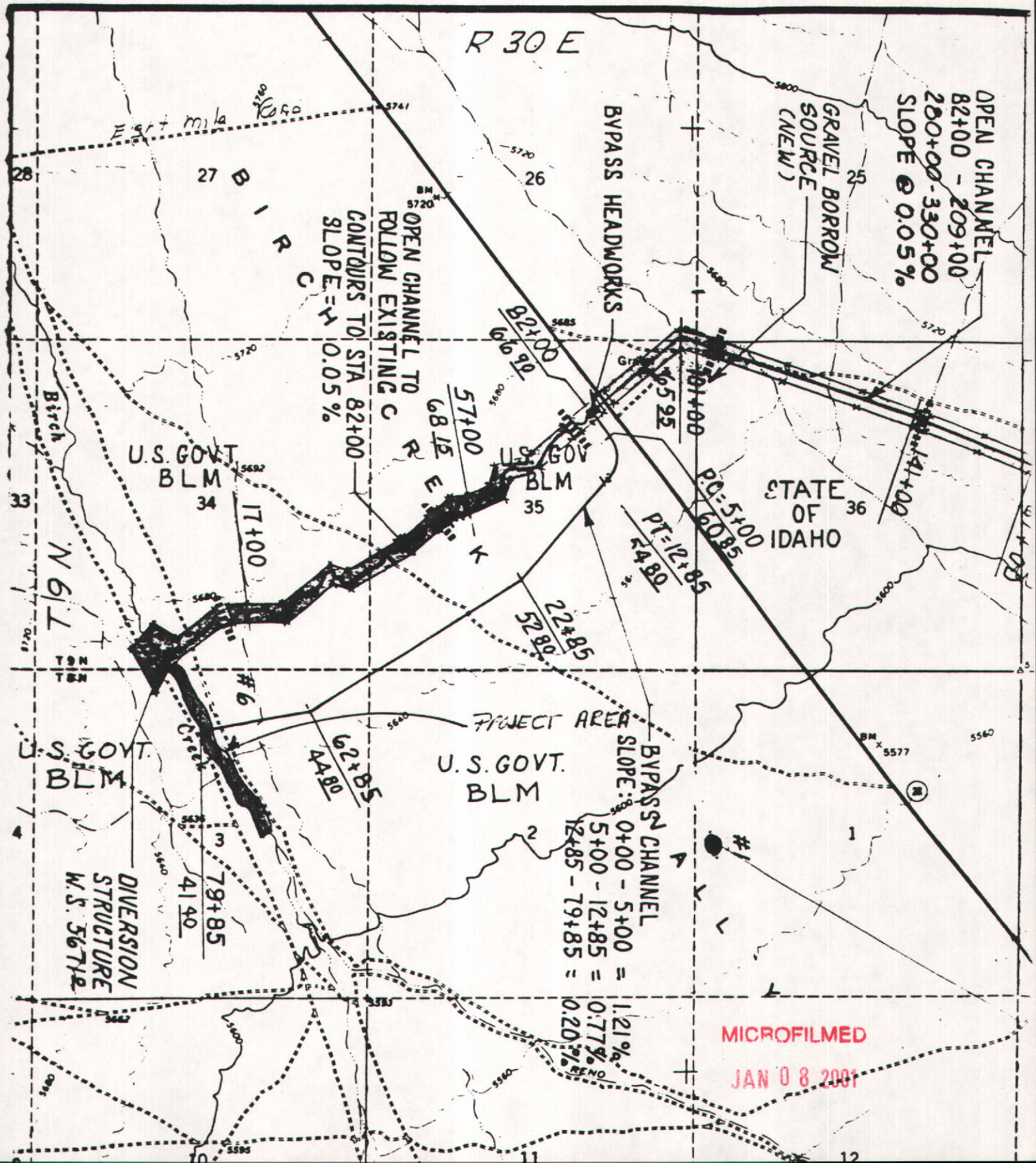
This amendment is requested to remove a requirement to bypass 5 cfs or 11% of the flow of Birch Creek down the old Birch Creek Channel.

Any protest to the proposed amending of the permits must be filed with the Idaho Department of Water Resources, 150 Shoup Ave., Idaho Falls, ID 83401, on or before SEPTEMBER 3, 1990.

Published: August 16, 23, 1990

MICROFILMED
JAN 0 8 2001
WITHDRAWN

Map 1



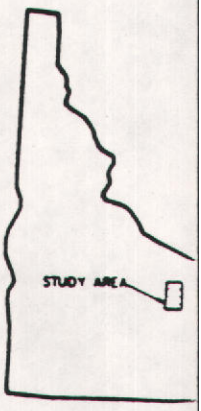
MICROFILMED
JAN 0 8 2001

Lower Birch Cre

UPSTREAM

Figure 3

(APPROXIMATE SCALE)



Roads

Diversion Dam
(approximate location)
(UPSTREAM LIMIT OF MAINTENANCE FLOW)

Study Plot

Segment #1

Fence Line

DOWNSTREAM LIMIT OF MAINTENANCE FLOW

Segment #2

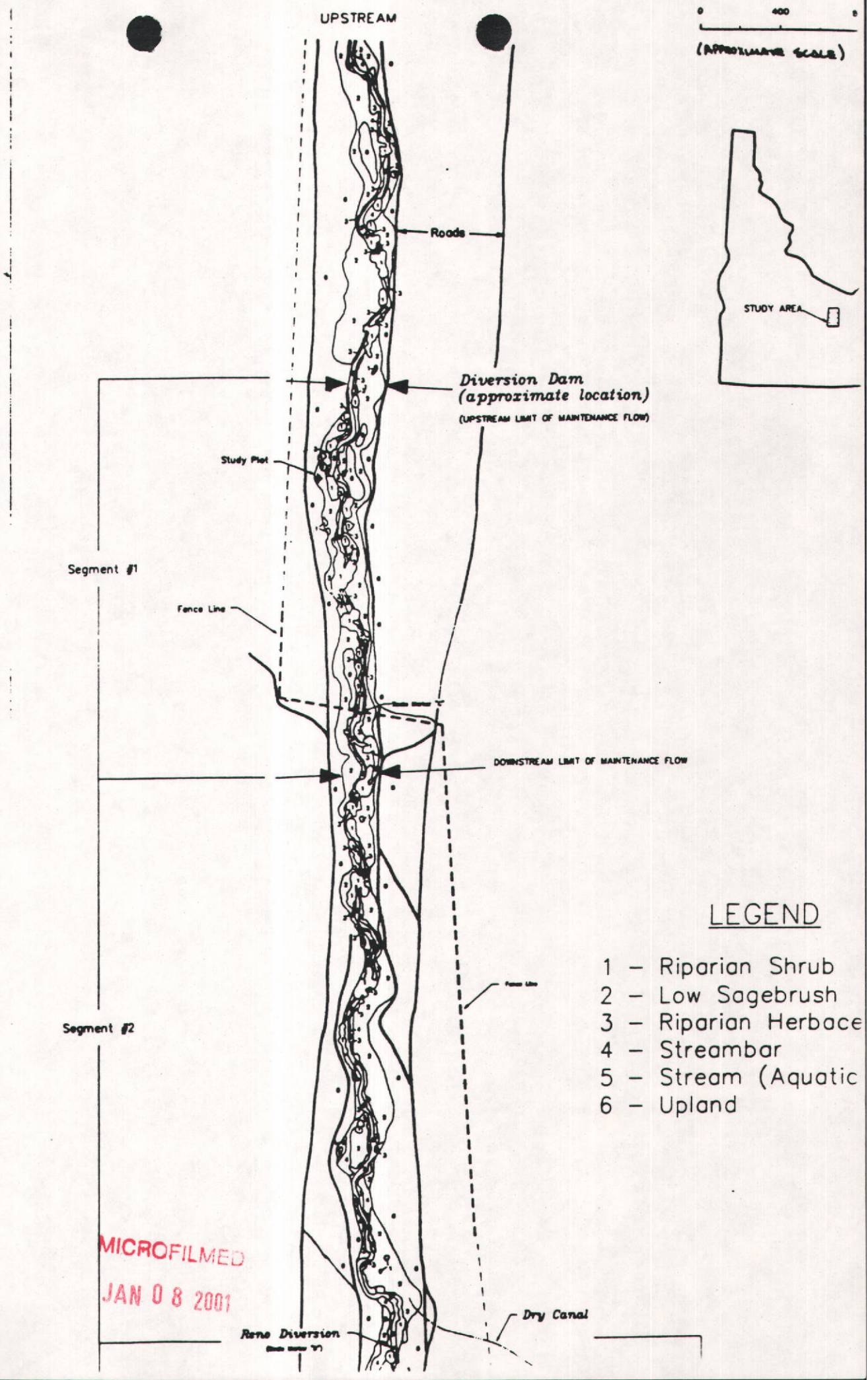
LEGEND

1 – Riparian Shrub
2 – Low Sagebrush
3 – Riparian Herbac
4 – Streambar
5 – Stream (Aquatic
6 – Upland

MICROFILMED
JAN 0 8 2001

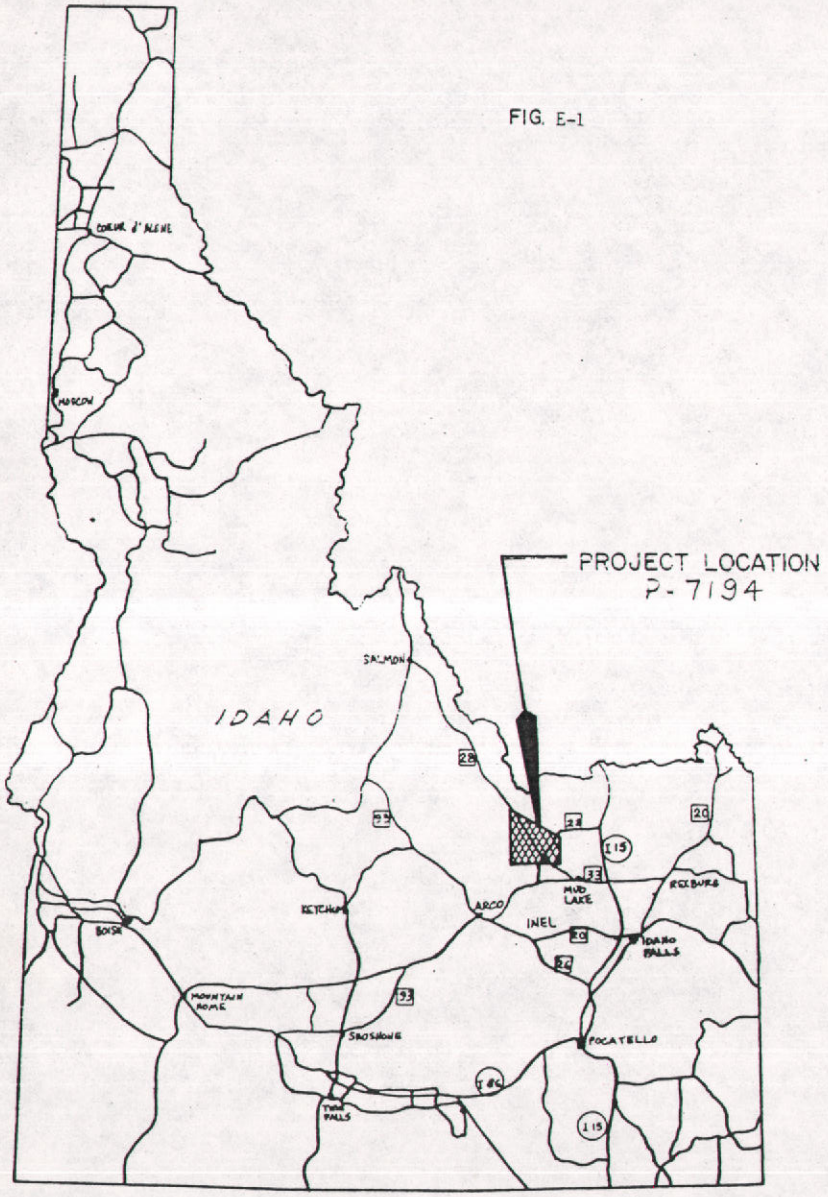
Dry Canal

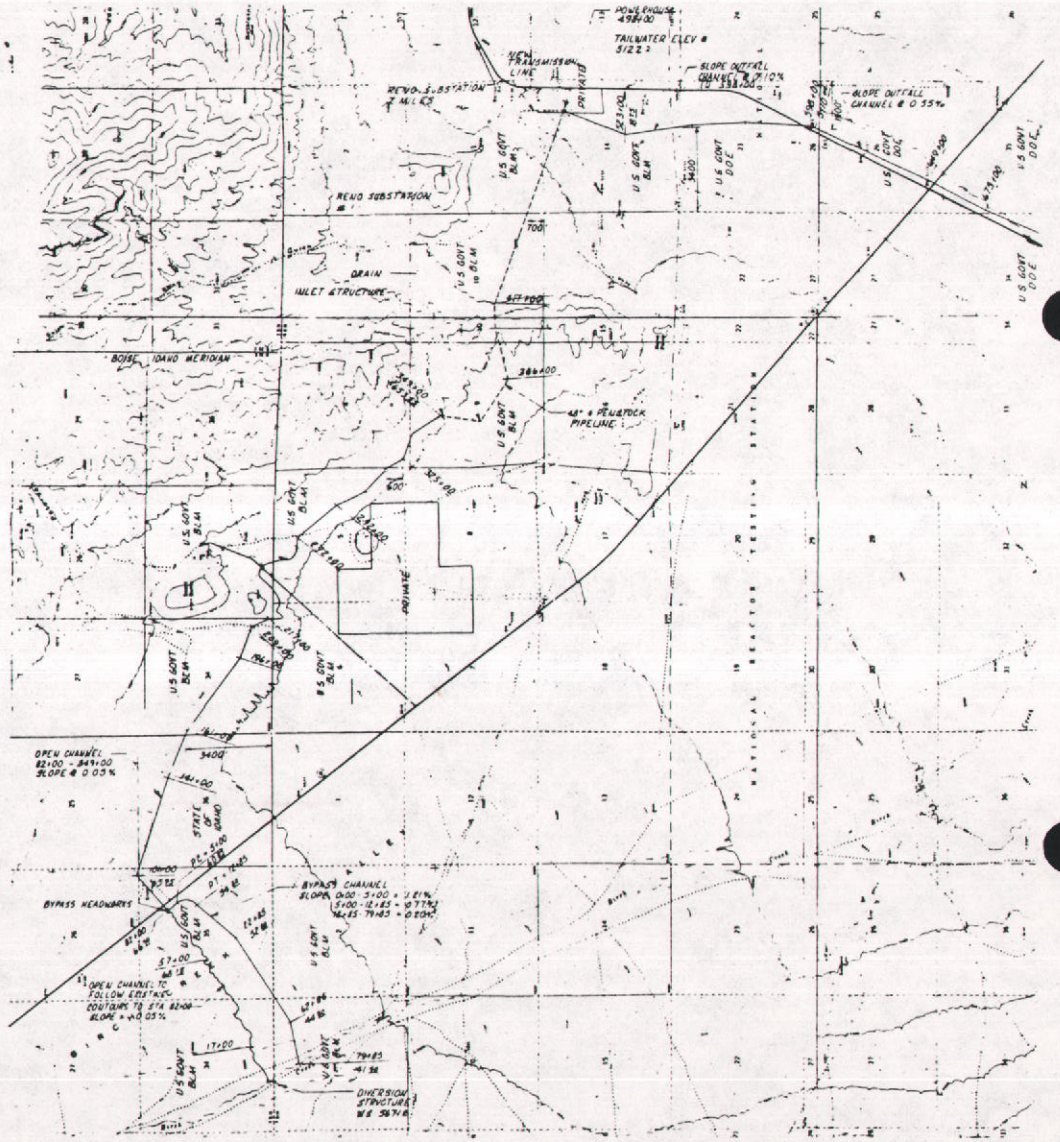
Reno Diversion



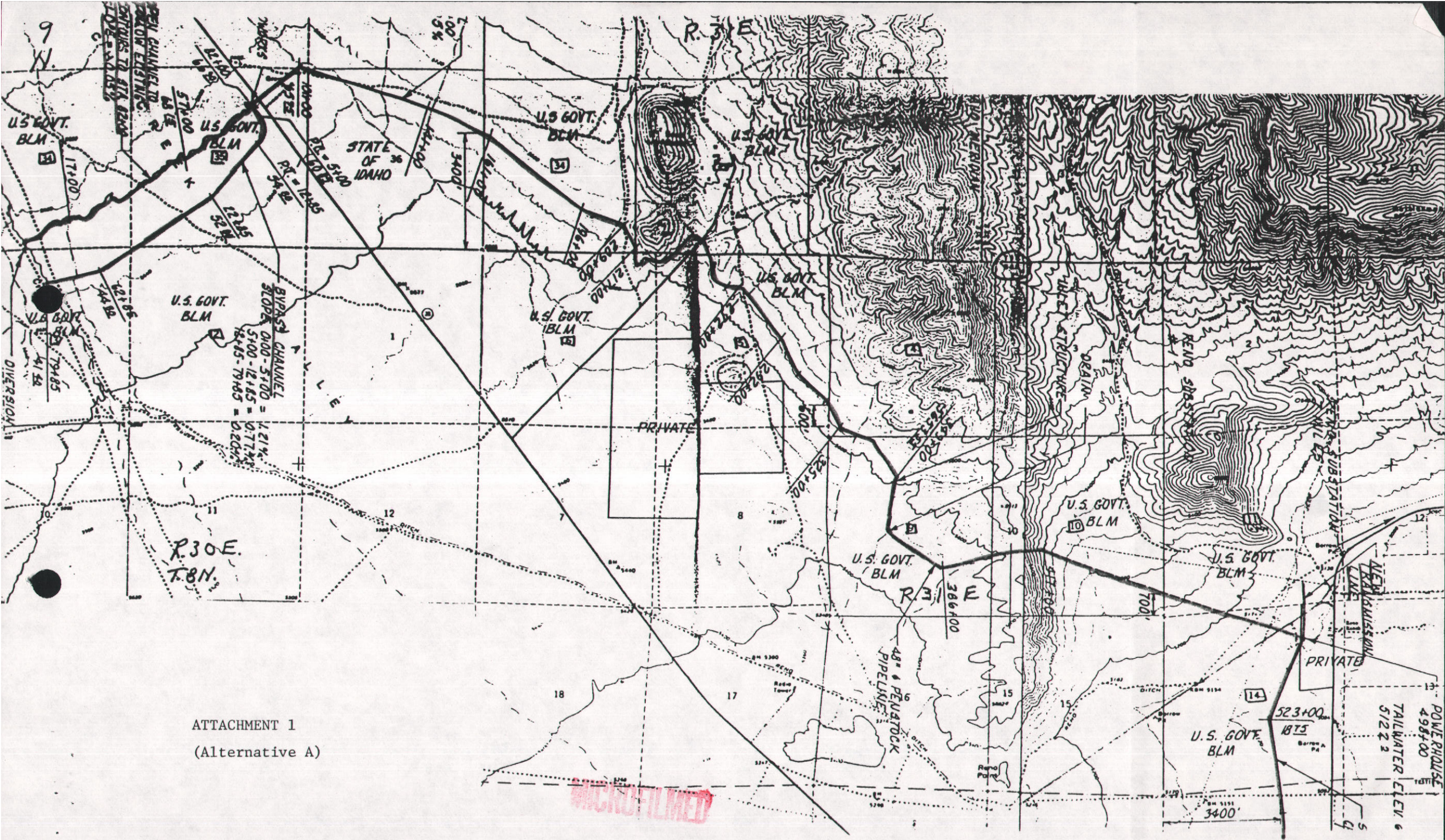
MICROFILMED
JAN 0 8 2001

FIG. E-1



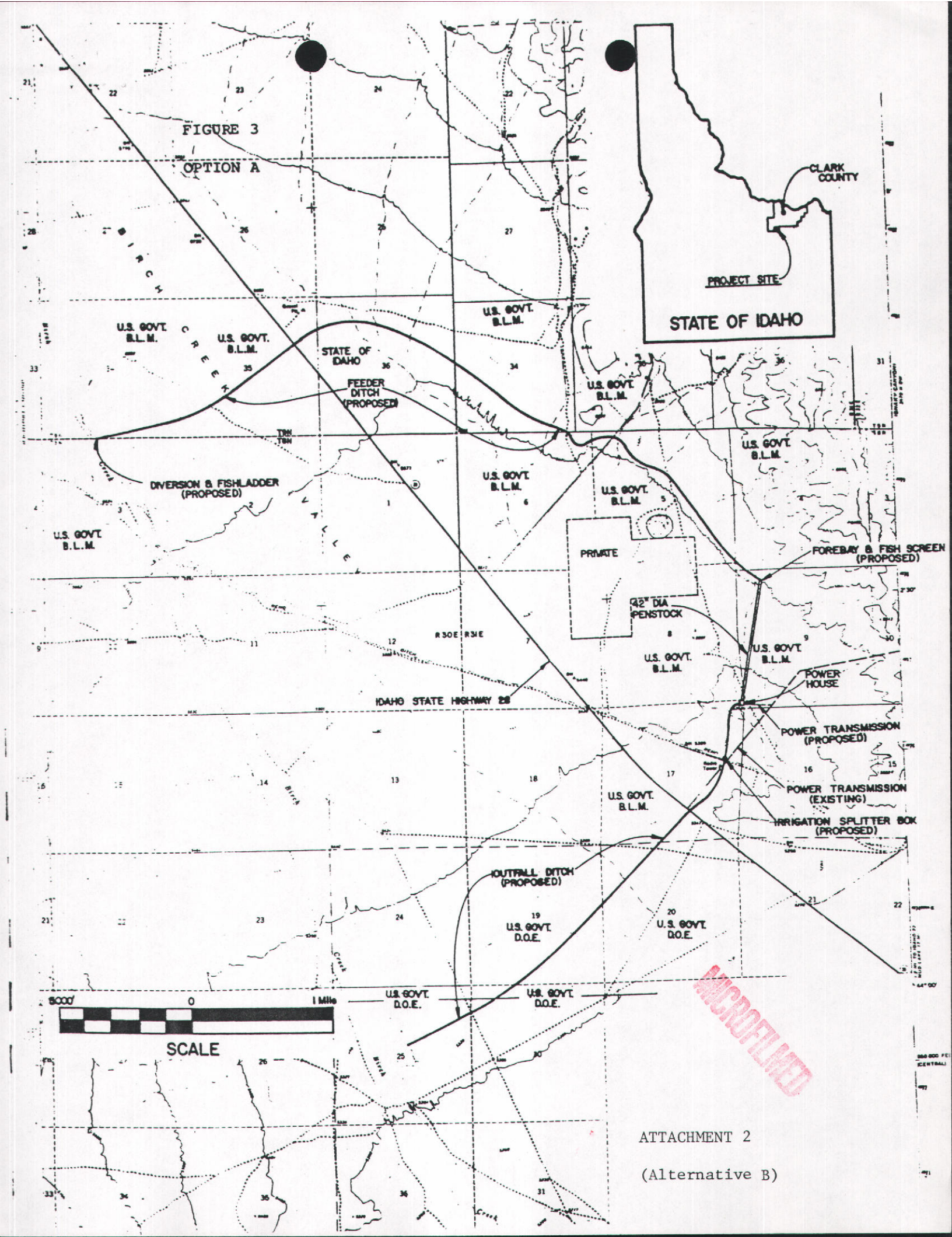


MICROFILMED



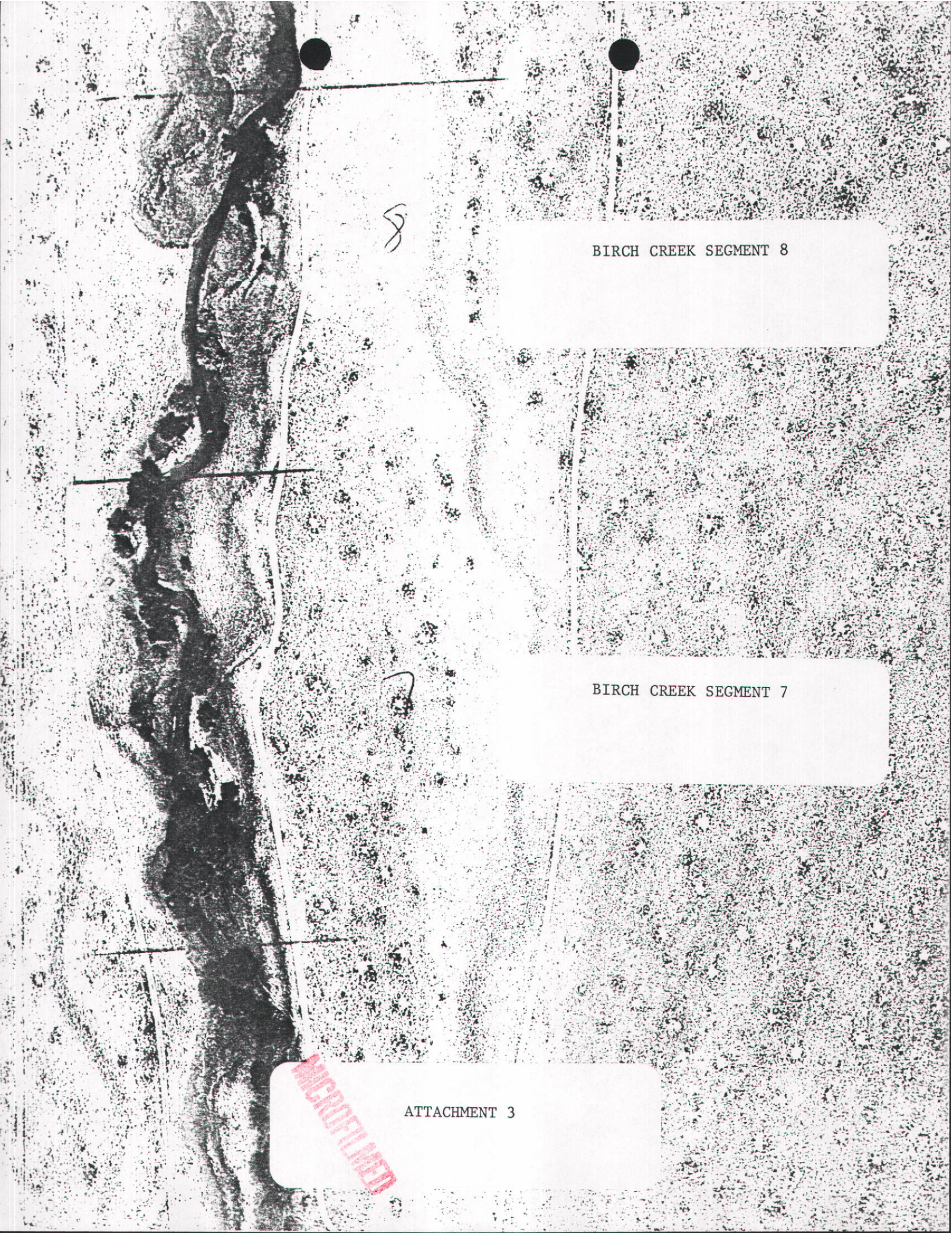
ATTACHMENT 1

(Alternative A)



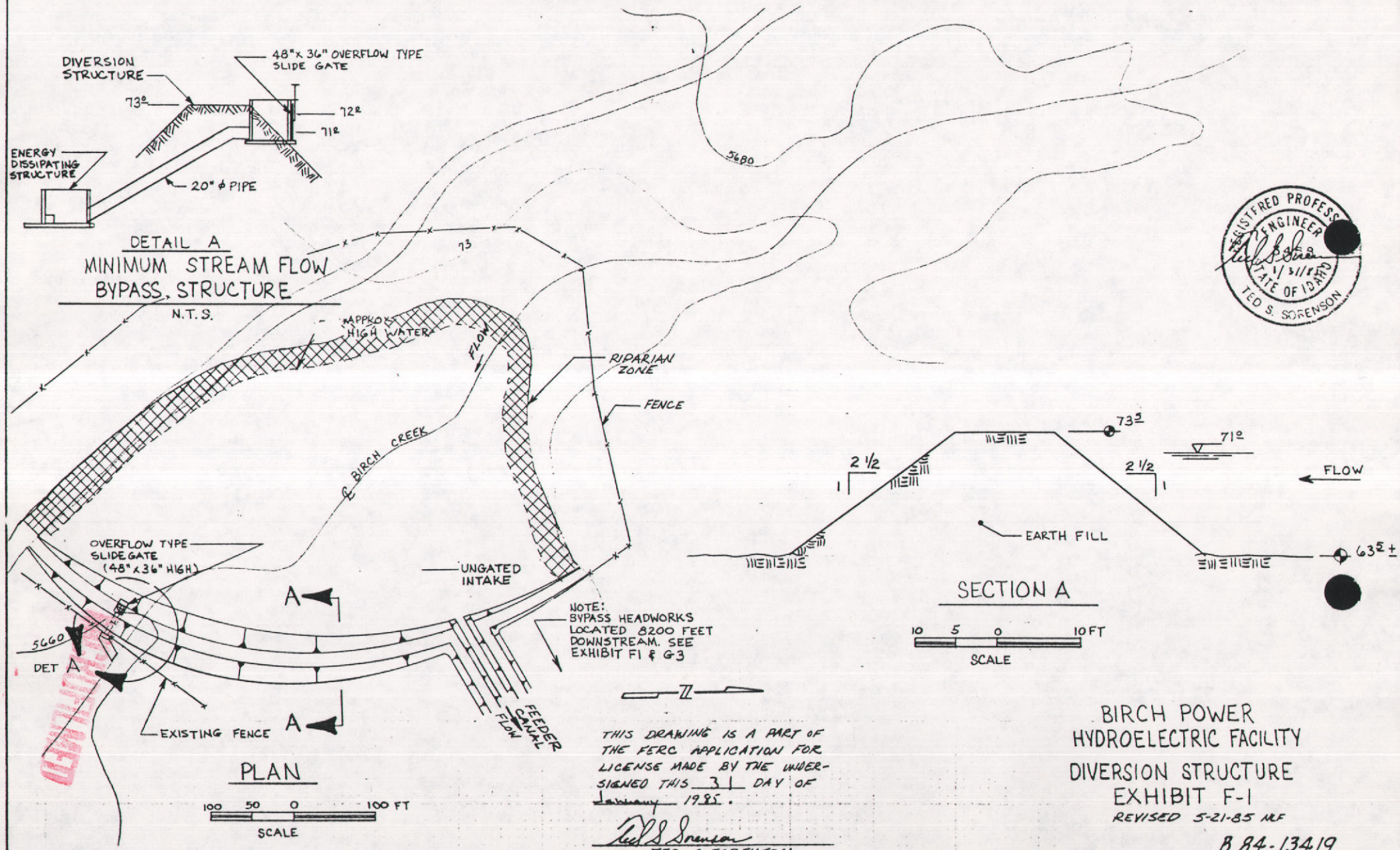
ATTACHMENT 2

(Alternative B)



ATTACHMENT 3

MICROFILMED



THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 31 DAY OF January 1985.

Ted S Sorenson
TED S. SORENSON

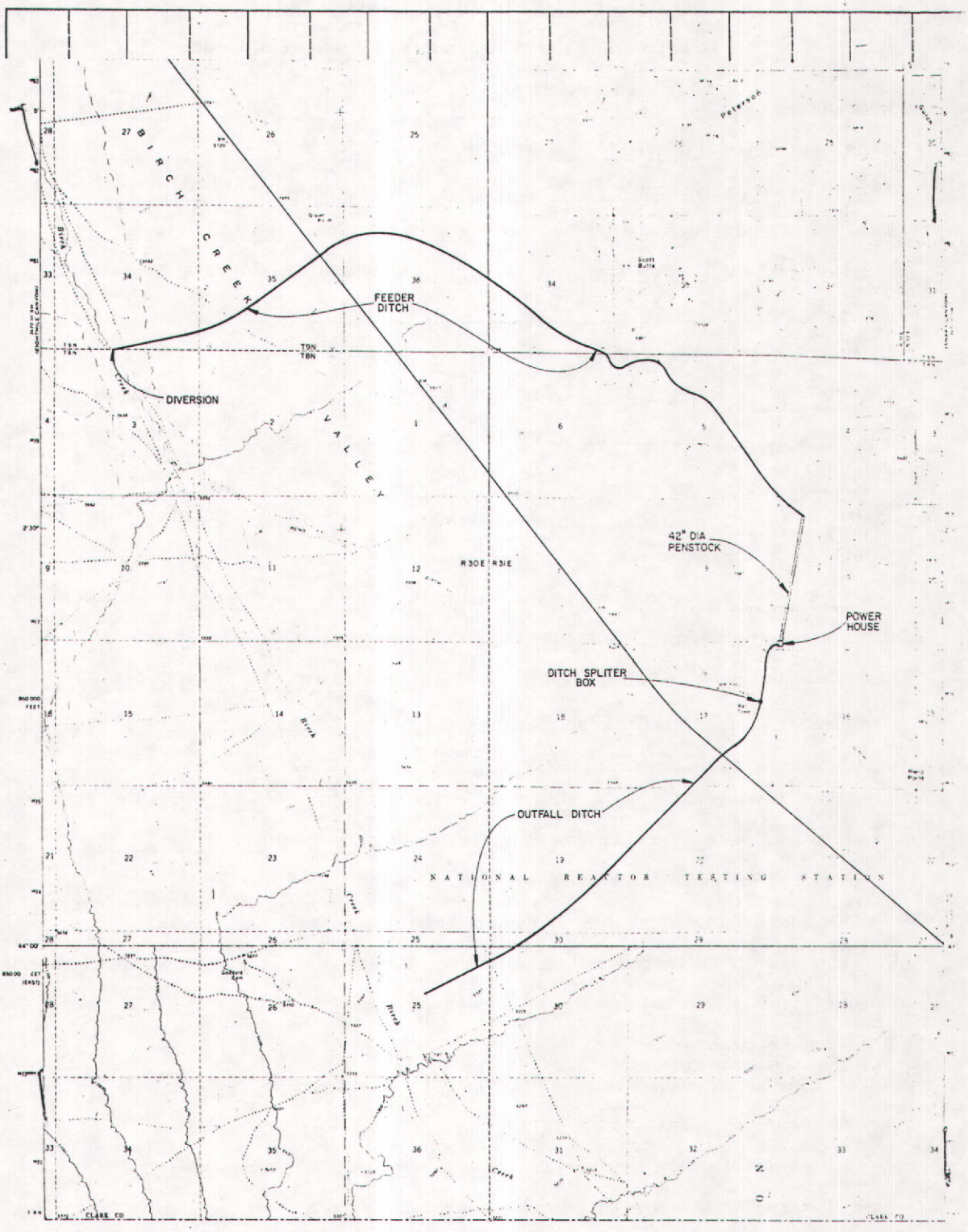
BIRCH POWER HYDROELECTRIC FACILITY

DIVERSION STRUCTURE EXHIBIT F-1

REVISED 5-21-85 MF

B 84-13419

11. Map of proposed project: show clearly the proposed point of diversion, place of use, section number, township and range number.

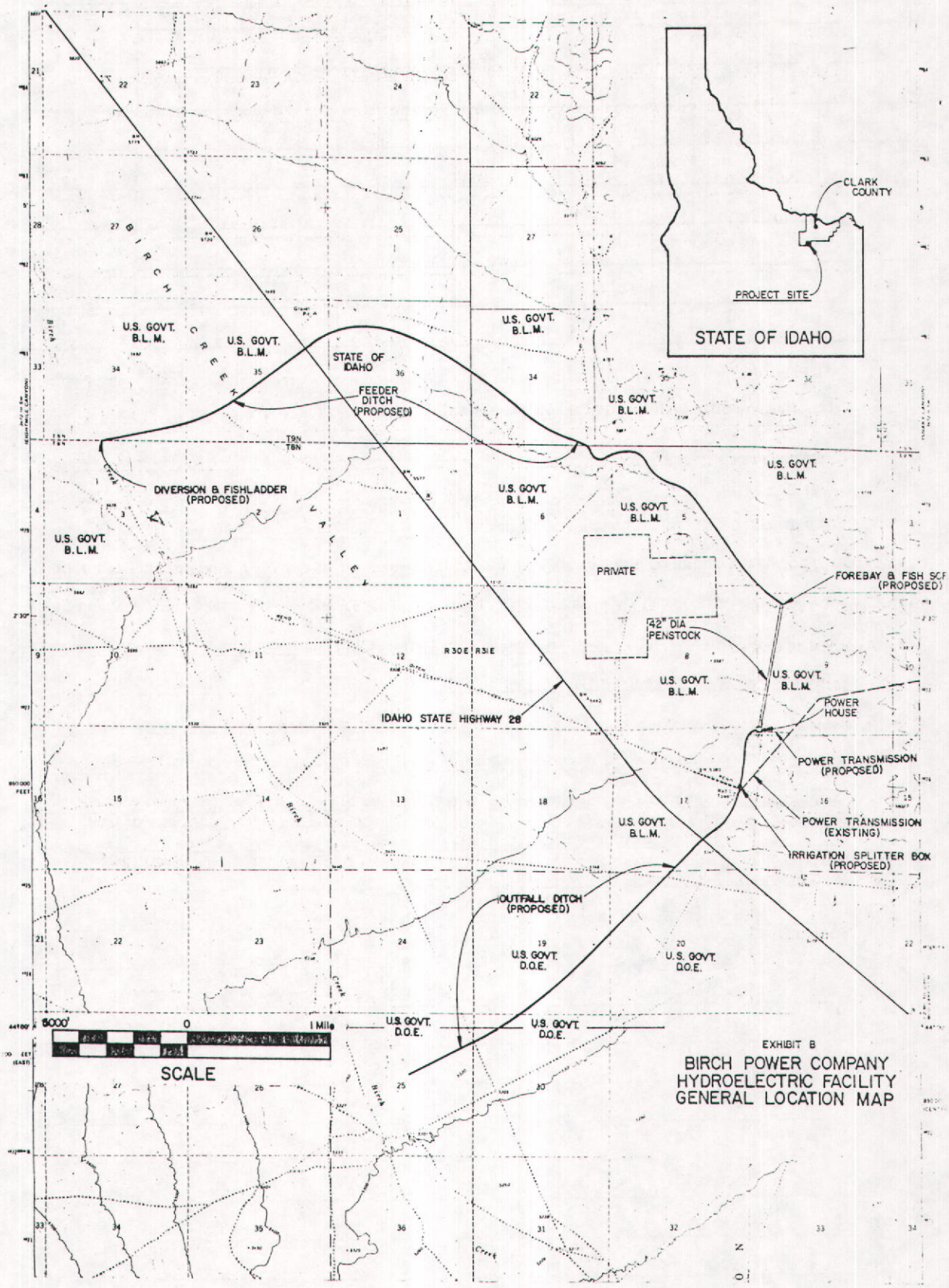


BE IT KNOWN that the undersigned hereby makes application for permit to appropriate the public waters of the State of Idaho as herein set forth.

(Applicant)

MICROFILMED

11. Map of proposed project: show clearly the proposed point of diversion, place of use, section number, township and range number.



(Applicant)

NO. 340-10 DIETZGEN GRAPH PAPER
10 X 10 PER INCH
DIETZGEN CORPORATION
MADE IN U.S.A.

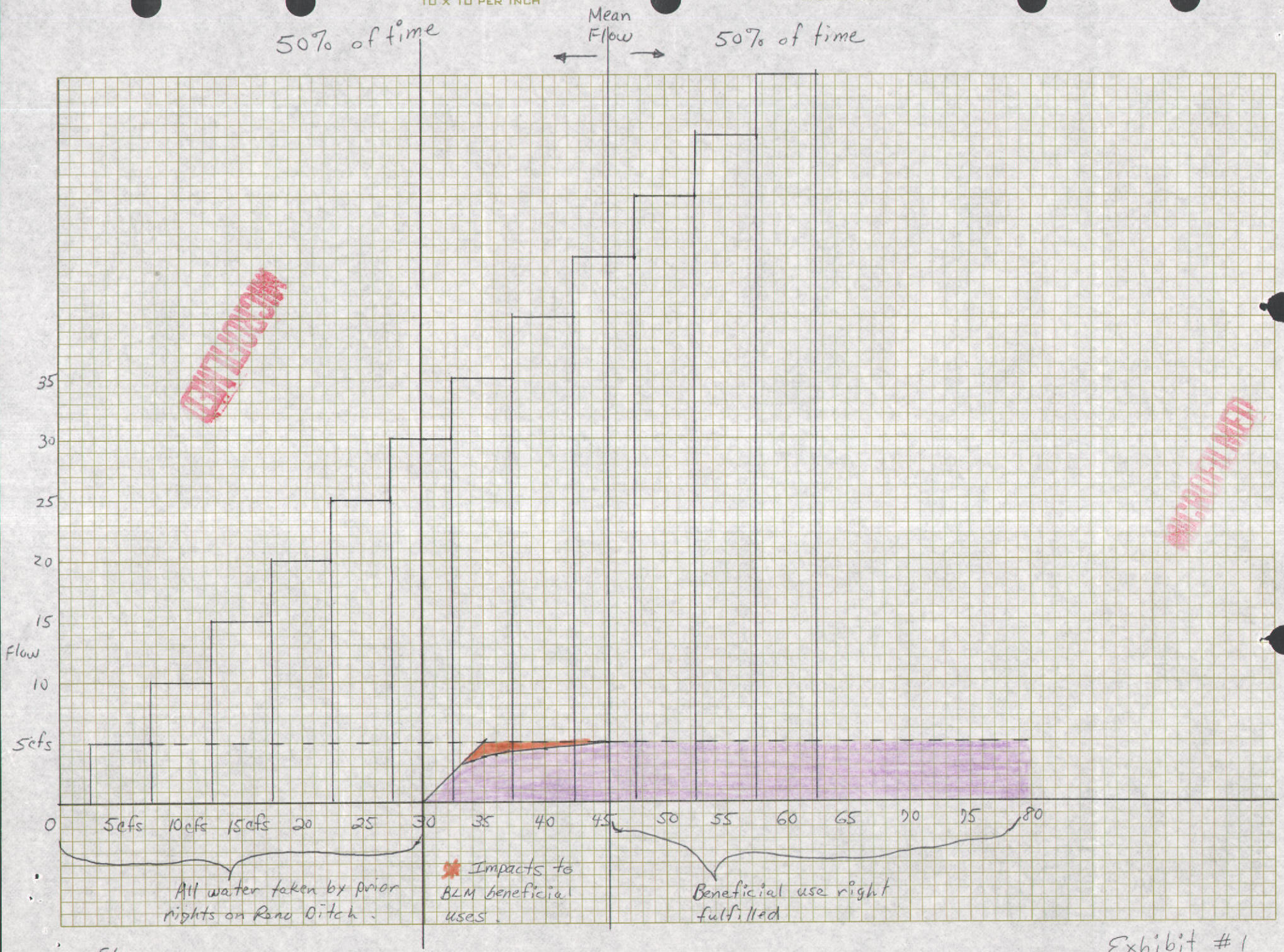


Exhibit #1

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Boise, ID 83706 - P.O. Box 83720, Boise, ID 83720-0098
Phone: (208) 327-7900 Fax: (208) 327-7866 Web Site: www.idwr.state.id.us

DIRK KEMPTHORNE
Governor

KARL J. DREHER
Director

December 11, 2001

TED S SORENSON
5203 S 11 E
IDAHO FALLS ID 83404

RE: License Nos. 32-7136 and 32-7128

Dear Mr. Sorenson:

The Department of Water Resources has issued the enclosed Water Right License confirming that a water right has been established in accordance permit 32-7136. Please be sure to thoroughly review the conditions of approval and remarks listed on your license.

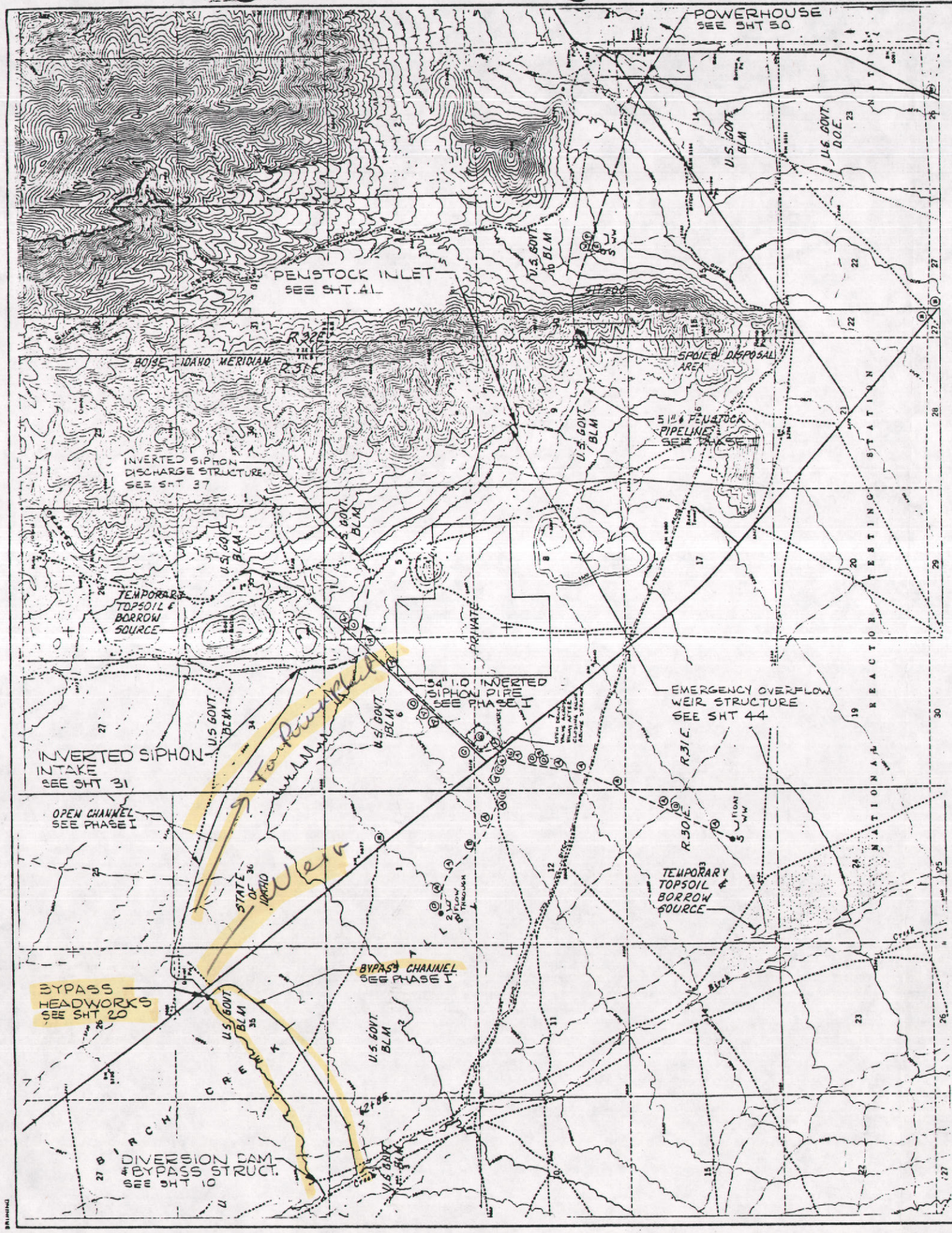
The license is a **"preliminary order"** issued by the Department pursuant to section 67-5243, Idaho Code. It can and will become a final order without further action by the Department unless a party petitions for reconsideration or files an exception and/or brief within fourteen (14) days of the service date as described in the enclosed information sheet about preliminary orders.

A copy of your approved amendment of permit for right 32-7136 is also enclosed.

The Department has also issued the enclosed amended Water Right License for water right 32-7128. The amendment was necessary to add condition no. 8 to the license. The condition was added to the permit 32-7128 by order on December 5, 2000, but it was inadvertently omitted from the license. The amended license is an **"amended final order"** pursuant to Sections 67-5246 or 67-5247, *Idaho Code*, and Rule 760 of the Department's Rules of Procedure. An informational sheet that explains how to respond to final orders is enclosed.

In preparing your licenses, the Department considered your request to retain the old subordination condition from your permits rather than imposing the new subordination condition used by the Department since the adoption of Section 42-203B(6), *Idaho Code.* It is the Department's position, however, that the new condition embodies the intent of the legislation, and that the Department has the authority to subordinate licenses issued for hydropower purposes, even if the permit was issued prior to July 1, 1985. Therefore, to comply with the intent of the legislation, the Department issued your licenses with the new subordination condition. If an application is filed to appropriate water upstream from your diversion for a use other than hydropower, you

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DEC 12 2001



LEGEND

- (A) AIR VENT
- (D) DRAIN
- ( ) TROUGH
- (G) GATE VALVE
- (Y) GATE, Y STRAINER, & FLOW REDUCER IN CULVERT
- (W) WATER INLET FROM HYDRO
- WW WILDLIFE WATER
- (P) PRESSURE REDUCING VALVE W/ Y STRAINER, GATE VALVE, & AIR VENT
- (R) FLOW CONTROL VALVE

SITE PLAN
PHASE II

N

2000 1000 0 3000
SCALE IN FEET

MICROFILMED
NOV 13 2001

RECORD DRAWING

REVISIONS

A	ADDED EMERGENCY OVERFLOW WEIR & SPILLWAY, REVISED SPOIL & BORROW AREAS, ADDED BLM WATERING IMPROVEMENTS	SEPT 8, 1986
B	ADDED 34" I.D. SIPHON PIPE	

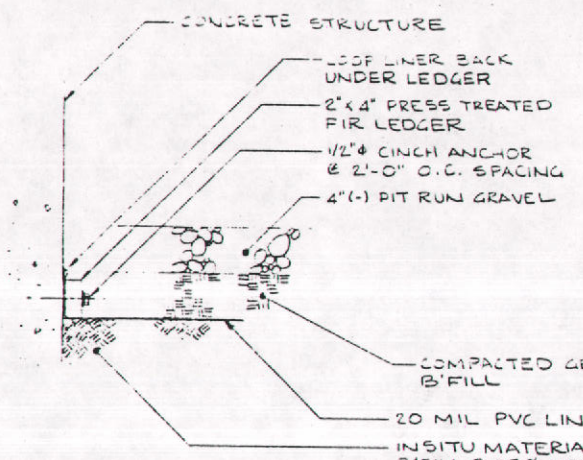
DATE SEPT 8, 1986
DRAWN SPO
CHECKED
APPROVED
ENGINEER

BIRCH CREEK HYDROELECTRIC FACILITY PHASE II

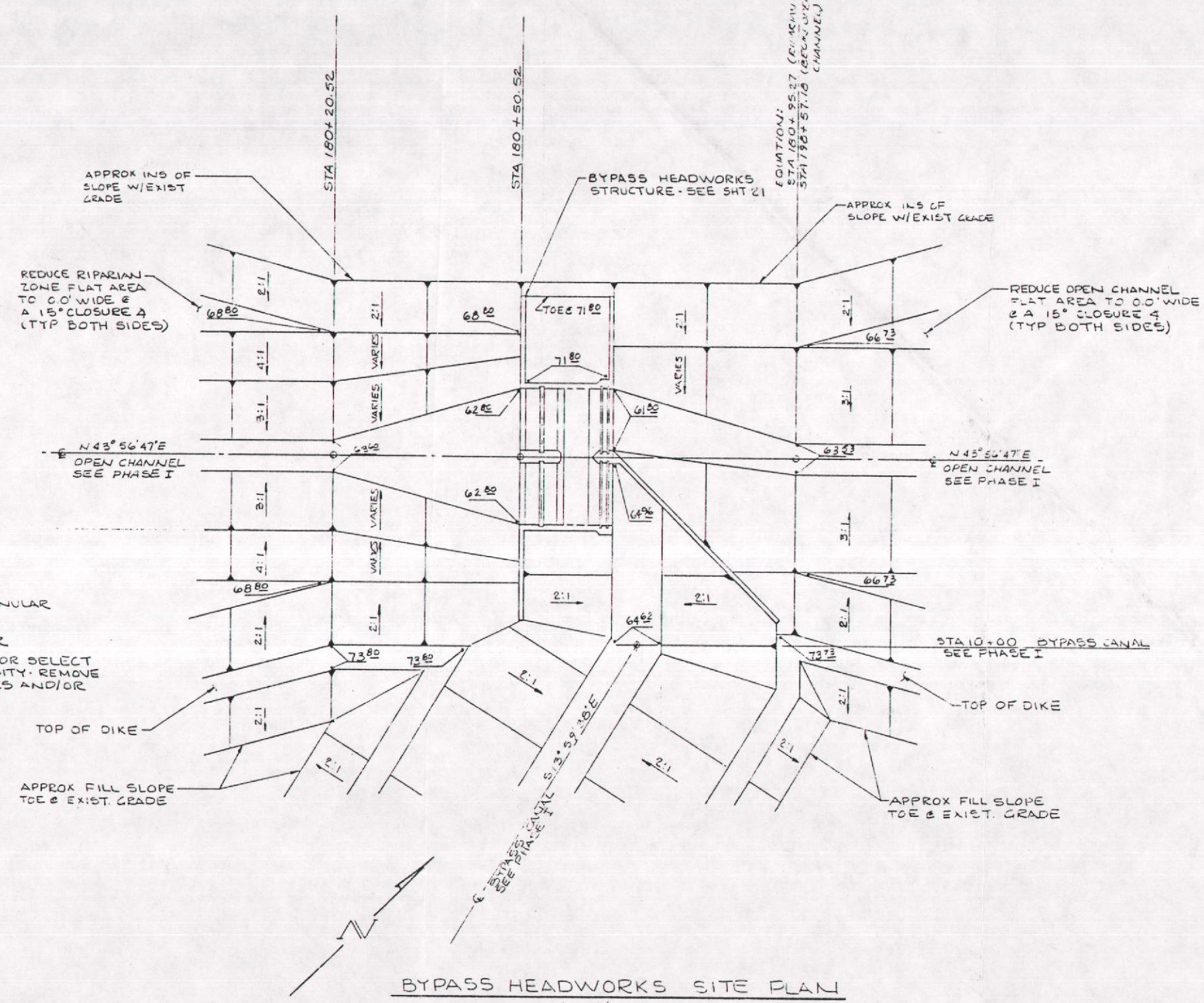
SITE PLAN

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

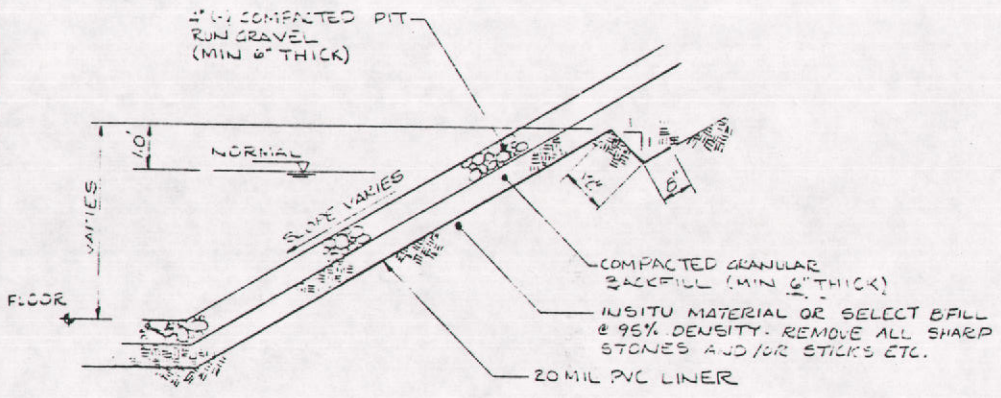
SCALE 1" = 1000'
DRAWING NO. C8613424
SHEET NO. 2



DETAIL B
NO SCALE



BYPASS HEADWORKS SITE PLAN
1" = 10'



DETAIL A
1/2" = 1'-0"

NOTES:

1. SEE PHASE I DRAWING D86-13423 SHT 8 FOR RIPARIAN ZONE, OPEN CHANNEL, & BYPASS CANAL TYPICAL CROSS SECTIONS.
2. INSTALL 20 MIL PVC LINER IN OPEN CHANNEL. TERMINATE ALL AROUND AT 4.2 FT ABOVE CHANNEL FLOOR ELEV SHOWN. SEE DETAIL A FOR TYP TERMINATION. TERMINATE LINER AROUND CONCRETE STRUCTURE PER DETAIL B.

RECORD DRAWING

REVISIONS

A	COVERED STRUCTURE G.F. FILET	

DATE SEPT. 5 1986
DRAWN SWB
CHECKED
APPROVED
ENGINEER
CHECK 9-5-86

BIRCH CREEK HYDROELECTRIC FACILITY PHASE II

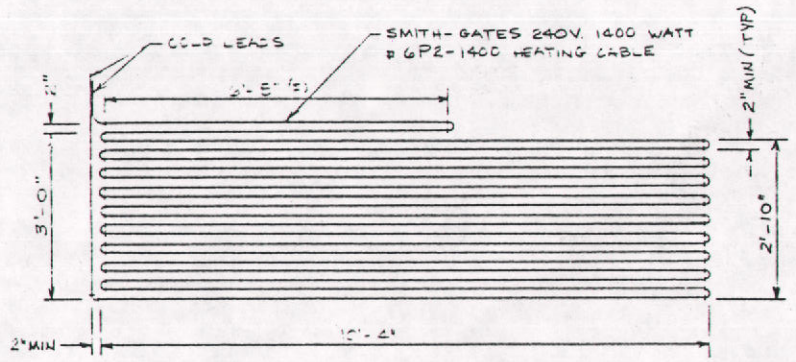
BYPASS HEADWORKS SITE PLAN

REGISTERED PROFESSIONAL ENGINEER STATE OF IDAHO

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

SCALE NOTED
DRAWING NO. D86-13424
SHEET NO. 20

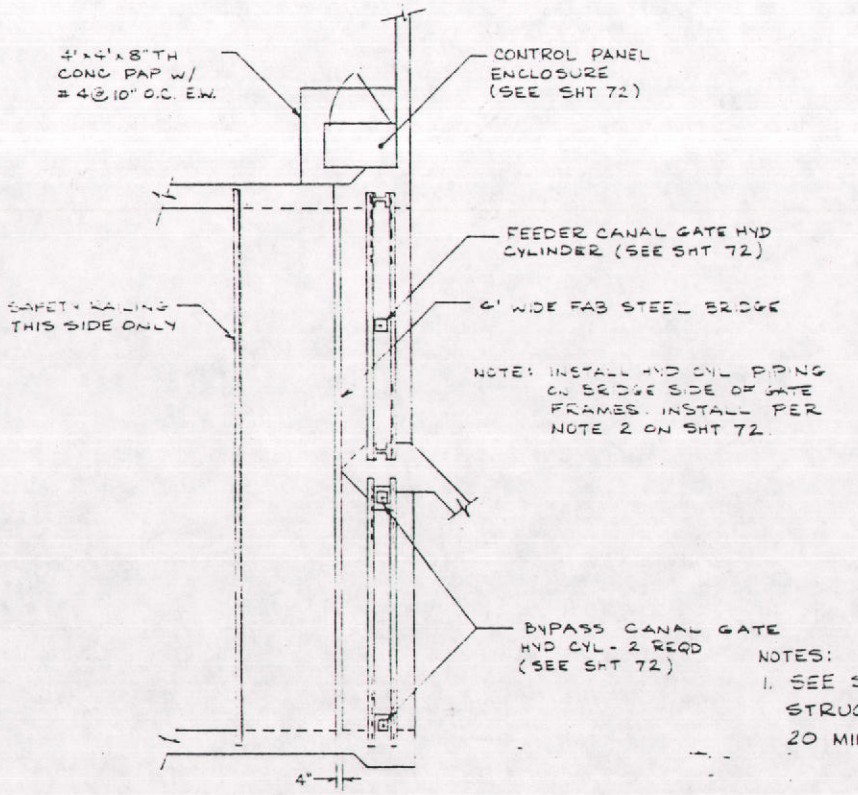
BRUNING



APPROX. LAYOUT FOR A 203 LF CABLE INSTALL ON 6" DIA. x 2" O.C. VINYL COATED WIRE USING NYLON TIES.

DETAIL C SHT 24

NO SCALE

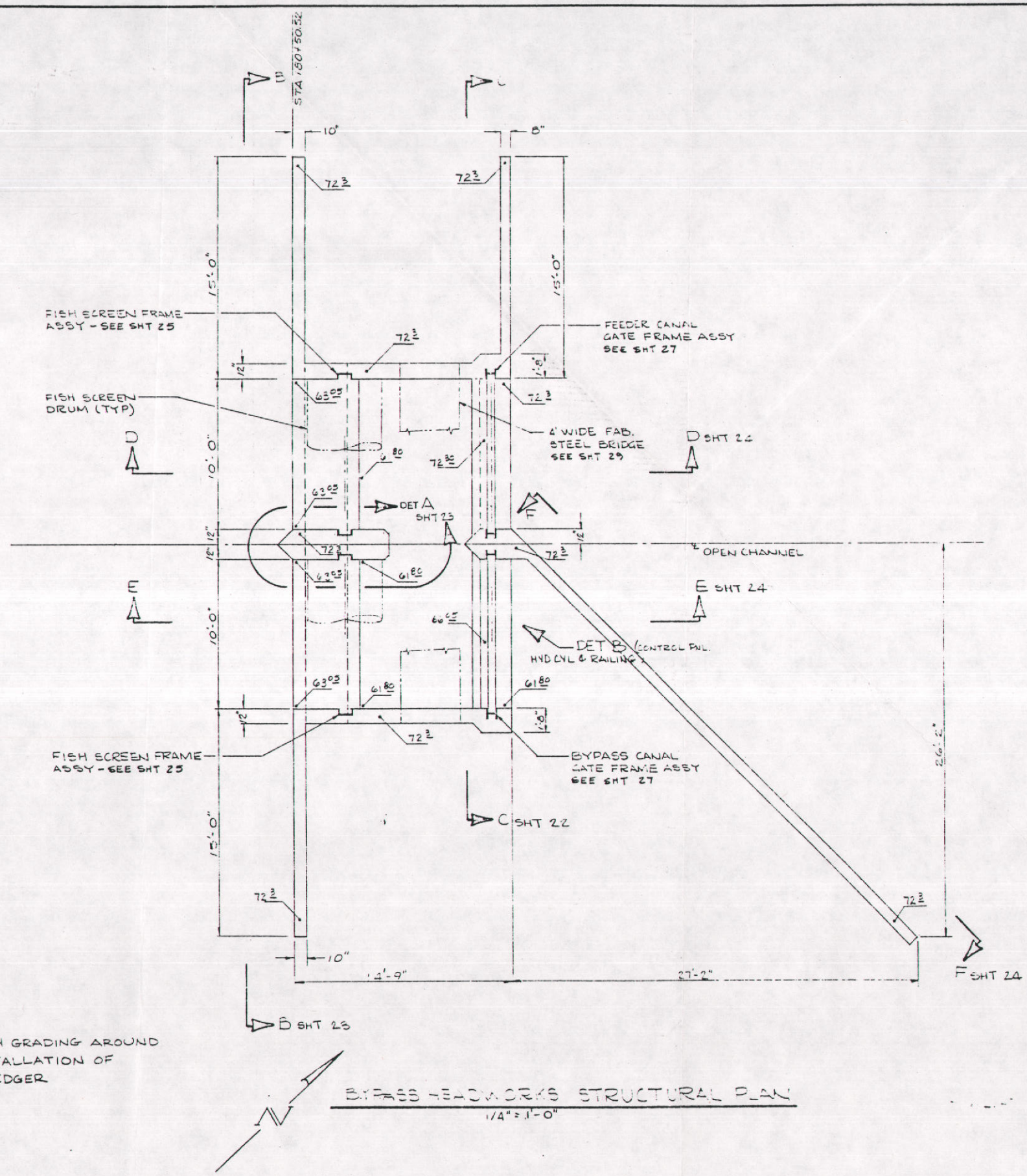


DETAIL B

1/2 = 1'-0"

NOTES:

1. SEE SHT. 20 FOR FINISH GRADING AROUND STRUCTURE AND INSTALLATION OF 20 MIL PVC ATTACH LEDGER



BYPASS HEADWORKS STRUCTURAL PLAN

1/4" = 1'-0"

RECORD DRAWING

REVISIONS		
A	ADJUSTED ELEVS	
B	ADDED DETAIL C	
C	ADDED DETAIL B	

DATE: OCT 5, 1956
DRAWN: CJES
CHECKED:
APPROVED:
ENGINEER: [illegible]

BIRCH CREEK HYDROELECTRIC FACILITY PHASE II

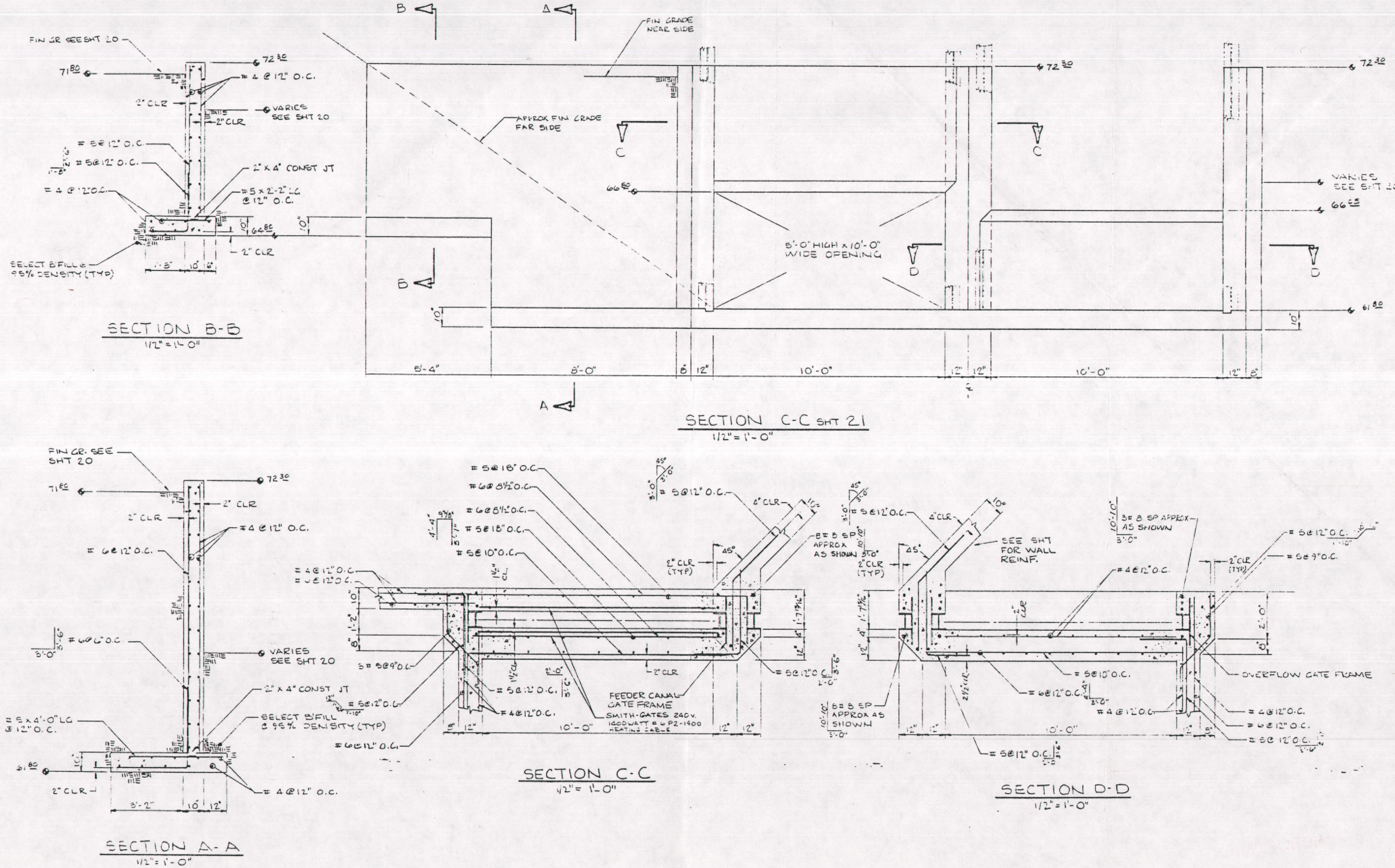
BYPASS HEADWORKS STRUCTURAL PLAN

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

SCALE: NOTED

DRAWING NO. D86-13424

SHEET NO. 21



BIRCH CREEK HYDROELECTRIC FACILITY PHASE II

BYPASS HEADWORKS STRUCTURAL DETAILS

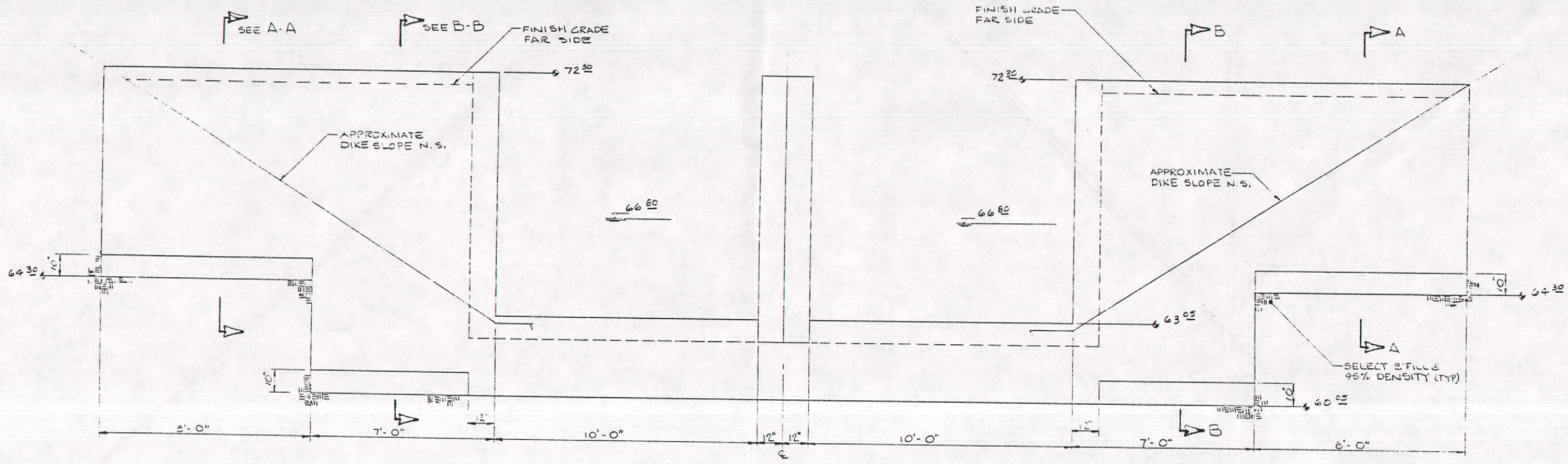
REVISIONS	
A	LOWERED STRUCT. 0.2 FEET

DATE	SEPT 5, 1986
DRAWN	SB
CHECKED	
APPROVED	
ENGINEER	BAKESH 9-6-86

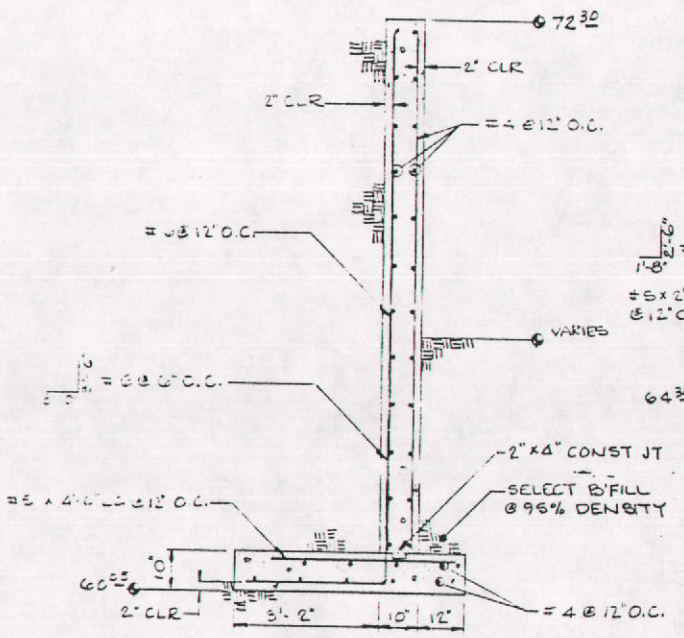
SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

SCALE: NOTED
DRAWING NO. D 36-13424
SHEET NO. 22

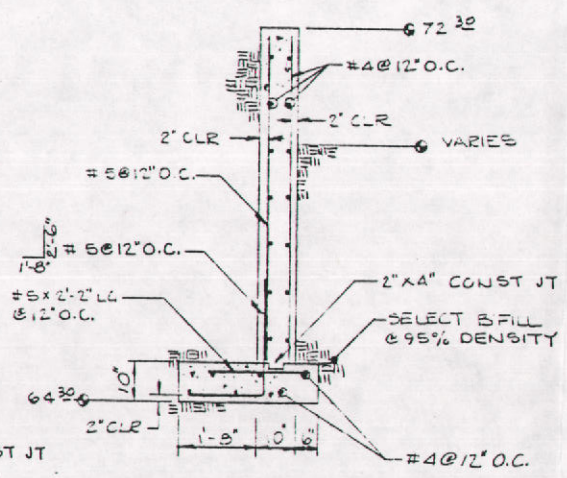
RECORD DRAWING



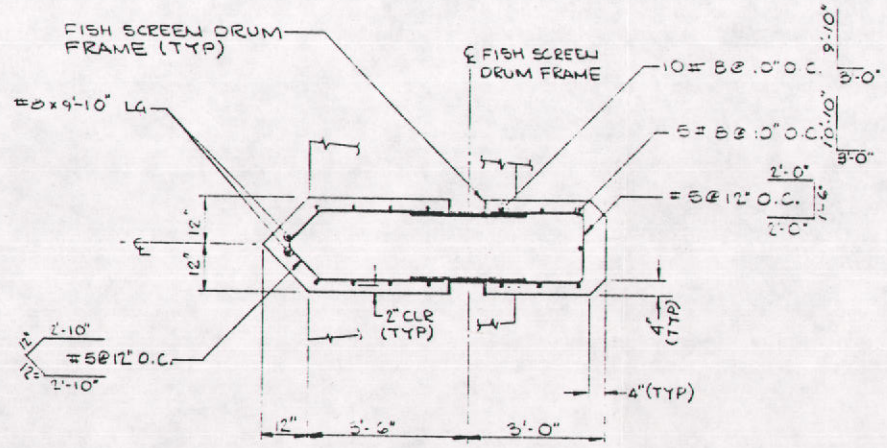
SECTION B-B SHT 21
1/2" = 1'-0"



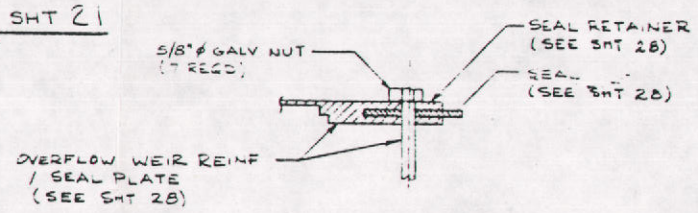
SECTION B-B
1/2" = 1'-0"



SECTION A-A
1/2" = 1'-0"



DETAIL A SHT 21
1/2" = 1'-0"



DETAIL C SHT 24
3" = 1'-0"

RECORD DRAWING

REVISIONS		
A	ADJUSTED ELEVS	
B	ADDED DETAIL C	

DATE SEPT 5, 1986
DRAWN CB
CHECKED
APPROVED
ENGINEER

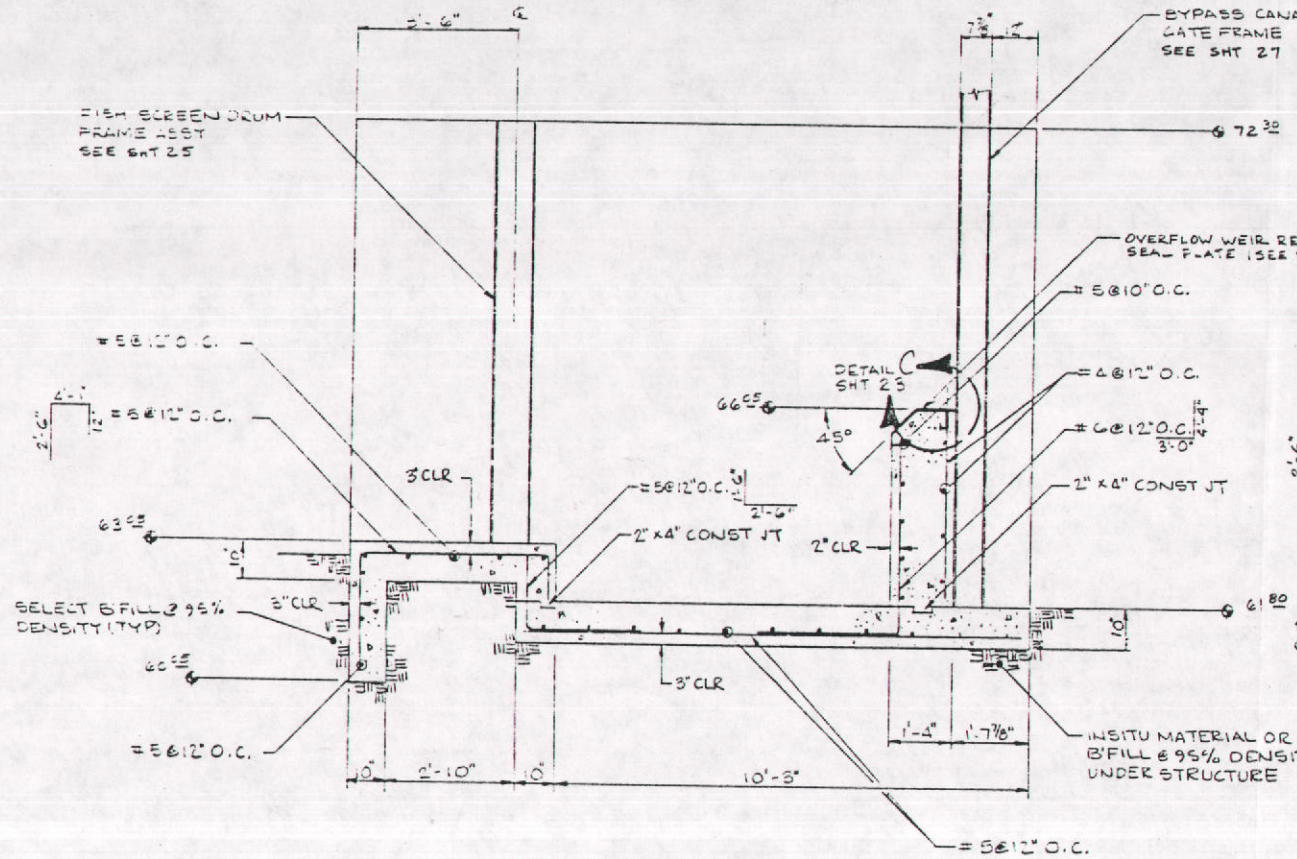
BIRCH CREEK HYDROELECTRIC FACILITY PHASE II

BYPASS HEADWORKS STRUCTURAL DETAILS

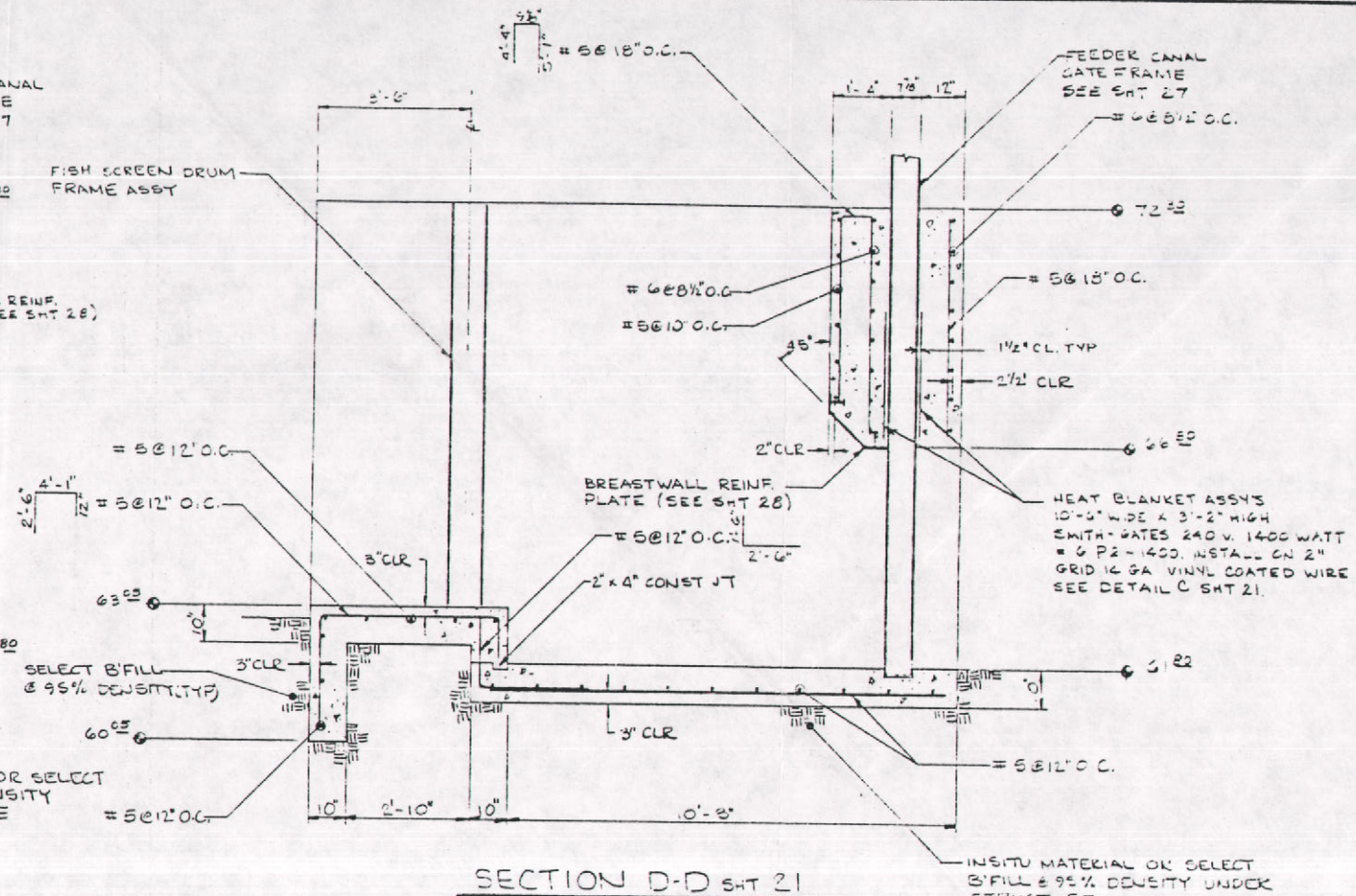
REGISTERED PROFESSIONAL ENGINEER STATE OF IDAHO TED S. SORENSON

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

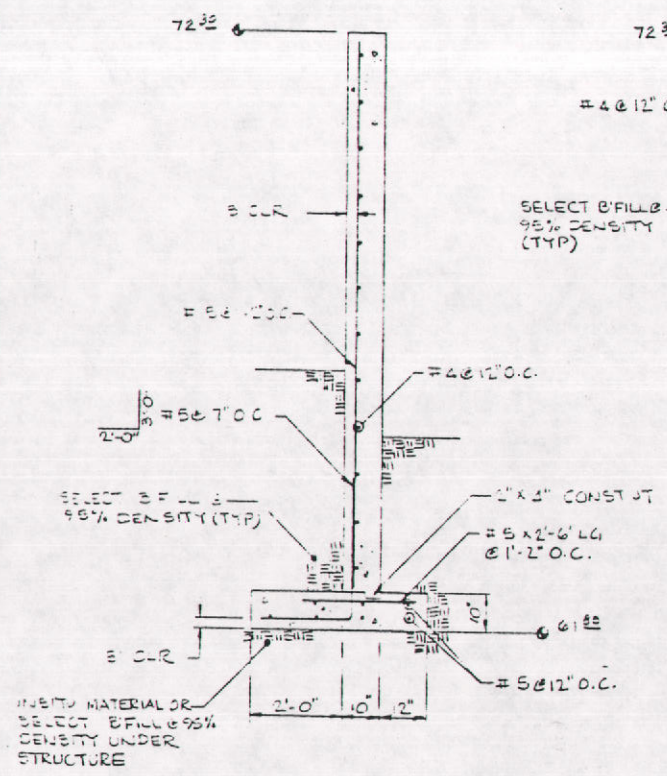
SCALE NOTED
DRAWING NO. DA-13424
SHEET NO. 23



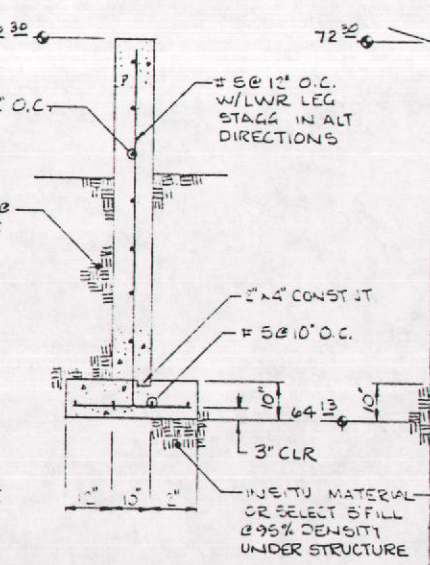
SECTION E-E SHT 21
1/2" = 1'-0"



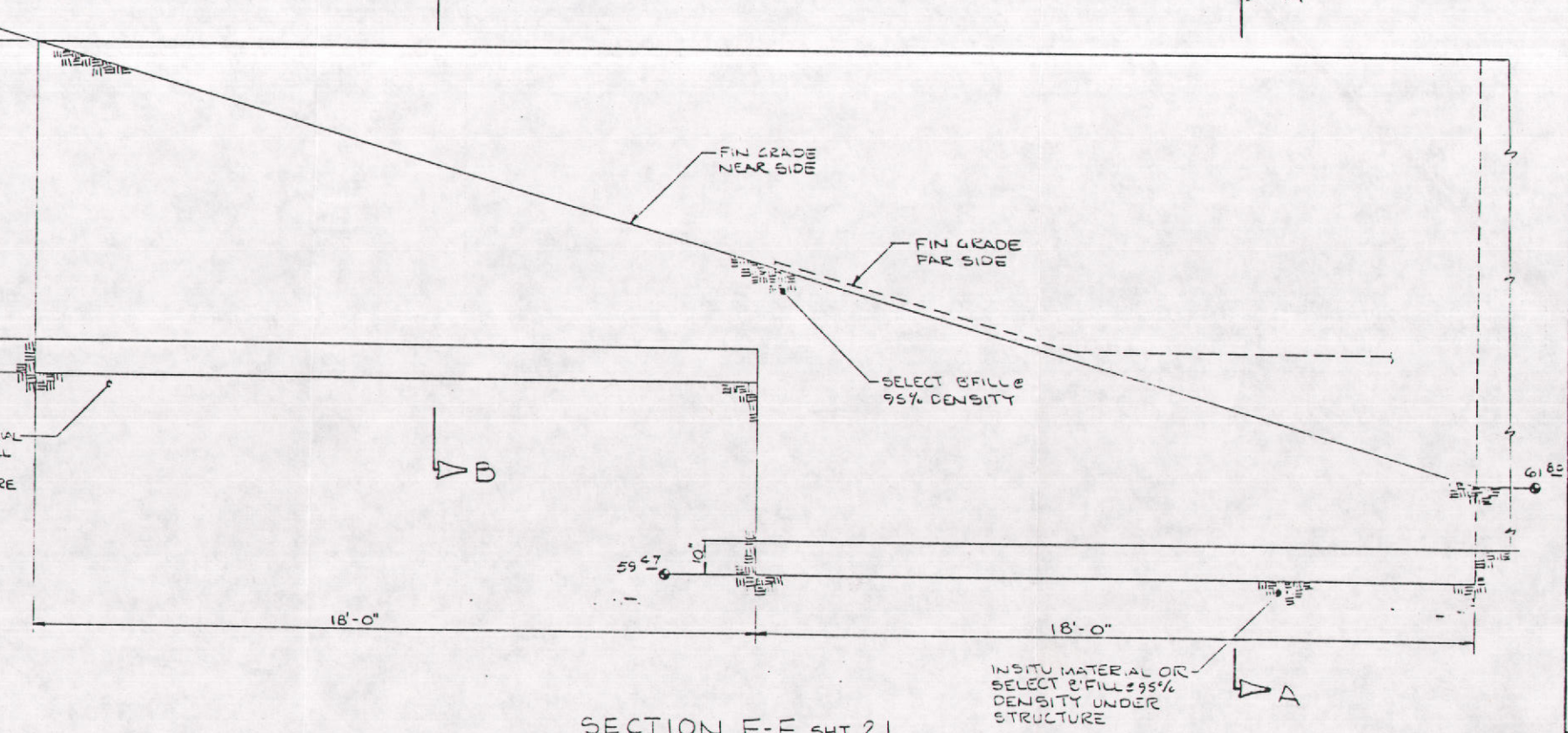
SECTION D-D SHT 21
1/2" = 1'-0"



SECTION A-A
1/2" = 1'-0"



SECTION B-B
1/2" = 1'-0"



SECTION F-F SHT 21
1/2" = 1'-0"

REVISIONS

A	LOWERED STRUCT. 0.20 FEET	
B	RAISED OVERFLOW WEIR REINF SEAL PLATE 0.10' & ADDED HEAT BLANKET ESTIMATE TO GATE SLOTS	

DATE OCT 7 1986
DRAWN GMS
CHECKED
APPROVED
ENGINEER

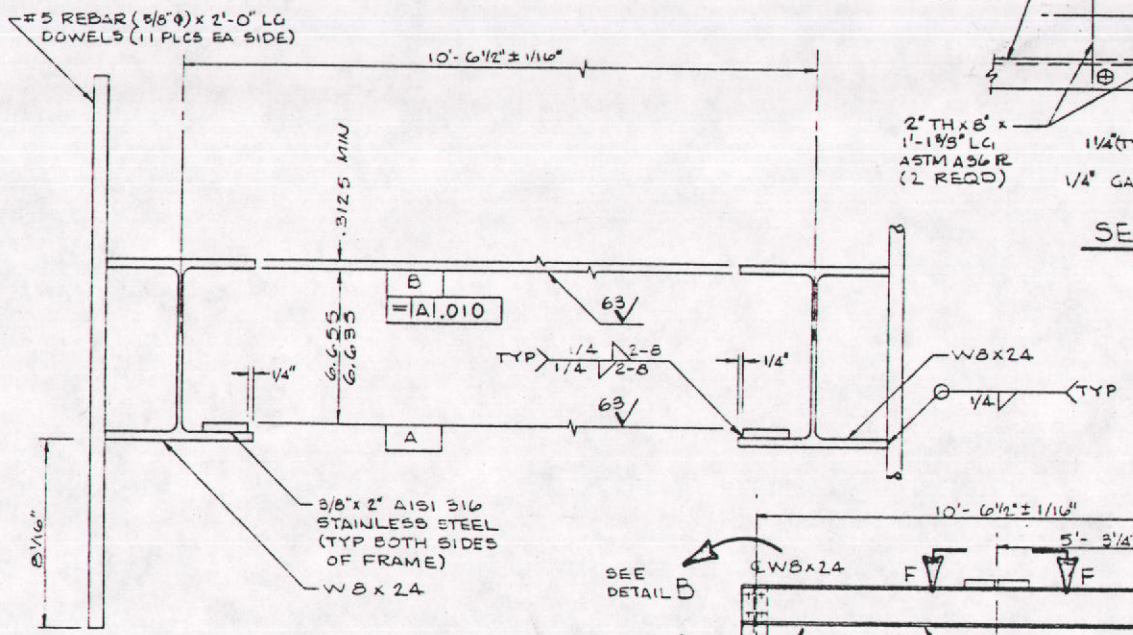
BIRCH CREEK HYDROELECTRIC FACILITY PHASE II

BYPASS HEADWORKS STRUCTURAL DETAILS

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

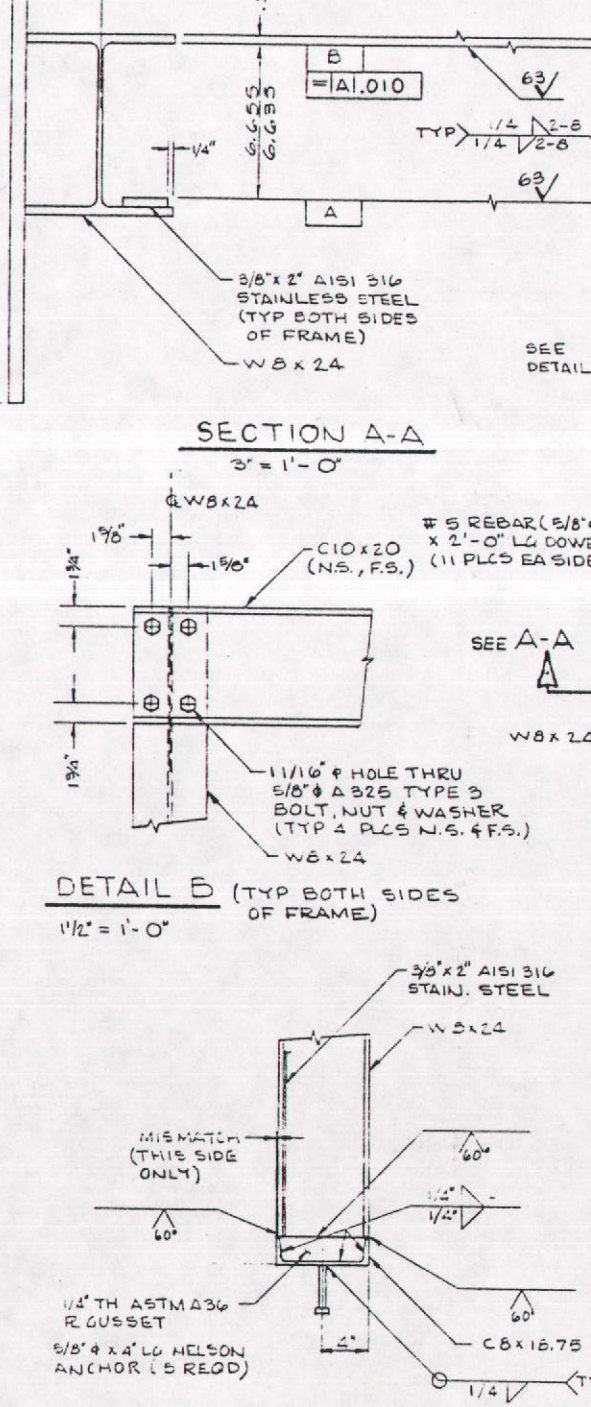
SCALE NOTED
DRAWING NO. DB6-13424
SHEET NO. 24

RECORD DRAWING

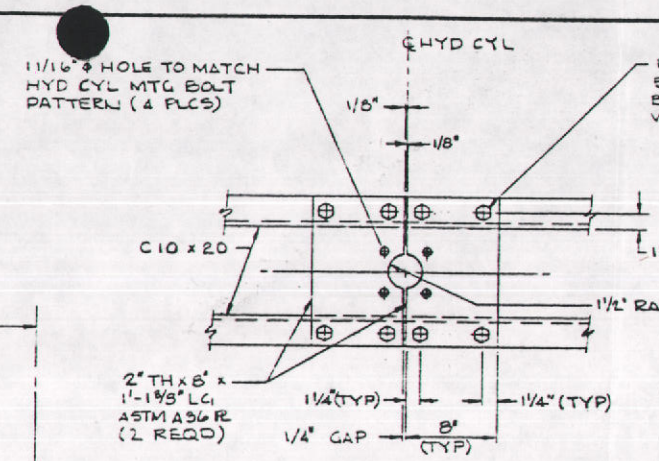


SECTION A-A
3" = 1'-0"

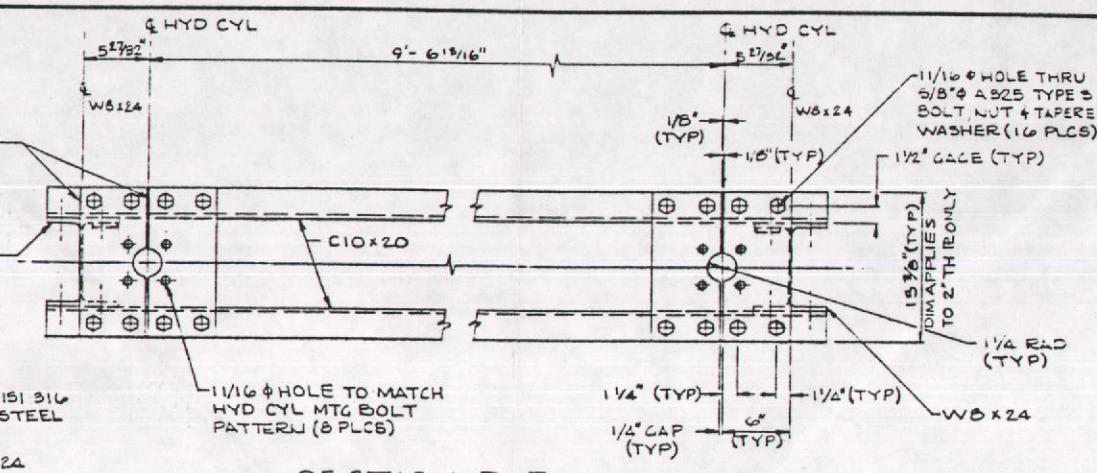
DETAIL B (TYP BOTH SIDES OF FRAME.)
1 1/2" = 1'-0"



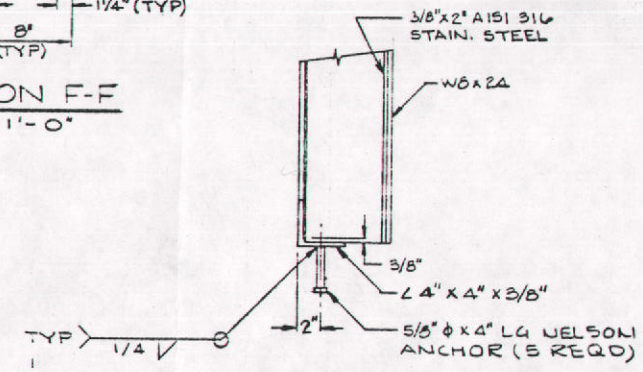
SECTION E-E (TYP BOTH SIDES OF FRAME)
1 1/2" = 1'-0"



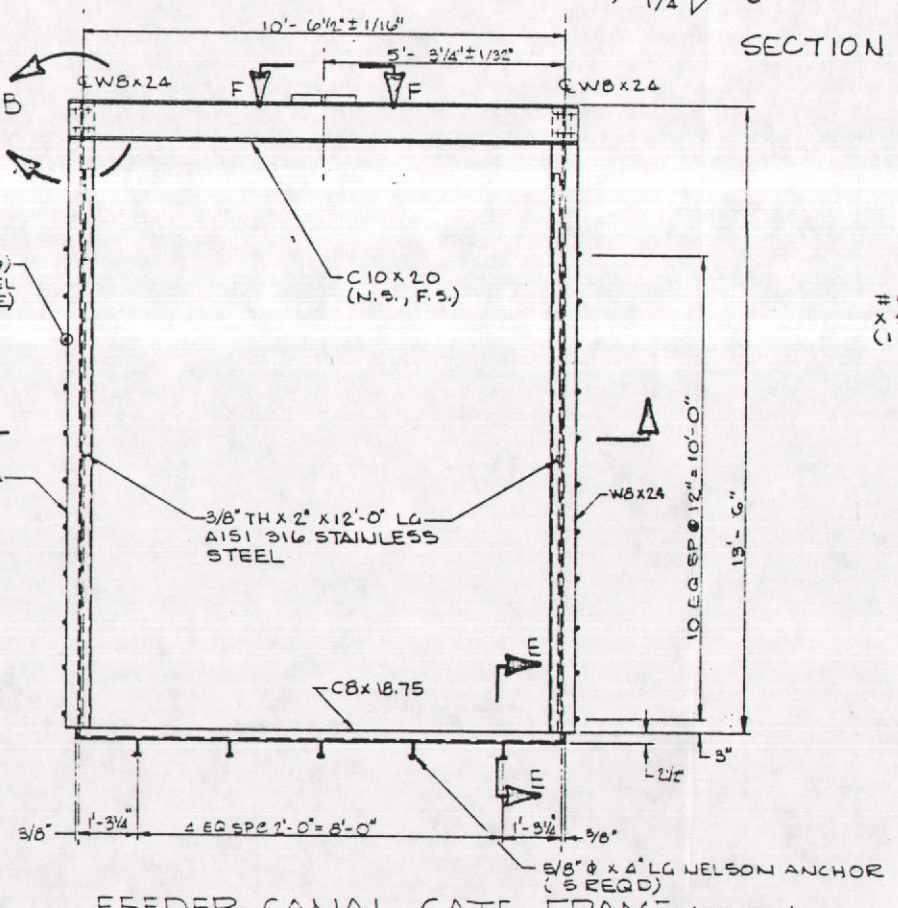
SECTION F-F
1 1/2" = 1'-0"



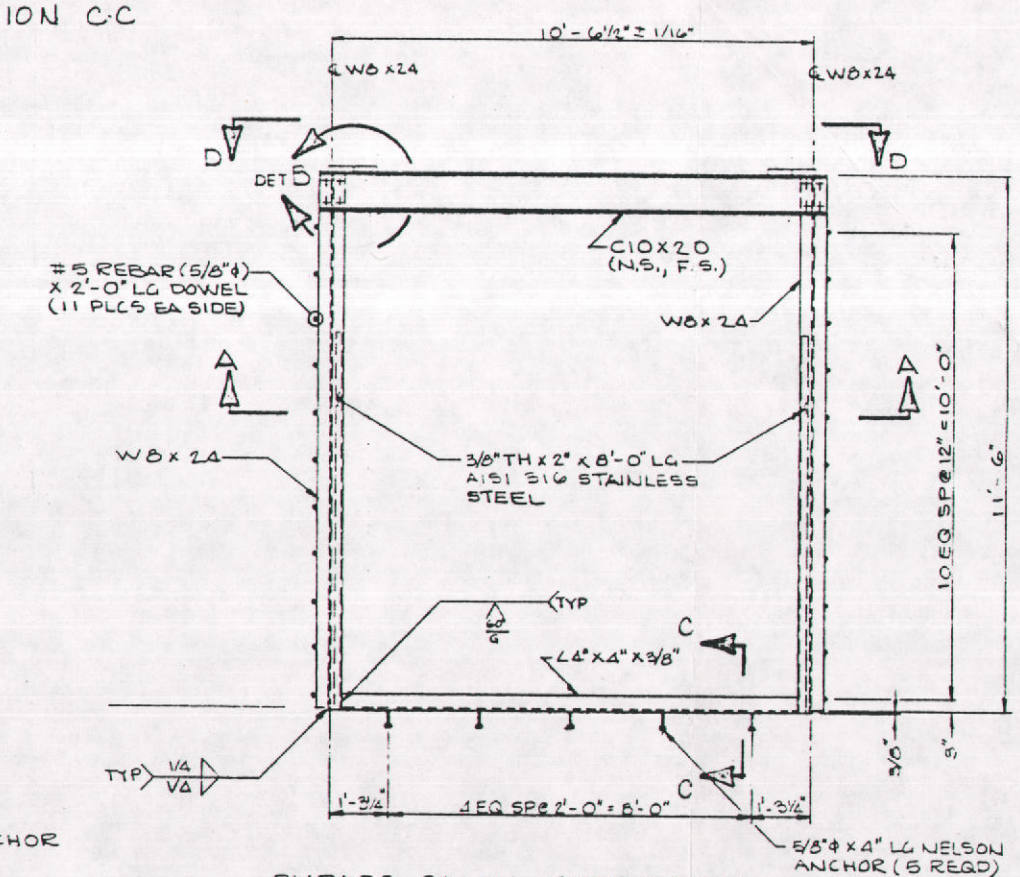
SECTION D-D
1 1/2" = 1'-0"



SECTION C-C



FEEDER CANAL GATE FRAME (1 REQD)
1/2" = 1'-0" FINISH PER NOTE 1.



BYPASS CANAL GATE FRAME (1 REQD)
1/2" = 1'-0" FINISH PER NOTE 1.

NOTES:

1. FINISH COMPLETED ASSYS PER SYSTEM "B" IN THE SPECIFICATIONS EXCEPT APPLY 2 FINISH COATS. TOTAL DFT SHALL BE 10 MILS MIN. OMIT FINISH FROM STAINLESS STEEL MACHINED SURFACE.
2. REMOVE CAMBER AND SWEEP FROM "AS ROLLED" STEEL SHAPES SUCH THAT 1/16" MAX CAN BE MEASURED AT ANY LOCATION BETWEEN ENDS.
3. INSTALLATION CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND/OR BLOCKING TO PREVENT BOWING, WARPING AND TWISTING OF FRAME ASSY.

RECORD DRAWING

REVISIONS

DATE	10-4-86		
DRAWN	S.P.B.	PER RQ	BYPASS GATE FRAME ANGLE INSERTION
CHECKED		MLT	
APPROVED			
ENGINEER			
℄ BOOK	10-4-86		

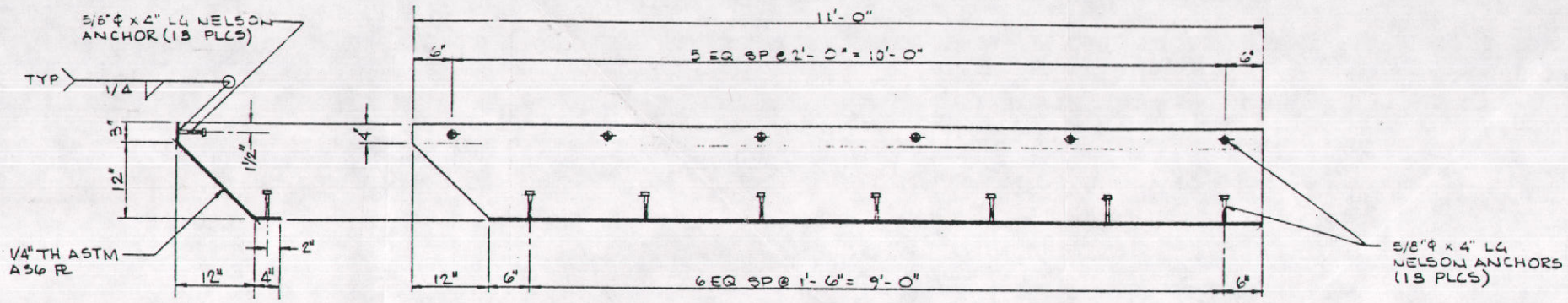
BIRCH CREEK HYDROELECTRIC FACILITY PHASE II

BYPASS HEADWORKS FABRICATED DETAILS

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

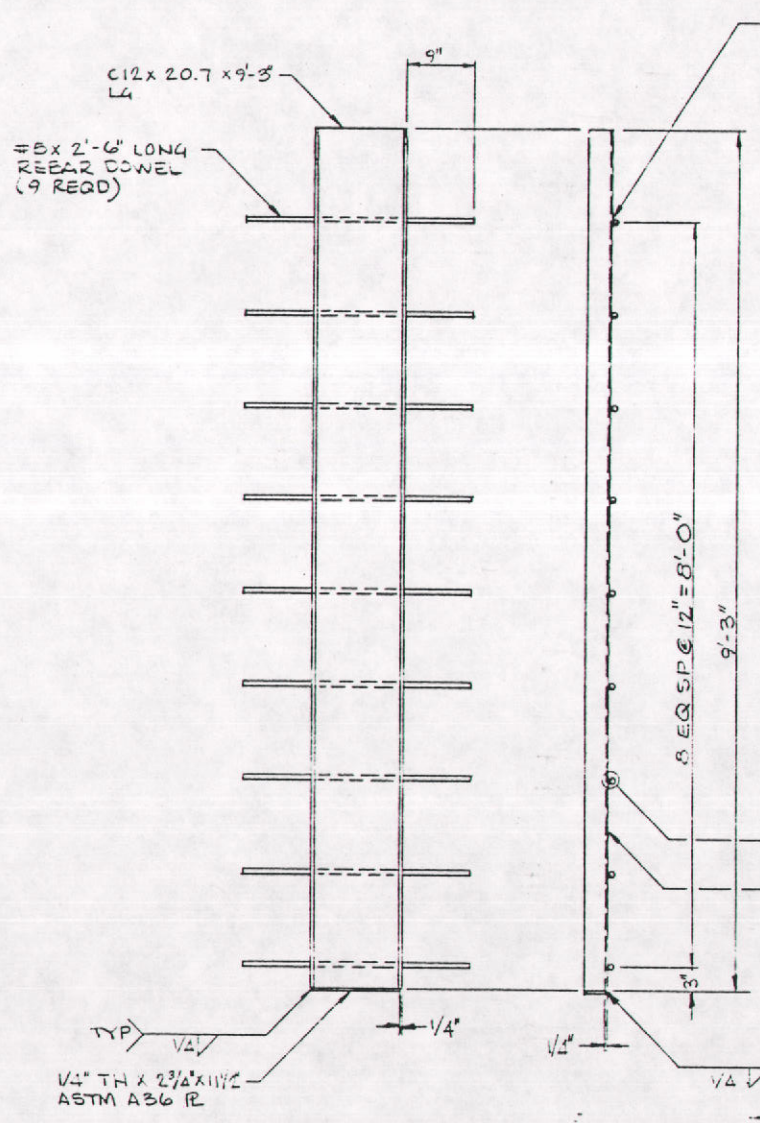
REGISTERED PROFESSIONAL ENGINEER 3458 STATE OF IDAHO TED S. SORENSEN

SCALE: NOTED
DRAWING NO.: D86-13424
SHEET NO.: 27



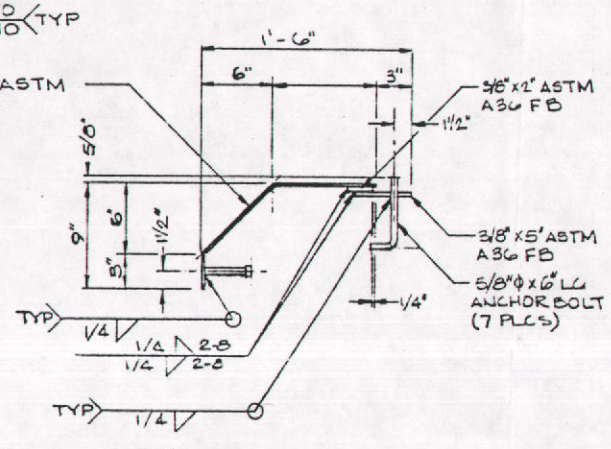
BREASTWALL REINFORCING PLATE (1 REQD)

1"=1'-0" FINISH: HOT DIP GALV - DO NOT QUENCH



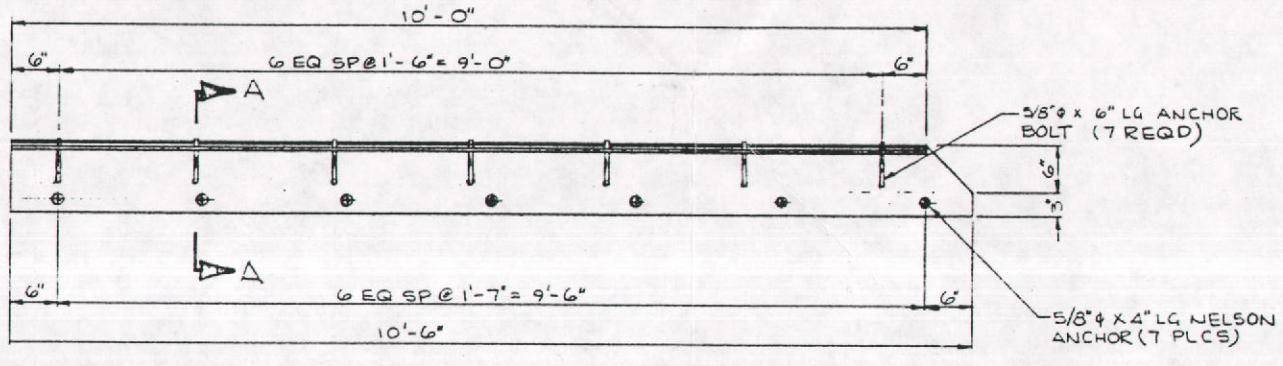
FISHSCREEN SLIDE RAIL (4 REQD)

1"=1'-0" FINISH: HOT DIP GALV-DO NOT QUENCH



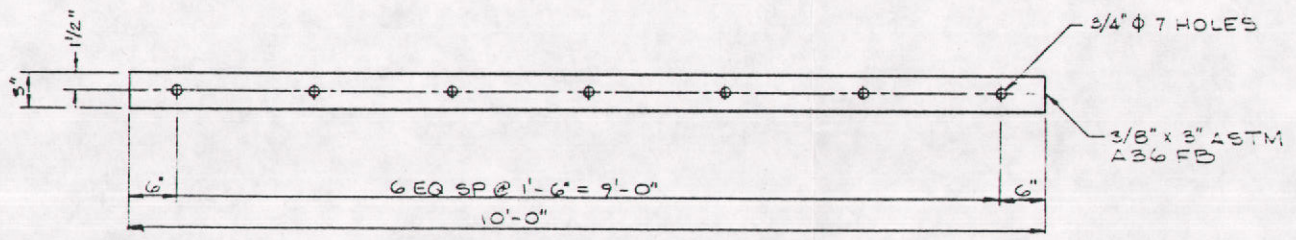
SECTION A-A

1 1/2" = 1'-0"



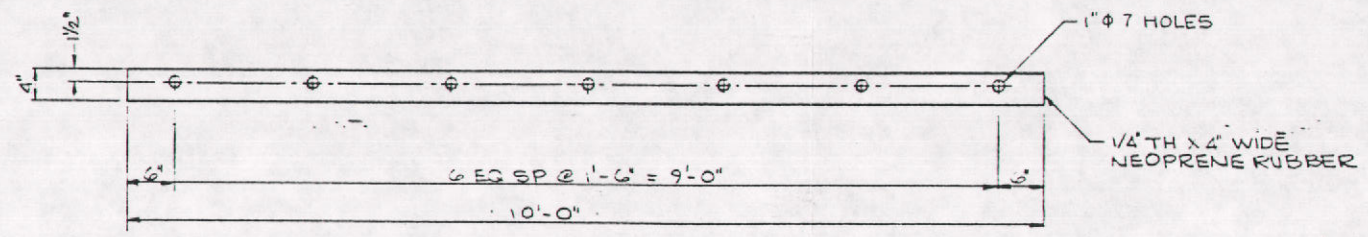
OVERFLOW WEIR REINFORCING/SEAL PLATE (1 REQD)

1"=1'-0" FINISH: HOT DIP GALV- DO NOT QUENCH



SEAL RETAINER (1 REQD)

1"=1'-0" FINISH: HOT DIP GALV - DO NOT QUENCH



SEAL (1 REQD)

RECORD DRAWING

REVISIONS				

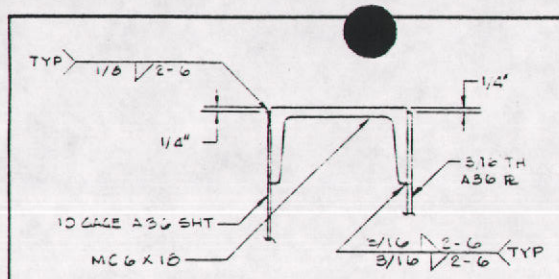
DATE 10-6-86
DRAWN SPB
CHECKED
APPROVED
ENGINEER EVERETT 10-6-86

BIRCH CREEK HYDROELECTRIC FACILITY PHASE II

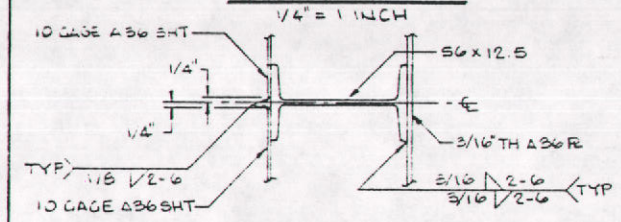
BYPASS HEADWORKS FABRICATED DETAILS

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

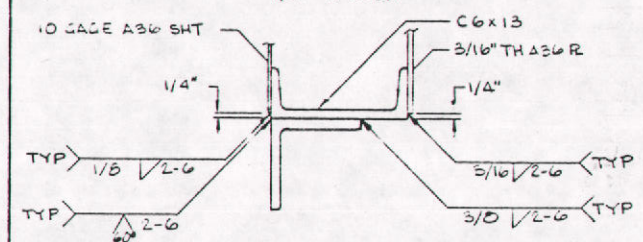
SCALE NOTED
DRAWING NO. D86-13424
SHEET NO. 28



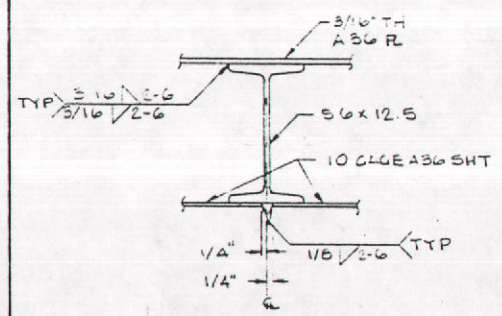
SECTION C-C
1/4" = 1 INCH



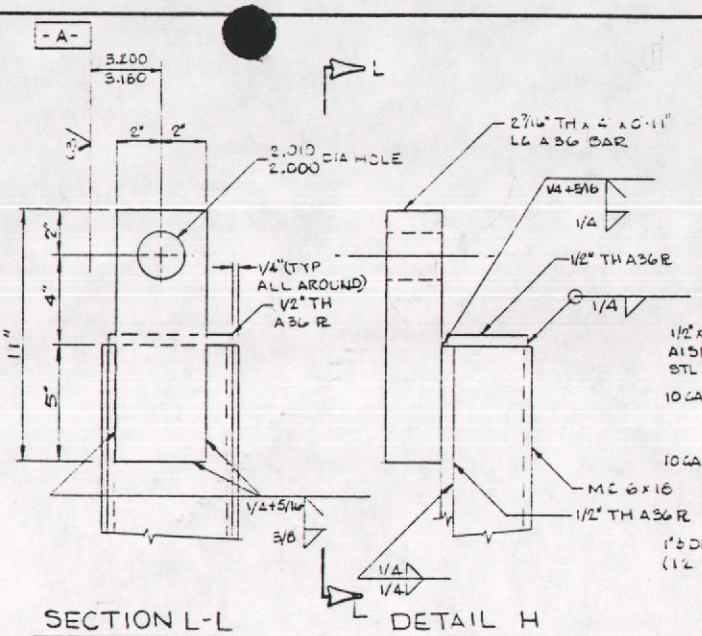
SECTION D-D
1/4" = 1 INCH



SECTION F-F
1/4" = 1 INCH

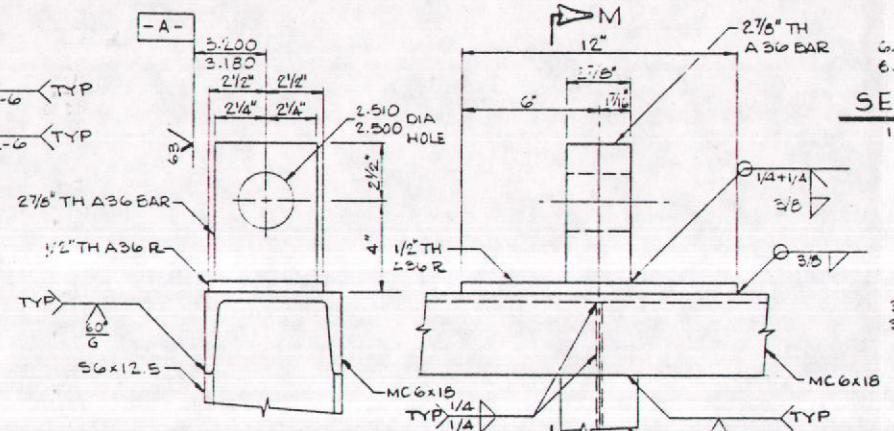


SECTION J-J
1/4" = 1 INCH



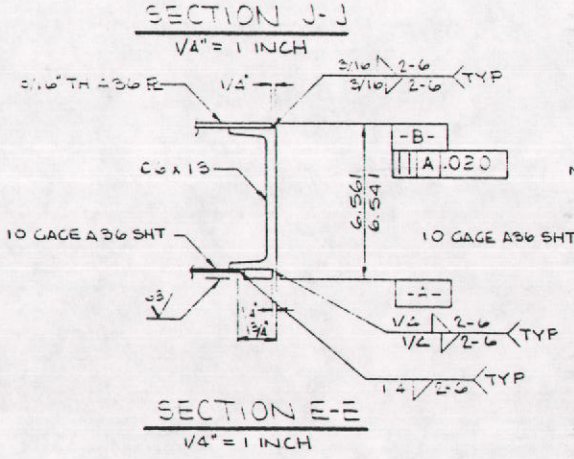
SECTION L-L
1/4" = 1 INCH

DETAIL H
1/4" = 1 INCH

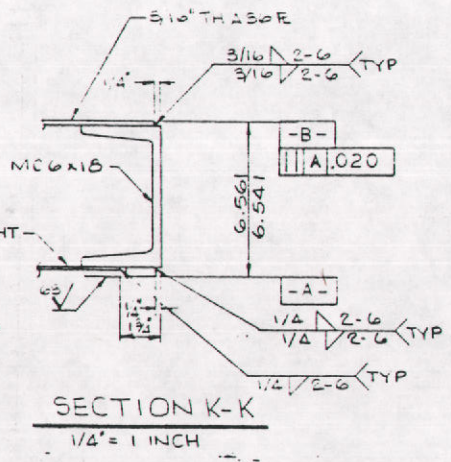


SECTION M-M
1/4" = 1 INCH

DETAIL B
1/2" = 1 INCH



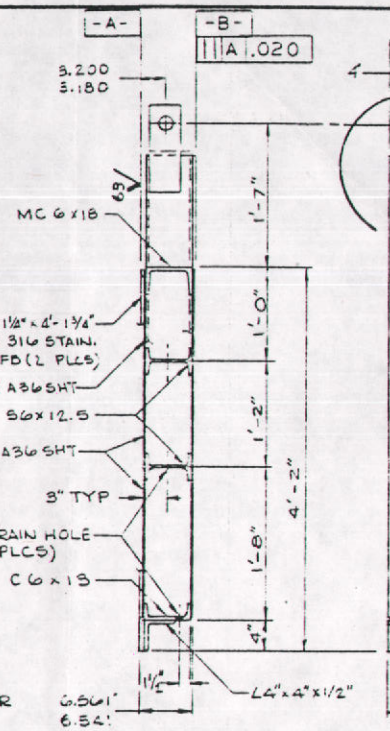
SECTION E-E
1/4" = 1 INCH



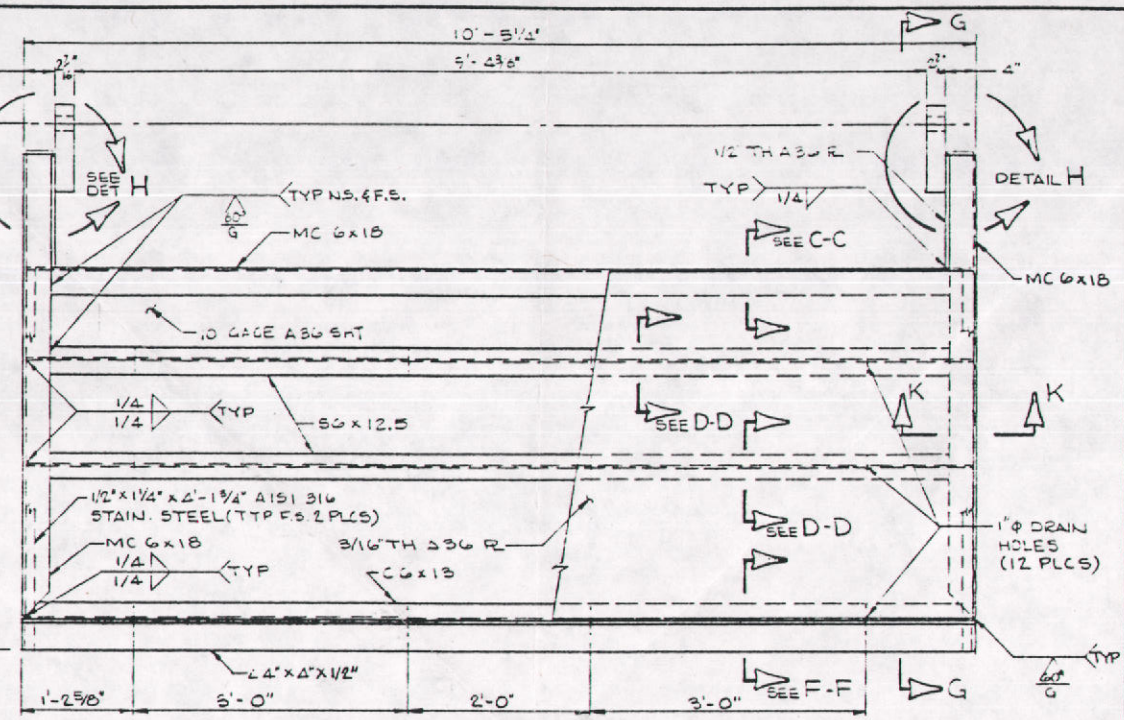
SECTION K-K
1/4" = 1 INCH

NOTES:

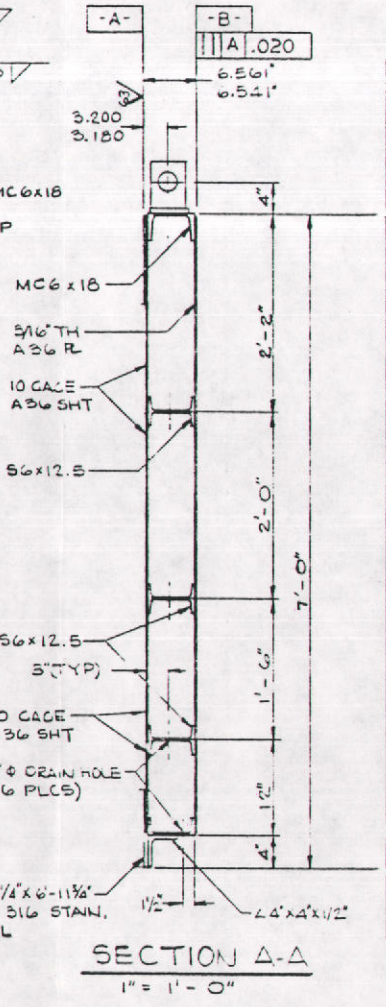
1. FINISH COMPLETED ASSY'S PER SYSTEM "B" IN THE SPECIFICATIONS EXCEPT APPLY 2 FINISH COATS, TOTAL DFT SHALL BE 10 MILS MIN. OMIT FINISH FROM STAINLESS STEEL MACHINED SURFACES.
2. REMOVE CAMBER AND SWEEP FROM "AS ROLLED" STEEL SHAPES SUCH THAT 1/16" MAX. CAN BE MEASURED AT ANY LOCATION BETWEEN ENDS



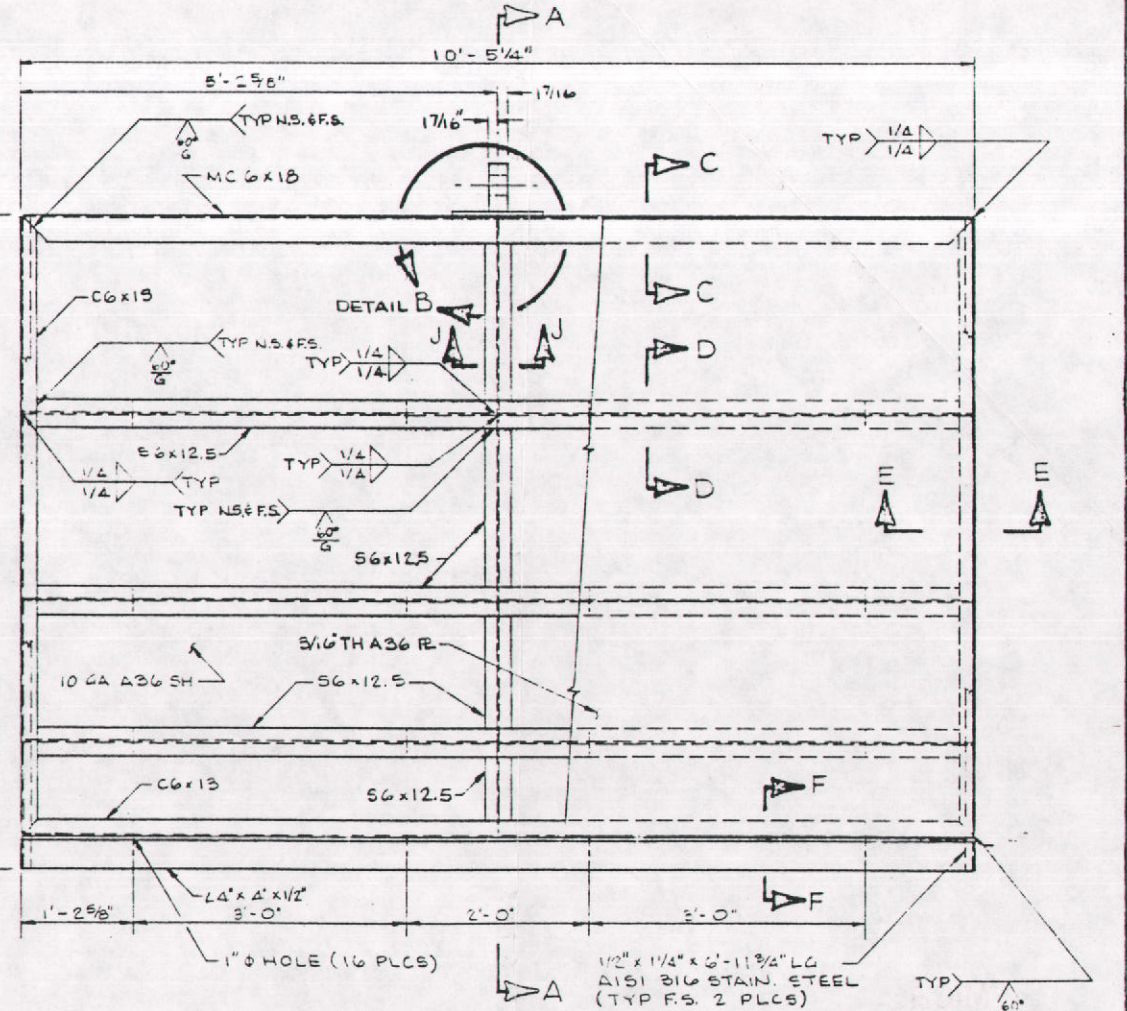
SECTION G-G
1"=1'-0"



BYPASS CANAL GATE (1 REQD)
1"=1'-0" FINISH PER NOTE 1



SECTION A-A
1" = 1'-0"



FEEDER CANAL GATE (1 REQD)
1"=1'-0" FINISH PER NOTE 1

RECORD DRAWING

REVISIONS

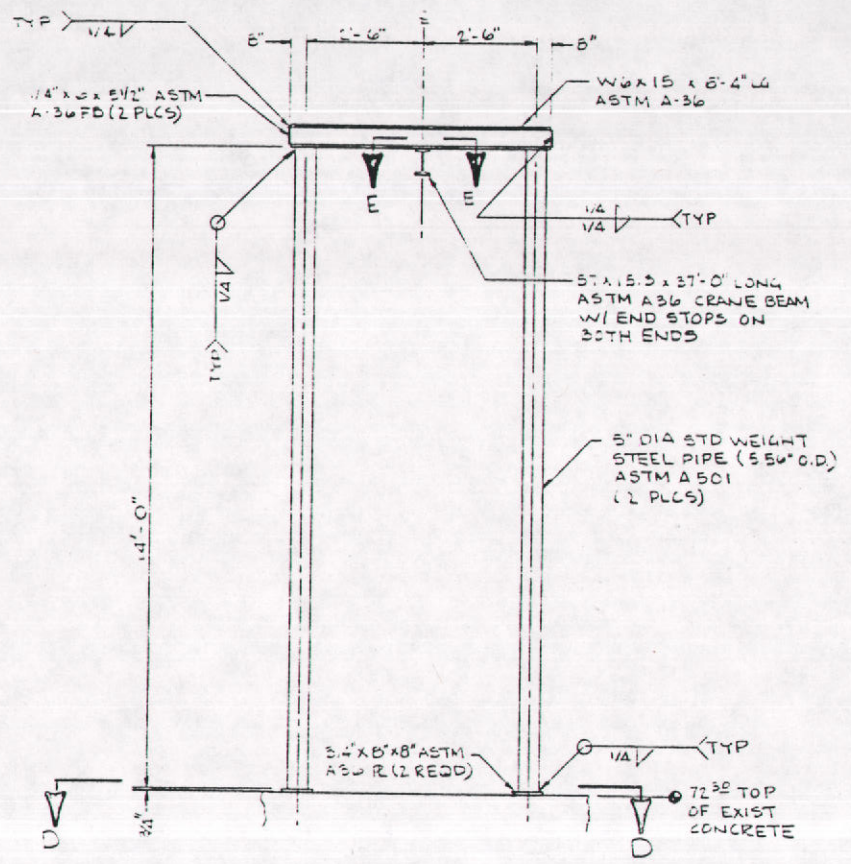
DATE 10-3-86
DRAWN STD
CHECKED
APPROVED
ENGINEER

BIRCH CREEK
HYDROELECTRIC FACILITY
PHASE II

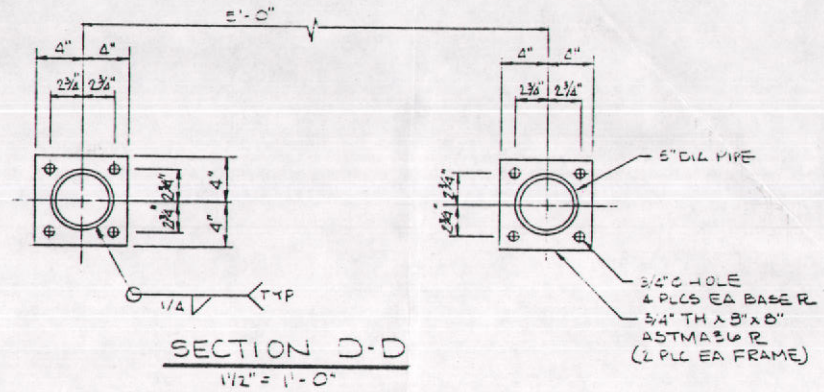
BYPASS HEADWORKS
FABRICATED DETAILS

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

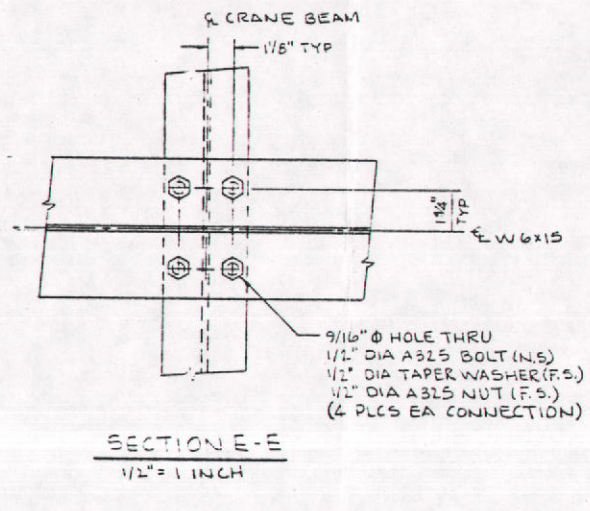
SCALE NOTED
DRAWING NO. D86-13424
SHEET NO. 29



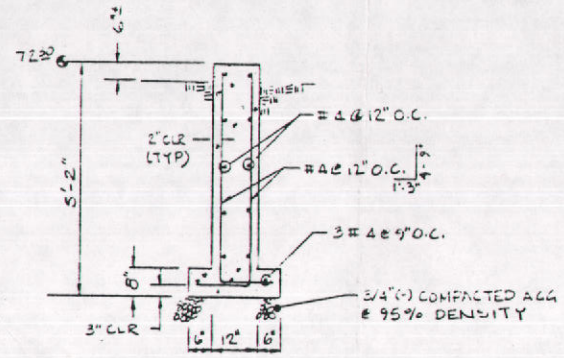
SECTION A-A
1/2" = 1'-0"



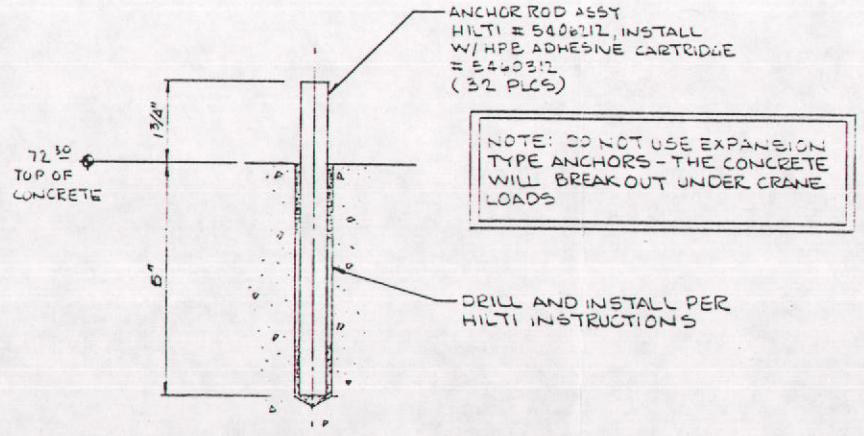
SECTION D-D
1½" = 1'-0"



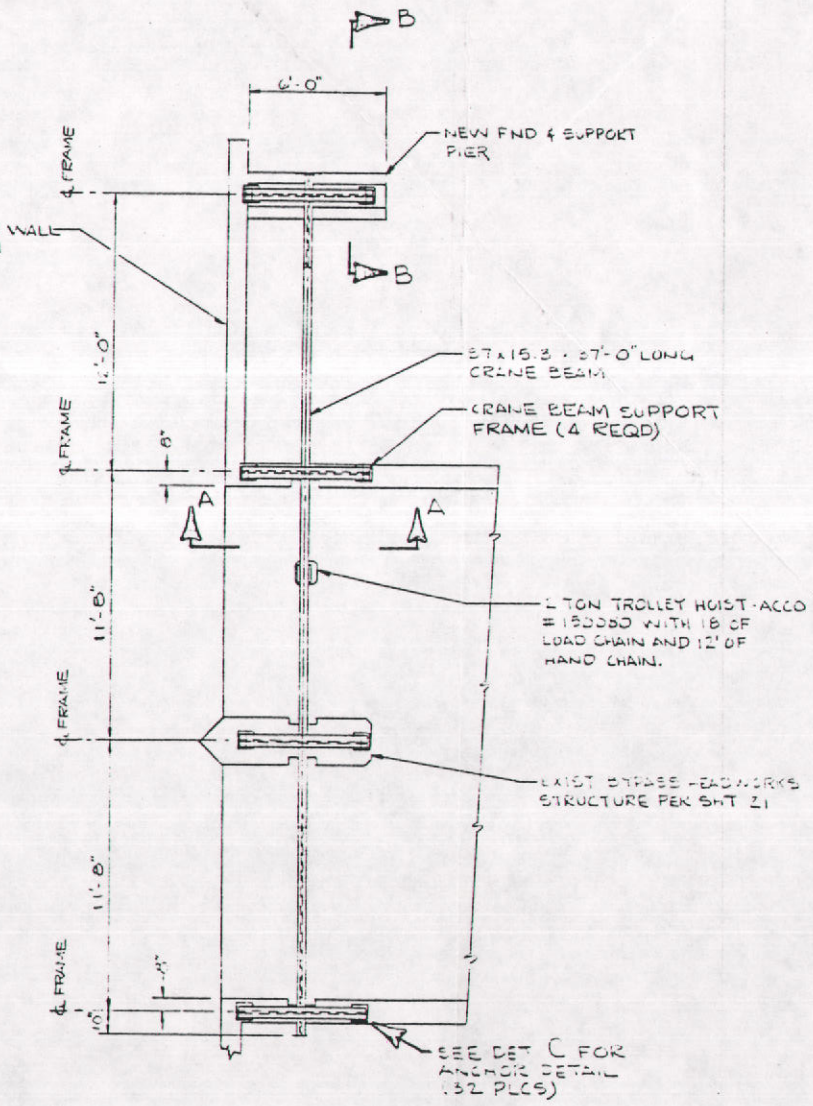
SECTION E-E
1½" = 1 INCH



SECTION B-B
1½" = 1'-0"



DETAIL C
(TYP 32 PLCS - LOC TO MATCH HOLES IN FRAME BASE PLATES)



PLAN
BYPASS HEADWORKS
1/4" = 1'-0"

REVISIONS			

DATE JAN 21, 1986
DRAWN
CHECKED
APPROVED
ENGINEER

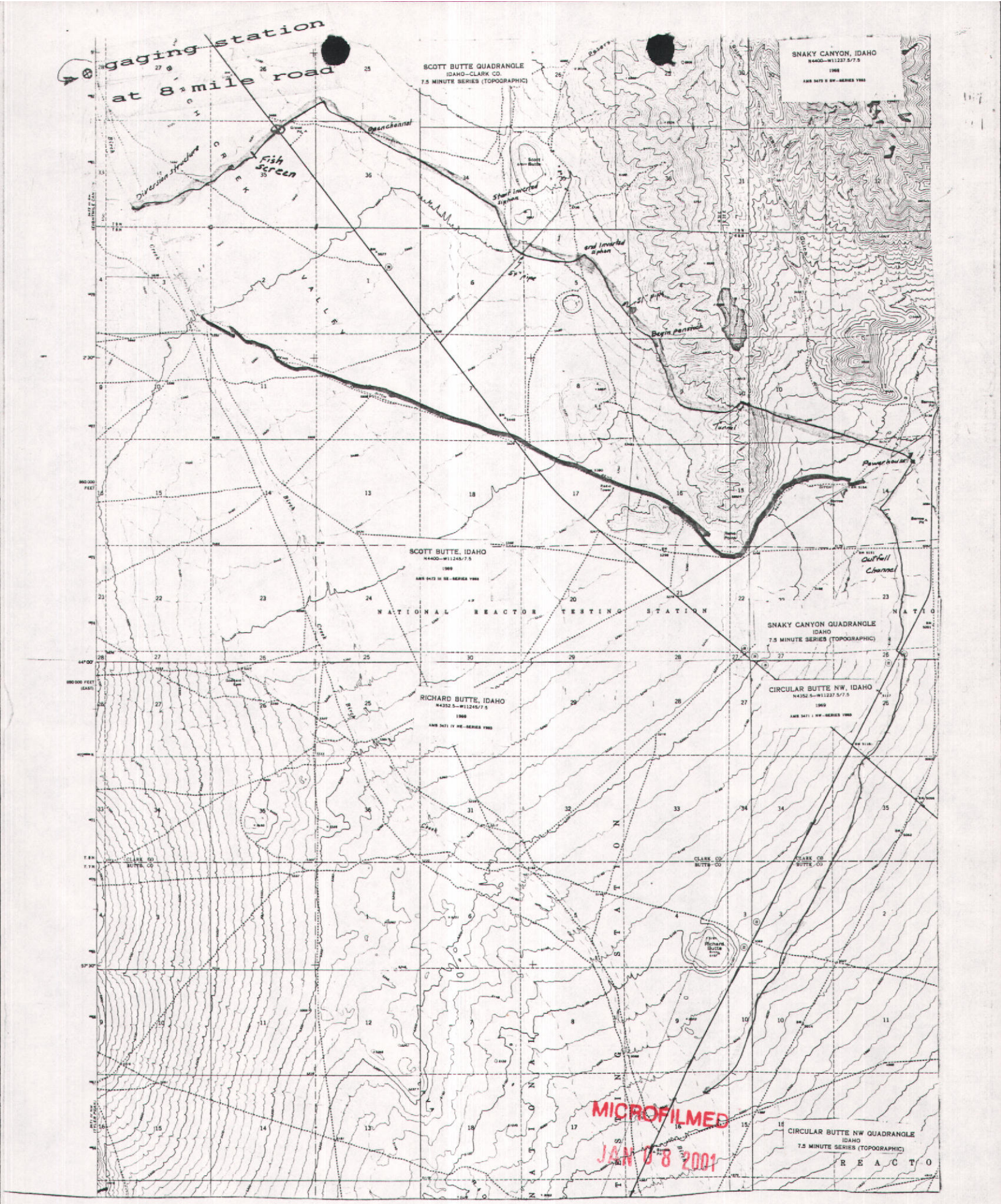
BIRCH CREEK
HYDROELECTRIC FACILITY
PHASE II

FISH SCREEN
CRANE SYSTEM

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

SCALE
NOTED
DRAWING NO.
DBG-13424
SHEET NO.
30

RECORD DRAWING



MICROFILMED
JAN 08 2001

TOPOGRAPHIC MAP SHOWING ROUTE OF BIRCH CREEK DIVERSION AND OUTFALL

Also: 3204062 Dept. of Int'l
32-07128 Sorenson
5207136

MICROFILMED

Form 219
6/86

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

BENEFICIAL USE FIELD REPORT

73-07106

A. GENERAL INFORMATION

Permit No. 32-7128, 32-7136

1. Owner: Ted Sorenson — Phone No. (208) 522-8069
   Current Address: 550 Linden Drive, Idaho Falls, Idaho 83401
2. Accompanied by: Cecil A. Thomas, P.E. — EXAM. DATE: Feb. 2, 1988
   Address: 3775 N. Locust Grove, Meridian, Id. 83642 — Phone No. (208) 888-3087
   Relationship to Permit Holder: Consulting Engineer
3. Source: Birch Creek tributary to Snake Plain Aquifer at Birch Creek sinks

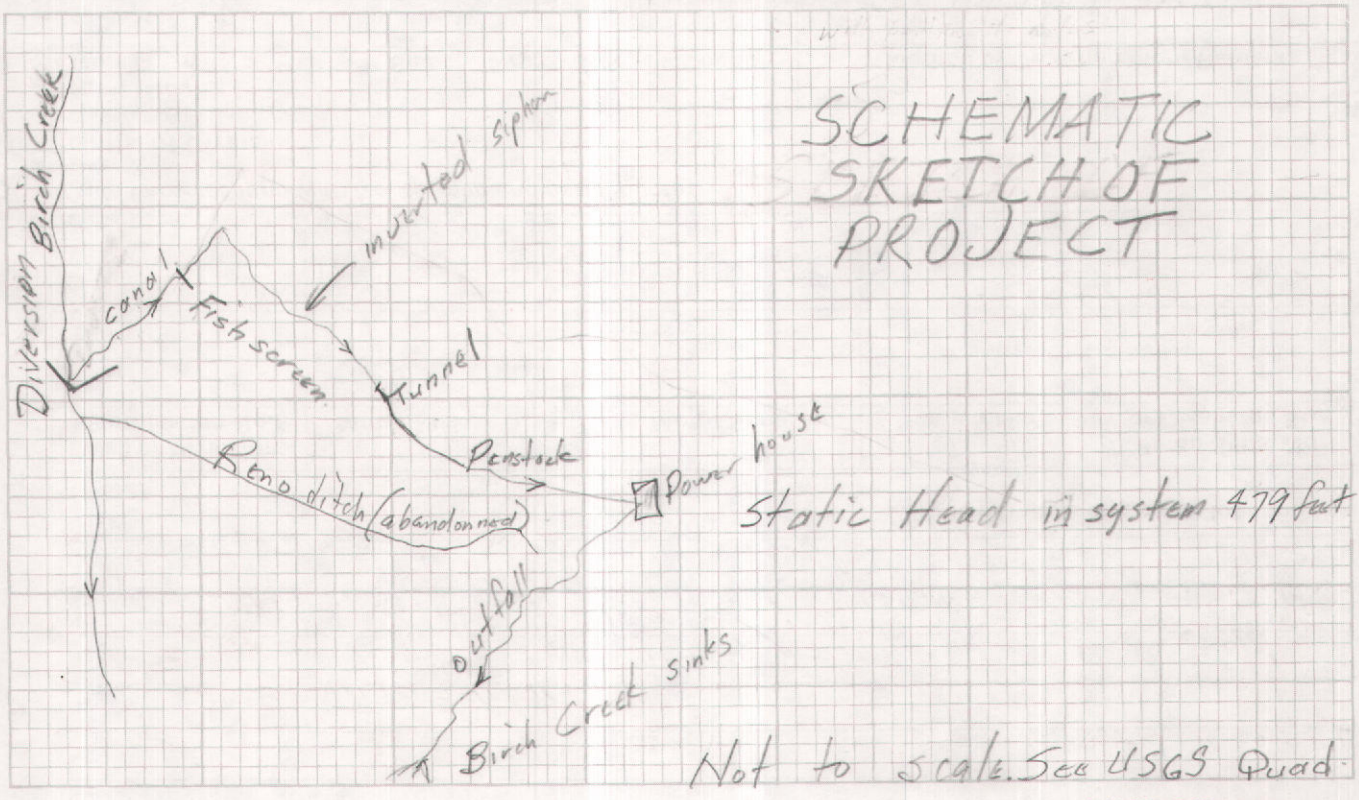
B. OVERLAP REVIEW

1. Other water rights with same place of use: None except for fishery rights at head of canal and some riparian and esthetic right in and along canal. ☐ Copies Attached
2. Other water rights with same point of diversion: From the diversion to the tailrace the diversion system replaces the Reno ditch. Nos.?? ☐ Copies Attached ☐ Copies of Field Exam's Attached

C. SYSTEM DESCRIPTION

3204062

1. **Diversion System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe i.d. as applicable. ☑ Alternative diagram attached



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Scale: 1" = _____.

2. ☑ Copy of U.S.G.S. Quadrangle Attached
   Showing location(s) of point(s) of diversion and place(s) of use (required).
   ☐ Aerial Photo Attached
   (required for irrigation of 10 acres or more).
   JAN 0 8 2001
   ☑ Photos of Diversion and System Attached
   (required for all but single household domestic groundwater, and stockwater.



Hwy 28, bridge and weir with the fish screen in the background



Typical canal section downstream from Hwy 28



Head of siphon



Route of tunnel

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JAN 0 6 2001

Pictures of diversion works of Birch Creek Power Company Project



View easterly six miles from diversion to tunnel portal



Diversion dam and pool



Fish screen and wasteway above Hwy 28



10 foot weir at Hwy 28 bridge

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JAN 0 8 2001

Pictures near upper end of Birch Creek Power Company Project



Head of pen stock



Penstock line from powerhouse to tunnel



Trifurcation below powerhouse

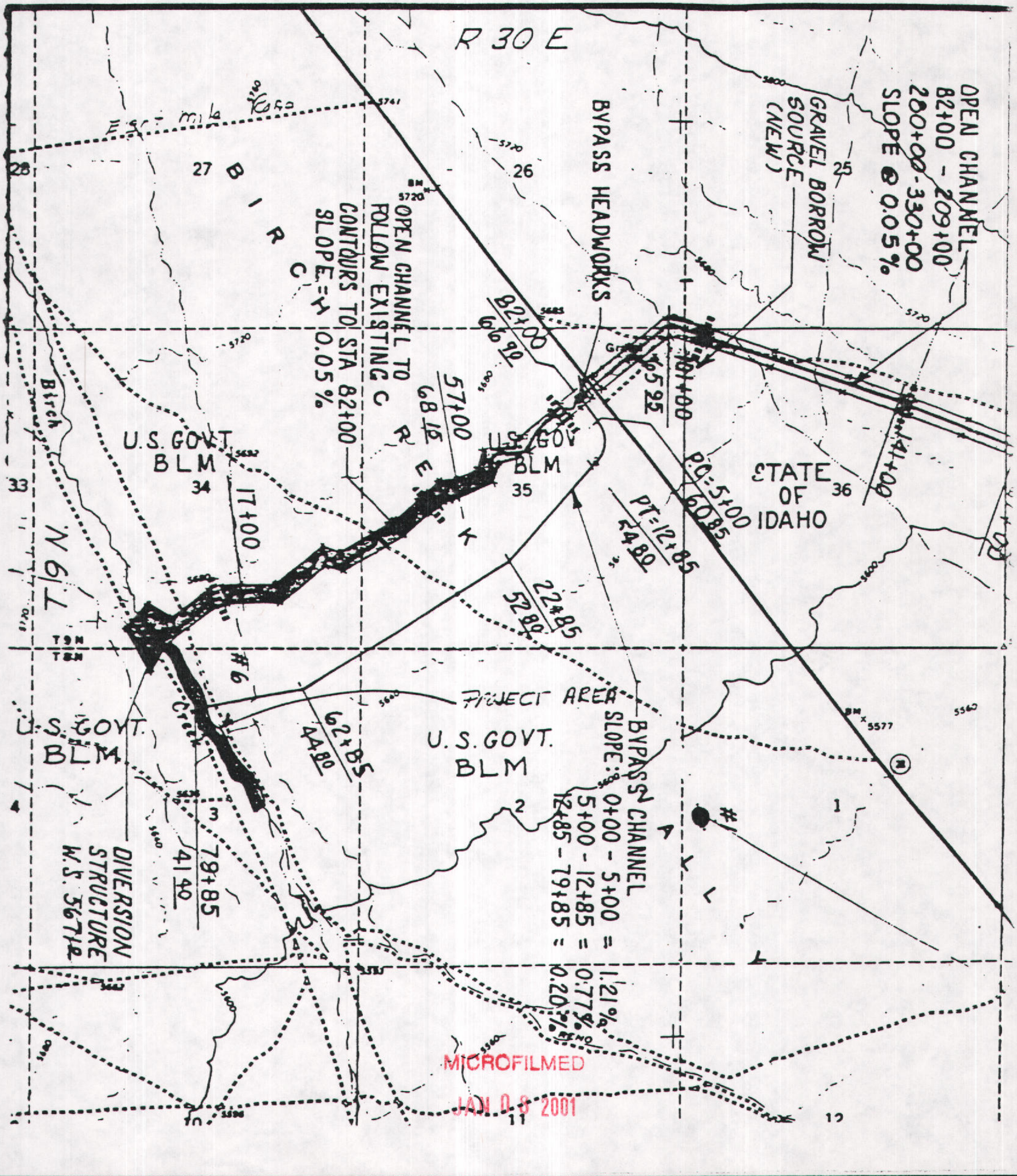


Another view of the trifurcation

Pictures of penstock, powerhouse, tailrace, and trifurcation of Birch Creek Power Company

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JAN 08 2001

Map 1



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JAN 08 2001










POND #3



POND #4





POND #5





POND #6



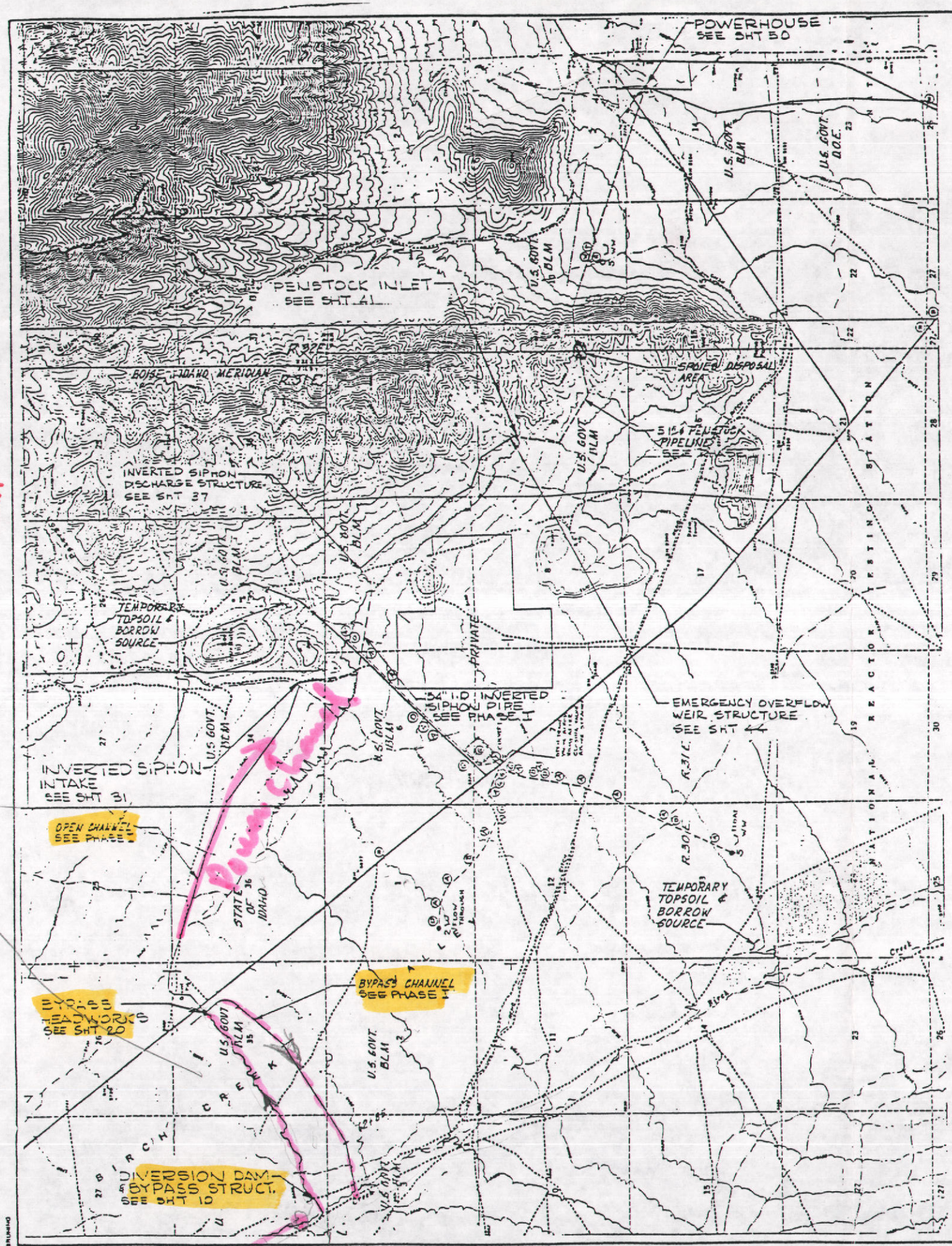


POND #7





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JAN 08 2002



LEGEND

- (A) AIR VENT
- (D) DRAIN
- (TROUGH
- (G) GATE VALVE
- (Y) GATE, Y STRAINER, & FLOW REDUCER IN CULVERT
- (W) WATER INLET FROM HYDRO
- WW WILDLIFE WATER
- (P) PRESSURE REDUCING VALVE W/ Y STRAINER, GATE VALVE, & AIR VENT
- (P) FLOW CONTROL VALVE

SITE PLAN
PHASE II

N

2000 1000 0 2000
SCALE IN FEET

RECORD DRAWING

REVISIONS		
A	ADDED EMERGENCY OVERFLOW WEIR	
B	ADDED NEW DISCHARGE STRUCTURE & REVISED NEW WATERFALL ELEVATIONS	

DATE SEPT 8, 1986
DRAWN SPB
CHECKED
APPROVED

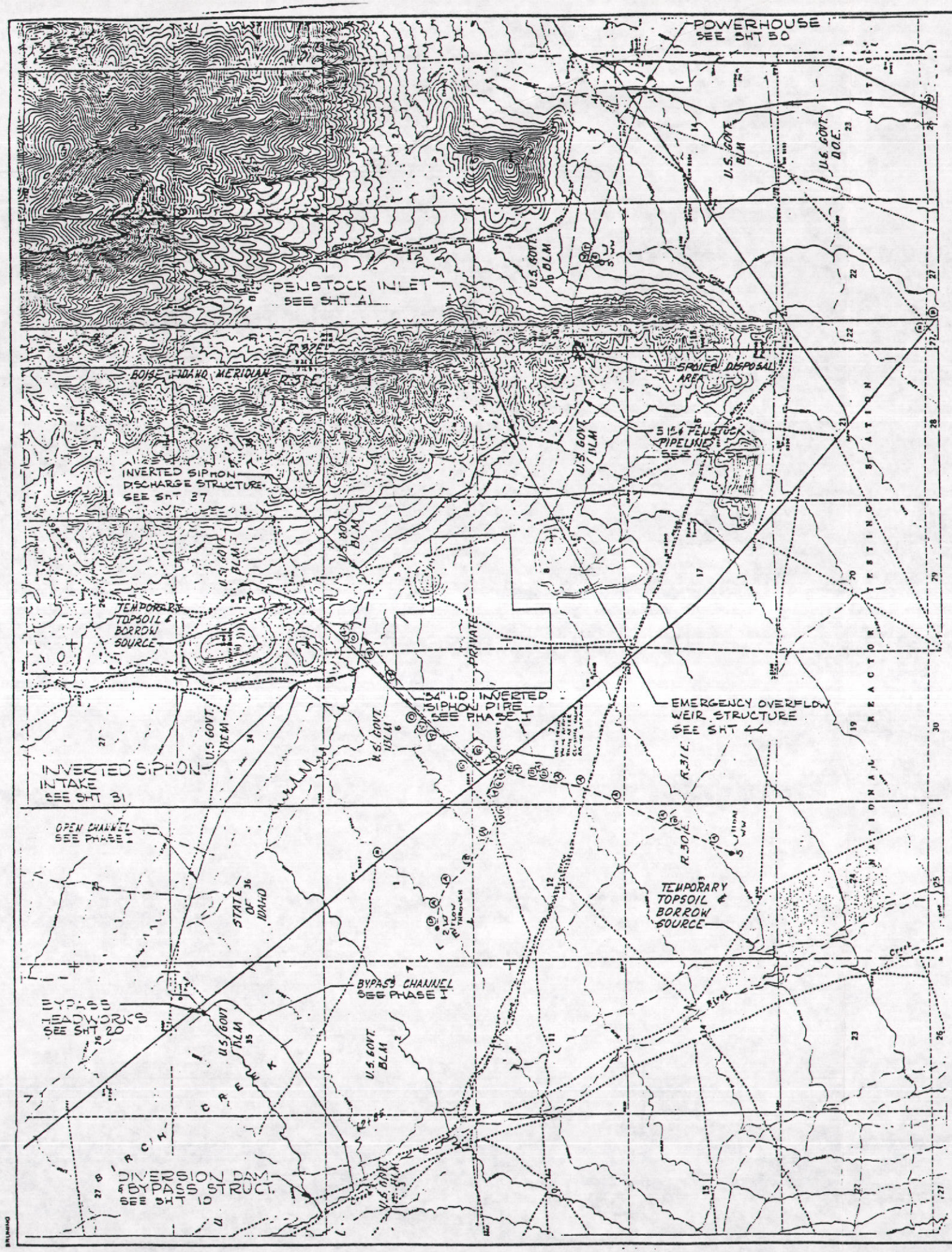
BIRCH CREEK HYDROELECTRIC FACILITY PHASE II

SITE PLAN

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

SCALE NOTED
DRAWING NO. L86H342
SHEET NO. 2

MICROFILMED
JAN 0 8 2001



LEGEND

- (A) AIR VENT
- (D) DRAIN
- TROUGH
- (G) GATE VALVE
- (Y) GATE, Y STRAINER, & FLOW REDUCER IN CULVERT
- (W) WATER INLET FROM HYDRO
- WW WILDLIFE WATER
- (P) PRESSURE REDUCING VALVE W/ Y STRAINER, GATE VALVE, & AIR VENT
- (P) FLOW CONTROL VALVE

SITE PLAN
PHASE II

N

2000 1000 0 2000
SCALE IN FEET

RECORD DRAWING

REVISIONS		
ADDED EMERGENCY OVERFLOW WEIR W/SPILLWAY SHEET, DISCHARGE STRUCTURE, AND ADDED BLM WATERSHED IMPROVEMENTS	A	R.

DATE SEPT 8, 1986
DESIGN SPB
CHECKED
APPROVED

BIRCH CREEK
HYDROELECTRIC FACILITY
PHASE II

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

SCALE AS NOTED
DRAWING NO. USG1342
SHEET NO. 2

DATED this 15 day of May, 1998.

LaVar Newman

LAVAR NEWMAN

STATE OF IDAHO)
) ss
County of)

LAVAR NEWMAN, being first duly sworn on oath, deposes and says that he is the above named affiant, has read the foregoing Affidavit, knows the contents thereof, and verily believes the same to be true.

LaVar Newman

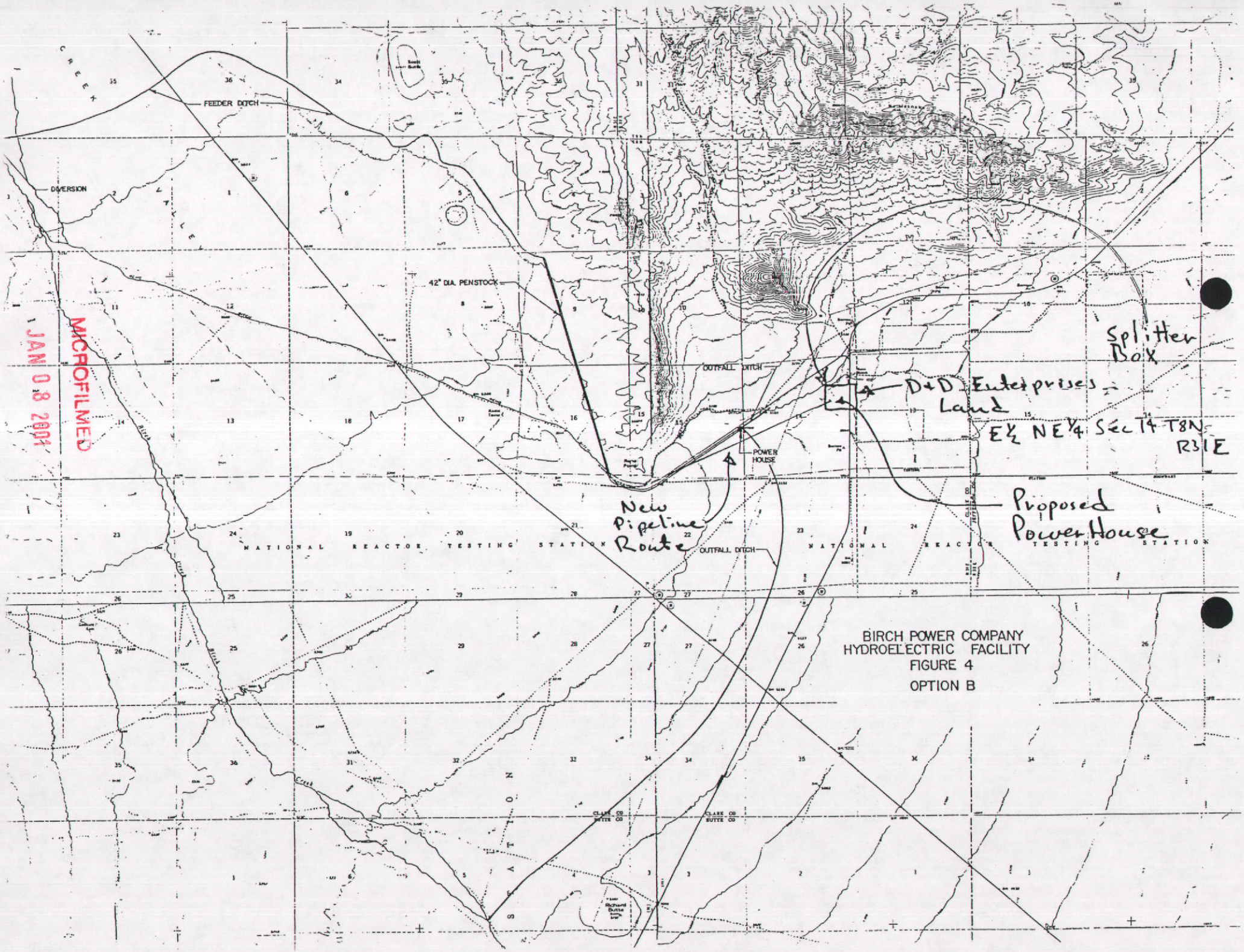
LAVAR NEWMAN

Subscribed and sworn to before me this 15 day of May, 1998.

Notary Public for Idaho
Residing at Rigby
Commission Expires: 10/24/97

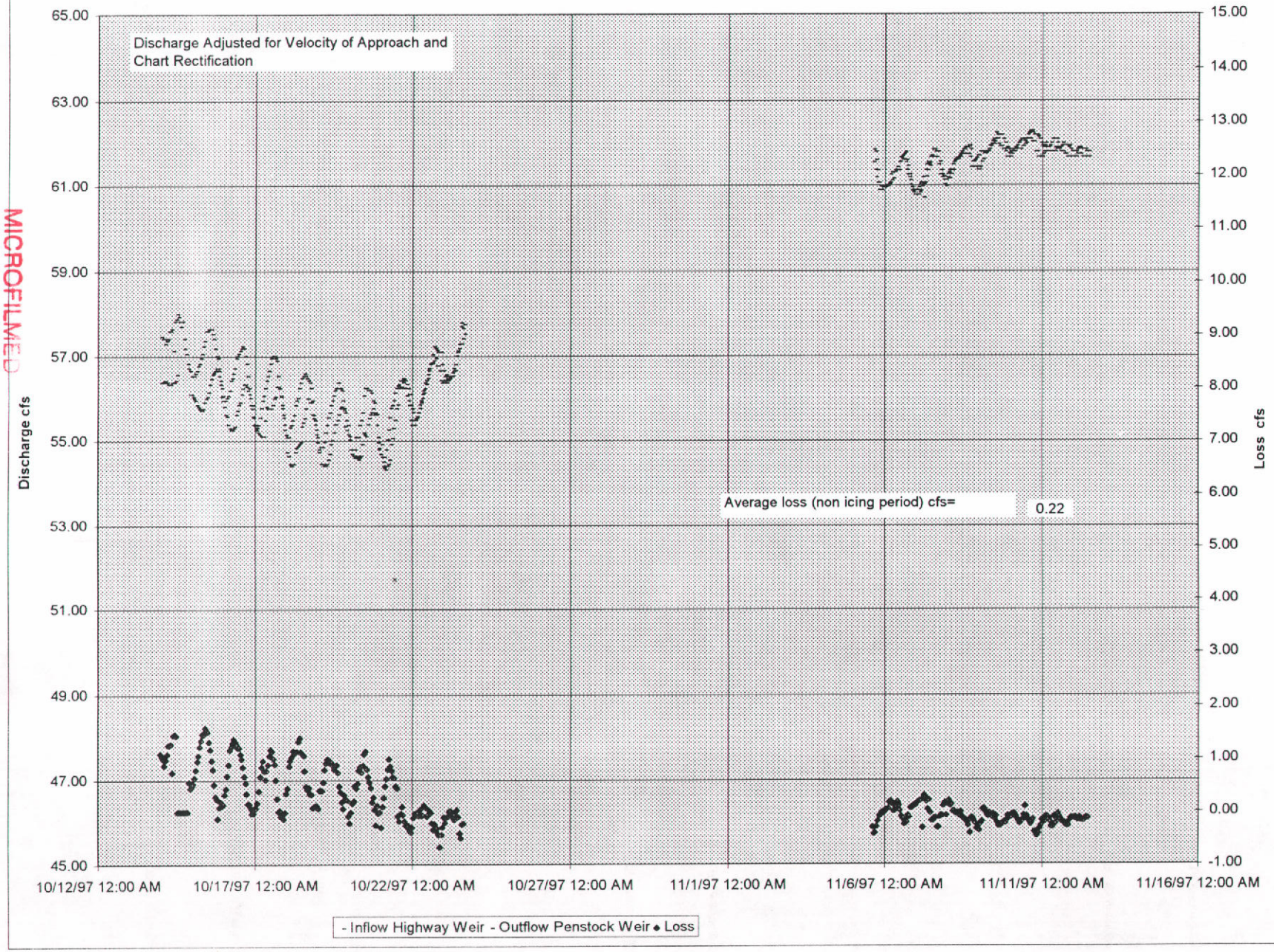
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MICROFILMED
JAN 0 8 2001



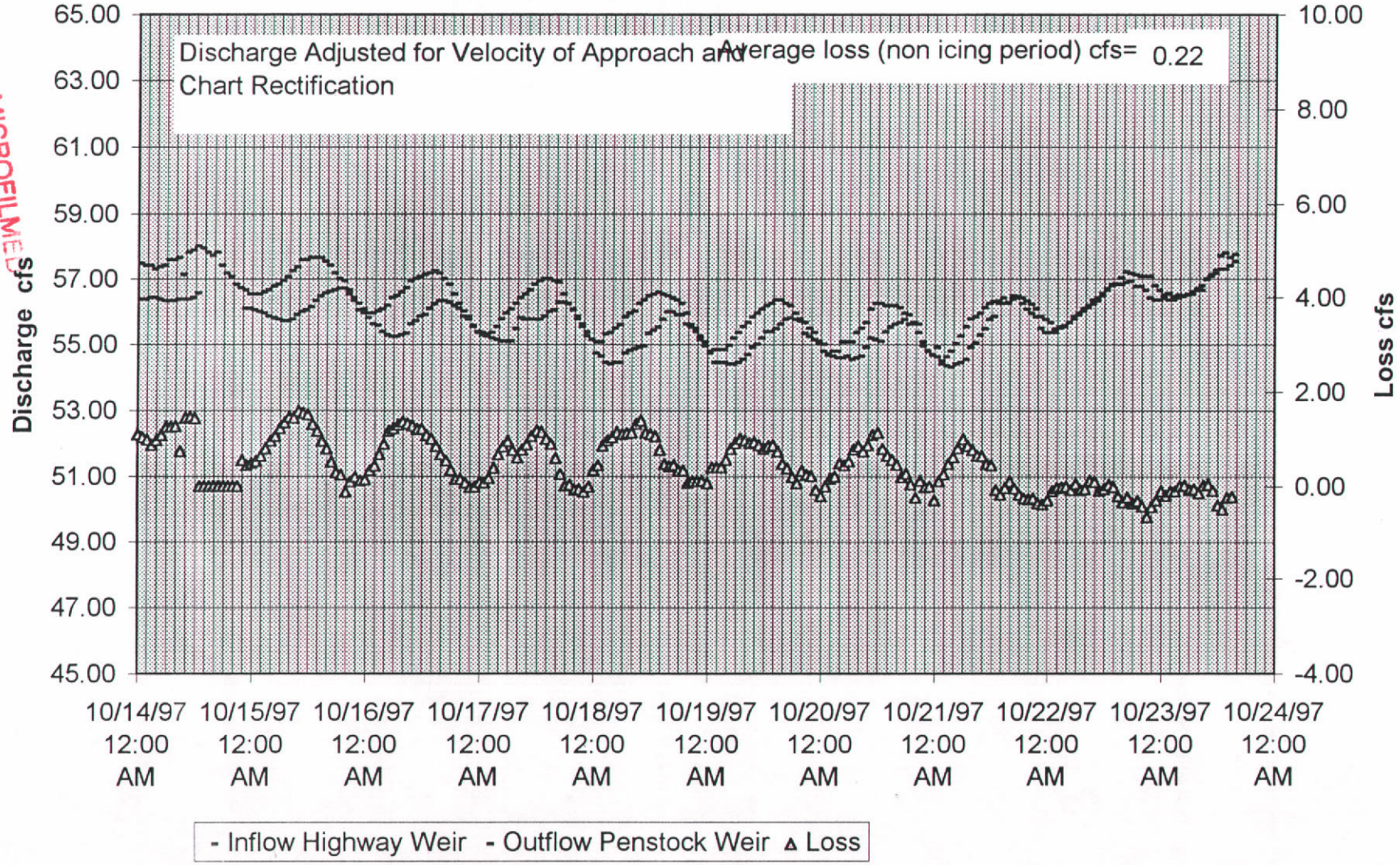
JAN 08 2001
MICROFILMED

Figure 1 Birch Power Canal 1997 Loss Measurements

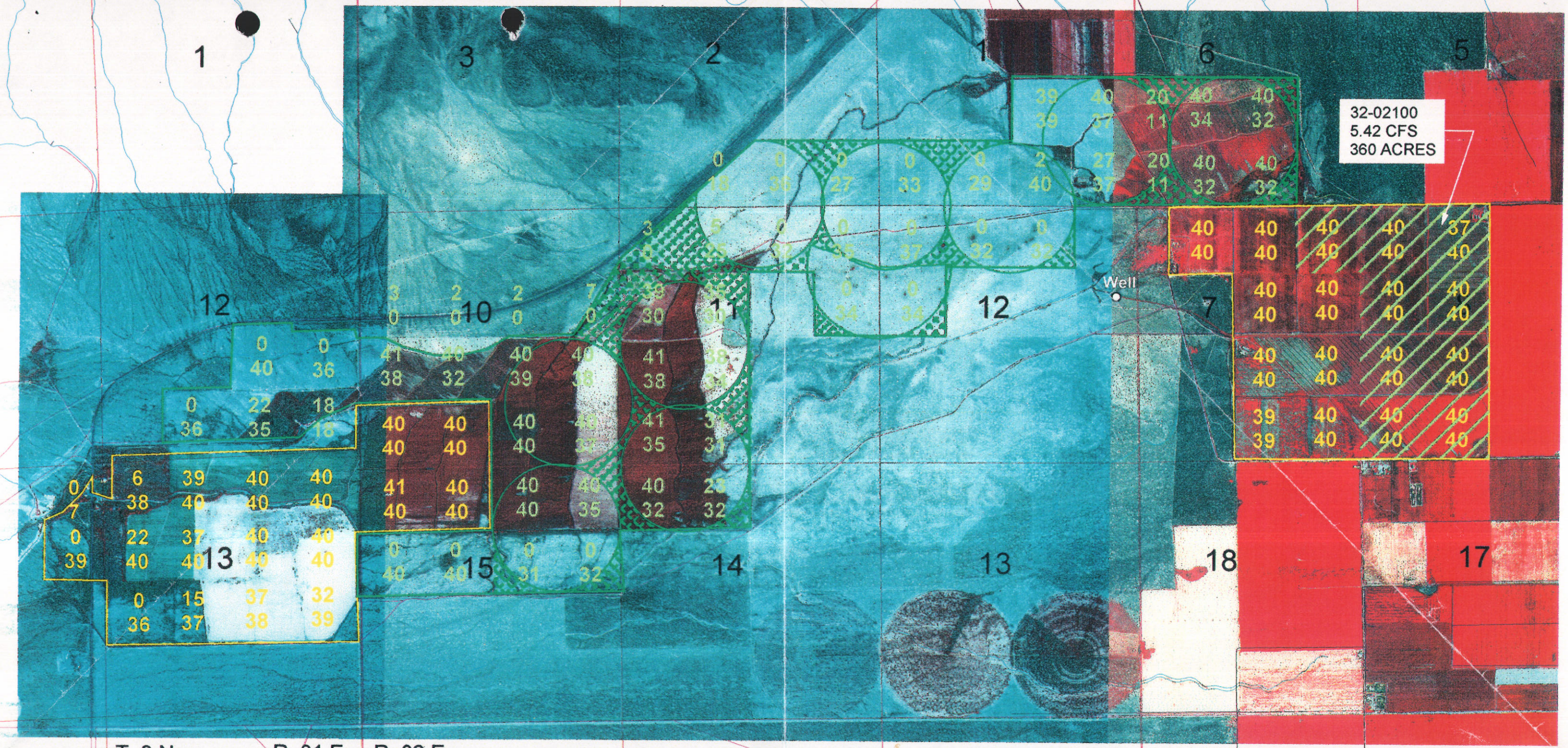


MICROFILMED
JAN 0 8 2001

Figure 2 Birch Power Canal 1997 Loss Measurements Prior to Ice Period



MICROFILMED
JAN 0 8 2001



1997 Irrigation on Newman Farms and D-D Farms

General boundary of 1997 irrigation - Newman

General boundary of 1997 irrigation - D-D

Areas not irrigated in 1997

BROCKWAY ENGINEERING 3/6/98

SCALE: 1 INCH = 2000 FT

Explanation

Areas irrigated during 1997 are overlain on a 1987 aerial photo. 1997 irrigation determined from aerial photos taken July 15, 1997. 1987 irrigation determined from Spatial Dynamics analysis of landsat photograph. Top number is 1987; bottom number is 1997.

Acreage Summary

	1987	1997	Chg
D-D	979	1578	+599
Newman	1185	1353	+168
TOTAL	2164	2931	+767

EIGHT MILE GUAGING STATION
STA 000
0 cfs

STA. 8500
2.7 CFS
Proposed Diversion

STA. 11200
3.7 CFS
Existing Diversion

STA. 13500
4.33 CFS

STA. 36500
11.7 CFS
Microwave Tower Site

STA. 50 000
16.1 CFS
U. of I.

STA. 53100
17.05 CFS

CLARK COUNTY
PROJECT SITE
STATE OF IDAHO

BIRCH CREEK
DIVERSION & FISHLADDER (PROPOSED)
FEEDER DITCH (PROPOSED)
FOREBAY & FISH SCREEN (PROPOSED)
42" DIA PENSTOCK
POWER HOUSE
POWER TRANSMISSION (PROPOSED)
POWER TRANSMISSION (EXISTING)
GUAGING STATION
IRRIGATION SPLITTER BOX (PROPOSED)
RENO RANCH SPLITTER BOX
RENO RANCH
OUTFALL DITCH (PROPOSED)
IDAHO STATE HIGHWAY 28
PRIVATE
U.S. GOVT. B.L.M.
U.S. GOVT. D.O.E.
STATE OF IDAHO
R30E R31E
T8N T8N

REGISTERED PROFESSIONAL ENGINEER
STATE OF IDAHO
TED S. SORENSON
9/11/83

SCALE
0 1 Mile 5000'

BIRCH POWER COMPANY
HYDROELECTRIC FACILITY
GENERAL LOCATION MAP & BEDLOSS DATA

EXHIBIT "H"

5005

WATER RIGHT SUMMARY

ACTION	RIGHT NO.	NAME	AMOUNT CFS
Original Permit	32-7128	Birch Power Co.	45.0
Full Assignment	32-7128	Sorenson, Ted S. DBA Sorenson Engineering	45.0

RECEIVED
AUG 1986
Department of Water Resources

State of Idaho

Department of Water Resources

ASSIGNMENT OF PERMIT

Birch Power Company hereby assigns to Ted S. Sorenson d/b/a Sorenson Engineering with his principal place of business at 2988 Tipperary Lane, Idaho Falls, Idaho 83401, all of Birch Power Company's, right, title and interest in and to Permit No. 32-7128 to appropriate the public waters to the State of Idaho.

Executed this 21st day of August, 1986.

BIRCH POWER COMPANY

By: Ted S. Sorenson
Ted S. Sorenson, President

STATE OF IDAHO)
) ss.
County of Bonneville)

On this 21st day of Aug, in the year 1986, before me, the undersigned, a Notary Public in and for said state, personally appeared Ted S. Sorenson, known or identified to me to be the President of Birch Power Company, the corporation that executed the instrument or the person who executed the instrument on behalf of said corporation, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

David E. Benton
Notary Public for Idaho
Residing at Idaho Falls, Idaho
My Commission Expires: 10-18-91

(seal)

130le/jk

Form 205/206
7/81

Ident. No._____

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
AFFIDAVIT FOR WATER RIGHTS TO BE USED
FOR POWER PURPOSES

RECEIVED
AUG 22 1986
Department of Water Resources

A. Establishment of Residency: (Complete either 1, or 2).

1. Individual Applicant or Individual Members of a Partnership:

I, Ted S. Sorenson d/b/a Sorenson Engineering (name) of Idaho Falls (city),

county of Bonneville, State of Idaho, being duly sworn, do hereby certify that I am a bona fide resident of the State of Idaho.

2. Corporation:

I,_____ (name) of_____ (city),

County of_____, State of Idaho, being duly sworn, depose and say: That I am the designated registered agent of the_____

_____ (name of corporation): that as such I am in charge of the registered office of the said corporation as required by Section 30-1-12, Idaho Code, at

_____ (city) Idaho, wherein are kept the corporate records required by Section 30-1-52, Idaho Code: and that_____ (name of corporation)

is a corporation qualified to do business in the State of Idaho under the laws of the State of Idaho.

B. Ownership of Facilities: (To be completed for hydropower projects only)

The hydropower facility to be developed pursuant to the attached Application for Permit:

(check one)

[X] Will not utilize existing man-made irrigation facilities such as a dam or a canal.

[ ] Will utilize existing man-made irrigation facilities such as a dam or a canal, and permission of the owner is documented in an affidavit attached hereto.

[ ] Will utilize existing man-made irrigation facilities such as a dam or a canal and the owner of the facilities is the signee of this affidavit.

Ted S. Sorenson
Applicant

State of Idaho)
County of Bonneville) ss.

On this 21st day of August, 19 86, personally appeared before me the signer(s) of the above instrument, who duly acknowledged to me that he (she) (they) executed the same.

David E. Benton
Notary Public residing at
Idaho Falls Id

seal

My commission expires:

10-18-91

RECEIVED
AUG 15 1986
Department of Water Resources

Form 211
5/78

Ident. No. _____

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

APPLICATION FOR AMENDMENT OF A PERMIT

APPROVED

To change the point of diversion and/or the place of use.

Comes now BIRCH POWER COMPANY

of (address) 550 Linden Drive, Idaho Falls, Idaho 83401 , and represents to the Director of the Idaho Department of Water Resources:

That he is the owner and holder of Permit to Appropriate the Public Waters of the State of Idaho No. 32-7128 , and requests that the permit and permit map be changed as follows:

1. Point of diversion: _____ ¼ _____ ¼, Section _____, Township _____, Range _____, B.M., County of _____. Other points of diversion: _____

(No change)

2. Period and nature of use: (irrigation, domestic, stockwatering, industrial, etc.) (No Change)

Amount _____ (cfs or acre feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

Amount _____ (cfs or acre feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

Amount _____ (cfs or acre feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

Amount _____ (cfs or acre feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

3. Place of use, or land to be irrigated: The power plant and penstock will be located upon a tract of approximately 2 3/4 acres located in the NE¼NE¼, Sec. 14, T. 8N., Rge. 31 EBM. (See Plat and legal descriptions attached hereto.)

TWP	RGE	SEC	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	

Total number of acres to be irrigated = _____

4. a. Who owns the property at the point of diversion? No change

b. Who owns the land to be irrigated or the place of use? Birch Power Company

c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing: N.A.

Complete the following map by showing land and point of diversion as proposed by this amendment.

Show 40-acre subdivisions, townships, ranges and ditches.

(See attached map)

Scale: 2 inches equal 1 mile.

SEE ATTACHED EXPLANATION

That no one will be injured by such change, and that such change will be made at permit holder's own risk.

Signed at Idaho Falls, Idaho, this 8th day of August, 19 86.

Birch Power Company

by: _____

President (Signature)

This application is filed in association with a like application for permit No. 32-7136.

FOR DEPARTMENT USE ONLY

Preliminary check by _____ Fee = $20.00 Receipted by _____ Date 8-21-86 # 38942

Publication prepared by _____ Date _____ Published in _____

Publication dates _____

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

I, A. KENNETH DUNN, Director of the Department of Water Resources hereby Approve the above referenced Amendment provided the conditions as set forth in Permit No. 32-7128 are met.

Witness my hand this 15th day of August, 19 86.

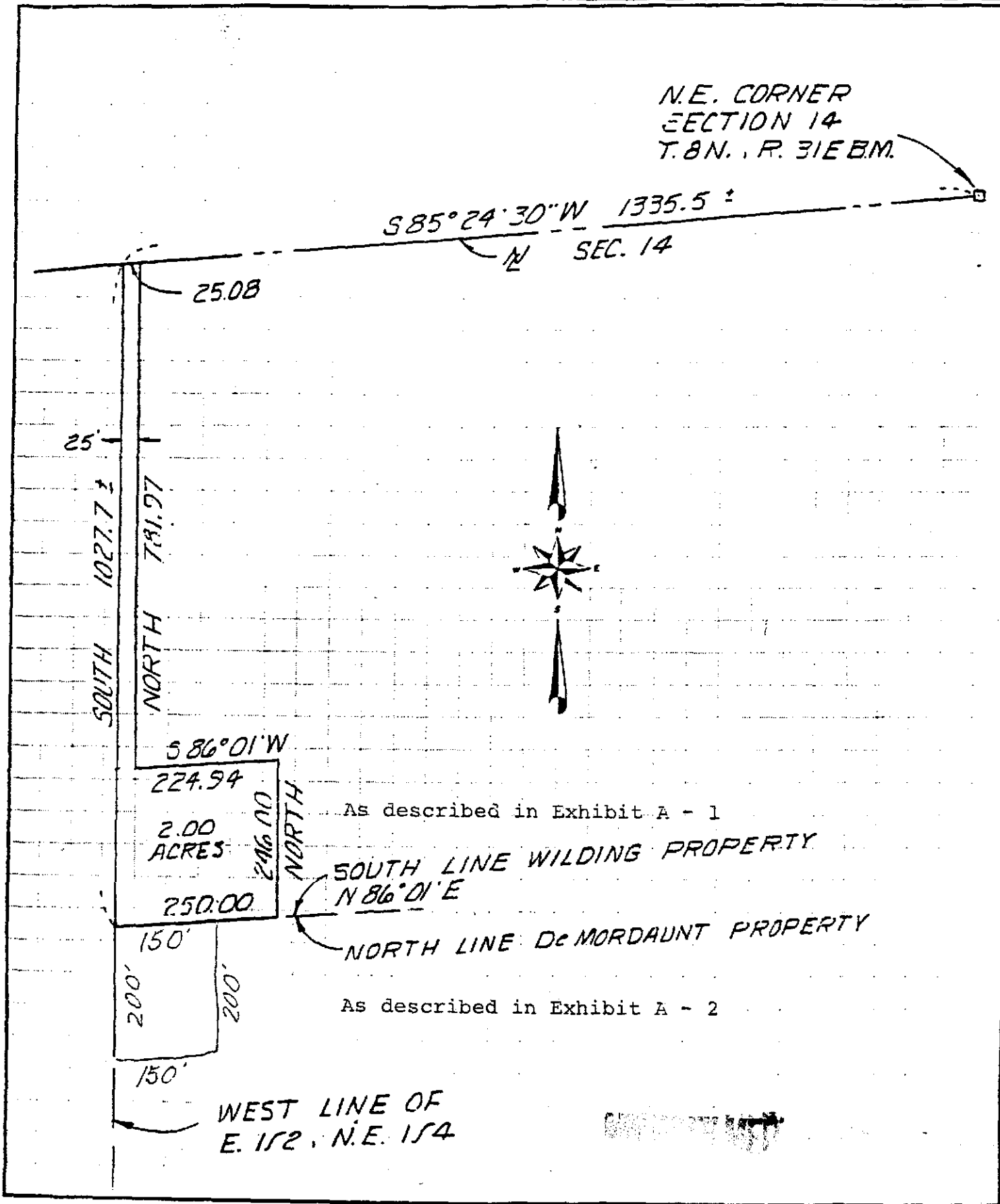
A. Kenneth Dunn

Director

This amendment would adopt the "current" option which changes the location of the power plant and replaces the entire length of the Reno Ditch to eliminate bed loss. The power plant would still discharge the water into the same channel of the diversionary works of the irrigators as it would under option A or option B, but further down stream. All consumptive irrigation use is down stream of either the location of the power plant in option A (Section 17) or option B (Section 15) and is down stream of the location under the "Current" option. The "Current" option merely eliminates more bed loss associated with the existing Reno Ditch. To this end the downstream irrigators have sold a parcel of ground in Section 14 to Birch Power to locate the power house. This location allows for a fee simple ownership and more head for greater power production. Since there is absolutely no effect on existing water rights and no one will be adversely affected, request is hereby made for an immediate ex parte amendment without publication of notice thereof.

BENTON ENGINEERING
550 Lind[illegible]
IDAHO FALLS, IDAHO 83401
Phone 522-8033

JOB BIRCH CREEK ROAD
SHEET NO [redacted] OF
CALCULATED BY D. L. J. DATE 5-30-86
CHECKED BY DATE
SCALE 1" = 200'



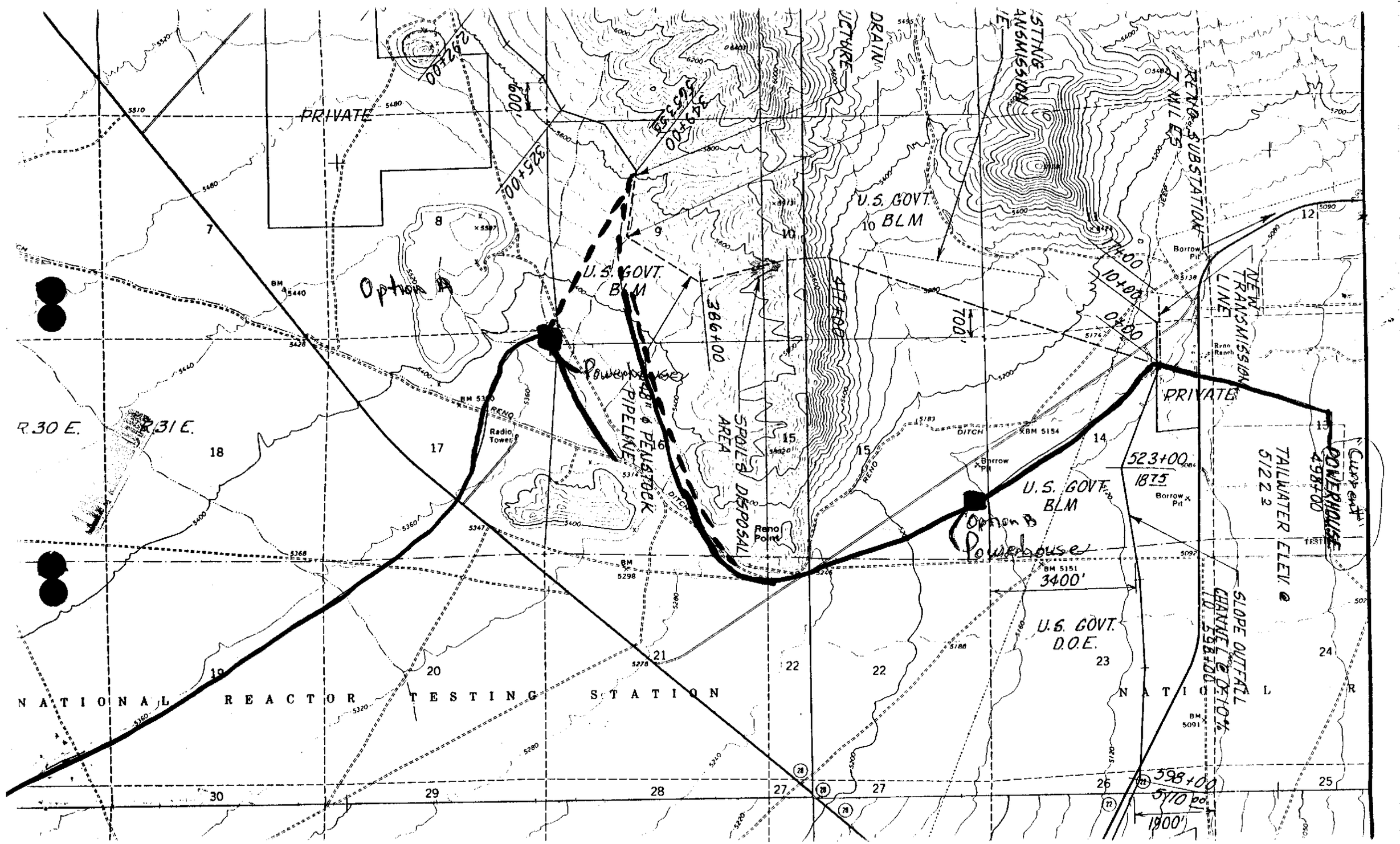
PRODUCT 7061 NEBS Inc. Bronx, New York 10459

EXHIBIT A - 1

Beginning at the Northwest Corner of the East Half of the Northeast Quarter (E½, N.E. ¼) of Section 14, Township 8 North, Range 31 East of the Boise Meridian, said point being S. 85°24'30" W. 1335.5 feet more or less along the Section line, from the Northeast Corner of said Section 14, and running thence South 1027.7 feet more or less along the West line of said East half of the Northeast Quarter (E½, N.E.¼), to a point that is common to the North boundary of the property owned or formerly owned by D & D Enterprisses, Inc., and the South boundary of the property owned or formerly owned by Ben Wilding; thence N. 86°01' E. 250.00 feet along said common boundary; thence North 246.00 feet; thence S. 86°01' W. 224.94 feet; thence North 781.97 feet more or less to the North line of said Section 14; thence S. 85°24'30" W. 25.08 feet to the point of beginning, containing 2.00 acres more or less.

EXHIBIT A - 2

Beginning at a point on the West line of the East half of the Northeast Quarter, ($E\frac{1}{2}$, $NE\frac{1}{4}$) of Section 14, Township 8 North, Range 31 East of the Boise Meridian, said point being common to the North boundary of the property owned or formerly owned by D & D Enterprises, Inc., and the South boundary of the property owned by Ben Wilding, said point also being described as S. 85° 24' 30" W. 1335.5 feet more or less along the Section line, and South 1027.7 feet more or less, along the West line of said East half of the Northeast Quarter ($E\frac{1}{2}$, N.E.$\frac{1}{4}$) from the Northeast Corner of said Section 14, and running thence South along said West line 200.00 feet; thence N. 86° 01' E. 150.00 feet parallel to said common boundary line; thence North 200.00 feet to said common boundary line; thence S. 86° 01' W.150.00 feet along said common boundary line, to the point of beginning.


PRIVATE
U.S. GOVT. BLM
Option A
Powerhouse
Option B
Powerhouse
U.S. GOVT. BLM
U.S. GOVT. D.O.E.
U.S. GOVT. BLM
PRIVATE
NATIONAL REACTOR TESTING STATION
NATIONAL
R.30 E.
R.31 E.
700'
600'
1900'
3400'
1875
PIPELINE
SPOILS DISPOSAL AREA
SLOPE OUTFALL CHANNEL
TAILWATER ELEV.
NEW TRANSMISSION LINE
RENO SUBSTATION
TWIN FALLS
Reno Point
Radio Tower
Reno Ranch
Borrow Pit
DITCH
RENO
325+00
349+00
386+00
398+00
498+00
523+00
5/22 2
5/10 pd

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATIONS FOR PERMIT NOS. 32-7128 AND 32-7136 IN THE NAME OF BIRCH POWER COMPANY	ORDER ADOPTING MODIFIED MEMORANDUM DECISION AND ORDER

A Proposed Memorandum Decision and Order was issued on November 21, 1984 by Bobby D. Fleenor, Hearing Officer and served on the parties on November 27. Those parties wishing to file exceptions to the proposed decision or request oral argument were allowed fifteen days to do so.

Exceptions to the proposed decision were received on December 12, 1984 from the Idaho Department of Fish and Game and from the Birch Creek Water Users and on December 14, 1984 from the Bureau of Land Management. No requests for oral argument before the Director were received.

The Birch Creek Water Users took exception to the conclusion that the saved water belongs to the applicant and also to the requirement that water must be left in the natural channel of Birch Creek to provide water for livestock and to maintain the vegetation along the stream. In answer, I find that the court has consistantly awarded water saved to the person saving it. I also find that the preservation of the riparian habitat along the stream is in the public interest, is consistant with the policy of the Water Resource Board and will not deprive the water users of any water they normally would receive.

The Department of Fish and Game objected to the portion of paragraph 4 of the order that would require "amount of water saved by the new ditch" as one of the alternatives for the amount of water released past the new point of diversion and to the wording of paragraph 2 of the order on the timing of a

review of the license by the Director. In answer, I find that the release of the amount of water saved must be included as an alternative in the amount of water allowed to flow past the proposed point of diversion in order to prevent injury to existing prior irrigation rights. There must, however, be water saved so condition 5 of the order has been modified to require an 11% savings of water in the new system. Also, I find that no change is necessary in paragraph 2 since it is clear that the license conditions can only be modified at the FERC license renewal or in 30 years.

The Bureau of Land Management's exception suggested Finding of Fact No. 15 be changed to read "few woody plants ..." and No. 16 be changed to "maintain a riparian zone ...". Both changes have been made. An exception also is made to paragraph 3 of the Order which places the diversion of water under the control of the watermaster. This exception is rejected since the statutory method of delivery is by the state appointed watermaster. The last exception is to paragraph 4 of the Order which is similar to the exception of the Idaho Department of Fish and Game and, therefore, would receive the same response concerning the water saved.

On January 14, 1985, D & D Enterprises, Inc. responded to the exceptions of the Birch Creek Water Users, the Idaho Department of Fish and Game and the Bureau of Land Management. The primary objection of D & D Enterprises, Inc. concern the disposition of the saved water. While I would agree that if the holder of a decreed water right saves the water normally lost in his conveyance works to seepage he would be entitled to the water under his decree. That, however, is not the case here. The water in this instance is being saved by a party other than the owners of the decreed rights. Therefore, the arguments of D & D Enterprises, Inc. do not convince me to reach a different decision.

The Proposed Memorandum Decision and Order has been modified for clarification at the following places: Findings of Fact 10, 11, 12, 15, 16 and 22; Conclusion of Law 1 and 3; and Order 4.

The modifications of the Proposed Decision do not substantially change the decision and, therefore, the Proposed Decision as modified is hereby adopted as the Final Decision.

Dated this 26th day of March, 1985.

A. KENNETH DUNN, Director

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATIONS FOR PERMIT NOS. 32-7128 AND 32-7136 IN THE NAME OF BIRCH POWER COMPANY	MODIFIED MEMORANDUM DECISION AND ORDER

On September 8, 1982, Birch Power Company filed with the Department of Water Resources Application for Permit No. 32-7128 to appropriate 45 cubic feet per second less a minimum of 5 cubic feet per second for fish propagation from Birch Creek in Clark County. The water would be diverted in the NE1/4NW1/4, Sec. 3, Twp. 8N, Rge. 30E and used to generate 900 horsepower in the NE1/4NE1/4, Sec. 17, Twp. 8N, Rge. 31E.

Notice of the application was published in the Rexburg Journal on September 23 and 30, 1982 and was subsequently protested on September 23, 1982 by the Idaho Department of Fish and Game. On October 12, 1982, additional protests were received from the Bureau of Land Management and from William T. Simmons, C. A. Wagoner, and Ben R. Wilding.

On January 3, 1984, Birch Power Company filed with the Department of Water Resources Application for Permit No. 32-7136 to appropriate an additional 30 cubic feet per second from Birch Creek to be used in combination with Application No. 32-7128.

Notice of this application was published in the Rexburg Journal on January 19 and 26, 1984 and subsequently protested on February 1, 1984 by the Bureau of Land Management. Additional protests were received from the Idaho Department of Fish and Game, and Ben Wilding, Watermaster of Water District 32-D, on February 2 and 3, 1984, respectively. A petition for D & D Enterprises

RECEIVED

to intervene in the matter of Application for Permit No. 32-7128 was received on September 16, 1983. The applicant had previously advised the Department he would not object to such a petition so on February 23, 1984, the Department issued an order allowing D & D Enterprises to intervene in the matter.

The protests and petition to intervene cited several reasons for objecting to the proposed project which are summarized as follows:

1) Diversion of 75 cubic feet per second at the proposed diversion point would have an adverse impact on the fishery and riparian habitat along the 3,000 feet of Birch Creek between the proposed point of diversion and the Reno Ditch diversion.

2) The construction of the proposed diversion would be incompatible with the interests of the water users of Birch Creek.

3) The applicant's plans are inadequate to allow an assessment of possible detrimental effects.

4) The application contains no proof of a firm commitment to finance the project and the applicant has not demonstrated financial ability to complete it.

5) Information provided on the application is not sufficient to evaluate feasibility of the project.

6) The application appears to be made for speculative purposes.

On April 5, 1984, a combined hearing was held in Idaho Falls, Idaho to consider the objections against Applications for Permit No. 32-7128 and 32-7136. Present at the hearing and representing the applicant were Ted Sorenson, owner of Birch Power Company and Ray Rigby, Attorney at Law. The protestants present at the hearing were William Dillon, Deputy Attorney General and Virgil Moore, Regional Fisheries Manager representing the Idaho Department of Fish and Game; Ben Wilding, Watermaster representing Water District 32-D, Birch Creek; Jim

Esget, District Hydrologist and Robert McCardy, Wildlife Biologist representing U.S. Bureau of Land Management; and George Peterson, Attorney at Law representing D & D Enterprises. The following evidence was obtained during the hearing and considered in reaching this decision.

Review of Evidence

1) Applications for Permit Nos. 32-7128 and 32-7136

2) Hearing tapes numbered 1 through 9.

3) Applicant's Exhibit No. 1, Birch Power Company Preliminary Design and Report.

4) Applicant's Exhibit No. 2, letter from Don McGahey, General Manager of Midstate Distributing, Inc. dated April 4, 1984.

5) Applicant's Exhibit No. 3, letter from Brian D. Holt, Director Consumer Service, Planning and Research for Utah Power and Light Company, dated February 14, 1984.

6) Applicant's Exhibit No. 4, letter from Lyle J. Larson, Assistant Vice-president, Continental Bank & Trust Company, dated January 6, 1984.

7) Applicant's Exhibit No. 5, letter from Lyle J. Larson, Assistant Vice-president, Continental Bank & Trust Company, dated October 24, 1983.

8) Applicant's Exhibit No. 6, a report by J. S. Griffeth, PhD, entitled "Feasibility of Developing a Trout Population in the Proposed Birch Creek Hydroelectric Project Feeder Ditch" dated April 5, 1984.

9) Applicant's Exhibit No. 7, photos of Birch Creek in vicinity of proposed diversion.

10) Applicant's Exhibit No. 8, photos of riparian habitat along Reno Ditch.

11) Applicant's Exhibit No. 9, photos of general area where feeder ditch will be constructed.

12) Applicant's Exhibit No. 10, order from Federal Energy Regulatory Commission issuing preliminary permit to Birch Power Company, Project No. 7194-000 issued September 7, 1983.

13) Protestant's Exhibit Fish and Game No. 1, letter from Tom Reinecker, Region VI Supervisor, Idaho Department of Fish and Game, dated March 26, 1984.

14) Policy Statement of Idaho Water Resource Board on Birch Creek.

15) Court decree entitled Agnes B. Reno, et al vs J. R. Richards, et al dated September 6, 1922 adjudicating water rights on Birch Creek and tributaries.

Birch Creek flows in a southeasterly direction from Gilmore Summit down through Birch Creek Valley and adjacent to State Highway 28 for several miles. Birch Creek is used heavily by campers and fishermen partially because of the ease of access to the creek and because picnic and camping areas have been developed along it. About 3 miles above the proposed point of diversion Birch Creek turns more south and diverges from Highway 28 until at the proposed point of diversion it is about 1 1/2 miles west of the highway. The creek continues in a southerly direction about 3000 feet to the diversion structure for the Reno Ditch where during most of the time the entire flow is diverted leaving the channel of Birch Creek below the diversion without water.

The Reno Ditch takes the water from the east side of the creek and runs in a east-southeasterly direction about 5 miles before it is used. The slope of the ditch is steep enough so that the velocity of water is between 5 and 8 feet per second.

The applicant plans to divert the water from Birch Creek about 3000 feet upstream from the Reno Ditch diversion into a feeder ditch with a flatter slope with the velocity of the water reduced to 1.8 to 2.25 feet per second.

The water would be conveyed for about 5 1/2 miles in the feeder ditch then enter a steel penstock leading downhill to the generation facility located adjacent to the Reno Ditch. The water leaving the generation facility would return directly to the Reno Ditch for use by the irrigators.

The applicant claims that the water lost to seepage in the new feeder ditch will be at least 5 cubic feet per second less than in the 3000 feet of Birch Creek and in the approximately 5 miles of the Reno Ditch to the point where the water is returned to the Reno Ditch. This possible decrease in water loss raises the question of whether the water previously lost to seepage should be used to fill the decreed rights of the irrigators on the Reno Ditch or should it be used to provide a minimum flow in the Birch Creek channel downstream from the proposed point of diversion.

The hearing officer has considered the evidence and reviewed the testimony, and based upon his understanding of the law, proposes the following Findings of Fact, Conclusions of Law and Order:

FINDINGS OF FACT

1) Birch Power Company, the applicant, is a corporation qualified to do business in the State of Idaho, under the laws of the State of Idaho.

2) The applicant has applied to the Department of Water Resources for 45.0 cubic feet per second under Application for Permit No. 32-7128 and 30.0 cubic per second under Application for Permit No. 32-7136.

3) The applicant, through Ted Sorenson sole owner verbally deleted at the hearing all reference to the intent of the applicant to leave 5.0 cubic feet per second maintenance flow in Birch Creek between the proposed point of diversion and the Reno Ditch diversion.

4) The applicant has filed an application to divert water from Birch Creek in the NE1/4NW1/4, Sec. 3, Twp. 8N, Rge. 30E, convey this water through

5 miles of feeder ditch and 1 mile of penstock to a point in the NE1/4NE1/4, Sec. 17, Twp. 8N, Rge. 31E, where it will be used to generate 1,600 horsepower under 278 feet of head. This plan is option A in Applicant's Exhibit 1. Option B shown in Exhibit 1, but not shown on the application, would use the same feeder ditch but would use about 3 miles of penstock to a generating station in the NE1/2SE1/2, Sec. 15, T8N, Rge. 31E. The effect on Birch Creek and the downstream users would be the essentially the same for both options.

5) Based upon the records of the USGS gaging station at Eight Mile Canyon Road, flows at the proposed point of diversion are expected to range consistantly from 41.0 cubic feet per second to 75.0 cubic feet per second with flows in excess of 75.0 cubic feet per second occurring primarily in the period from October to May.

6) Water normally conveyed through the Reno Ditch for irrigation purposes will be the same water used for power generation during the irrigation season.

7) The proposed point of diversion is approximately 3,000 feet upstream from the head of the Reno Ditch.

8) Diversion of water from Birch Creek during the summer months is subject to regulation by the watermaster of Water District No. 32-D, Birch Creek.

9) Losses in the Birch Creek channel between the proposed point of diversion and the Reno Ditch are estimated at 1.0 cubic foot per second.

10) Loss measurements in the Reno Ditch indicate 9.0 cubic feet per second or approximately 22% of the water diverted is lost in the existing system between the proposed point of diversion and the point where the water will be returned to the Reno Ditch from the generation facility.

11) The use of sealants by the applicant in the feeder ditch is

expected to reduce the loss by about 50% between the proposed point of diversion and the point where the water is returned to the Reno Ditch.

12) The water lost to seepage does not reach the downstream water user as either surface or subsurface flow and has never been used for irrigation by those water users on the Reno Ditch.

13) Utah Power and Light to whom the power will be sold, and General Electric, the major supplier of the electrical equipment, have reviewed the project and found it financially feasible.

14) The Continental Bank & Trust Company has a verbal contract with Birch Power Company to secure or provide the best available financing. The bank would finance the project itself or arrange financing with several other alternate sources which are available pending the issuance of a water right permit.

15) Existing riparian habitat will be lost along that portion of the Reno Ditch and Birch Creek where dewatering is expected to occur. The existing riparian habitat is mainly willows and other brushy plants along Birch Creek and grasses and few woody plants along the Reno Ditch.

16) The fishery existing in Birch Creek below the proposed point of diversion will be eliminated. A maintenance flow of 5 cubic feet per second bypassing the proposed point of diversion is not sufficient to maintain a fishery, but would be sufficient to provide stockwater and maintain a riparian zone along the 3000 feet of Birch Creek being dewatered.

17) The first 1 1/2 miles of the feeder ditch is being designed to support a riparian zone and create a fishery habitat where the population density of trout should equal the fishery existing in Birch Creek below the proposed diversion. A continuous flow of water must be maintained in that section of the feeder ditch to assure a fishery.

18) A grazing allotment administered by the BLM has used for many

years, the Reno Ditch and Birch Creek below the proposed point of diversion for the watering of 4,000 sheep from April 1 to June 30. The proposed feeder ditch is also located within this grazing allotment.

19) Under a trailing allotment administered by the BLM, 450 head of cattle have watered along the 1 1/2 miles of Birch Creek below the proposed point of diversion between November 1 and February 1.

20) Section 42-113, Idaho Code charges the Department with recognizing and protecting water rights for instream livestock use and other purposes based on priority.

21) On September 7, 1983, the applicant received from the Federal Energy Regulatory Commmission a preliminary permit to conduct investigations and secure data necessary to determine the feasibility of the project.

22) None of the protestants are participating in the cost on the construction of the project.

CONCLUSIONS OF LAW

1) The water that will be saved by sealing the feeder ditch is new water that has never been available for use by the Reno Ditch irrigators, therefore, the existing irrigation rights will not be injured if the water being saved is used to provide water for livestock and to protect the public interest by preserving the riparian habitat along the natural stream channel of Birch Creek. The person who saves the water is entitled to the benefit of the water with his right to the saved water being prior to the right of the other parties. Reno v. Richards, 32 Idaho 1, 6, 13 (1918) and Basinger v. Taylor, 36 Idaho 591, 596-597, 599 (1922).

2) Streamflows at the proposed point of diversion have been shown to be adequate for the project as designed for the use of 75 cubic feet per second.

3) The adverse impacts to riparian habitat caused by the appropriation

and diversion of water from the 3,000 feet of stream will be sufficiently mitigated by the establishment of 1 1/2 miles of riparian zone plus the riparian vegetation that will naturally occur in the remaining length of the feeder ditch and the riparian vegetation that will be maintained by the flow left in the natural channel.

4) Establishing 1 1/2 miles of fishery habitat in the feeder ditch as shown in Applicant's Exhibit 6, will mitigate the loss of 3,000 feet of fishery below the proposed point of diversion as long as feeder ditch is not dewatered.

5) Stockwatering use from Birch Creek predates diversion and use of water under the two Birch Power Company applications.

6) Water rights established for instream livestock use on the 3,000 feet of Birch Creek above the Reno Ditch diversion must be satisfied.

7) The applicant has sufficient financial resources to complete the project.

8) The diversion of water under these permits when conditioned to protect the existing irrigation and stockwater rights and to mitigate the riparian, fish and wildlife values, is in the public interest.

9) The applicant is entitled to have both permits approved for a combined diversion of 75 cubic feet per second.

ORDER

IT IS, THEREFORE, HEREBY ORDERED that Applications for Permit Nos. 32-7128 and 32-7136 be APPROVED subject to the following limitations and conditions:

1) Subject to all prior water rights.

2) A measuring device and lockable controlling works of a type acceptable to the Department shall be permanently installed and maintained as part of the diverting works. A second measuring device shall be installed near the end

of the feeder ditch so that the amount of water lost in the feeder ditch can be determined.

3) Use of water under these permits is subject to control by the watermaster of State Water District No. 32-D, Birch Creek.

4) Eleven percent of the flow of Birch Creek at the diversion to the feeder ditch, the amount of water saved by the new ditch, or 5 cubic feet per second whichever is the least, shall be allowed to flow past the feeder canal diversion in the natural channel of Birch Creek. The amount of water saved shall be computed by subtracting the amount of water being lost in the new feeder ditch which can be measured, from the amount that would have been lost in the 3,000 feet of stream channel and the Reno Ditch, which is 22% (0.22) of the water flowing in the stream at the new point of diversion.

5) The feeder canal shall be constructed and maintained in a manner that will reduce the amount of seepage loss by at least 11% of the flow at the proposed point of diversion.

6) The first 1 1/2 miles of ditch must be designed, constructed, maintained and operated in a manner that supports a fishery as shown in Applicant's Exhibit No. 6.

7) Provisions shall be made to return the water to Birch Creek at the end of the first 1 1/2 mile of feeder ditch to assure that the section of feeder ditch will not be dewatered if the generator malfunctions or icing occurs or any other event necessitates that the water not be conveyed to the generator.

8) These permits are subject to the provisions of Sections 42-205 through 42-210, Idaho Code restricting sale, transfer, assignment, or mortgage of these permits. Failure to comply with these provisions is cause for immediate cancellation of the permits.

9) This project shall be operated in a manner that will not conflict

Subordination clause

or interfere with future diversion of water for irrigation or other beneficial consumption.

10) Project construction shall commence within one year from the date of permit issuance and shall proceed diligently to completion unless it can be shown to the satisfaction of the Director of the Department of Water Resources that delays were due to circumstances over which permit holder had no control.

11) The diversion and use of water under this permit and any license subsequently issued is subject to review by the Director on the date of expiration of any license issued by FERC or if no license from FERC is issued, then thirty (30) years from the date the permit is issued. Upon appropriate findings relative to the interest of the public, the Director may cancel all or part of the use authorized herein and may revise, delete or add conditions under which the rights may be exercised.

12) These permits do not constitute Idaho Public Utilities Commission or Federal Energy Regulatory Commission approval that may be required.

13) Proof of construction of works and application of water to beneficial use shall be submitted on or before March 1, 1990.

Dated this 27 day of March, 1985.

Bobby D. Fleenor

BOBBY D. FLEENOR
Hearing Officer

Form 202
3/78

Ident. No. 32 7128
32-7128

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

To appropriate the public waters of the State of Idaho APPROVED

1. Name of applicant BIRCH POWER COMPANY Phone (208) 529-2469

   Post office address 550 Linden Drive, Idaho Falls, Idaho 83401

2. Source of water supply Birch Creek which is a tributary of Birch Ck. sinks to ground-water aquifer.

3. Location of point of diversion is NE ¼ of NW ¼ of Section 3 Township 8N

   Range 30 E*B.M. Clark County, additional points of diversion if any:

*kw 5/18/84

4. Water will be used for the following purposes:

   Amount 45 cfs (cfs ~~or acre-feet per annum~~) for power productio purposes from Jan. 1 to Dec. 31 (both dates inclusive)

   Amount _____ (cfs or acre-feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

   Amount _____ (cfs or acre-feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

   Amount _____ (cfs or acre-feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

5. Total quantity to be appropriated:

   a. 45 cubic feet per second ~~and/or~~ ~~or~~ ~~b.~~ less minimum 5 cfs for fish propagation

6. Proposed diverting works:

   a. Description of ditches, flumes, pumps, headgates, etc. headgate with five miles of feeder ditch, penstock and power house

   b. Height of storage dam none feet, active reservoir capacity none acre-feet; total reservoir capacity None acre-feet, materials used in storage dam: N/A

      Period of year when water will be diverted to storage None (Month/Day) to None (Month/Day) inclusive.

   c. Proposed well diameter is N/A inches; proposed depth of well is N/A feet.

7. Time required for the completion of the works and application of the water to the proposed beneficial use is 5 years *(minimum 1 year – maximum 5 years).*

8. Description of proposed uses:
   a. If water is **not** for irrigation: Power Generation
      (1) Give the place of use of water: NE ¼ of NE ¼ of Section 17 Township ~~31E~~ 8N*
      Range ~~8N~~ 31E* B.M.

      (2) Amount of power to be generated: 900 horsepower under 278 feet of head.

      (3) List number of each kind of livestock to be watered N/A

      (4) Name of municipality to be served N/A, or number of families to be supplied with domestic water _____.

      (5) If water is to be used for other purposes describe: Power Generation

b. If water is for irrigation, indicate acreage in each subdivision in the tabulation below:

TWP	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	

Total number of acres to be irrigated _____

c. Describe any other water rights used for the same purposes as described above. _____

N/A

9. a. Who owns the property at the point of diversion US Dept. of Interior, Bureau of Land Mgmt.

b. Who owns the land ~~to be irrigated at~~ place of use US Dept. of Interior, Bureau of Land Mgmt.

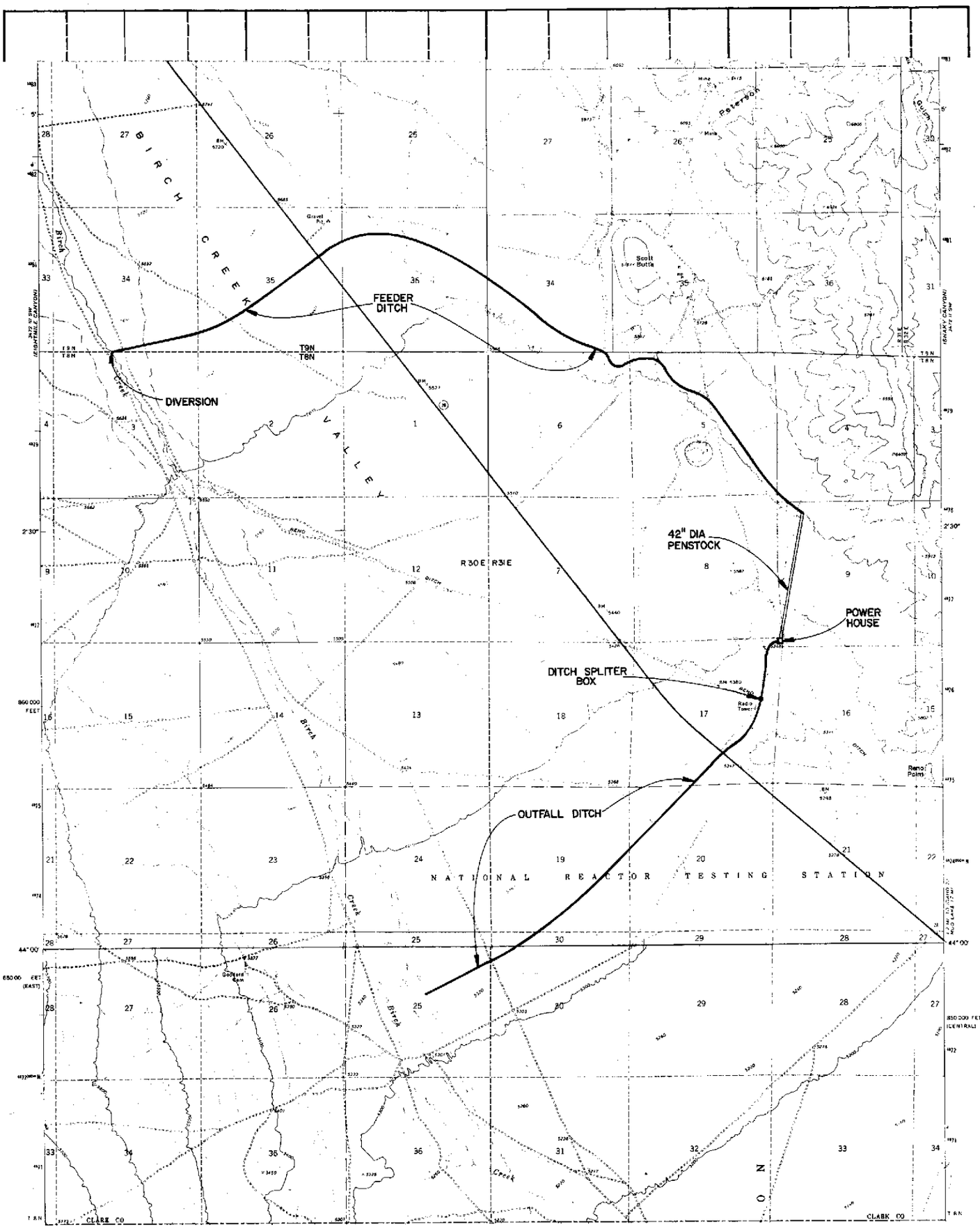
c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing Right-of-way application on file with U.S. Dept. of Interior, Bureau of Land Management.

10. Remarks The water use is nonconsumptive. All water will be available for present irrigational uses and/or returned to Birch Creek

The power plant feeder ditch will reduce existing bed losses by approximately 5 cfs. This additional flow will be available to meet irrigational and/or fish propagation needs.

The outfall ditch will be filled with a concrete diversion box at the intersection with Reno Ditch to afford irrigational diversion as desired.

11. Map of proposed project: show clearly the proposed point of diversion, place of use, section number, township and range number.



BE IT KNOWN that the undersigned hereby makes application for permit to appropriate the public waters of the State of Idaho as herein set forth.

(Applicant)

Priority: 09/08/82

Received by BP Date 9/8/82 Time 9:45am

Preliminary check by Emc Fee $ 675.00

Receipted by BP Date 9/10/82 # 22496

Publication prepared by BP Date 9/15/82

Published in Standard Journal

Publication dates 9/16 & 9/23/82

Publication approved CW Date 10-14-82

Protests filed by: Water District 32-D, BLM, Fish & Game

Copies of protests forwarded by CW

Hearing held by _____ Date _____

Recommended for approval denial by EMC

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

This is to certify that I have examined Application for Permit to appropriate the public waters of the State of Idaho No. 32-7128, and said application is hereby APPROVED.

1. Approval of said application is subject to the following limitations and conditions:

   a. SUBJECT TO ALL PRIOR WATER RIGHTS.

   b. Proof of construction of works and application of water to beneficial use shall be submitted on or before March 1, 19 90.

   c. The rate of diversion, if water is to be used for irrigation under this permit, when combined with all other water rights for the same land shall not exceed 0.02 cubic feet per second for each acre of land.

   d. Other: Pursuant to Order Adopting Modified Memorandum Decision and Order and Modified Memorandum Decision and Order.

Dated this 27th day of March, 1985.

A. Glen Saxton
Chief, Operations Bureau

BEFORE THE DIRECTOR OF THE DEPARTMENT

OF WATER RESOURCES OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATIONS FOR PERMIT NOS. 32-7128 AND 32-7136 IN THE NAME OF BIRCH POWER COMPANY	ORDER ISSUING PROPOSED DECISION

A. Kenneth Dunn, Director of the Department of Water Resources, having reviewed the attached proposed decision prepared by his appointee, Bobby D. Fleenor, who conducted the hearing or who has read the record in this case, hereby approves the same as a proposal for decision pursuant to Idaho Code, § 67-5211 and orders that said proposed decision and a copy of this order be served upon each of the parties to these proceedings who appeared at the hearing on April 5, 1984, of this matter or upon their attorneys in accordance with Rule 7.3 of the Rules of Practice and Procedure of this Department.

Each party to these proceedings who appeared at the hearing is hereby afforded the opportunity, pursuant to Idaho Code §§ 42-1701A and 67-5211, to file exceptions to the attached proposed decision and to present briefs and oral agruments in accordance with the provisions of this order. Exceptions may not be filed and briefs and oral agruments may not be presented by parties who did not appear at the hearing of this case. If no timely and proper exceptions are received, an order by the Director will be entered adopting and issuing the proposed decision as his final decision.

I.
EXCEPTIONS

A. To be considered by the Director, exceptions must:

1. be received by the Director on or before the 15th day following the day of service of this Order and the proposed decision,

2. specifically identify the portions of the proposed decision to which exceptions are made and specifically state the grounds for those exceptions, and

3. be sent to each of the parties who appeared or their attorneys.

B. Exceptions not in compliance with the above stated requirements will not be considered and will be deemed an acceptance of the propose decision.

II.
BRIEFS

A. Any briefs in support of exceptions to the proposed decision shall be filed with the Director at the same time that party's exceptions are filed with the Director.

B. Any party desiring to file a brief in response to any exceptions filed by any other party may do so by filing such brief with the Director on or before the 15th day following the last day any exceptions by any other party were served upon that party desiring to respond.

III.
ORAL ARGUMENTS

A. No oral arguments before the Director on the proposed decision will be held unless specifically requested by a party filing exceptions to the proposed decision and unless that request is filed with the Director concurrently with the filing of that party's exceptions.

B. If oral agruments have been properly requested by a party filing exceptions, any other party, upon reasonable notice to the Director, shall have the right to present oral arguments in response to the exceptions filed.

C. Oral arguments before the Director on exceptions to the proposal for decision shall be heard at the discretion of the Director, pursuant to Idaho Code, § 42-1701A. After all exceptions, briefs and requests for oral arguments have been received, the Director will decide whether to hear oral agruments. If oral arguments are to be heard, the Director will, within a reasonable time, set the case for oral agruments and notify each party of the place, date and hour the oral agruments will take place and of the period of time allocated for the arguments of this case. Unless the Director orders otherwise, all oral agruments shall be heard in Boise, Idaho.

IV.
CERTIFICATION OF SERVICE

A. All exceptions, briefs, requests for oral arguments and other matters filed with the Director in connection with the proposed decision shall be served on all other parties to these proceedings in accordance with Rule 7.2.

V.
FINAL DECISION

A. Following the submission of all exceptions and briefs and oral agruments, if they are heard, the Director shall issue a final decision adopting, modifying or rejecting and replacing the proposed decision. Copies of the decision and order shall be served on all parties.

Dated this 27th day of November, 1984.

A. KENNETH DUNN
Director
Department of Water Resources

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATIONS FOR PERMIT NOS. 32-7128 AND 32-7136 IN THE NAME OF BIRCH POWER COMPANY	PROPOSED MEMORANDUM DECISION AND ORDER

On September 8, 1982, Birch Power Company filed with the Department of Water Resources Application for Permit No. 32-7128 to appropriate 45 cubic feet per second less a minimum of 5 cubic feet per second for fish propagation from Birch Creek in Clark County. The water would be diverted in the NE1/4NW1/4, Sec. 3, Twp. 8N, Rge. 30E and used to generate 900 horsepower in the NE1/4NE1/4, Sec. 17, Twp. 8N, Rge. 31E.

Notice of the application was published in the Rexburg Journal on September 23 and 30, 1982 and was subsequently protested on September 23, 1982 by the Idaho Department of Fish and Game. On October 12, 1982, additional protests were received from the Bureau of Land Management and from William T. Simmons, C. A. Wagoner, and Ben R. Wilding.

On January 3, 1984, Birch Power Company filed with the Department of Water Resources Application for Permit No. 32-7136 to appropriate an additional 30 cubic feet per second from Birch Creek to be used in combination with Application No. 32-7128.

Notice of this application was published in the Rexburg Journal on January 19 and 26, 1984 and subsequently protested on February 1, 1984 by the Bureau of Land Management. Additional protests were received from the Idaho Department of Fish and Game, and Ben Wilding, Watermaster of Water District 32-D, on February 2 and 3, 1984, respectively. A petition for D & D Enterprises to intervene in the matter of Application for Permit No. 32-7128 was received on September 16, 1983. The applicant had previously advised the Department he would not object to such a petition so on February 23, 1984, the Department issued an order allowing D & D Enterprises to intervene in the matter.

The protests and petition to intervene cited several reasons for objecting to the proposed project which are summarized as follows:

1) Diversion of 75 cubic feet per second at the proposed diversion point would have an adverse impact on the fishery and riparian habitat along the 3,000 feet of Birch Creek between the proposed point of diversion and the Reno

UNOFFICIAL

Ditch diversion.

2) The construction of the proposed diversion would be incompatible with the interests of the water users of Birch Creek.

3) The applicant's plans are inadequate to allow an assessment of possible detrimental effects.

4) The application contains no proof of a firm commitment to finance the project and the applicant has not demonstrated financial ability to complete it.

5) Information provided on the application is not sufficient to evaluate feasibility of the project.

6) The application appears to be made for speculative purposes.

On April 5, 1984, a combined hearing was held in Idaho Falls, Idaho to consider the objections against Applications for Permit No. 32-7128 and 32-7136. Present at the hearing and representing the applicant were Ted Sorenson, owner of Birch Power Company and Ray Rigby, Attorney at Law. The protestants present at the hearing were William Dillon, Deputy Attorney General and Virgil Moore, Regional Fisheries Manager representing the Idaho Department of Fish and Game; Ben Wilding, Watermaster representing Water District 32-D, Birch Creek; Jim Esget, District Hydrologist and Robert McCardy, Wildlife Biologist representing U.S. Bureau of Land Management; and George Peterson, Attorney at Law representing D & D Enterprises. The following evidence was obtained during the hearing and considered in reaching this decision.

Review of Evidence

1) Applications for Permit Nos. 32-7128 and 32-7136

2) Hearing tapes numbered 1 through 9.

3) Applicant's Exhibit No. 1, Birch Power Company Preliminary Design and Report.

4) Applicant's Exhibit No. 2, letter from Don McGahey, General Manager of Midstate Distributing, Inc. dated April 4, 1984.

5) Applicant's Exhibit No. 3, letter from Brian D. Holt, Director Consumer Service, Planning and Research for Utah Power and Light Company, dated February 14, 1984.

6) Applicant's Exhibit No. 4, letter from Lyle J. Larson, Assistant Vice-president, Continental Bank & Trust Company, dated January 6, 1984.

7) Applicant's Exhibit No. 5, letter from Lyle J. Larson, Assistant Vice-president, Continental Bank & Trust Company, dated October 24, 1983.

8) Applicant's Exhibit No. 6, a report by J. S. Griffeth, PhD, entitled "Feasibility of Developing a Trout Population in the Proposed Birch Creek Hydroelectric Project Feeder Ditch" dated April 5, 1984.

9) Applicant's Exhibit No. 7, photos of Birch Creek in vicinity of proposed diversion.

10) Applicant's Exhibit No. 8, photos of riparian habitat along Reno Ditch.

11) Applicant's Exhibit No. 9, photos of general area where feeder ditch will be constructed.

12) Applicant's Exhibit No. 10, order from Federal Energy Regulatory Commission issuing preliminary permit to Birch Power Company, Project No. 7194-000 issued September 7, 1983.

13) Protestant's Exhibit Fish and Game No. 1, letter from Tom Reinecker, Region VI Supervisor, Idaho Department of Fish and Game, dated March 26, 1984.

14) Policy Statement of Idaho Water Resource Board on Birch Creek.

15) Court decree entitled Agnes B. Reno, et al vs J. R. Richards, et al dated September 6, 1922 adjudicating water rights on Birch Creek and tributaries.

Birch Creek flows in a southeasterly direction from Gilmore Summit down through Birch Creek Valley and adjacent to State Highway 28 for several miles. Birch Creek is used heavily by campers and fishermen partially because of the ease of access to the creek and because picnic and camping areas have been developed along it. About 3 miles above the proposed point of diversion Birch Creek turns more south and diverges from Highway 28 until at the proposed point of diversion it is about 1 1/2 miles west of the highway. The creek continues in a southerly direction about 3000 feet to the diversion structure for the Reno Ditch where during most of the time the entire flow is diverted leaving the channel of Birch Creek below the diversion without water.

The Reno Ditch takes the water from the east side of the creek and runs in a east-southeasterly direction about 5 miles before it is used. The slope of the ditch is steep enough so that the velocity of water is between 5 and 8 feet per second.

The applicant plans to divert the water from Birch Creek about 3000 feet upstream from the Reno Ditch diversion into a feeder ditch with a flatter slope with the velocity of the water reduced to 1.8 to 2.25 feet per second.

The water would be conveyed for about 5 1/2 miles in the feeder ditch then enter a steel penstock leading downhill to the generation facility located adjacent to the Reno Ditch. The water leaving the generation facility would return directly to the Reno Ditch for use by the irrigators.

The applicant claims that the water lost to seepage in the new feeder ditch will be at least 5 cubic feet per second less than in the 3000 feet of Birch Creek and in the approximately 5 miles of the Reno Ditch to the point where the water is returned to the Reno Ditch. This possible decrease in water loss raises the question of whether the water previously lost to seepage should be used to fill the decreed rights of the irrigators on the Reno Ditch or should it be used to provide a minimum flow in the Birch Creek channel downstream from the proposed point of diversion.

The hearing officer has considered the evidence and reviewed the testimony, and based upon his understanding of the law, proposes the following Findings of Fact, Conclusions of Law and Order:

FINDINGS OF FACT

1) Birch Power Company, the applicant, is a corporation qualified to do business in the State of Idaho, under the laws of the State of Idaho.

2) The applicant has applied to the Department of Water Resources for 45.0 cubic feet per second under Application for Permit No. 32-7128 and 30.0 cubic per second under Application for Permit No. 32-7136.

3) The applicant, through Ted Sorenson sole owner verbally deleted at the hearing all reference to the intent of the applicant to leave 5.0 cubic feet per second maintenance flow in Birch Creek between the proposed point of diversion and the Reno Ditch diversion.

4) The applicant has filed an application to divert water from Birch Creek in the NE1/4NW1/4, Sec. 3, Twp. 8N, Rge. 30E, convey this water through 5 miles of feeder ditch and 1 mile of penstock to a point in the NE1/4NE1/4, Sec. 17, Twp. 8N, Rge. 31E, where it will be used to generate 1,600 horsepower under 278 feet of head. This plan is option A in Applicant's Exhibit 1. Option B shown in Exhibit 1, but not shown on the application, would use the same feeder ditch but would use about 3 miles of penstock to a generating station in the NE1/2SE1/2, Sec. 15, T8N, Rge. 31E. The effect on Birch Creek and the downstream users would be the essentially the same for both options.

5) Based upon the records of the USGS gaging station at Eight Mile Canyon Road, flows at the proposed point of diversion are expected to range

consistantly from 41.0 cubic feet per second to 75.0 cubic feet per second with flows in excess of 75.0 cubic feet per second occurring primarily in the period from October to May.

6) Water normally conveyed through the Reno Ditch for irrigation purposes will be the same water used for power generation during the irrigation season.

7) The proposed point of diversion is approximately 3,000 feet upstream from the head of the Reno Ditch.

8) Diversion of water from Birch Creek during the summer months is subject to regulation by the watermaster of Water District No. 32-D, Birch Creek.

9) Losses in the Birch Creek channel between the proposed point of diversion and the Reno Ditch are estimated at 1.0 cubic foot per second.

10) Loss measurements in the Reno Ditch indicate 9.0 cubic feet per second or approximately 22% of the water diverted is lost between the proposed point of diversion and the point where the water will be returned to the Reno Ditch from the generation facility.

11) The use of sealants by the applicant in the feeder ditch is expected to reduce the loss by 5 cfs or 50% between the proposed point of diversion and the point where the water is returned to the Reno Ditch.

12) The water lost to seepage has never been used for irrigation by those water users on the Reno Ditch.

13) Utah Power and Light to whom the power will be sold, and General Electric, the major supplier of the electrical equipment, have reviewed the project and found it financially feasible.

14) The Continental Bank & Trust Company has a verbal contract with Birch Power Company to secure or provide the best available financing. The bank would finance the project itself or arrange financing with several other alternate sources which are available pending the issuance of a water right permit.

15) Existing riparian habitat will be lost along that portion of the Reno Ditch and Birch Creek where dewatering is expected to occur. The existing riparian habitat is mainly willows and other brushy plants along Birch Creek and grasses but no woody plants along the Reno Ditch.

16) The fishery existing in Birch Creek below the proposed point of diversion will be eliminated. A maintenance flow of 5 cubic feet per second bypassing the proposed point of diversion is not sufficient to maintain a

fishery, but would be sufficient to provide stockwater and maintain the riparian zone along the 3000 feet of Birch Creek being dewatered.

17) The first 1 1/2 miles of the feeder ditch is being designed to support a riparian zone and create a fishery habitat where the population density of trout should equal the fishery existing in Birch Creek below the proposed diversion. A continuous flow of water must be maintained in that section of the feeder ditch to assure a fishery.

18) A grazing allotment administered by the BLM has used for many years, the Reno Ditch and Birch Creek below the proposed point of diversion for the watering of 4,000 sheep from April 1 to June 30. The proposed feeder ditch is also located within this grazing allotment.

19) Under a trailing allotment administered by the BLM, 450 head of cattle have watered along the 1 1/2 miles of Birch Creek below the proposed point of diversion between November 1 and February 1.

20) Section 42-113, Idaho Code charges the Department with recognizing and protecting water rights for instream livestock use and other purposes based on priority.

21) On September 7, 1983, the applicant received from the Federal Energy Regulatory Commmission a preliminary permit to conduct investigations and secure data necessary to determine the feasibility of the project.

CONCLUSIONS OF LAW

1) The water that will be saved by sealing the feeder ditch is essentially new water that has never been available for use by the Reno Ditch irrigators, therefore, the existing irrigation rights will not be injured if the water being saved is used to provide stockwater and preserve the riparian habitat along the natural stream channel.

2) Streamflows at the proposed point of diversion have been shown to be adequate for the project as designed for the use of 75 cubic feet per second.

3) The adverse impacts to riparian habitat caused by the appropriation and diversion of water from the 3,300 feet of stream will be sufficiently mitigated by the establishment of 1 1/2 miles of riparian zone plus the riparian vegetation that will naturally occur in the remaining length of the feeder ditch and the riparian vegetation that will be maintained by the minimum flow left in the natural channel.

4) Establishing 1 1/2 miles of fishery habitat in the feeder ditch as shown in Applicant's Exhibit 6, will mitigate the loss of 3,000 feet of fishery

below the proposed point of diversion as long as feeder ditch is not dewatered.

5) Stockwatering use from Birch Creek predates diversion and use of water under the two Birch Power Company applications.

6) Water rights established for instream livestock use on the 3,000 feet of Birch Creek above the Reno Ditch diversion must be satisfied.

7) The applicant has sufficient financial resources to complete the project.

8) The diversion of water under these permits when conditioned to protect the existing irrigation and stockwater rights and to mitigate the riparian, fish and wildlife values, is in the public interest.

9) The applicant is entitled to have both permits approved for a combined diversion of 75 cubic feet per second.

ORDER

IT IS, THEREFORE, HEREBY ORDERED that Applications for Permit Nos. 32-7128 and 32-7136 be APPROVED subject to the following limitations and conditions:

1) Subject to all prior water rights.

2) A measuring device and lockable controlling works of a type acceptable to the Department shall be permanently installed and maintained as part of the diverting works. A second measuring device shall be installed near the end of the feeder ditch so that the amount of water lost in the feeder ditch can be determined.

3) Use of water under these permits is subject to control by the watermaster of State Water District No. 32-D, Birch Creek.

4) Eleven percent of the flow of Birch Creek at the diversion to the feeder ditch, the amount of water saved by the new ditch or 5 cubic feet per second whichever is the least, shall be allowed to flow past the feeder canal diversion in the natural channel of Birch Creek.

5) The feeder canal shall be constructed and maintained in a manner that will reduce the amount of seepage loss by about 5 cubic feet per second.

6) The first 1 1/2 miles of ditch must be designed, constructed, maintained and operated in a manner that supports a fishery as shown in Applicant's Exhibit No. 6.

7) Provisions shall be made to return the water to Birch Creek at the end of the first 1 1/2 mile of feeder ditch to assure that the section of feeder ditch will not be dewatered if the generator malfunctions or icing occurs or any

other event necessitates that the water not be conveyed to the generator.

8) These permits are subject to the provisions of Sections 42-205 through 42-210, Idaho Code restricting sale, transfer, assignment, or mortgage of these permits. Failure to comply with these provisions is cause for immediate cancellation of the permits.

9) This project shall be operated in a manner that will not conflict or interfere with future diversion of water for irrigation or other beneficial consumption.

10) Project construction shall commence within one year from the date of permit issuance and shall proceed diligently to completion unless it can be shown to the satisfaction of the Director of the Department of Water Resources that delays were due to circumstances over which permit holder had no control.

11) The diversion and use of water under this permit and any license subsequently issued is subject to review by the Director on the date of expiration of any license issued by FERC or if no license from FERC is issued, then thirty (30) years from the date the permit is issued. Upon appropriate findings relative to the interest of the public, the Director may cancel all or part of the use authorized herein and may revise, delete or add conditions under which the rights may be exercised.

12) These permits do not constitute Idaho Public Utilities Commission or Federal Energy Regulatory Commission approval that may be required.

Dated this 21 day of November, 1984.

Bobby D. Fleenor

BOBBY D. FLEENOR
Hearing Officer

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATIONS FOR PERMIT NOS. 32-7128 AND 32-7136 IN THE NAME OF BIRCH POWER COMPANY	CERTIFICATE OF MAILING

I HEREBY CERTIFY That on this the 27th day of November, 1984, true and correct copies of the foregoing ORDER ISSUING PROPOSED DECISION and PROPOSED MEMORANDUM DECISION AND ORDER, were mailed, postage prepaid to:

Ted S. Sorenson
Birch Power Company
550 Linden Drive
Idaho Falls, ID 83401

Virgil Moore
Idaho Department of Fish and Game
1515 Lincoln Road
Idaho Falls, ID 83401

William B. Dillon, III
Attorney General's Office
Statehouse Mail
Boise, ID 83720

James A. Esget and Robert McCardy
Bureau of Land Management
920 Lincoln Road
Idaho Falls, ID 83401

William T. Simmons
Dubois, ID 83423

Ben Wilding, Watermaster
Water District No. 32-D
Dubois, ID 83423

D & D Enterprises, Inc.
c/o George C. Petersen, Jr.
485 "E" St.
Idaho Falls, ID 83402

Ray W. Rigby, Esq.
RIGBY, THATCHER, ANDRUS, BARTON & WALTERS
25 North 2nd East
Rexburg, ID 83440

Rita I. Fleck

RITA I. FLECK
Secretary/Records Manager
Idaho Department of Water Resources

REGISTERED

Form 205/206
7/81

Ident. No. 32 7198

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
AFFIDAVIT FOR WATER RIGHTS TO BE USED
FOR POWER PURPOSES

A. Establishment of Residency: (Complete either 1, or 2).

1. Individual Applicant or Individual Members of a Partnership:

I, _____ (name) of _____ (city),

county of _____, State of Idaho, being duly sworn, do hereby certify that I am a bona fide resident of the State of Idaho.

2. Corporation:

I, Ted S. Sorenson (name) of Idaho Falls (city),

County of Bonneville, State of Idaho, being duly sworn, depose and say: That I am the designated registered agent of the Birch Power Company (name of corporation): that as such I am in charge of the registered office of the said corporation as required by Section 30-1-12, Idaho Code, at Idaho Falls, (city) Idaho, wherein are kept the corporate records required by Section 30-1-52, Idaho Code: and that Birch Power Company (name of corporation) is a corporation qualified to do business in the State of Idaho under the laws of the State of Idaho.

B. Ownership of Facilities: (To be completed for hydropower projects only)

The hydropower facility to be developed pursuant to the attached Application for Permit:

(check one)

[xx] Will not utilize existing man-made irrigation facilities such as a dam or a canal.

[ ] Will utilize existing man-made irrigation facilities such as a dam or a canal, and permission of the owner is documented in an affidavit attached hereto.

[ ] Will utilize existing man-made irrigation facilities such as a dam or a canal and the owner of the facilities is the signee of this affidavit.

Ted S Sorenson
Applicant

State of Idaho)
County of Bonneville) ss.

On this 3rd day of Sept, 1982, personally appeared before me the signer(s) of the above instrument, who duly acknowledged to me that he (she) (they) executed the same.

David E. Benton
Notary Public residing at
Idaho Falls, Ida

seal

My commission expires:

Non Expiring

The REXBURG STANDARD and
The REXBURG JOURNAL
REXBURG, IDAHO

Affidavit of Publication

STATE OF IDAHO }
County of Madison } ss.

I, Bruce Porter, being first duly sworn, depose and say, that I am the printer of THE REXBURG Journal, a newspaper printed and published weekly at Rexburg, Madison County, Idaho; and I do solemnly swear that the

Notice Of Application

a copy of which notice appears attached hereto, was published in the regular and entire issue of said newspaper, and not in any supplement issue thereof for Two consecutive issues, the first publication having been made on Sept. 23, 1982 and the last publication having been made on Sept. 30, 1982.

Further, that said newspaper is one of general circulation in said county; that it is a legal newspaper, conforming to legal specifications under the Idaho Statutes; that it has at least two hundred bona fide subscribers living within the county of publication; and that it has been continuously and uninteruptedly published in said county dur a period of seventy-eight consecutive weeks prior to the first publication of the said notice.

Subscribed to and sworn to before me this Oct. 1, 1982.

Notary Public.

(SEAL)

My commission expires Life.

OCT 13 1982

Department of Water Resources
Eastern District Office

NOTICE OF APPLICATION FOR WATER RIGHT

Notice is hereby given that the following application(s) have been submitted for permit to appropriate the public waters of the State of Idaho:

32-7128

BIRCH POWER CO.
550 LINDEN DR., IDAHO FALLS, ID 83401

Source: BIRCH CREEK tributary to SINKS
Date Filed: 09/08/1982
Amount: 45.00 CFS
Diversion Point: NENW Sec 03 T 08N R 30E, CLARK Co.
Use: POWER (45.00 CFS) from 01/01 to 12/31
Place of Use: NENE Sec 17 T 08N R 31E
Diversion Means: HEADGATE, DITCH, PENSTOCK & POWER HOUSE

32-7129
CARLYLE, HOWARD &/or HEBERT
772 BIRCH, POCATELLO, ID 83201
Source: POND tributary to SINKS
Date Filed: 09/09/1982
Amount: 0.50 CFS
Diversion Point: SENW NENW Sec 13 T 10N R 29E, CLARK Co.
Use: MINING (0.50 CFS) from 03/01 to 10/30
Place of Use: NENW Sec 13 T 10N R 29E
Diversion Means: PUMP

If issued, the permit(s) will be subject to all prior water rights. Protests against the granting of any permit must be filed with the Director of the Idaho Department of Water Resources, 150 Shoup Ave., Idaho Falls, Idaho 83402 on or before OCTOBER 11, 1982.

A. KENNETH DUNN
Director

Publ. Sept. 23 and 30, 1982J.

ACTION REQUIRED

11/19/86

FROM: Kay Walker

TO: File 32-7128

See ~~all~~ 32-7128 #2 for following correspondence...

Below this note is all related material dated prior to May 18, 1984 ——

MICROFILMED

Form No. 202a
3/79

State of Idaho
Department of Water Resources

APPLICATION FOR PERMIT ANALYSIS SHEET

INITIAL REVIEW BY: Ernest Carlson. APPLICATION NUMBER: 32 7128

CHECK:

- ☑ Source.
- ☑ Point of diversion.
- ☑ County.
- ☑ Quantity of water and period of use.
- ☑ Description of diverting works.
- ☑ Time required for beneficial use of water.
- ☑ Place of use or acres irrigated.
- ☑ Map.
- ☑ Signature.
- ☑ Fee.

Field check by: _____
Date: _____
Comments: _____

- ☐ Yes ☑ No Field check required.
- ☐ Yes ☑ No Critical groundwater area.
- ☐ Yes ☑ No Request dam safety information. Sent by: _____ Date: _____
- ☑ Yes ☐ No* In form to receipt.

*REQUEST THE FOLLOWING ADDITIONAL INFORMATION FROM THE APPLICANT: _____

SEND COPIES TO:

☐ Idaho State Health Department.	Copies sent by: _____	Date: _____
☑ Idaho Fish and Game Department.	R W	9-16-82
☐ Idaho Department of Lands.		
☑ U.S. Bureau of Land Management.	CW	9-16-82
☐ U.S. Forest Service.		
☑ Other W.D. 32-D.		

PROCESSING:

- ☐ Yes ☐ No Platted by: _____ Map No. _____
- ☐ Yes ☐ No Other rights on same place of use. _____
- ☐ Yes ☐ No* In form for advertising. Final date for protests: Oct 11, 1982
- ☑ Yes ☐ No Protests received. If yes, record information on 4th page of application.

FINAL REGIONAL PROCESSING REVIEW:

- ☑ Affidavit of publication received. Date: 10-13-82
- ☑ Application published correctly. If not, record action taken: _____
- ☑ Fee amount, receipt date & number, recorded on application.
- ☑ Publication dates and paper, recorded on application.
- PM04D ☑ Protests, dates, withdrawal, etc., recorded on application.
- ☑ Recommendation & initial, recorded on application.
- ☑ Yes ☐ No Measuring device required.
- ☐ Yes ☑ No Access port required.
- ☑ Yes ☐ No Will water be delivered by watermaster? If yes, what district? 32-D
- 9-8-82 Date of priority recommended.

Special conditions of approval or cover letter. _____

See Proposed Memorandum Decision and Order.

By: Ernest Carlson. Date: May 15, 1984

STATE OFFICE REVIEW:

LL7a

05 (32-D, Birch Creek)
OL 08A 36A [illegible] 35

☐ See attached sheet for more information.

By: _____ Date: 5-18-84

RECEIVED
MAY 18 1984
Department of Water Resources

POINT OF DIVERSION AND STREAM INDEX INFORMATION

TRACT	SEC	TWP	RGE	gov't lot	rediv. (R)	REACH

IDAHO STREAM CODE INDEX

TRACT	SEC	TWP	RGE	gov't lot	rediv. (R)	REACH

IDAHO STREAM CODE INDEX

TRACT	SEC	TWP	RGE	gov't lot	rediv. (R)	REACH

IDAHO STREAM CODE INDEX

TRACT	SEC	TWP	RGE	gov't lot	rediv. (R)	REACH

IDAHO STREAM CODE INDEX

TRACT	SEC	TWP	RGE	gov't lot	rediv. (R)	REACH

IDAHO STREAM CODE INDEX

POWER CALCULATIONS FOR APPLICATION NO. 32-7128

P = Kilowatts 6666 .74 X hp 900

Q = cfs 45

H = feet 278

e = efficiency

proposed

1.) Affidavit of Residency
2.) Ownership of Facilities
3.)*Financial Ability (see letter of 12-2-83)
4.) Feasibility of Project
a. Plans, drawings
b. Economic analysis
5.)*Compliance w/FERC (Pre-Permit →)

*only for projects of more than 25 cfs or more than 500 horsepower.

$$e = \frac{P(11.8)}{QH} = \frac{6666(11.8)}{45 \times 278} = \frac{7858.8}{12{,}510} = 0.628$$ ok

Based on the above calculations the proposed project must have an 63 % efficiency.

****

OVERLAP REVIEW

P/D

P/U

BYPASSED AREA

BIRCH CREEK WATER RIGHT HEARING

Time: September 2, 1983 - 9:00 AM

1) Will the proposed use reduce the quantity of water under existing water rights?

Under present conditions, from the point of diversion in Birch Creek of Reno Ditch to the Reno Ranch splitter box approximately 30% of the water is lost due to bedloss.

Presented as Exhibit 1 is a tabulation of the Birch Creek/ Reno Ditch Bedloss, compiled by comparing the flow at the 8 mile canyon USGS gauging station and at a gauging station 1 mile south of the Reno Ranch established by the University of Idaho. The readings were taken by Mr. Don Shenton.

Exhibit 1 illustrates flows by day, June thru September of 1980. Please note that the average bedloss is 16 cfs.

Exhibit 1A is a map which illustrates the location of Birch Creek, the existing Reno Ditch and the proposed power feeder ditch. Exhibit 1A also prorates lineally, the bedloss from 8 mile gauging station to the University of Idaho gauging station at various points along Birch Creek and Reno Ditch, specifically the prorated bedloss from the 8 mile gauging station to the proposed diversion and also from the 8 mile gauging station to the existing diversion and from the 8 mile gauging station to the proposed irrigation splitter box, the bedloss from the 8 mile gauging station to the Reno Ranch splitter box.

Please note that the bedloss from the proposed diversion to the proposed irrigation splitter box is 11.7 cfs less 2.7 cfs at the proposed diversion which equals 9 cfs.

This data was further verified August 23, 1983 by readings taken by a Mr. Don Shenton, Dubois, Idaho. Please note that the bedloss from the proposed diversion to the Micro Wave site at Reno Ditch, which is the location of the proposed splitter box, is 43.77 cfs less 33.13cfs which equals 10.4 cfs. The data taken in 1983 correlates well with the data taken in 1980.

Presented as Exhibit 3 are the field notes from Mr. Donald W. Shenton.

The existing Reno Ditch bedloss is due to the extremely high velocity of the ditch (i.e. in the range of 3 to 6 feet per second). The deposition of fines is not possible due to scouring. The proposed ditch will have a shallower grade with velocities in the range of 1.5 to 2.5 feet per second. In this velocity range the bed may be successfully sealed with either bentonite or a soil polymer to the extent that the 9 to 10 cfs bedloss between the proposed point of diversion and the proposed splitter box may be reduced by 1/2 to 2/3. In other words, approximately 5 cfs or 250 inches of water would be available for use - water that is now being lost due to bed seepage.

2) Is the proposed water supply insufficient for the purpose intended?

Presented as Exhibit 4 is a compilation of water flow data, 1970 thru 1980 at 8 Mile Gauging Station on Birch Creek. This station was maintained and the data collected according to USGS gauging standards. Please note that the average flows show sufficent flow for a power generation flow of 45 second feet.

3) Is the application made in good faith or for delay or speculative purposes?

Presented as Exhibit 5 is a copy of the preliminary permit from the U.S. Federal Energy Regulatory Commission which gives Birch Power Company the right to conduct the necessary feasibility studies and also to secure the necessary permits to file for either a FERC Exemption or FERC Minor License. In order to file to do further work and obtain the final permit from FERC, it is necessary to resolve the rights to the water. For this purpose we have requested that this hearing be held. The filing has not been made for speculative purposes or for delay. The applicant, if able to successfully secure the permits, intends to build the project.

4) Has the applicant sufficient financial resources with which to complete the project?

The power produced by this project would be sold to Utah Power and Light under regulations set forth as the Public Utilities Regulatory Policy Act of 1978 (PURPA). The applicant can secure a 35 year firm contract for the sale of power. With this contract are a number of both public and private groups who have expressed interest in providing the financing for this project. Further information will be submitted at the request of the Department of Water Resources.

5) Will the proposed use conflict with the public interests?

By examination of the layout of the map, it becomes apparent that approximately 3,000 feet of Birch Creek fishery habitat would be lost. However, it should be noted that the proposed feeder ditch is approximately 5-1/2 miles in length. The existing Reno Ditch does not support any fishery due to prohibitively high velocities. The proposed feeder ditch velocity however, will be in the ideal range for fish production.

Presented as Exhibit 6 is a study completed by Dr. Jack Griffith of Idaho State University which shows that the feeder ditch may be constructed in such a manner that the fisheries lost in the 3,000 feet would be offset by a fisheries development in the proposed feeder ditch. This has been discussed previously with the Idaho Fish & Game Department. Dr. Griffith indicates that the fishery habitat may be increased in the feeder ditch by approximately five to six times that of the fishery habitat presently involved in the 3,000 lineal feet that would be lost.

Conclusion: It is our view that the sportsmen in the area would have a gain due to implementation of the improved fisheries in the feeder ditch. It is also our view that the local irrigators' water would not be depleted and in fact, could be increased. It is also our view that the development of this project would add to the renewable energy resources of the State of Idaho which would lower our dependence on the importation of foreign oil. This project would add to the economic development of this state and also the long term stability of the state due to the development of this resource. For this reason, your favorable consideration with respect to this water right application is sincerely appreciated.

EXHIBITS

1. Birch Creek/Reno Ditch Bedloss Analysis

1A. Map Illustrating Birch Power Company General Location Map

2. 1983 Birch Creek Readings

3. Field Notes from Mr. Donald W. Shenton

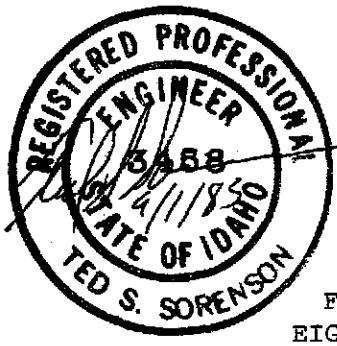
3A. Reno Ditch Flow Comparison

4. Water Flow Data - 1970 thru 1980

5. Preliminary FERC Permit

6. Study by Dr. Jack Griffith

EXHIBIT 1



BIRCH CREEK/RENO DITCH

BEDLOSS ANALYSIS

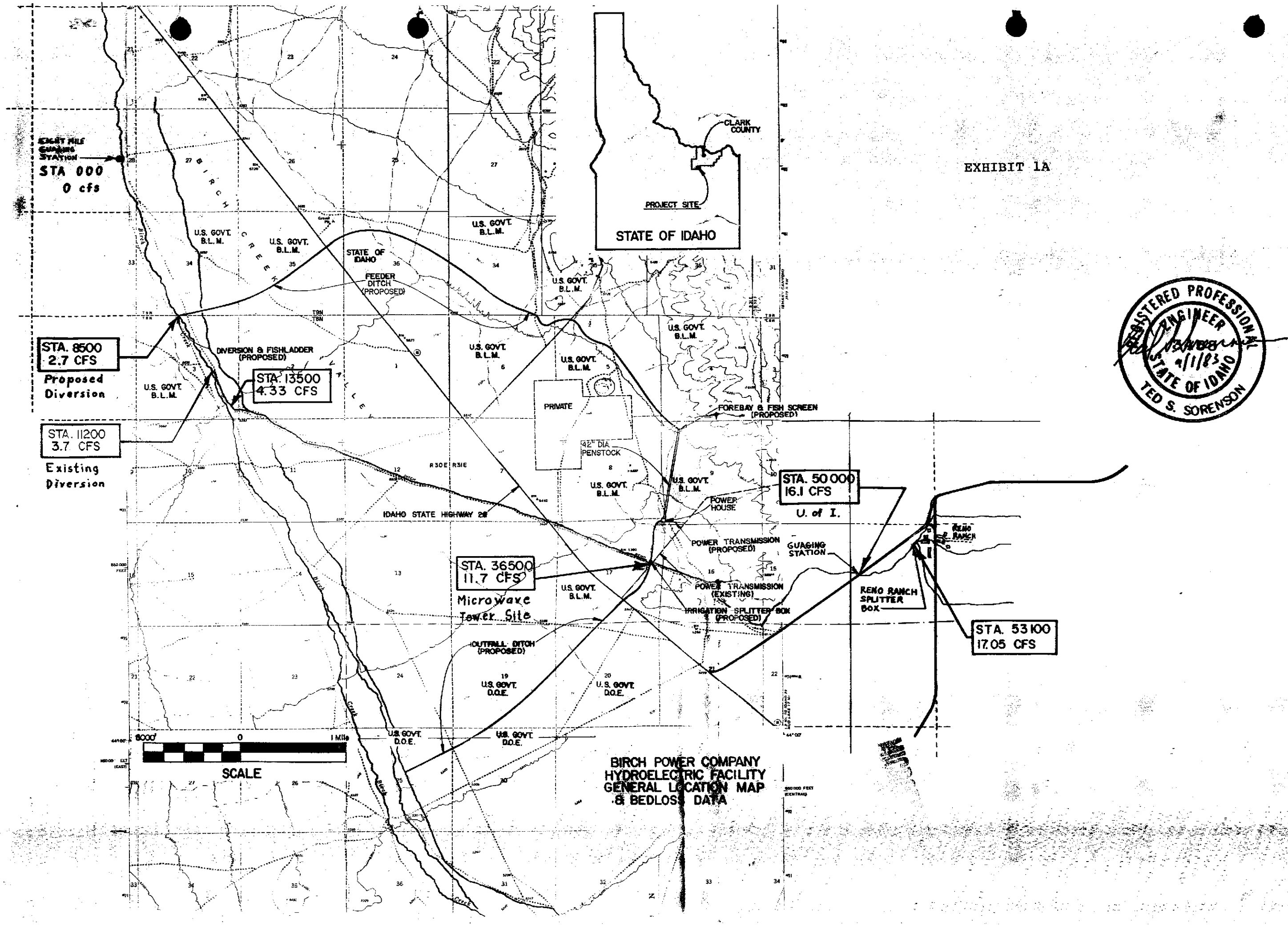
TED S. SORENSON, P.E.

DATE	FLOW AT* EIGHT MILE CANYON cfs	FLOW AT ** ROAD CROSSING 1 MILE SW OF RENO RANCH cfs	PRESENT LOSS cfs
June 6, 1980	49	34	15
June 12, 1980	47	27	20
June 16, 1980	48	31	17
June 20, 1980	49	33	16
June 25, 1980	48	32	16
June 28, 1980	45	27	18
July 14, 1980	45	27	18
July 18, 1980	48	33	15
July 21, 1980	46	32	14
July 24, 1980	47	32	15
August 2, 1980	42	26	16
August 14, 1980	39	24	15
August 20, 1980	39	26	13
August 25, 1980	43	25	18
August 28, 1980	43	27	16
Sept. 13, 1980	44	28	16
Sept. 22, 1980	48	33	15
AVERAGE	45.2	29.2	16.06

* USGS Gaging Station - Eight Mile Road-Birch Creek

** University of Idaho Gage Station, Data taken 1980 only - Reno Ditch
Readings taken by Don Shenton

EXHIBIT 1A



REGISTERED PROFESSIONAL ENGINEER
9/11/83
STATE OF IDAHO
TED S. SORENSON

EXHIBIT 2

BIRCH CREEK READINGS *

BY: DON SHENTON

August 23, 1983

Location	First Set	Second Set
Proposed Diversion	44.53	43.77
Existing Diversion	42.96	42.07
Micro Wave Tower Reno Ditch		33.13
Reno Ranch Splitter Box		30.2

*Note: All flows in cfs - 1 cfs = 50 inches

EXHIBIT 3

Water District #31

Box 33
Dubois, Idaho 83423
(208) 374-5230

Donald W. Shenton
Watermaster

August 25, 1983

Mr. Ted Sorenson
Sorenson Engineering
550 Linden Drive
Idaho Falls, Idaho 83401

RE: Birch Creek Flow Measurements

Dear Ted;

Attached you will find the following enclosures.

1. Discharge measurement notes.
2. A map describing measurement locations, Lettered A thru D.
3. Supplementary discharge measurement notes and conditions.
4. Additional comments and observations.

I will make a follow-up measurement as we agreed as soon as possible.

Thank you.

Sincerely;

Donald W. Shenton

Donald W. Shenton

WATER DISTRICT NO. 31

Donald Shenton, Watermaster

Measurement # B

DISCHARGE MEASUREMENT NOTES

GAUGE _____ DATE 8-23, 1983

TIME: BEGIN 1:50 PM END _____

Birch Creek at Point of Diversion of Reno Ditch.

DIST. FROM INITIAL POINT	WIDTH	DEPTH	REVOLUTIONS	TIME IN SECONDS	VELOCITY AT POINT	VELOCITY MEAN IN VERTICAL	ADJUSTED FOR HOR. ANGLE	AREA	DISCHARGE
6.0	.50	0	0	40	—			1	—
7.0	1.0	.40	0	40	—			.40	
8.0	1.0	.60	20	42	1.06			.60	.61
9.0	1.0	.85	20	41	1.09			.85	.93
10.0	1.0	1.00	50	44	2.50			1.00	2.50
11.0	1.0	1.05	50	40	2.74			1.05	2.88
12.0	1.0	1.00	60	44	2.99			1.00	2.99
13.0	1.0	1.15	60	44	2.99			1.15	3.44
14.0	1.0	1.20	60	44	2.99			1.20	3.59
15.0	1.0	1.25	60	40	3.29			1.25	4.11
16.0	1.0	1.15	60	42	3.13			1.15	3.60
17.0	1.0	1.08	60	40	3.29			1.08	3.55
18.0	1.0	1.15	60	42	3.13			1.15	3.60
19.0	1.0	1.20	60	44	2.99			1.20	3.59
20.0	1.0	1.20	50	43	2.55			1.20	3.06
21.0	1.0	1.00	50	40	2.74			1.00	2.74
22.0	1.0	.85	15	43	.79			.85	.67
23.0	.50	.55	15	50	.68			.27	.18
									42.07

Donald W. Shenton

TOTAL C.F.S. 42.07

MINERS INCHES _____

No. 1 of 1 Sheets. Comp. by D.S. Chk. by D.S.

Measurement # A

WATER DISTRICT NO. 31

Donald Shenton, Watermaster

DISCHARGE MEASUREMENT NOTES

GAUGE _____ DATE 8-23, 1983

TIME: BEGIN 2:44 PM END _____

Birch Creek at Point of Proposed Diversion

DIST. FROM INITIAL POINT	WIDTH	DEPTH	REVOLUTIONS	TIME IN SECONDS	VELOCITY AT POINT	VELOCITY MEAN IN VERTICAL	ADJUSTED FOR HOR. ANGLE	AREA	DISCHARGE
6.0	.50	.40	0	40	—			.20	—
7.0	1.0	.60	20	44	1.02			.60	.61
8.0	1.0	.60	50	44	2.50			.60	1.50
9.0	1.0	.70	50	47	2.34			.70	1.64
10.0	1.0	.81	50	40	2.74			.81	2.22
11	1.0	.90	60	44	2.99			.90	2.69
12.0	1.0	1.00	60	46	2.86			1.00	2.86
13.0	1.0	1.10	50	44	2.50			1.10	2.75
14.0	1.0	1.20	60	42	3.13			1.20	3.76
15.0	1.0	1.15	60	44	2.99			1.15	3.44
16.0	1.0	1.15	60	41	3.21			1.15	3.69
17.0	1.0	1.21	60	40	3.29			1.21	3.98
18.0	1.0	1.25	60	43	3.06			1.25	3.82
19.0	1.0	1.11	80	52	3.37			1.11	3.74
20.0	1.0	.96	60	40	3.29			.96	3.16
21.0	1.0	.90	60	40	3.29			.90	2.96
22.0	1.0	.60	30	42	1.58			.60	.95
23.0	.50	.22	10	43	.53			.11	.06
									43.77

Donald W. Shenton

TOTAL C.F.S. 43.77

MINERS INCHES _____

No. _____ of _____ Sheets. Comp. by D.S. Chk. by D.S.

measure not. ≠ C

WATER DISTRICT NO. 31

Donald Shenton, Watermaster

DISCHARGE MEASUREMENT NOTES

GAUGE _____ DATE 8-23, 1983

TIME: BEGIN 4:06 PM. END _____

Birch Creek (Reno Ditch.)

Location. NEAR Micro Wave Tower

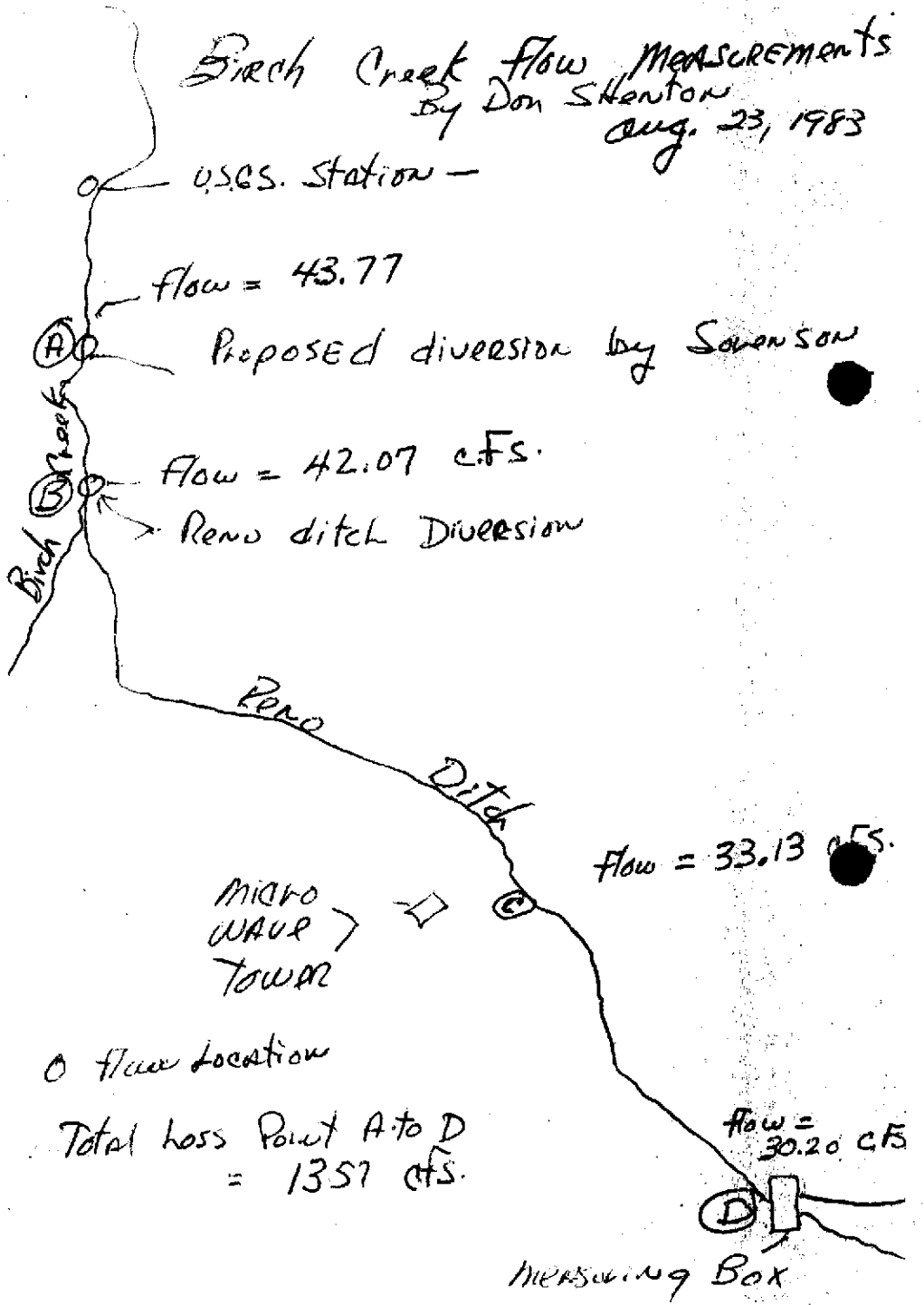
DIST. FROM INITIAL POINT	WIDTH	DEPTH	REVOLUTIONS	TIME IN SECONDS	VELOCITY AT POINT	VELOCITY MEAN IN VERTICAL	ADJUSTED FOR HOR. ANGLE	AREA	DISCHARGE
4.0	.50	.60	15	42	.86		-	.30	.24
5.0	1.00	.70	30	44	1.62			.70	1.13
6.0	1.00	1.00	80	44	3.98			1.00	3.98
7.0	1.00	1.15	80	42	4.16			1.15	4.78
8.0	1.00	1.15	81	48	3.65			1.15	4.20
9.0	1.00	1.15	80	48	3.65			1.15	4.20
10.0	1.00	1.30	80	46	3.80			1.30	4.94
11.0	1.00	1.32	80	43	4.17			1.32	5.37
12.0	1.0	1.30	50	42	2.61			1.30	3.39
13.0	.50	.90	40	44	2.00			.45	.90
									33.13

FAST Water on Donald Shenton

TOTAL C.F.S. 33.13

MINERS INCHES _____

No. 1 of 1 Sheets. Comp. by D.S. Chk. by D.S.



WATER DISTRICT NO. 31

Donald Shenton, Watermaster

SUPPLEMENTARY DISCHARGE MEASUREMENT NOTES

Date 8-23 19 83 No. of Meas. 1

Birch Creek

Header Box At End of Rand Ditch,

Enter on this form ample notes in regard to the following:

1. Accuracy of measurement; 2. gauge; 3. observer; 4. bench marks; 5. gage-height corrections; 6. adjustments to total discharge; 7. station equipment; 8. channel, control, and point of zero flow; 9. rating, backwater; 10. diversions, regulation; 11. records; 12. cooperation.

1. 1st Measurement NOON

7 Ft of Opening X .83 X 10" = 17.2 cfs.

5 Ft of Opening X .87 X 10.5" = 13.0 CFS

total 30.2 c.f.s.

2. Conditions

3. Water level 2nd measurement slightly Stronger

4. Horse Power Bridge on Cut-off Road -

U.S.G.S. Staff 1.08 8:00 AM

1.10 1:00 PM

1.11 5:00 PM

5. Other Comments

U.S.G.S. Station at 8 mile Canyon Rd.

G.H. Between 1.12 and 1.20 (in Well)

Don Shenton

Sheet No.

WATER DISTRICT NO. 31

Donald Shenton, Watermaster

SUPPLEMENTARY DISCHARGE MEASUREMENT NOTES

Date 8-23 -, 19 83 No. of Meas. 3

Birch Creek at various locations

Enter on this form ample notes in regard to the following:

1. Accuracy of measurement; 2. gauge; 3. observer; 4. bench marks; 5. gage-height corrections; 6. adjustments to total discharge; 7. station equipment; 8. channel, control, and point of zero flow; 9. rating, backwater; 10. diversions, regulation; 11. records; 12. cooperation.

1. MEASUREMENTS lettered A- FAIR to good -

B- Very good -

C- FAIR - FAST.

2. Conditions other Condition good -

Weir Measurement good -

3. Water level Tops Choppy

4. ~~Horse Power~~ Staff Readings quite Stable

5. Other Comments Some movement of Bottom of Channel on Measurement Lettered #C Due to velocity

Sheet No

Donald W. Shenton



EXHIBIT 3A

RENO DITCH

FLOW COMPARISON

1980 USGS / U OF I DATA VS. 1983
(All flows in cfs, 1 cfs = 50 inches)

	8/80	8/23/83
1. Proposed Diversion (STA 85 + 00)	43.0*	43.77
2. Existing Diversion (STA 112+00)	42.0*	42.07
3. Flow - Reno Ditch near Micro Wave Tower (STA 36 + 500)	34.0*	33.13
4. Flow at Reno Ranch Splitter Box (STA 500 + 00)	28.7*	30.2
5. Bedloss Existing to Proposed Diversion	1.0	1.7
6. Bedloss - Proposed Diversion to Micro Wave Site	9.0	10.64
7. Bedloss Proposed Diversion to Reno Ranch Splitter Box	14.3	13.57

*1970 - 1980 USGS average (Eight Mile) less 1980 prorated bedloss (U of I Gauge)

EXHIBIT 4

BIRCH CREEK AT EIGHT-MILE CANYON ROAD

USGS GAUGING STATION

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
1970-71								47.4	46.3	46.2	49.6	55.3
1971-72	64.0							59.1	50.1	51.6	51.8	52.6
1972-73								48.3	44.7	53.5	53.5	46.2
1973-74								53.1	47.1	43.7	49.3	42.7
1974-75							71.3	71.1	48.3	38.3	37.1	36.8
1975-76								41.8	41.2	36.0	45.4	50.7
1976-77									42.1	40.5	42.7	49.5
1977-78	65.7						77.2	64.8	41.1	40.7	39.7	44.0
1978-79	53.0							53.7	44.4	44.5	43.9	40.7
1979-80								49.5	47.8	45.8	40.7	45.8
Average	60.9						74.3	54.3	45.3	44.1	45.4	46.4

NOTE: All flows shown in cfs.

1 cfs = 50 inches

EXHIBIT 5

P-7194-000

UNITED STATES OF AMERICA

FEDERAL ENERGY REGULATORY COMMISSION

Notice of Application Filed with the Commission

(May 20, 1983)

Take notice that the following hydroelectric application has been filed with the Federal Energy Regulatory Commission and is available for public inspection:

a. Type of Application: Preliminary Permit

b. Project No: 7194-000

c. Date Filed: April 5, 1983

d. Applicant: Birch Power Company

e. Name of Project: Birch Project

f. Location: Birch Creek, Clark County, Idaho

g. Filed Pursuant to: 16 U.S.C. §§791(a) - 825(r)

h. Contact Person: Ted S. Sorenson, 550 Linden Dr., Idaho Falls, Idaho 83401.

i. Comment Date: JUL 25 1983

j. Description of Project: The proposed all new run-of-the-creek project would utilize lands of the United States administered by Interior's Bureau of Land Management and would consist of: (1) a concrete diversion structure with sill elevation 5,654 feet m.s.l. and having radial gate control and a fish ladder; (2) a 34,000-foot-long 5-foot-deep earthen feeder ditch; (3) a forebay having a surface area of 1/3-acre and a gross storage capacity of 2 acre-feet at surface elevation 5,626 feet m.s.l.; (4) a screened intake structure; (5) a 42-inch diameter 4,700-foot-long steel penstock; (6) a powerhouse containing a generating unit having a rated capacity of 1,100-kW operated under a 276-foot head and at a flow of 60 cfs; (7) a 0.2-mile-long transmission line; (8) an 18,900-foot-long earthen outfall ditch; and (9) appurtenant facilities.

k. Purpose of Project: Project energy would be sold to Utah Power & Light Company. Applicant estimates that the average annual generation would be 3,000,000 kWh.

l. This notice also consists of the following standard paragraphs: A4b, A4c, A4d, B, C and D2.

m. Proposed Scope of Studies under Permit: A preliminary permit, if issued, does not authorize construction. Applicant seeks issuance of a preliminary permit for a period of 24 months, during which time it would perform studies and, if feasible, would prepare an application for an FERC license. Applicant estimates the cost of the work under the permit would be $25,000.

A4b. No Existing Dam -- Anyone desiring to file a competing application for preliminary permit for a proposed project where no dam exists or there are proposed to be major modifications, must submit to the Commission on or before the specified comment date for the particular application, the competing application itself, or a notice of intent to file such an application (see 18 CFR 4.30 to 4.33 (1982)).

A4c. The Commission will accept applications for license or exemption from licensing, or a notice of intent to submit such an application in response to this notice. A notice of intent to file an application for license or exemption must be submitted to the Commission on or before the specified comment date for the particular application. Any application for license or exemption from licensing must be filed in accordance with the Commission's regulations (see 18 CFR 4.30 to 4.33 or §§4.101 to 4.104 (1982), as appropriate).

A4d. Submission of a timely notice of intent to file an application for preliminary permit allows an interested person to file an acceptable competing application for preliminary permit no later than 60 days after the specified comment date for the particular application.

B. **Comments, Protests, or Motions to Intervene** - Anyone may submit comments, a protest, or a motion to intervene in accordance with the requirements of the Rules of Practice and Procedure, 18 C.F.R. §§385.210, .211, .214 (1982). In determining the appropriate action to take, the Commission will consider all protests or other comments filed, but only those who file a motion to intervene in accordance with the Commission's Rules may become a party to the proceeding. Any comments, protests, or motions to intervene must be received on or before the specified comment date for the particular application.

C. Filing and Service of Responsive Documents - Any filings must bear in all capital letters the title "COMMENTS", "NOTICE OF INTENT TO FILE COMPETING APPLICATION", "COMPETING APPLICATION", "PROTEST" or "MOTION TO INTERVENE", as applicable, and the Project Number of the particular application to which the filing is in response. Any of the above named documents must be filed by providing the original and the number of copies required by the Commission's regulations to: Kenneth F. Plumb, Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street, N.E., Washington, D.C. 20426. An additional copy must be sent to: Fred E. Springer, Chief, Applications Branch, Division of Hydropower Licensing, Federal Energy Regulatory Commission, Room 208 RB at the above address. A copy of any notice of intent, competing application or motion to intervene must also be served upon each representative of the Applicant specified in the particular application.

D2. Agency Comments - Federal, State, and local agencies are invited to file comments on the described application. (A copy of the application may be obtained by agencies directly from the Applicant.) If an agency does not file comments within the time specified for filing comments, it will be presumed to have no comments. One copy of an agency's comments must also be sent to the Applicant's representatives.

Kenneth F. Plumb
Secretary

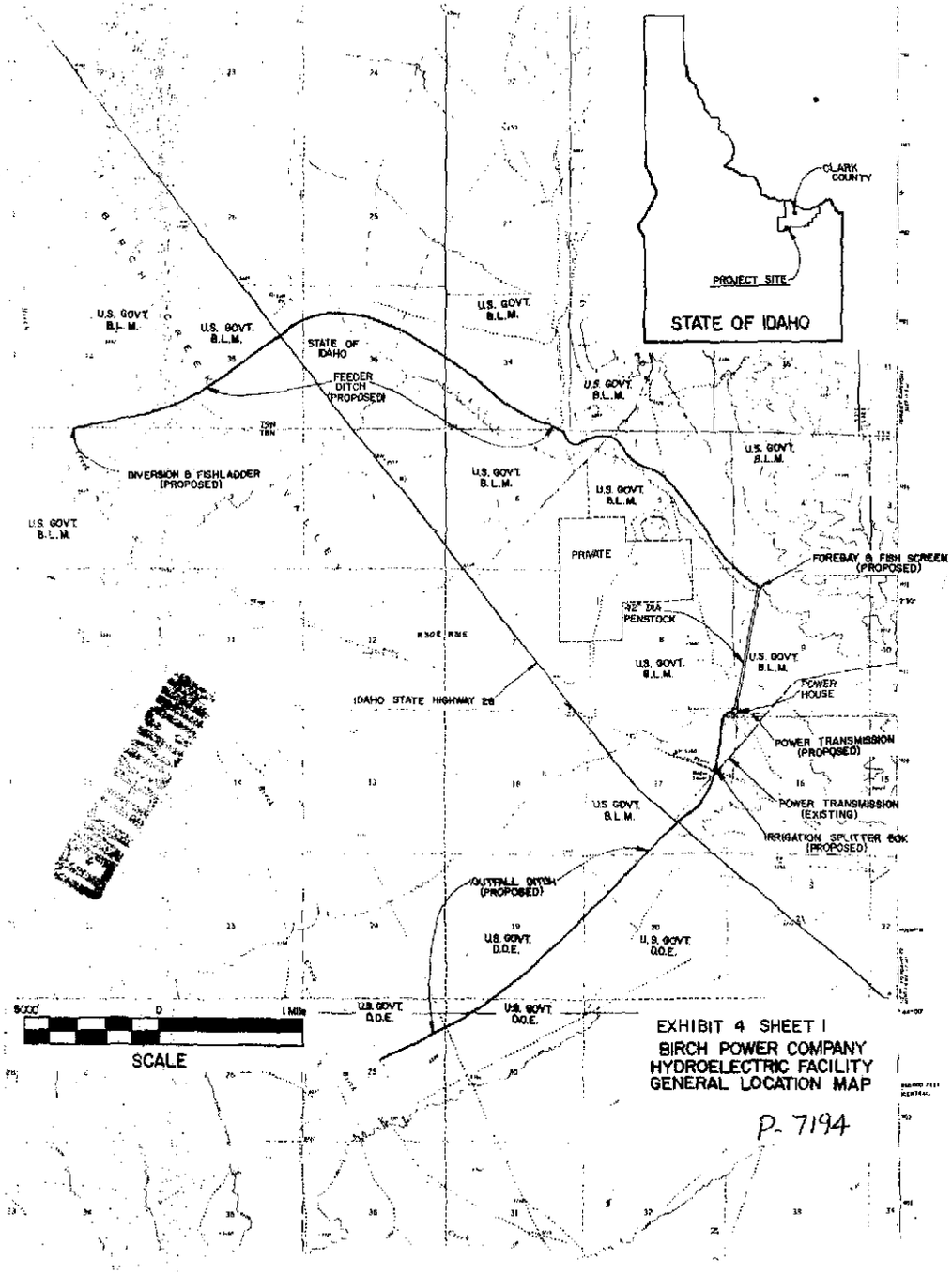
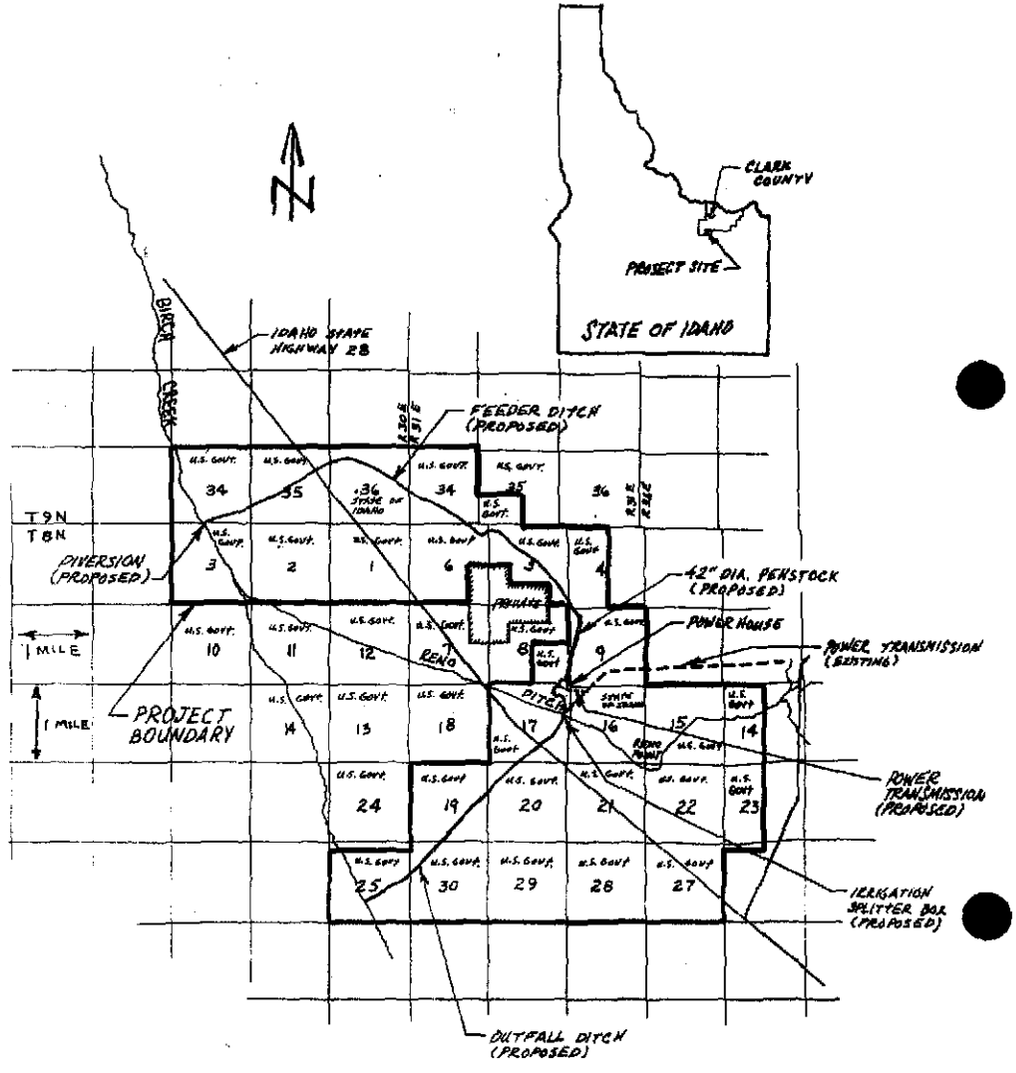


EXHIBIT 4 SHEET 1
BIRCH POWER COMPANY
HYDROELECTRIC FACILITY
GENERAL LOCATION MAP

P-7194



BIRCH POWER COMPANY
HYDROELECTRIC FACILITY

EXHIBIT 4
SHEET 2

P-7194

EXHIBIT 6

Feasibility of Developing a Trout Population in the Proposed Birch Creek Hydroelectric Project Feeder Ditch

A report to:

Mr. Ted S. Sorenson, Consulting Engineer
550 Linden Drive
Idaho Falls, ID 83401

By:

J. S. Griffith, Ph.D.
2055 Kenneth Place
Pocatello, ID 83201

6 July 1983

The proposed hydroelectric project would divert water from Birch Creek (Clark County, Idaho) approximately 3,000 feet upstream from the existing Reno diversion and pass it through a feeder ditch approximately 29,500 feet in length before entering a penstock and power house. The objectives of this report are to:

a. briefly describe the existing aquatic resources in the 3,000-foot portion of Birch Creek that would be partially dewatered,

b. examine the feasibility of developing the proposed feeder ditch as habitat suitable for sustaining a population of both wild and hatchery trout, and

c. suggest the construction design and necessary materials to provide that habitat.

EXISTING AQUATIC RESOURCES

Birch Creek originates from springs in the upper portion of the watershed. Flows at the USGS Eightmile gauging station (elevation 5770 feet) immediately upstream from the proposed diversion have ranged from 36 to 71 cfs throughout May through September during the period 1971-1980, averaging about 45 cfs. The minimum recorded was 11 cfs in July 1967. Specific conductance of the water checked by Andrews (1972) in 1970-71 ranged from 530-650 mhos/cm, indicating a relatively high potential for biotic production. Channel gradient in the lower river is 1.6%. No systematic water temperature data are available.

Land adjoining the lower portion of Birch Creek is largely publicly owned and administered by the Bureau of Land Management. Riparian areas

and aquatic habitat in this area have been "severely abused. Channel changes, annual addition of bentonite to the stream by downstream water users, and overuse of riparian habitat by livestock have restricted aquatic improvements. These problems predominate in the lower six miles of stream on national resource lands " (BLM 1975, p.1 & 4). Objectives of the 1975 BLM Management Plan include improvement and protection of riparian areas and provision of benefits for the multiple uses of water. Specific objectives include increasing deepwater habitat by 100% with a goal of increasing the average size of rainbow trout in the lower 7 miles of stream from 8.5 to 10.5 inches.

Rainbow trout (Salmo gairdneri) are essentially the only salmonid fish species present in the area, although brook trout (Salvelinus fontinalis) are reported to be present in the drainage. Fish populations were examined by Idaho Fish and Game personnel on 1 October 1982. Based on electroshocking samples taken in a 155-yard section and a 185-yard section at the point of the proposed diversion, they estimated the wild trout population to be 296 per mile and 434 per mile at the two sites, respectively. Trout size averaged approximately 8.5 inches at both sites, with a maximum of 13 inches. Approximately 20,000 catchable-sized hatchery rainbow trout are stocked annually in the lower portion of the river, with few surviving in the area after the summer of stocking. Approximately 55% of these hatchery fish are caught by anglers. The catch rate of trout is close to 1 fish per angler-hour, the objective set by the Idaho Department of Fish and Game in its current management plan.

On 14 June 1983 I electroshocked a short section of Birch Creek at the site of the proposed diversion and based upon this feel that the Idaho Fish and Game Department estimate of fish size and abundance is reasonable. I also captured shorthead sculpin (Cottus confusus) in slackwater areas, although sculpin populations are at a low level.

Rainbow trout populations in lower Birch Creek appear to be held at relatively low levels by the shallowness of the water, making it unsuitable habitat for larger trout. Probability of use curves compiled for adult rainbow trout (Bovee 1978, Figure 1) suggest that water depth of about 2 feet or greater is required.

Qualitative aquatic invertebrate samples from Birch Creek were made by Andrews (1972 and in BLM 1975), but no quantitative data were available. On 14 June 1983 I took a series of four Hess net samples (mesh size 390μ) from a riffle at the site of the proposed diversion. A total of 20 taxa of invertebrates was collected (Table 1). Diversity and abundance were typical of the Lost Rivers, indicating a moderately high level of production and a good substrate. Some Chara comprised the only aquatic vegetation present. From these samples, it appears that the availability of invertebrates for trout food is good and fish populations are not limited by food supply.

RECEIVED

Figure 1. Probability of use curves for utilization of water velocity and water depth by adult rainbow trout. From Bovee 1978.

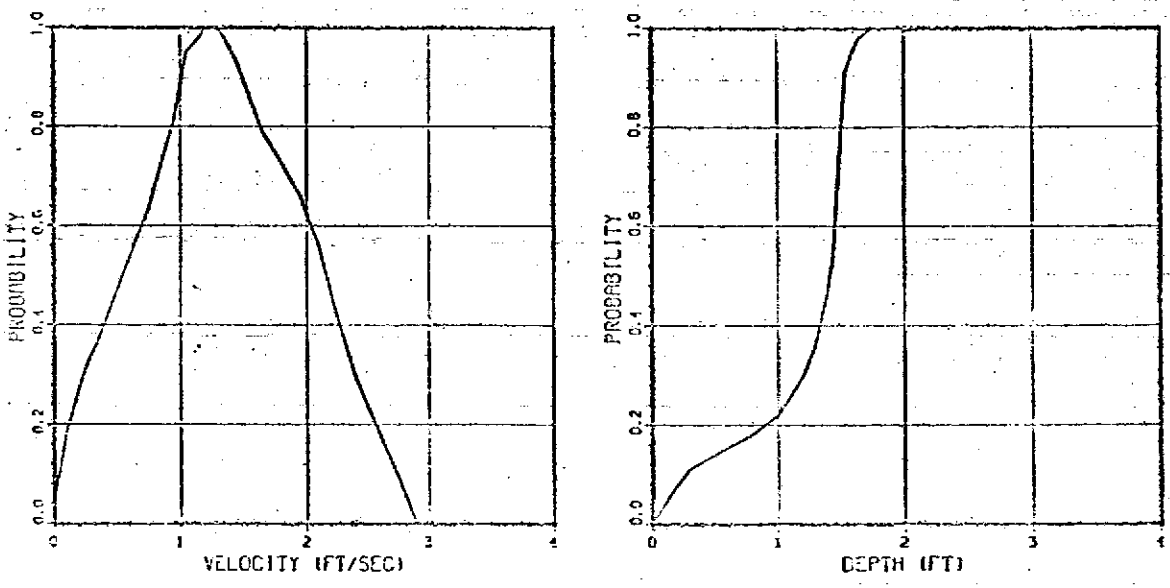


Table 1. Aquatic invertebrates collected in four Hess net samples from Birch Creek at site of proposed hydroelectric project diversion, 14 June 1983.

taxon	NUMBERS IN SAMPLE 1	2	3	4
EPHEMEROPTERA				
Baetis tricaudatus	7	6	1	10
Ephemerella inermis	51	55	28	194
Ephemerella grandis	0	4	1	3
Rhithrogena hageni	1	16	19	0
Paraleptophlebia heteronea	0	0	0	4
PLECOPTERA				
Claasenia sabulosa	1	6	4	0
Isoperla sp.	1	4	0	1
Cultus sp.	6	9	14	8
Pteronarcella badia	0	1	0	1
Pteronarcys californica	0	1	0	0
TRICHOPTERA				
Hydropsyche sp.	5	1	4	6
Rhyacophila sp.	2	3	2	1
COLEOPTERA				
Optioservus quadrimaculatus	0	2	0	1
DIPTERA				
Chironomidae - larvae	437	321	340	96
Chironomidae - pupae	8	9	6	2
Atherix	2	0	0	1
Hexatoma	0	0	0	1
NON-INSECTS				
Turbellaria	1	2	5	1
Lumbriculus	0	33	37	47
Lymnea	1	4	2	1
Physa	0	1	2	2
Total Number	523	478	465	380
Total taxa	12	17	13	17
Extrapolated number/m^2	8368	7648	7440	6080

MICROFILMED

PROPOSED AQUATIC ENVIRONMENT

The proposed feeder ditch would originate at the point at which Birch Creek passes between Townships 8N and 9N and then extend to the east, under Highway 28, for a distance of 29,500 feet. Between the point of diversion and the head of the penstock there would be a fall of 29 feet, giving an overall gradient of 0.1%. The system would be designed to carry a normal flow of 45 cfs. Typical width of the channel bottom would be 3 feet, with bank slopes of 1:1. Channel substrate will be local alluvial gravel or, in the case of two sections 500-1,000 feet long in total, bedrock through which the channel will be blasted.

The feeder ditch should be capable of maintaining a substantial population of rainbow trout if the flow of water is continuous. For this report, the design goal is to provide habitat to sustain a minimum of 200 trout, the number estimated to be inhabiting the 3,000 feet of Birch Creek that would be partially dewatered by the project. The expected average size of fish in the feeder ditch would likely exceed both the present average of 8.5 inches and the BLM Management Plan goal of 10.5 inches.

Proposed modifications to enhance trout population

1. At the point of diversion, an impoundment should be constructed to hold downstream migrant fish and thus minimize their movements into the feeder ditch, as recommended in the BLM Management Plan. This would create deepwater habitat (10-15 foot depth) to improve overwinter survival of trout and increase angling opportunities.

Size of the impoundment would be ½ to 1 acre. As a result, the water table in the area would be elevated, enhancing the growth of riparian vegetation.

2. Design the feeder ditch to maximize the number of channel meanders, and concentrate instream habitat improvements in these meanders.

3. Maintain an average surface velocity of 1.5 to 2.0 feet/second to maintain an ideal range for rainbow trout (Figure 1) and for aquatic insect production.

4. The average water depth that would result from the design gradient, flow and channel width would range from 3 to 4 feet, ideal for production of larger trout.

5. Riffles should be constructed at intervals along the channel to enhance invertebrate production, aerate water, and provide spawning substrate for trout. Approximately 12 riffles 15 feet wide by 30 feet long would be made by introducing washed alluvial gravel.

6. In the bedrock sections, stream banks should be essentially vertical or undercut if possible, and water depth should be 3 to 4 feet.

7. Instream cover should be added, especially at meanders, in the form of 3-foot diameter boulders placed singly and in pairs. In addition, green conifers should be cut and anchored to the stream bank in strategic locations to provide cover for juvenile trout.

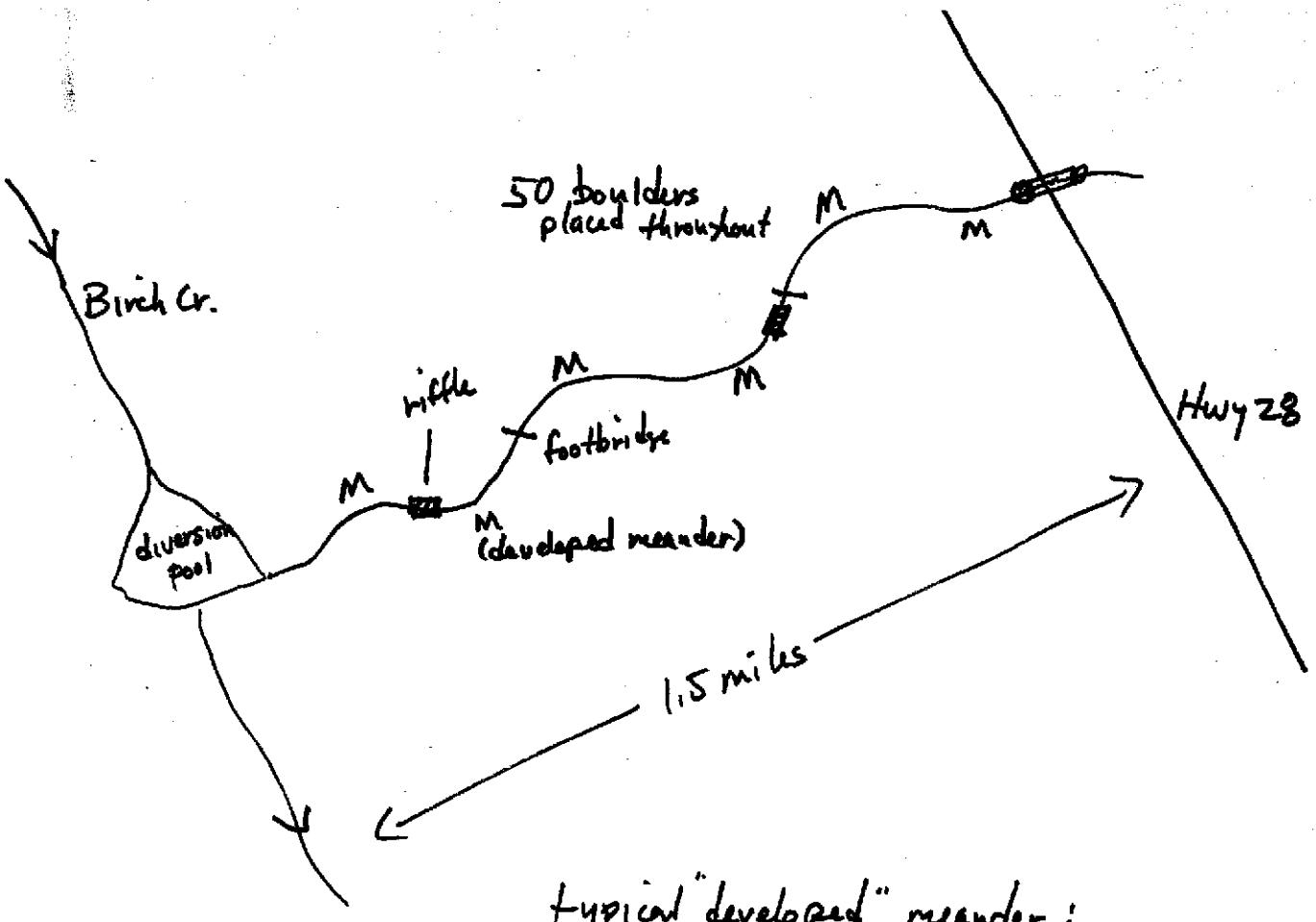
In some meanders, overhead cover should be added in the form of pairs of logs anchored into the bank.

8. The planting of riparian vegetation in the form of willows, birches, and russian olives should be carefully considered. The vegetation enhances fish and wildlife production and reduces water temperature, but increases water loss due to evapotransporation. Depending upon stand density (but regardless of tree species), water loss of 2.5 feet of water per unit area of vegetation per year can be expected. A strip of woody cover 4 feet wide along both banks for the entire length of the feeder ditch would lose about 1.3 acre-feet of water annually, about 424,000 gallons per year. It is recommended that trees be planted on the meanders initially. Fencing of these areas will be required to exclude livestock.

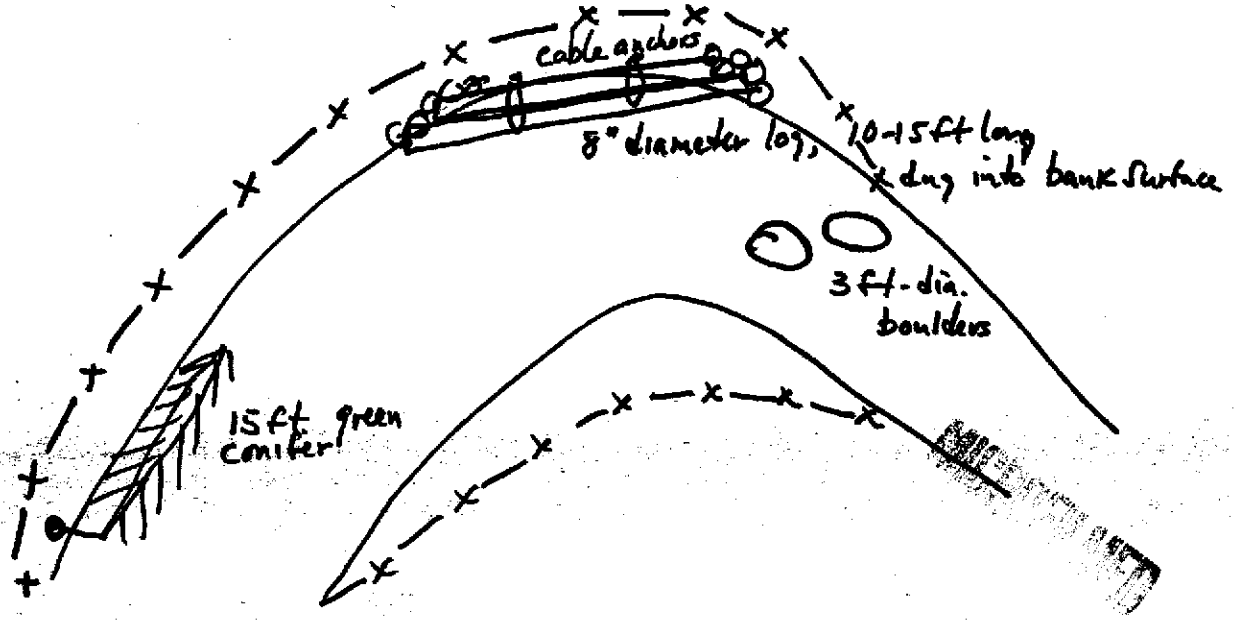
9. Footbridges could be installed at intervals along the channel for the convenience of anglers.

10. Where drywashes intersect the channel (east of Highway 28), small pools will naturally be formed. These pools will be valuable in providing winter habitat for trout.

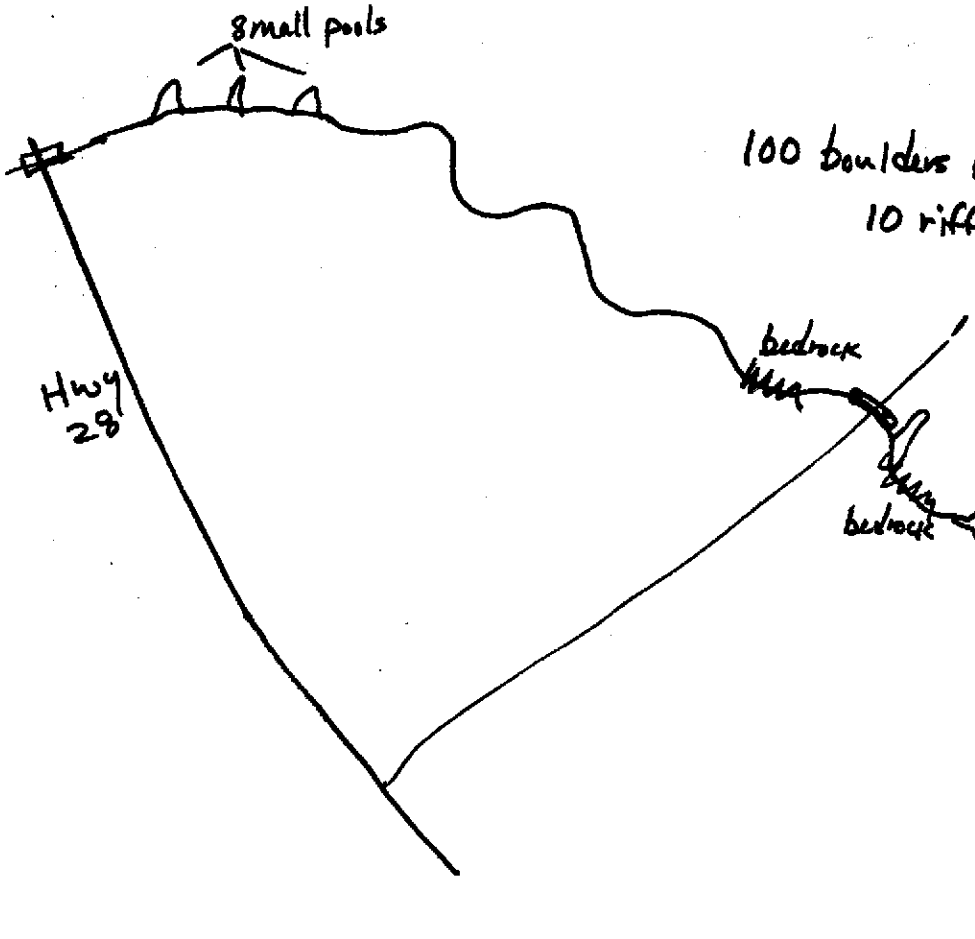
Birch Creek



typical "developed" meander:



Birch Creek



100 boulders placed throughout
10 riffles scattered through section

"develop" 2 dozen mean
1/2 with 2 boulder
1/2 with 2 log cov

MATERIALS REQUIRED

Boulders - approx. 3 ft. diameter
150 total

washed alluvial gravel - ½ to 1½ in.
for 12 riffles 15 x 30 x 0.5 ft
100 yd^3 total

logs - 8 in. x 10-15 ft.
36 total, with anchor cable and rock fill

birch/willow/ russian olive cuttings
1,000 total

green conifers - approx. 15 ft long
24 total, with anchors and cable

fencing - as needed

footbridge materials - for 4 bridges

Colonization by invertebrates and fishes

The newly-constructed stream should be partially colonized by rainbow trout from Birch Creek during the initial summer of operation. Some of the hatchery fish stocked into lower Birch Creek at present typically move downstream, occasionally leading to loss of substantial numbers into the unscreened Reno ditch (BLM 1975). This is likely due to a lack of adequate habitat in the existing channel and a tendency toward normal downstream dispersal, especially if water temperatures at time of stocking are below 10 C (Cresswell 1981). Habitat in the new feeder ditch should be more attractive for these fish, and many would be expected to take up residence. Colonization by wild rainbow trout would also be expected, but due to the low density populations upstream this would not be particularly rapid.

Colonization by aquatic invertebrates depends principally upon the quality of the souce of individuals available for colonization and the distance from that source. In Summit Creek in the Little Lost drainage, areas of stream bottom were completely recolonized in one month during summer if they were immediately adjacent to a source (Griffith and Andrews 1981). In an irrigation canal leading from the Big Lost River, colonization of the upper 2.6 km was complete after four summer months (Fuller 1981). Downstream in the canal from that point, some invertebrate species declined in numbers but levels of the species most important for trout food stayed high for an additional 5 km. Flow in that canal was only 3% of that expected in the Birch Creek feeder ditch, and insect drift in the latter should be more rapid. Food organisms should develop quickly enough to support trout as they enter the feeder ditch.

Project monitoring

It is recommended that relatively intensive monitoring be conducted for a 2-year period following completion of the project. This could be carried out by an ISU fisheries graduate student supervised by myself. Monitoring should concentrate on assessing:

1. colonization rates of fishes and aquatic invertebrates
2. distribution and size of trout in feeder ditch, especially utilization of habitat structures
3. angler effort and catch (creel census)
4. turbine mortality
5. ice formation and possible fish mortality in winter

The student would reside on the site in summer, during which time the creel census, electroshocking to assess fish populations, and sampling to monitor invertebrates would be conducted. The student would visit the site approximately monthly during the remainder of the 2-year period to collect supporting data.

For the project and fish populations to be compatible, it will be necessary to prevent dewatering of the channel due to spring washouts, mechanical breakdowns, etc. Also, it will be imperative to avoid the addition of substances (demossing agents, bentonite, etc.) in concentrations that are toxic or stressful to trout.

Some initial stocking of rainbow trout into the project area will probably be appropriate, but it would be advantageous to develop a self-sustaining population of wild rainbows that are adapted to conditions there. To do this, it may be necessary to protect wild fish from excessive angler harvest, possibly be closing a different section for 1-2 years on a rotation basis.

LITERATURE CITED

Andrews, D.A. 1972. An ecological study of the Lost Streams in Idaho, with emphasis on the Little Lost River. Masters Thesis, Idaho State University. 57 pp.

Bureau of Land Management. 1975. Birch Creek Aquatic Habitat Management Plan. Idaho Falls District.

Bovee, K.D. 1978. Probability of use criteria for the family Salmonidae. Instream Flow Infor. Paper 4, FWS/OBS - 78/07. 80 pp.

Cresswell, R.C. 1981. Post-stocking movements and recapture of hatchery-reared trout released into flowing waters - a review. J. Fish. Biol. 18: 429-442.

Fuller, R.K. 1981. Habitat utilization, invertebrate consumption, and movement by salmonid fishes under fluctuating flow conditions in the Big Lost River, Idaho. Masters Thesis, Idaho State University. 76 pp.

Griffith, J.S., and D.A. Andrews. 1981. Effects of a small suction dredge on fishes and aquatic invertebrates in Idaho streams. N. Amer. J. Fish. Mgt. 1: 21-28.

1-5-84

32-7136

Applicant - Birch Power Co.
Attorney - Ray Rigby

Protestants
- Idaho Dept F&G - Attorney - William Dillon
- U.S. Bureau of Land Management - Bob McCarty - Jana Esget
- Water District 32-D - Ben Wilding watermaster -
- D&D Enterprises - George Peterson Attorney -

Hearing Scheduled for 8:30 - Applicant arrived at 8:48 Applicant Attorney @ 8:55
Conference began at 9:37 am due to conferences between parties
Hearing begun at

Ronald Ball Ball Sheep Co - Use BLM land -

Amendment ~~to~~ delete 5 cfs - reference → taken
Approve for 40 cfs →
? - Request continuance - by F&G denied on basis that F&G showing for need of min flow has not changed -

Rigby's Presentation of Evidence
1st Witness 9:48
Ted Sorensen - Applicant B.S. M.S. Engineering - Licensed in 1978
Prior experience - feasibility studies Georgetown ID, Ravenscroft, Trail Creek Sprinkler Co for power
Birch Power Co - Inc. Ted Sorensen sole stockholder
- Applicant's exhibit #1 Admitted - Report -

Project for diversion of water from Birch Ck
Option A 1 MW
Option B 2 MW

Present Vol. of Reno ditch water 5 to 8 ft. sec.
Reno ditch loses about 1/3 of the water diverted.

Feeder Ditch - new ditch will be sealed so that the loss would be 3 cfs —

Less loss would occur in new ditch over the old ditch

Report - Shows effect on fishery in the feeder ditch —
Report - Feasability and financial ability —

Water supply is sufficient
Has expended about $50,000 to this point

Financial Ability Appendix 7

—

No adverse local public interest
A. The stream has dried Birch Ck every year at Reno Diversion Irrigators
B. Fishery will be improved in Birch Ck - by developing 1½ miles of feeder ditch
C. Irrigators will have more water than in the past
D. Reno Ditch now washs out each year and effects adversely public lands

Birch Creek below
Reno Ditch diversion is dry year around —

In the public interest to produce power —

D&D Peterson
BLM Eagle
32-D Wilding
F&G Dillon

X-exam by Peterson D&D

→ Measuring devices at ditch beginning and end to determine ditch losses—
- Water savings are not guaranteed
-

X-exam by F&G

There is some importance to 3000 foot stretch of Birch Creek dried up.
Loss in 3000 feet of Birch Ck. — estmated 1.0 cfs
Irrigation District - Not contributing to cost of project to save water
Total project would still be feasible with 5cfs min. flow —
Effect on 3000 ft.

Dry Channel —

Tape 3 begin No Fishery —

P-1 → Protestants F&G Exhibit 1 → Admitted letter

7. ~~No work~~ — add to 2 to include bentonite ing

A-2 → Applicants Exhibits 2 - Admitted Letter From Mid State Sealing Co.

Applicants ~~Exhibit~~ Witness #2
Brian Holt. Director of Customer Service UP&L
A subsidiary to UP&L -
Project is financable
" " feasible
Will provide financial and legal assistance
A power contract has been negotiated —

A-3. → Applicants Exhibit 3 - admitted Letter from witness to Mr Sorensen
Giving final Approval

X-exam by F&G

Applicants Witness

Dale Lyke — [redacted] BSEE = General Electric

Will furnish the generating equipment —

Did a feasiblity study -

Feasible even to the point where G.E. would help arrange financing

Letter in report Appendix 7

Generating equipment is available.

X-exam

No commitment for financing —

Applicant Witness —

Lyle Larson - Financial Consultant for Continental Bank & Trust

- Project is financible in a number of ways —

Verbal Contract presently —

- Contract is pending to secure financing → Today contract could be signed

A-4 Applicant Exhibit #4 admitted Statement of Finacial Option B Jan 6, 1984

A-5 Applicant Exhibit #5 admitted Statement Option A Oct 23, 1983 ?

Bank is willing to finance the project

X-exam by F&G

Re-direct by Rigby

→ Important Showing of Financial ability —

D&D [illegible]son
BLM Esqet
32-D Wilding
F&G Dillon

Applicant Witness

Jack Griffith — Assoc Prof at Idaho State
Phd fisheries 1971 from U of I

Has been involved for about one year.
Contract with ISU for a graduate student.

A-6 Applicants Exhibit #6 admitted Report of Dr. Griffeth April 5, 1984

Intend to have same density of Trout in the canal as in Birch Ck.
Canal twice as long ∴ more fish.
Sorensen supports the recommendations of Dr Griffeth
Riparian habitat
Conserve Top soil —
Cuttings planted to willow
Pools will been installed to enhance the riparian zone

2.2 cfs
4 6
8.8 8.8
9 8
79.2 70.6

→ Condition that canal must be built as shown in Exhibit #6

X-exam - Petersen —

X-exam - Esqet —

Not expert in riparian vegetation -
No woody riparian vegetation along existing (Reno ditch)

X-exam - Dillon

July, Sept, Nov. → Visited the area 3 days —
Flows a fairly constant on Birch Creek —
Birch Creek is able to be fished early.
A Montana canal was modified for fishery
There is some element of uncertainty
A dewatering of the canal would cause a major loss of Fish —
Estimated Cost of Habitat ≈ $25,000

Griffeth (con't) x-exam by Dillon

~~Ex~~ Riparian Zone would be enhanced if 5 cfs is allowed to flow past the proposed point of diversion

F & G

~~X~~-exam

Pools 300 ft² 12 pools →

Recall - Applicant

→ Accept the recommendations of the Griffeth report.

→

X-exam

Applicant Rests —

Tape ran out during break

D & D 3rd Witness

Ben Wilding — Watermaster —

6 users - 20

Simmon ¾ 18.40 Wagg 1.8 cfs Wa

Tape change Total Q = 44 cfs decreed to users of ~~Reno Ditch~~ Birch Creek

= " " " " Reno Ditch

The common practice is to pre-irrigate

Consistantly do not have sufficient water almost every year

X-exam BLM

2500 head livestock watered from Reno Ditch

X-exam ~~BLM~~ F & G

X-exam Birch Power

5

D&D Witness

Steve Phillips - Ranch Manager of D&D Enterprises

- Almost every year the ranch is short of water.

Wells are ≈500 feet to water

→ Sworn

BLM - Opening statement — Mr. Esget —

- Take Judicial notice of the acts of the Idaho Board —
- Want water diverted down the channel —
- The project design is acceptable —

B.L.M. Witness

- Robert McCarty — Wildlife biologist

Impact of Riparian Zone →

Read prepared statement —

No flow past Reno ditch usually

Wants to restore flow

5cfs would provide

Difficult to establish riparian vegetation —

X-exam D&D

There are no bald eagles

X-exam F&G

Riparian habitat 50' to 4' in width — on Birch Creek

X-exam - Birch Power

A-7 Applicants Exhibit #7 not offered Pictures

B.L.M. →

A-8 Applicants Exhibit #8 not offered Pictures —

B.L.M. Witness

Glen
~~Wayne~~ Devoe —

Will have a significant impact on Cattle watering

600 cattle at proposed p.d - Begin Nov 1 Not affected

450 cattle below p.d - Water about Jan 1 while trailing - there for 2 days

4000 sheep " " - Not affected

X-exam

Period Sheep April 1 — June 30 Nov 1 — ~~Dec~~ Feb 1

" Cattle ~~Nov~~ Jan 1

X-exam Rigby

B.L.M witness

Robert ~~M~~ Ball

Run sheep on the 3000 feet of Birch Creek and Reno Ditch

Sheep water until

Band of about 2000,

Sheep can move a couple of miles between ~~the~~ waterings

X-exam by D & D

Problems ~~by~~ could be resolved —

B.L.M. witness

Mr Esget - District Hydrogist —

No way for stockwater and minimum flow to be protected except under their ~~rights~~ right of way

~~Locations~~ were measured and appear to be accurate —

The providing of minimum flow would not interfere with historic water uses of the irrigator.

They want to encourage the development of the project -

X-exam by D&D
-The question is where this is new water —

X-exam by B

F & G Witness —

Virgil Moore - Regional Fisheries Manager

Estimated fish population from study Oct 82 434 fish/mile
Jul 83 378 fish/mile

3,000 feet has less fishing pressure than Birch Ck upstream -
Fishing would be lost in 3000 feet with or without 5 cfs
min flow.

X-exam —

Project shouldn't be approved if the 5 cfs can't be left in the stream —

X-exam by Rigby —

Direct — Ben Wilding

Heavy fishing is above —

Has Preliminary Permit —

→ Closing of F & G —

Burden of Applicant that Application is in the public interest

4/05/84
Time 9:30.

#32-7128 & 32-7136.

Applicant
Birch Power represented by Ted Sorensen -
Ray Rigby - Attorney.

Protestants -
F & G.

B.L.M.

W.D.

D & O.

* Ball Brothers Sheep Co.

Stipulations - from both applications any reference to
Rigby - Remove stipulation for allowing ~~5~~ 5 cfs to remain in Creek.

Dillon - Objection - causes a significant change ~~to the interest of~~ of the application. - request continuance.

Fleenor - Request for continuance denied. - reserve ruling on whether application was for 45 or 40 c/s.

MICROFILMED

Rigby - applicant intended 45 c/s. - based on flow records.

#2

10:00.

App. Wit.

Direct. Ted Sorensen. - Civil Engineer licensed since 1978. B.S. & M.S.
Birch Power Co. - owned total by Ted Sorensen.
Feasibility study on project was submitted to interested partees

Applicants exhibit #1. Feasibity study.
Option A - 1000 kw.
Option B - 2000 kw.

Present grade of Reno Ditch causes velocity flow around 5 ft/sec. scowering channel preventing sealing. bed loss 9 to 12 c/s.

Grade of feederditch would allow sealing of channel, but there would still be a bed loss of 3 c/s. but would provide net gain of 5 c/s and more.

Development of fishery -
There is no fishery in the Reno ditch because of high flow velocity. Reduced flow in feeder ditch will allow development of fishery.

Water supply is sufficient. -
Has financial resources - already spent $50,000.

Tape #2.
10:23.

Not adverse to public interest.
1- Birch Creek has historically been dewatered at Reno Ditch.
2- Irrigators will have more water.
3. Will increase fishery habitat.

MICROFILMED

Only 3000 ft. of Birch Creek will be effected by project. That is the reach between the proposed project p.d. & the Reno Ditch diversion.

Perpa & Northwest Power Planning Council direct the development of small hydropower development.

~~FX~~ - Exam -

Fleenor - Uses during non-irrigation season - water not needed for present uses will be diverted into outfall ditch.

Peterson - Plan A - will provide an additional 5 or 6 c/s.
Plan B " " " " 10 c/s.
Sorensen will not garantee attainment of additional flows but technologies are existing to seal channel and reduce losses.
Concern of R&D. is that they receive their full entitlement. -

Dillion - Sorensen acknowledges there is some degree of public interest with regard to the 3000 ft. -
Bed loss in this reach is estimated at 1 c/s. - confirmed by measurement taken by Jim Eggert of B.L.M.
Bed loss in Reno Ditch is about 9.0 c/s.
Development requires financing from out side sources.
Project not economically feasible with only 45 c/s. need both applications
~~Not feasible to allow 5 c/s to remain in channel during summer.~~

MICROFILMED

Protestants Fish & Game Exhibit # 1

Tape #3
11:10.

Stipulation #7 - Agrees not to take unilateral action that may ~~take~~ damage fishery.
Did not agree to Stipulation #8.

Redirect -

Applicant's Exhibit #2 - letter from sealing company.
Author of letter not available at hearing.

App. Wit
Direct - Byron Holt - Employed by Utah Power & Light.
Director of Customer Service & Research Dev.
Reviewed project.
- Engineering is sound.
- Is financiable
- UP&L subsidiary will jointly develop project.
- Contract for sale of power has been negotiated.

Applicant's Exhibit #3. Letter by Mr. Holt to Ted Sorensen.

X-Exam - Dillon - Negotiations have not been finanizes.

App. Wit.
Direct - Dayle Lyke - Electrical Engineer with General Electric.
Has examined data related to power production.
General Electric has evaluated project and determined it to be financiable. will assist in obtaining financing.
Letter from Mr. Lyke to Ted Sorensen in appendix 7 of Applicant's Exhibit #1.

MICROFILMED

X-Exam- Dillion - G.E. has not committed to financing of project.

App. Wit.

Direct- Lyle Larson - ~~Finan~~. Continental Bank.

- There will be no problem securing funding from various sources.

1- Tax Exempt.- Mirror Bonding -

2- Joint venture private financing.

Contract is pending to secure financing.

Applicants Exhibit #4 letter from Larson addressing financiability of option B.

Applicants Exhibit #5 letter from Larson. addressing financiability of option A.

Continental bank is willing to finance project or be financial advisor.

Tape #4.

X-Exam- Dillion-

Financing is contingent upon-

- Issuance of a permit.
- Financing at current market interest rate or 1% more.

Fleenor- Moral contract should be signed today. can be submitted for review.

MICROFILMED

#6

App. Wit.
Direct. ~~Jack~~ John ("Jack") Griffith - Private Fisheries Consultant.
M.A in
PHD in Fisheries from Univ I in 1971.

Concerned with development of fisheries habitat in the feeder canal.

Applicants exhibit #6 - Report by Dr. Griffith dated 4-5-84.
supercedes previous report.
Fisheries habitat -
twice the linear distance,
better habitat.
Velocity & channel configuration is more conducive to trout habitat than present
3000 ft of Birch Creek below proposed p.d.
Riparian habitat proposal.
Construction procedures -
- Stockpile top soil for distribution along feeder ditch.
- Seed stream banks with native rye grasses, birch & willow.
- 24' meanders.
- Fenced.
- Narrow riparian zone,

X-Exam - Peterson — Dr. Griffith will be targeting the 1st mile and ½ for intensive riparian development.

MICROFILMED

X-exam -

Esgot - Dr. Griffith is not an expert on riparian habitat.
Channel configuration will have 1 to 1.5 slopes.

Dillon - Dr. Griffith - spent 3 full days - in July, Sept & Nov.
Development of fishery habitat is a preserving proposal.
with some elements of uncertainty.
- Dewatering of channel would have substancial effects.
to aquatic environment.
- $25,000 is the estimated cost of establishing
habitat.
- Riparian habitat would be extended if 5 c/s were
left in the stream channel.
- Over all stipulation in F&G exhibit #1 are conducive
to fish habitat.
- Riparian Pools - 300 sq ft., 12 each,

Recall App. - Sorensen. -
Accepted applicants exhibit #6.
Stipulate to conditions recommended by Dr. Griffith.

X-exam - Dillon - Mr. Sorensen will comply with Dr. Griffith's
riparian pools if conditioned by permit.

Applicant Rests.

MICROFILMED

#8

Prot. Wit.

Direct. - Ben Wilding - Farmer & Watermaster.

- 6 users on Birch Creek.
  - William Simmons - 18.4 c/s.
    Wagner 74. inches
    Mack Wagner - 200 inches.
    Iddy. 5 inches
    P & D, - 2200 inches.

Tape. 6.

- Are periods of the year when more than 2200 inches diverted through Reno Ditch.
- This ~~year~~ past winter Reno Ditch froze over in Dec. and is still dry. Last year water ran ~~ye~~ the entire year.

X-exam -

Esgat - Runs ~~2200~~ 2200 stock.

Dillon - 1300 inches of loss from head of creek down to Reno diversion.

Rigby - Feelo project would save water user substantial amounts of water.

MICROFILMED

Protest. Wit.

Direct. Steve Phillips - manager for D&D. Enterprises.
Needs heavy spring flow to carry crop through summer.
Could irrigate an additia 250 acres with 5 cfs

B.L.M. - Opening statement.

Direct - ~~Jim~~ Esgot -
BLM wants complete mitigation of resource damages consistant with policy statement of Idaho Water Resource Board on minimum flows in Birch Creek.
Project design is acceptable if 10 stipulation outlined in F&G Exhibit #1 are implemented.

Direct. Robert McCarty - Wildlife Biologist. With BLM for 8 yr.
- Has backgraund in riparian ecosystem evaluation.
- Read statement.
- Riparian vegetation below Reno Ditch is minimal.
- Minimum flow below diversion is need to preserve
- public values in riparian vegetation.

X-Exam -
Peterson - No eagle roosts or nests of Birch Creek between proposed p.d.& Reno Ditch.

Dillon - Both sheep & cattle water from 3000 ft. section of Birch Creek.

Existing riparian vegetation varies from 30 to 50 ft. to 2 ft.

Rigby — tape #7.

Applicant's exhibit #7 photos. of Birch Creek.
Applicant's " #8 " . of Reno Ditch.

- McCarty - is supportive of project but contends 5 c/s is needed to be consistant with management plan of B.L.M.
- There has been no attempt to inspire riparian vegetation along Reno Ditch.

~~Peterson~~

Prot. Wit.

Direct. - Glen Devon — Range Conservationist. with B.L.M.
Dewatering below existing diversion with significant impact on use patterns by livestock.
- 4 livestock operations involving 4000 sheep, approximately 1000 hd. cattle.
- Sheep - 4-1 to 6-30
Cattle - 11 1 - 12 30 -
- Mr Woodies Cattle trail off of allotment in January.

MICROFILMED

Direct - Robert Ball - Sheep herder.
Has sheep allotment that relies on Birch Creek & Reno Ditch for water.
Allotment used in the spring.
Herds 2000 Sheep.

Tape #8

Could get water from stock troughs.

James Esgat - District Hydrologist with BLM.
- Easement will require protection of existing riparian habitat under executive order #
- Is concerned that under present law ~~stockwater~~ the right for stockwatering & public interest to maintain riparian habitat can no be secured under historical and traditional methods of use on the open range.

X-exam -
Peterson - Esgat - ~~additional~~ water developed over ~~existing~~ traditional flows over 4 cfs are no subject to existing water rights.

Rigby - BLM advisory board has endorsed project.

BOARD COPIES NOT

#12

Protest Wit

Direct. Virgil Moore - F&G. Fisheries Biologist.
Regional Fisheries Biologists

Conducted fish population research using electro-fish techniques.
434 / mi

Lower fishing pressure on lower 3000 ft of Birch Creek.

- 5 c/s would not maintain a fishable population of trout below proposed diversion.
- 5 c/s is not a fisheries minimum flow.
- Riparian zones have been shown ~~to be~~ to provide the best wildlife habitat.

X-exam - Petersen - F&G respects existing water rights.

Type 9

400 fish in 3000 ft. below proposed p.d.

Rigby —

Redirect - Ben Wilding - lower 3000 ft. is not heavily fished.

Dillon - Loss of fishery is mitigated by proposal.
Loss of riparian habitat is not.

MODIFIED

32-7128 & 32-7136 - Birch Power Company

3rd Floor Conference Room, IDWR, Idaho Falls, Idaho
Thursday, April 5, 1984 (8:30 a.m.)

ROSTER OF ATTENDANCE

Hearing Officer Bob Fleenor & Ernest Carlsen

Name	Address	Representing
Robert McCarty	940 Lincoln Rd. I.F. Id.	BLM
James A. Esget	940 Lincoln Rd. I.F. Id.	BLM
William B Dillon, III	[redacted] P.O. Box 25, Boise 83707	Fish & Game
George C. Petrie	485 E. Street, I.F. Id 83402	Atty D & D Enterprise
Jim R. Mordant	294 Apache, Rexburg,	D & D Enterprise
Steve R. Phillips	Star Rout Box 15 Dubois	" "
Clio Wilding	Dubois Idaho	Wilding Ranch
Randel Isbell	Leesville Idaho Box 69	Bar Bra Sheep Co
Robert M Ball	HC 69 Box 1370 Howe Ida	" "
Ben R. Wilding - Watermaster - 32-D - Dubois Idaho		
Ted S. Sorenson P.E.	550 Linden Drive Idaho Falls, Idaho	Birch Power Company
Dayle Lyke	General Electric Co 1111 Brickyard Rd Salt Lake City	
Jack Griffith	Box 8007 Pocatello ID 83209	Idaho State Univ. Biology Dept
Lyle J Larson	200 S. Main SLC, Ut 84111	Continental Bank & Trust
Brian D. Holt	1231 E. 3720 So, SLC Ut 84106	UP&L
Ray W. Rigby	P.O. Box 250 Rexburg, Id.	applicant
Doug Moore	1515 Lincoln Rd Idaho Falls	Idaho Fish & Game

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BLM
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5. Bernetta Bleuch

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Eastern District Office

32-7128-7136

PS Form 3811, July 1982

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☑ Show to whom and date delivered ..... ____¢
   - ☐ Show to whom, date, and address of delivery .. ____¢
2. ☐ RESTRICTED DELIVERY..... ____¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $____

3. ARTICLE ADDRESSED TO:
Jid Sorensen
550 Lyndon
Idaho Falls

4. TYPE OF SERVICE:
   - ☐ REGISTERED ☐ INSURED
   - ☑ CERTIFIED ☐ COD
   - ☐ EXPRESS MAIL

ARTICLE NUMBER
13192

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

Ted Sorensen

5. DATE OF DELIVERY
3-23-84

POSTMARK (may be on reverse side)

IDAHO FALLS ID MAR 22 84

6. ADDRESSEE'S ADDRESS *(Only if requested)*

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

RETURN RECEIPT

☆ GPO: 1982-379-593

UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

U.S.MAIL

PENALTY FOR PRIVATE USE, $300

RECEIVED

MAR 23 1984

Department of Water Resources
Eastern District Office

RETURN TO

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE
150 SHOUP AVE. Suite 15
IDAHO FALLS, IDAHO 83401

(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

32-7128-7136

PS Form 3811, July 1982

RETURN RECEIPT

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☑ Show to whom and date delivered ..... ____¢
   - ☐ Show to whom, date, and address of delivery .. ____¢
2. ☐ RESTRICTED DELIVERY ..... ____¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $____

3. ARTICLE ADDRESSED TO:
Kay Rigby
25 N 2 E
Rexburg, Id. 83440

4. TYPE OF SERVICE:
   - ☐ REGISTERED ☐ INSURED
   - ☒ CERTIFIED ☐ COD
   - ☐ EXPRESS MAIL

ARTICLE NUMBER
13193

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent

5. DATE OF DELIVERY
3/22/84

POSTMARK
(may be on reverse side)

6. ADDRESSEE'S ADDRESS *(Only if requested)*

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

☆ GPO: 1983-379-693

ACCEPTANCE OF REGISTERED, INSURED, AND CERTIFIED MAIL

PS Form 3877, Sept. 1979

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE
150 SHOUP AVE.
IDAHO FALLS, IDAHO 83401

NAME AND ADDRESS OF SENDER

Indicate type of mail
- ☐ Registered
- ☐ Insured
- ☐ COD
- ☒ Certified

I certify that we have
- ☐ Commercial Insurance
- ☐ A deductible clause of $

Affix stamp here if issued as certificate of mailing or for additional copies of this bill.
POSTMARK AND DATE OF RECEIPT

LINE NO.	NUMBER OF ARTICLE	NAME OF ADDRESSEE, STREET, AND POST-OFFICE ADDRESS	POSTAGE	FEE	Handling Charge	Actual Value (If Registered)	DUE SENDER (IF C.O.D.)	R. R. FEE	S.D. FEE	S. H. FEE	REST. DEL. FEE / REMARKS
1	13190	Kent Foster PoBox 129 IF	20	75				60			T31-0216
2	13191	Thomas D Vadnais Hamer									"
3	13192	Ted Sorensen 550 Linden I.F.									22-7128 32-7136
4	13193	Roy W Rigby 25 No 2nd E Rexburg									"
5	13194	Wm T. Simmons, Dubois, Id									"
6	13195	George Petersen 485 "E" St IF									"
7	13196	Odell Frandsen BLM 946 Lincoln Dr.									"
8	13197	Ben Wilding Star Rt Dubois									"
9	13198	Ca Wagner Box 14-A Dubois									"
10	13199	Jon Reinecker 1515 Lincoln Rd ID.									"
11				$	15.59						
12											
13											
14											
15											

MICROFILMED

TOTAL NUMBER OF PIECES LISTED BY SENDER	TOTAL NUMBER OF PIECES RECEIVED AT POST OFFICE	*POSTMASTER, PER (Name of receiving employee)*
10	Ten	

The full declaration of value is required on all domestic and international registered mail. Commercial Insurance—Payment of the full registry fee is required on articles valued up to $1,000 or the full amount of the deductible if the deductible exceeds $1,000. The maximum indemnity payable is $25,000 for registered mail, $400 for COD and $400 for insured mail. Special handling charges apply only to third- and fourth-class parcels. Special delivery service also includes special handling service.

FORM MUST BE COMPLETED BY TYPEWRITER, INK OR BALL POINT PEN ☆ U.S. GOVERNMENT PRINTING OFFICE: 1979-301-994

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATIONS FOR PERMITS NO. 32-7128 AND 32-7136 IN THE NAME OF BIRCH POWER COMPANY	NOTICE OF HEARING AND/OR CONFERENCE

Notice is hereby given that the Department of Water Resources has rescheduled the hearing and/or conference concerning the above referenced applications for permits for Thursday, April 5, 1984, at 8:30 a.m. in the Third Floor Conference Room, Idaho State Office Building, 150 Shoup, Idaho Falls, Idaho.

Any hearing will be held in accordance with the Rules and Regulations of the Idaho Code and adopted Rules of Practice and Procedure as previously indicated in the hearing and/or conference notice dated February 23, 1984.

Dated this 21st day of March, 1984.

Ronald D Carlson

RONALD D. CARLSON

Eastern Regional Supervisor

MICROFILMED

PETERSEN, MOSS, OLSEN, MEACHAM & CARR
ATTORNEYS AT LAW
485 "E" STREET
IDAHO FALLS, IDAHO 83402

TELEPHONE
AREA CODE 208
523-4650

GEORGE C. PETERSEN, JR.
REED L. MOSS
DENNIS M. OLSEN
GREGORY P. MEACHAM
WM. CHARLES CARR
EARL BLOWER
ALAN E. BARBER
SCOTT P. ESKELSON
KENT A. HIGGINS

March 5, 1984

RECEIVED
MAR 7 1984
Department of Water Resources
Eastern District Office

Ray W. Rigby, Esq.
Rigby, Thatcher, Andrus, Barton & Walters
Attorneys at Law
25 North 2nd East
Rexburg, Idaho 83440

RE: Request for Cancellation of Scheduled Notice of Hearing and/or Conference on Permit Nos. 32-7128 and 32-7136 - Birch Power Company - D & D Enterprises, Inc.

Dear Ray:

I most sincerely appreciate your consideration and courtesies in agreeing to continue the Notice of Hearing, the subject of the above captioned, scheduled for hearing before the Department of Reclamation this coming Thursday, March 8, 1984.

For the purpose of supplementing your file, together with the file of the Department of Water Resources, as to the reasons and justification for our client's requested continuance, I hereby submit on behalf of D & D Enterprises, Inc., in writing, the following:

1. D & D Enterprises, Inc. was not permitted to intervene in the above entitled matter until February 23, 1984 (see Order granting Request for Intervention).

2. Department of Water Resources set up a final hearing of the pending protests, filed in the above entitled matter, for March 8, 1984, said Notice of Hearing being dated February 23, 1984.

3. The two documents referred to in Paragraph 1. and 2. above were received by counsel for D & D Enterprises, Inc. at approximately 11:40 a.m., Monday, February 27, 1984.

4. Immediately upon notice of D & D's permitted intervention D & D retained a Water Engineer, Mr. Ray Michener,

Michener Associates, Inc., Tri-Cities, Washington 99302, telephone (509) 545-8561, as its consulting engineer for the purpose of defending and supporting the protest of D & D Enterprises, Inc.

5. According to my calculations there is a total of ten days (8 working days) of actual notice dating from the date notice was actually received up to the date of hearing, including a weekend. For the purpose of preparing and responding to the two applications, the subject of the above captioned, ten days is not an adequate period of time for allowing D & D's retained engineer to complete his investigation, make a recommendation to D & D Enterprises, Inc. and thereafter prepare for defense to applicants pending applications.

6. In addition to the above, the retained engineer of D & D Enterprises, Inc., Mr. Ray Michener, is scheduled to testify in a Federal Water case on the same date and at the same time that the above captioned has been set for hearing of applicant's applications, and protestants protests.

As discussed in our recent telephone conference, our clients are desirous of an early meeting, as suggested by you and your client, for the purpose of exchanging information, and for the further purpose of making every effort to resolve the questions, differences, and disputes, of D & D Enterprises, Inc. and your client, to the end and for the purpose of hopefully resolving said differences short of the necessity of a formal hearing.

I will be in contact with your within the next couple of days, as to an available date and/or dates for the purpose of scheduling the meeting discussed in the previous paragraph.

Following our telephone discussion on the above captioned, and pursuant to my suggestion to you, I contact Mr. Ron Carlson, of the Department of Reclamation, informed him of our oral discussion, and in response to said report he volunteered to send out notes to all parties concerned, ordering a continuance, without the necessity of a formal hearing.

Your cooperation and consideration on the above caption has been most sincerely appreciated.

Very truly yours,

PETERSEN, MOSS, OLSEN,
MEACHAM & CARR

GEORGE C. PETERSEN, JR.

GCP/tr
8523k

cc: Mr. Ron Carlson
William B. Dillon, III
Jim DeMordaunt

MICROFILMED

SORENSON ENGINEERING, P.A.
CONSULTING ENGINEERS
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401
208-522-8069

RECEIVED
MAR 7 1984
Department of Water Resources
Eastern District Office

March 6, 1984

Mr. Ron Carlson
Eastern Regional Supervisor
Idaho Dept. of Water Resources
150 Shoup Ave.
Idaho Falls, ID 83401

RE: BIRCH CREEK HYDRO - HEARING FOR APPLICATIONS 327128 and 327136

Dear Mr. Carlson,

The notice of cancellation for the March 8, 1984 meeting I received indicates this was per the agreement of the applicant. I did not agree to cancellation.

I also contacted my attorney, Mr. Ray Rigby in Rexburg, Idaho concerning this matter and asked him if he'd agreed to the cancellation of this meeting. He indicated he had not agreed to the cancellation of this meeting.

The cancellation of this hearing not only delays the progress of the project but is very costly to me in that I had arranged for an engineer to fly from Denver, Colorado and had also arranged for a banker to come from Salt Lake City, Utah, as well as a fisheries biologist from Pocatello, Idaho.

Very truly yours,

Ted S. Sorenson, P.E.
Project Engineer

TSS:kw

cc: Ray Rigby

RECEIVED

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF PROTESTS AGAINST APPROVAL OF APPLICATIONS FOR PERMITS NO. 32-7128 AND 32-7136 IN THE NAME OF BIRCH CREEK POWER	NOTICE OF CANCELLATION

Notice is hereby given that the Department of Water Resources has cancelled the hearing concerning the above referenced applications scheduled for 11:00 a.m., Thursday, March 8, 1984 at the request of the protestant, D & D Enterprises, and the agreement of the applicant.

Dated this 2nd day of March, 1984.

RONALD D. CARLSON
Eastern Regional Supervisor

MICROFILMED

Told George that I would not continue the hearing unless request comes from Ted Sorensen.

Peterson called back said Ray Rigby approved continuation of hearing.

To Ron Time 10:27

Date March

WHILE YOU WERE OUT

George Peterson

of

Phone 523-4650

Telephoned		✓ Please call	✓
Called to see you		Will call again	
Wants to see you		Returned your call	

Message Ref hearing Birch Power App.
Case 32-7128
32-7136

Operator

32-2128/2126

PS Form 3811, July 1982

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☒ Show to whom and date delivered ..... ____¢
   - ☐ Show to whom, date, and address of delivery .. ____¢
2. ☐ RESTRICTED DELIVERY..... ____¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $____

3. ARTICLE ADDRESSED TO: Ted Sorenson
Birch Power Co.
550 Linden Dr.
Idaho Falls Id. 83401

4. TYPE OF SERVICE:
   - ☐ REGISTERED ☐ INSURED
   - ☒ CERTIFIED ☐ COD
   - ☐ EXPRESS MAIL

ARTICLE NUMBER: 13182

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☒ Authorized agent

5. DATE OF DELIVERY: 2-24-84

POSTMARK (Only to be affixed when article is mailed.)
IDAHO FALLS ID
24
1984
USPO

6. ADDRESSEE'S ADDRESS (Only if requested)

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

RETURN RECEIPT

☆ GPO: 1982-379-593

UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.
- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested"
- adjacent to number.

U.S.MAIL

PENALTY FOR PRIVATE USE, $300

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE
[illegible] AVE. Suite 15
IDAHO FALLS, [illegible]

RETURN TO

RECEIVED

FEB 27 1984

Department of Water Resources
Eastern District Office

(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

22-7/36/7128 & 25-2308

PS Form 3811, July 1982

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☒ Show to whom and date delivered ..... ____¢
   - ☐ Show to whom, date, and address of delivery .. ____¢
2. ☐ RESTRICTED DELIVERY ..... ____¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $____

3. ARTICLE ADDRESSED TO:
Fish & Game
1515 Lincoln Rd.
Idaho Falls, Id 8340

4. TYPE OF SERVICE:
   - ☐ REGISTERED ☐ INSURED
   - ☒ CERTIFIED ☐ COD
   - ☐ EXPRESS MAIL

ARTICLE NUMBER
13181

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

5. DATE OF DELIVERY
FEB 24 1984

POSTMARK *(Affix on reverse side)*
IDAHO FALLS FEB 24 1984 USPO

6. ADDRESSEE'S ADDRESS *(Only if requested)*

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

RETURN RECEIPT

☆ GPO: 1982-379-593

UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS

SENDER INSTRUCTIONS

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- Endorse article "Return Receipt Requested" adjacent to number.

U.S.MAIL®

PENALTY FOR PRIVATE USE, $300

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE
150 SHOUP AVE. Suite 15
IDAHO FALLS, IDAHO 83401

RETURN TO

RECEIVED

FEB 27 1984

(Name of Sender)

(Street or P.O. Box)

Department of Water Resources
Eastern District Office

(City, State, and ZIP Code)

53-7158 - 7136

PS Form 3811, July 1982

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☒ Show to whom and date delivered ..... ____¢
   - ☐ Show to whom, date, and address of delivery .. ____¢
2. ☐ RESTRICTED DELIVERY..... ____¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $____

3. ARTICLE ADDRESSED TO:
Ben Wilding
Water District No. 32
Star Route
Dubois Id. 83423

4. TYPE OF SERVICE:
   - ☐ REGISTERED ☐ INSURED
   - ☒ CERTIFIED ☐ COD
   - ☐ EXPRESS MAIL

ARTICLE NUMBER
13184

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

Elda Maldonado

5. DATE OF DELIVERY
FEB 29 1984

POSTMARK
(Affixed on reverse side)
FEB 29 1984

6. ADDRESSEE'S ADDRESS *(Only if requested)*

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

RETURN RECEIPT

☆ GPO: 1982-379-593

UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.
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- Endorse article "Return Receipt Requested" adjacent to number.



RETURN TO

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE
900 NORTH SKYLINE AVE. Suite 15
IDAHO FALLS, IDAHO 83401

(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

33-7128 17136

PS Form 3811, July 1982

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☒ Show to whom and date delivered ..... ____¢
   - ☐ Show to whom, date, and address of delivery .. ____¢
2. ☐ RESTRICTED DELIVERY ..... ____¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $____

3. ARTICLE ADDRESSED TO:
B.L.M.
940 Lincoln Rd.
Idaho Falls Id. 83401

4. TYPE OF SERVICE:
   - ☐ REGISTERED
   - ☐ INSURED
   - ☒ CERTIFIED
   - ☐ COD
   - ☐ EXPRESS MAIL

ARTICLE NUMBER: 13183

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

5. DATE OF DELIVERY
FEB 24 1984

POSTMARK (may be on reverse side)
FEB 24 1984 U.S.P.O. IDAHO FALLS, ID

6. ADDRESSEE'S ADDRESS *(Only if requested)*

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

RETURN RECEIPT

☆ GPO: 1982-379-593

UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.
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- Endorse article "Return Receipt Requested"
- adjacent to number.

U.S.MAIL

PENALTY FOR PRIVATE USE, $300

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE
150 SHOUP AVE. Suite 15
IDAHO FALLS, IDAHO 83401

RETURN RECEIPT

(Name of Sender)

FEB 27 1984

(Street or P.O. Box)

Department of Water Resources
Eastern District Office

(City, State, and ZIP Code)

32-7128477136

PS Form 3811, July 1982

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☒ Show to whom and date delivered ..... ____¢
   - ☐ Show to whom, date, and address of delivery .. ____¢
2. ☐ RESTRICTED DELIVERY ..... ____¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $____

3. ARTICLE ADDRESSED TO:
C.A. Wagoner
Box 14-A
DuBois, Id. 83423

4. TYPE OF SERVICE:
   - ☐ REGISTERED ☐ INSURED
   - ☒ CERTIFIED ☐ COD
   - ☐ EXPRESS MAIL

ARTICLE NUMBER: P 13186

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

5. Betty Wagoner
DATE OF DELIVERY: FEB 24 1984

POSTMARK (may be placed on reverse side): DUBOIS FEB 24 1984 IDAHO

6. ADDRESSEE'S ADDRESS *(Only if requested)*

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

RETURN RECEIPT

☆ GPO: 1982-379-593

UNITED STATES POSTAL SERVICE

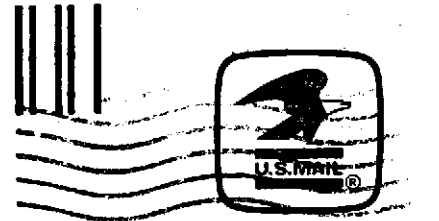
OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

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- Endorse article "Return Receipt Requested" adjacent to number.

FEB 24 PM 1984



PENALTY FOR PRIVATE USE, $300

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE
150 SHOUP AVE. Suite 15
IDAHO FALLS, IDAHO 83401
(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

RETURN TO

RECEIVED
FEB 27 1984
Department of Water Resources
Eastern District Office

32-7128/7136

PS Form 3811, July 1982

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - [X] Show to whom and date delivered ..... ____¢
   - [ ] Show to whom, date, and address of delivery .. ____¢
2. [ ] RESTRICTED DELIVERY ..... ____¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $____

3. ARTICLE ADDRESSED TO: Wm. T. Simmons
   Dubois,
   Idaho 83423

4. TYPE OF SERVICE:
   - [ ] REGISTERED
   - [ ] INSURED
   - [X] CERTIFIED
   - [ ] COD
   - [ ] EXPRESS MAIL

   ARTICLE NUMBER: 13185

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE [ ] Addressee [ ] Authorized agent

5. Sally Gibson
   DATE OF DELIVERY: 2-28-84

   POSTMARK (may be on reverse side)

6. ADDRESSEE'S ADDRESS *(Only if requested)*

7. UNABLE TO DELIVER BECAUSE:

   7a. EMPLOYEE'S INITIALS

RETURN RECEIPT

☆ GPO: 1982-370-593

UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS

SENDER INSTRUCTIONS

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- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.



PENALTY FOR PRIVATE USE, $300

RETURN TO

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE
150 SHOUP AVE. Suite 15
IDAHO FALLS, IDAHO 83401
(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

RECEIVED
FEB 29 1984
Department of Water Resources
Eastern District Office

P 381 713 728

PS Form 3811, July 1982

● **SENDER:** Complete items 1; 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☒ Show to whom and date delivered ..... ____¢
   - ☐ Show to whom, date, and address of delivery .. ____¢
2. ☐ RESTRICTED DELIVERY ..... ____¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $ ____

3. ARTICLE ADDRESSED TO:
   George C. Peterson
   485 "E" Street
   Idaho Falls Id. 83402

4. TYPE OF SERVICE:
   - ☐ REGISTERED ☐ INSURED
   - ☒ CERTIFIED ☐ COD
   - ☐ EXPRESS MAIL

ARTICLE NUMBER: P 13187

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

5. DATE OF DELIVERY: 2-24-84

POSTMARK (Affix postmark on this space below)

IDAHO FALLS ID FEB 24 1984 USPO

6. ADDRESSEE'S ADDRESS *(Only if requested)*

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

RETURN RECEIPT

☆ GPO: 1982-379-693

UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS

SENDER INSTRUCTIONS

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- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.



PENALTY FOR PRIVATE USE, $300

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE
150 SHOUP AVE. Suite 15
IDAHO FALLS, IDAHO 83401
(Name of Sender)

RETURN TO

RECEIVED
FEB 27 1984

(Street or P.O. Box)

Department of Water Resources
Eastern District Office

(City, State, and ZIP Code)

ACCEPTANCE OF REGISTERED, INSURED, [redacted] AND CERTIFIED MAIL

PS Form 3877, Sept. 1979

NAME AND ADDRESS OF SENDER

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE
150 SHOUP AVE.
IDAHO FALLS, IDAHO 83401

Indicate type of mail
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- ☐ Insured
- ☐ COD
- ☒ Certified

I certify that we have
- ☐ Commercial Insurance
- ☐ A deductible clause of $

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1	13180 X	CE/Stan Hawkins Box 367 Ucon	20	75				60			25-7208
2	13181 X	D F & G 1515 Lincoln Id. Falls	37							32-7135	32-7128 25-7208
3	13182 X	Jed Sorensen, 550 Linden, I. Falls									32-7128 32-7136
4	13183 X	O'dell Frandsen, RFD 940 Lincoln, Id Falls									"
5	13184 X	Ben Wilding, Star Route, Dubois									"
6	13185 X	Wm. T. Simmons, Dubois									"
7	13186 X	C. A. Wagoner, Box 14-A Dubois									"
8	13187 X	George Peterson RFD East 485 E 1st I. F.									"
9						25.65					
10											
11						Sent by certified mail 2/23/84 aw					
12											
13											
14		Copy sent to Ray Rigby - not certified 2/24/84 aw									
15											

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BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-7128 AND 32-7136 IN THE NAME OF BIRCH POWER COMPANY	NOTICE OF HEARING AND/OR CONFERENCE

On September 8, 1982, Birch Power Company filed with the Department of Water Resources application No. 32-7128 to appropriate the public waters of the State of Idaho. On September 23, 1982, the Department received a protest against approval of said application from Idaho Department of Fish and Game. On October 12, 1982, additional protests were received from the Bureau of Land Management, and from Wm. T. Simmons, C.A. Wagoner, and Ben R. Wilding. On February 23, 1984 the Department issued an order allowing D & D Enterprises to intervene in the matter.

On January 3, 1984, a second application No. 32-7136 was filed by Birch Power Company. On February 1, 1984, the Department received a protest from the Bureau of Land Management; on February 2, 1984 a protest was received from Idaho Department of Fish & Game; and on February 3, 1984 an additional protest was received from Ben Wilding, Watermaster of Water Distict No. 32-D.

The Department has set the matter of protest for hearing for Thursday, March 8, 1984, at 11:00 a.m. in the Third Floor Conference Room, State Office Building, 150 Shoup, Idaho Falls, Idaho. Because of the similarity of the issues involved this hearing has been combined. The hearing will be held in accordance with provisions of Chapter 2, Title 42, of the Idaho Code and adopted Rules of Practice and Procedure of the Department of Water Resources. Opportunity shall be afforded all parties to respond and present evidence and argument on all issues involved.

Dated this 23rd day of February, 1984.

Ronald D. Carlson

RONALD D. CARLSON
Eastern Regional Supervisor

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF REQUEST FOR LEAVE TO INTERVENE IN THE MATTER OF PROTESTS AGAINST APPLICATION FOR PERMIT NO. 32-7128 IN THE NAME OF BIRCH POWER COMPANY FILED BY GEORGE C. PETERSEN, ATTORNEY, IN BEHALF OF D & D ENTERPRISES	ORDER GRANTING INTERVENTION

WHEREAS, a petition to intervene in the matter of protests against application for permit No. 32-7128 was filed by the above-named party with the Department of Water Resources on September 18, 1983; and,

WHEREAS, D & D Enterprises was represented at the conference held on September 2, 1983 and the applicant stated he had no objection to their intervention in the matter; and,

WHEREAS, The Director of the Department of Water Resources finds that the petition to intervene alleges that the petitioners could be affected by the approval of application for permit No. 32-7128 through possible adverse impacts; and,

WHEREAS, it is the determination of the Director that the petitioners have satisfied the requirements for intervention in accordance with Rule 6 of the Department of Water Resources Rules of Practice and Procedure;

NOW, THEREFORE, IT IS HEREBY ORDERED that the above-named petitioners shall be allowed to intervene in the matter of application for permit No. 32-7128. The granting of leave to intervene shall not be construed to be a finding by the Director that the intervenors will or may be parties aggrieved by any ruling, order or decision of the Director for purposes of court review of appeal.

Dated this 23rd day of February, 1984.

RONALD D. CARLSON
Eastern Regional Supervisor

RECEIVED
FEB 3 1984
Department of Water Resources
Eastern District Office

Feb. 3, 1984

Dept. Water Resources
150 Shaup Ave
Idaho Falls, ID.

Gentlemen,

I as the Watermaster of Water District 32-D wish to enter a protest against application 32-7136. As of this date I have seen no engineering specifications which demonstrate that the proposed ditch will have the capacity to conduct 30 cfs for this application and 45 cfs for application 35-7128.

We feel it is essential that the ditch capacity be established to carry at least this total amount (75 cfs) to conduct water to downstream users in WD # 32-D.

Sincerely, Ben R. Willing

MICROFILMED

SORENSON ENGINEERING, P.A.
CONSULTING ENGINEERS
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401
208-522-8069

RECEIVED
FEB 3 1984
Department of Water Resources

January 29, 1984

ok to file
hearing proposed 3-6-84

Mr. Bobby Fleenor
Idaho Dept. of Water Resources
Statehouse
Boise, ID 83720

RE: APPLICATION FOR PERMIT #32-7128

Dear Mr. Fleenor,

This letter is written to request that we schedule another hearing for this water right application as soon as possible.

I would appreciate it if you would contact me with some proposed dates so I can coordinate with my attorney, Ray Rigby in setting this meeting date up.

I'd appreciate it if we could have this meeting in February if at all possible.

Your cooperation and consideration is appreciated.

Very truly yours,

Ted S. Sorenson, P.E.
Consulting Engineer

TSS:kw
cc: Ron Carlson, Water Resources
Ray Rigby, Attorney at Law

IDAHO DEPARTMENT OF FISH AND GAME
REGION 6
1515 Lincoln Road
Idaho Falls • Idaho • 83401

RECEIVED
FEB 2 1984
Department of Water Resources
Eastern District Office

February 1, 1984

Mr. Ernest Carlsen
Assistant Regional Supervisor
Department of Water Resources
150 Shoup - Suite 15
Idaho Falls, ID 83402

Re: Application for Permit No. 32-7136 - Birch Power Company

Dear Ernie:

We have reviewed the above application for an additional 30 cfs of water from Birch Creek for hydropower production and would like to enter a protest.

We presently have under protest the application for 45 cfs (No. 32-7128) for this same project. The major reason for the original protest was differences over minimum flows. This request for an additional 30 cfs would totally preclude any minimum flow on the 3000 feet of Birch Creek affected above Reno Diversion. If both applications are approved, then 75 cfs could be diverted which would result in total dewatering of this segment at least eleven months of the year, and in many years no flows would pass the diversion. This would result in a total loss of fishery resources and management options in this segment.

We would like the protest on Application No. 32-7128 for 45 cfs settled first since those decisions will affect this application.

Thank you for the opportunity to comment on this application.

Sincerely,

Frank Dethlefs for

Tom Reinecker
Regional Supervisor
Region 6

cc: US Fish & Wildlife Service
Bureau of Fisheries
Ted Sorenson

Ted S. Sorenson P.E.-L.S.
CONSULTING ENGINEER
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401

Bus: 208-522-8069
Res: 208-529-2469

ok to file
BDF

January 17, 1984

RECEIVED
JAN 19 1984
Department of Water Resources

Mr. Bill Dillion
Attorney At Law
Idaho Fish & Game Dept.
600 So. Walnut St.
P.O. Box 25
Boise, ID 83707

RE: BIRCH POWER COMPANY APPLICATION FOR PERMIT # 32-7128

Dear Mr. Dillion,

This letter is to confirm our telephone conversation of Monday, January 16, 1984.

Enclosed is a copy of the feasibility study and plans for the project. This includes costs and revenue projections.

Per your word of January 16, 1983 and your promise to confirm this in writing, this information is to be kept confidential, to be reviewed by yourself and other key personnel in the Fish and Game Department. The information is not to be made public and the information is to be returned to me when you have completed your study.

Also enclosed are letters illustrating ability to finance from the following:

-General Electric Company
-Bonneville Pacific Corp.
-Continental Bank & Trust
-Energy Dynamics

I will be meeting in the near future with representatives from Utah Power & Light and Idaho Power. Both of these groups have expressed an interest in a joint venture.

Your prompt review and approval is sincerely appreciated. If you have any questions or need further clarification, please do not hesitate to call.

Very truly yours,

Ted S. Sorenson, P.E.
Consulting Engineer

TSS:kw
enc.
cc: Virgil Moore
Bobby Fleenor
Ron Carlson
Ray Rigby

ok to file

Ted S. Sorenson P.E.-L.S.
CONSULTING ENGINEER
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401

Bus: 208-522-8069
Res: 208-529-2469

January 13, 1984

RECEIVED
JAN 17 1984
Department of Water Resources

Mr. Bobby Fleenor
Idaho Dept. of Water Resources
Statehouse
Boise, ID 83270

RE: BIRCH POWER COMPANY APPLICATION FOR PERMIT # 32-7128

Dear Mr. Fleenor,

Enclosed are copies of tentative offers to finance the Birch Creek Project and findings of feasibility from Continental Bank and Trust Company in Salt Lake City, Utah, from Bonneville Pacific Corporation and from Energy Dynamics Corporation.

I trust this provides sufficient information on the ability of Birch Power to be financed.

I would appreciate it if you could contact the attorney for the Department of Fish and Game, Mr. Dillon, and discuss this matter with him. Perhaps we could avoid the necessity of another administrative hearing.

Trusting this to be of value,

Ted S. Sorenson, P.E.
Consulting Engineer

TSS:kw
encs.
cc: Ron Carlson w/enc
Water Resources
Idaho Falls, ID

Ray Ribgy w/enc.

MICROFILMED

THE CONTINENTAL BANK AND TRUST COMPANY

SALT LAKE CITY, UTAH 84130

January 6, 1984

Mr. Ted S. Sorenson, P.E.
550 Lindon Drive
Idaho Falls, Idaho 83401

Dear Ted:

After reviewing option "B" of the Birch Creek project and preparing a repayment schedule, it has been concluded that the project is financially feasible, providing certain conditions are met.

One of the conditions is the approval of this project by the Idaho Division of Water Resources which will allow tax exempt financing. Another condition is securing an enforceable power purchase agreement with the utility that will be purchasing the power from the proposed facility.

Once these conditions are satisfied and all permits and licenses are in place, financing of the project can be pursued.

Sincerely,

Lyle J. Larson
Assistant Vice President

LJL/ad

MICROFILMED

BIRCH CREEK HYDRO ELECTRIC PROJECT

FINANCIAL FEASIBILITY SCHEDULE

	Year	(1) Gross Revenues	(2) Operating Expense	(3) Net Revenues	(4) Principal	(5) Interest	(6) Total	(7) Coverage	(8) Surplus
1	1985	$577,700	$ 75,000	$502,700	$ 45,000	$356,400	$401,400	1.25	$101,300
2	1986	589,000	77,200	511,800	55,000	351,450	406,450	1.26	105,350
3	1987	601,200	79,500	521,700	70,000	345,400	415,400	1.26	106,300
4	1988	614,500	81,900	532,600	90,000	337,700	427,700	1.25	105,200
5	1989	628,700	84,400	544,300	110,000	327,800	437,800	1.25	106,500
6	1990	644,200	86,900	557,300	130,000	315,700	445,700	1.25	111,600
7	1991	660,800	89,500	571,300	155,000	301,400	456,400	1.25	114,900
8	1992	678,800	92,200	586,600	185,000	284,350	469,350	1.25	117,250
9	1993	698,300	95,000	603,300	220,000	264,000	484,000	1.25	119,300
10	1994	719,200	97,800	621,400	260,000	239,800	499,800	1.24	121,600
11	1995	741,900	100,800	641,100	300,000	211,200	511,200	1.25	129,900
12	1996	766,400	106,900	659,500	350,000	178,200	528,200	1.25	131,300
13	1997	792,800	110,100	682,100	400,000	139,700	539,700	1.27	142,400
14	1998	821,300	113,400	707,900	430,000	95,700	525,700	1.35	182,200
15	1999	852,200	116,800	735,400	440,000	48,400	488,400	1.51	247,000

(1) Gross Revenues based on recent Utah Power and Light rates.

(2) Estimated operating expense @ 3% growth.

(3) Net Revenues available for debt service.

(4, 5, 6) $3,240,000 debt @ 11% for 15 years.

(7) Coverage factor of 1.25, Net Revenues in excess of total debt service payment.

(8) Surplus available after debt service is paid.

Project Cost	$2,640,000
Sinking Fund Reserve	500,000
R & R Reserve	100,000
TOTAL	$3,240,000

Bonneville Pacific Corporation
A Subsidiary of Bonneville Group, Inc.

January 4, 1984

Mr. Ted S. Sorenson
550 Linden Drive
Idaho Falls, Idaho 83401

RE: Birch Creek Hydro Facility

Dear Mr. Sorenson:

Thank you for sending me the feasibility study on the referenced project. Upon an initial reading, we would be interested in funding the project at the time that you have firm bids, a power contract in hand, and a valid exemption. As you may know, we have funded four projects to date in Idaho (Ravenscroft, Koyle, Cedar Draw and Pigeon Cove) and we are working on a number of additional projects with the canal companies around Twin Falls. As a result of the above activity, we are a known quantity to the Water Resources department of the state and Idaho Power as well.

Although we are somewhat uncertain as to the viability of a project in the Utah Power service area, we would be willing to write a formal commitment letter along the same lines as the canal companies are signing. Our basic offer is to finance an amount equal to 3.25 times the projected annual first year revenue, taking an assignment of all project assets as collateral. The owner (yourself) would then be given a royalty of 10% of the gross power revenue for fifteen years and 40% the next fifteen years, after which we would abandon all further interest in the assets.

In the study you sent it is apparent that our standard multiple will not work with the UPL rates unless you have other funds to invest yourself or rates increase. Bonneville would be willing to fund 100% of all costs (if they approximate your initial projections) with a royalty of 5% for fifteen years and 10% for fifteen years. This is the same proposal that has been accepted by a canal company in the UPL service area. The difference is, obviously, that the UPL rate will only repay the loan on the project, and the investor(s) receive virtually nothing until the loan is repaid (the above numbers assume a 15 year term loan on the project).

200 East South Temple, Suite 300 / Salt Lake City, Utah 84111 / 801-363-2520 / 801-363-1900 / Telex 381542

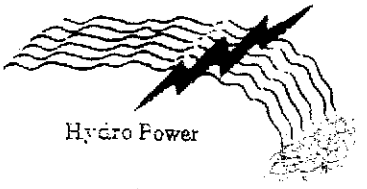
If this basic format is of interest to you, we can arrange a visit to the site and produce a "bankable" commitment after performing sufficient due diligence work to assure outselves that the project can produce the requisite revenue.

Best regards,

L. Wynn Johnson

L. Wynn Johnson
Vice President

LWJ:db
cc: Robert L. Wood



Energy Dynamics Corp.
1035 Shoshone St. N.
Twin Falls, Idaho 83301
208-734-7885

December 2, 1983

Ted Sorensen
2988 Tipperary Ln.
Idaho Falls, ID 83401

Dear Ted,

I'm glad to hear of your progress on the Birch Creek project. From the preliminary information received from you in our conversation of this date, it sounds like this is a double project. I am therefore interested in persuing an equity funding relationship with you based on the following criteria.

I would pay your out of pocket costs up to $30,000 as an initial or down payment. I would fund the construction costs, and assume all permitting functions and costs as prudence would dictate. My participation and investment return would come from the tax benefits and from the following royalty schedule. You would receive a royalty based on a percentage of the gross as follows:

Years 1-10	5%
11-20	10%
21-25	55%
26-35	65%

I could also fund based on a 15 year ownership with no royalty, then the project would revert to you with a 30% buy out until a fair market price was reached. I would also entertain a situation where I funded your project on a brokerage basis for a 2% fee or a 5% equity position. I would however, prefer one of the former arrangements.

I look forward to hearing from you on this matter at your earliest convenience.

Yours truly,

Samuel F. Curtis, Jr.
President.

SFC/cl

Ted S. Sorenson P.E.-L.S.
CONSULTING ENGINEER
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401

Bus: 208-522-8069
Res: 208-529-2469

December 30, 1983

Department of Water Resources
Eastern District Office

Mr. Ron Carlson
Idaho Department of Water Resources
State Office Building
150 Shoup
Idaho Falls, ID 83402

RE: BIRCH POWER COMPANY APPLICATION FOR PERMIT #32-7128

Dear Mr. Carlson,

Here is an additional application for this permit. This application applies for an additional 30 second feet over and above the 45 second feet which was previously applied for. This additional filing is consistent with the Birch Power Company Preliminary Engineering Design and Plan Report previously submitted to you.

If at all possible, I'd appreciate this filing being considered with permit #32-7128.

Your consideration is appreciated.

Very truly yours,

Ted S. Sorenson, P.E.
Consulting Engineer

TSS:kw
enc.
cc: Mr. Bobby Fleenor
Idaho Dept. of Water Resources
Boise, ID

Ray Ribgy, Attorney
Rexburg, ID

MICROFILMED

October 6, 1983

Ted S. Sorensen
Consulting Engineer
550 Linden Drive
Idaho Falls, ID 83401

Dear Mr. Sorenson:

Re: Protested Application for Permit No. 32-7128
Birch Power Company

Pursuant to your request for a copy of "Exhibit A", please note that Exhibit A is the protest of D & D Enterprises, Inc. Enclosed is a copy for your records.

If this office can be of further assistance, please feel free to contact us.

Sincerely,

RITA I. FLECK
Secretary/Records Manager

Enclosure

RECEIVED
OCT 5 1983
Department of Water Resources

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Idaho Falls District
940 Lincoln Road
Idaho Falls, Idaho 83401

OCT 03 1983

IN REPLY
REFER TO: 7250

Bobby D. Fleenor
State of Idaho
Department of Water Resources
State Office, 450 W. State Street
Boise, Idaho 83720

RE: Application for Permit No. 32-7128

Dear Mr. Fleenor:

We received a copy of your letter of September 26, 1983 to Mr. Ted Sorenson. We appreciate your efforts to address the water availability on Birch Creek for this project.

In the enclosed diagram with that letter, we assumed that the licensed Reno Ditch right of 29.77 cfs was for irrigation season flows. Is this a correct assumption, or do these rights carry over thru the year? If not would you clarify the winter rights for us?

This additional information should allow us to better assess the winter availability of water for this project and to address impacts when we begin writing the environmental assessment for the project's right-of-way application.

Sincerely,

O'dell A. Frandsen
District Manager

RECORDED

Ted S. Sorenson P.E.-L.S.
CONSULTING ENGINEER
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401

September 26, 1983

RECEIVED
SEP 30 1983
Department of Water Resources

Bus: 208-522-8069
Res: 208-529-2469

Mr. Bobby Fleenor, Chief
Regional Offices Bureau
State of Idaho Dept. of Water
Resources
State Office
450 W. State Street
Boise, ID

RE: APPLICATION FOR PERMIT 327128 protest

Gentlemen,

I am in receipt of a petition for D & D Enterprises Incorporated to intervene in the above referenced matter. However, I do not have the referenced Exhibit "A".

I would appreciate having this exhibit prior to my making a decision whether or not to object.

I would appreciate receiving this by October 7, 1983.

Thank you very much.

Very truly yours,

Ted S. Sorenson, P.E.
Consulting Engineer

TSS:kw

MICROFILMED

File.

State of Idaho
DEPARTMENT OF WATER RESOURCES
STATE OFFICE, 450 W. State Street, Boise, Idaho

JOHN V. EVANS
Governor

A. KENNETH DUNN
Director

RECEIVED
SEP 29 1983
Department of Water Resources
Eastern District Office

Mailing address:
Statehouse
Boise, Idaho 83720
(208) 334-4440

September 26, 1983

Ted S. Sorenson, Owner
Birch Power Company
550 Linden Drive
Idaho Falls, ID 83401

Dear Mr. Sorenson:

Re: Application for Permit No. 32-7128

You agreed at the hearing held in Idaho Falls on September 2, 1983 to prepare and send to us engineering plans of your proposed project sufficient in detail to allow a reasonable review of your cost estimates.

The plans should be of sufficient detail so that the impact on the water-related resources of the project can be determined and analyzed. You also must have a commitment for the construction and operating funds necessary for the project or show that you have the financial ability to complete the project.

Enclosed is an abstract of the Reno vs. Richards decree, which describes the water rights on Birch Creek. Comparing this information on existing water rights with the flow records you have at the Eight Mile gaging station should give you an indication of the available supply of water.

If you have any questions, please let us know. We will delay a further hearing at this time, until we receive the information requested from you.

Sincerely,

Bobby D. Fleenor

BOBBY D. FLEENOR
Chief, Regional Offices Bureau

cc: Eastern Region
Dept. of Fish and Game
Ben Wilding
C. A. Wagoner
Bureau of Land Management
D & D Enterprises
Wm. Simmons
(enclosed a copy of abstract)

MICROFILMED

STATE OF IDAHO
IDAHO WATER RESOURCE BOARD
State House
Boise, Idaho 83720

PRESORTED FIRST CLASS

BOISE SEP 28 '83 IDAHO

U.S POSTAGE 20 17

PITNEY BOWES 6010235

RECEIVED
SEP 27 1983
Department of Water Resources

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REASON CHECKED
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Unknown ..... Moved, left no address .....
Insufficient address .....
Moved, left no address .....
No such office in state .....
Office not named in this envelope

William T. Simmons
8342
Dubois, ID

unknown

September 22, 1983

Birch Power Company
550 Linden Drive
Idaho Falls, ID 83401

Gentlemen:

Re: Application for Permit No. 32-7128

Enclosed is a copy of the Petition of D & D Enterprises, Inc. to intervene in the above-referenced matter. Please review the petition and if you have any objections, please contact this office by October 11, 1983.

Sincerely,

BOBBY D. FLEENOR
Chief, Regional Offices Bureau

BDF:rf

Enclosure

September 22, 1983

O'Dell Frandsen
District Manager
Bureau of Land Management
940 Lincoln Road
Idaho Falls, ID 83401

Dear Mr. Frandsen:

Re: Application for Permit No. 32-7128 Birch Power Company

Enclosed is a copy of the Petition of D & D Enterprises, Inc. to intervene in the above-referenced matter. Please review the petition and if you have any objections, please contact this office by October 11, 1983.

Sincerely,

BOBBY D. FLEENOR
Chief, Regional Offices Bureau

BDF:rf

Enclosure

September 22, 1983

Mr. Tom Reinecker
Regional Supervisor
Department of Fish and Game
1515 Lincoln Road
Idaho Falls, ID 83401

Dear Mr. Reinecker:

Re: Application for Permit No. 32-7128 Birch Power Company

Enclosed is a copy of the Petition of D & D Enterprises, Inc. to intervene in the above-referenced matter. Please review the petition and if you have any objections, please contact this office by October 11, 1983.

Sincerely,

BOBBY D. FLEENOR
Chief, Regional Offices Bureau

BDF:rf

Enclosure

September 22, 1983

C. A. Wagoner
Dubois, ID 83423

Dear Mr. Wagoner:

Re: Application for Permit No. 32-7128 - Birch Power Company

Enclosed is a copy of the Petition of D&& D Enterprises, Inc. to intervene in the above-referenced matter. Please review the petition and if you have any objections, please contact this office by October 11, 1983.

Sincerely,

BOBBY D. FLEENOR
Chief, Regional Offices Bureau

BDF:rf

September 22, 1983

Ben Wilding, Watermaster
Water District No. 32-D
Dubois, ID 83423

Dear Mr. Wilding:

Re: Application for Permit NO. 32-7128
Birch PowderCompany

Enclosed is a copy of the Petition of D & D Enterprises, Inc. to intervene in the above-referenced matter. Please review the petition and if you have any objections, please contact this office by October 11, 1983.

Sincerely,

BOBBY D. FLEENOR
Chief, Regional Offices Bureau

BDF:rf

Enclosures

State of Idaho
DEPARTMENT OF WATER RESOURCES
STATE OFFICE, 450 W. State Street, Boise, Idaho

JOHN V. EVANS
Governor

A. KENNETH DUNN
Director

Mailing address:
Statehouse
Boise, Idaho 83720
(208) 334-4440

September 22, 1983

William T. Simmons
Dubois, ID 83423

Dear Mr. Simmons:

Re: Application for Permit No. 32-7128 -- Birch Power Company

Enclosed is a copy of the Petition of D & D Enterprises, Inc. to intervene in the above-referenced matter. Please review the petition and if you have any objections, please contact this office by October 11, 1983.

Sincerely,

Rita Fleck

for BOBBY D. FLEENOR
Chief, Regional Offices

BDF:rf

Enclosure

RECEIVED

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
Statehouse
Boise, Idaho 83720

ANTIQUATED FIRST CLASS

BOISE SEP 26 '83 IDAHO

US POSTAGE 20¢

RECEIVED
SEP 28 1983
Department of Water Resources

REASON CHECKED
Unclaimed
Unknown
Insufficient Address
Moved, Left No Address
No such office in state
Do not write in this area

William T. Simmons
Dubois, ID 83423

September 22, 1988

William T. Simmons
Dubois, ID 83423

Dear Mr. Simmons:

Re: Application for Permit No. 32-7128 -- Birch Power Company

Enclosed is a copy of the Petition of D & D Enterprises, Inc. to intervene in the above-refeeenced matter. Please review the petition and if you have any objections, please contact this office by October 11, 1983.

Sincerely,

BOBBY D. FLEENOR
Chief, Regional Offices

BDF:rf

Enclosure

INTER-DEPARTMENT MEMO — 1

DATE 9/21/83

FROM Bob Fleenor

TO File # 32-7128

SUBJECT Intervention

Mr Petersen, [illegible] of D&D Enterprises, Inc. attended the conference held about 3 weeks ago in Idaho Falls. Intervention by D&D Enterprises, Inc. was discussed at that time and the applicant stated he had no objection to the intervention of D&D Enterprises, Inc.

[redacted]

Bob

SIGNATURE

BDF

George C. Petersen, Jr., Esq.
PETERSEN, MOSS, OLSEN, MEACHAM & CARR
485 "E" Street
Idaho Falls, Idaho 83402
(208) 523-4650

RECEIVED
SEP 16 1983
Department of Water Resources
Eastern District Office

RECEIVED
SEP 23 1983
Department of Water Resources

BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-7128 IN THE NAME OF BIRCH POWER COMPANY	PROTEST OF D & D ENTERPRISES, INC.

D & D Enterprises, Inc., c/o George C. Petersen, Jr., PETERSEN, MOSS, OLSEN, MEACHAM & CARR, 485 "E" Street, Idaho Falls, Idaho 83402, hereby enters its protest against approval of the application for Permit No. 32-7128 in the name of Birch Power Company on the following grounds:

D & D Enterprises, Inc., an Idaho corporation, is a substantial user of the water rights of Birch Creek, said use thereof and the properties of D & D Enterprises, Inc., being situated down stream from the site of the proposed diversion and construction referred to in the application for Permit No. 32-7128. From a preliminary review of the application for Permit No. 32-7128, it appears the the proposed diversion and construction on and about the

waters of Birch Creek is detrimental to and not in the best interests of the other water users of Birch Creek.

D & D Enterprises, Inc., objects to the application for permit herein on the grounds that Birch Power Company has failed to provide adequate plans in which a valid decision can be made regarding the possible detrimental effect of the proposed diversion and construction. Additonally, Birch Power Company has failed to provide adequate information to show whether sufficient financial resourses will be available to complete the work proposed in the application; D & D Enterprises, Inc., questions Birch Power Company's financial ability to restore Birch Creek to its present condition and flow should Birch Power Company make changes to the condition or flow of Birch Creek.

The application of Birch Power Company contains no definitive statement of construction costs information which would allow a reasoned evaluation of the feasible of the proposed project.

The application of Birch Power Company contains no proof of any firm commitment of sufficient financial resources with which to complete the work proposed.

The application of Birch Power Company makes no adequate showing that the project is feasible.

The proposed project would conflict with the local public interest by endangering the present uses of the waters of Birch Creek, by spliting the stream flow of Birch Creek and by endangering the quantity of water under existing water rights.

The application of Birch Power Company appears to be made solely for speculative purposes.

D & D Enterprises, Inc., hereby respectfully requests the right to amend this protest following receipt of reports and recommendations from its water engineer, or following the receipt of additonal information from Birch Power Company or other interested parties.

DATED this 15 day of September, 1983.

D & D ENTERPRISES, INC.

By: _____
George C. Petersen, Jr.
Its Attorney

3804k

George C. Petersen, Jr., Esq.
PETERSEN, MOSS, OLSEN, MEACHAM & CARR
485 "E" Street
Idaho Falls, Idaho 83402
(208) 523-4650

BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-7128 IN THE NAME OF BIRCH POWER COMPANY	PETITION OF D & D ENTERPRISES, INC. TO INTERVENE

Pursuant to Rule 6 of the Rules and Regulations of Practice and Procedure of the Department of Water Resources, D & D Enterprises, Inc., c/o George C. Petersen, Jr., 485 "E" Street, Idaho Falls, Idaho 83402, hereby seeks leave to intervene in the within matter to take part in hearings regarding the above referenced application and/or to protest the approval of said application.

D & D Enterprises, Inc., is directly and substantially affected by the proceedings considering the application herein, in as much as D & D Enterprises, Inc., is a down stream user of the waters of Birch Creek. Accordingly, D & D Enterprises, Inc., may be a party agrieved by any ruling, order or decision of the director in the within matter.

The direct and substantial interest of the petitioner in the within proceeding, and the manner in which petitioner will be affected by this proceeding, is set out more fully in the protest of petitioner attached hereto, marked Exhibit "A" and made a part hereof by reference.

Petitioner is not a subscriber to the Rexburg Standard Journal wherein the notice of the application in the within matter was published, and petitioner was not aware until recently that the within application had been filed with the Department of Water Resources of the State of Idaho. Petitioner received no written notice directly from the department of Water Resources in time to file a timely protest, and therefore now seeks leave to intervene and file the attached protest and to participate in hearings held in this matter.

DATED this 15 day of September, 1983.

PETERSEN, MOSS, OLSEN,
MEACHAM & CARR

George C. Petersen, Jr.

3801k

32-7128 Conference Sept. 2, 1983

Applicant

Birch Power Co

Ted Sorensen = Dr. Griffith

Protestants

F & G - Virgil Moore - Bill Dillon III attorney

BLM - Jim Esgat

William Simmons — Did not appear —

~~C. A.~~ Mac. Wagoner —

Ben Wilding —

Intervenor? — D & D Enterprises — George Peterson

Witness —

Final Plans —

Reno Ditch loses about 3%

New P.D. is upstream 3000 from the Reno Ditch

→ D & D concerned with financial ability — wants assurance the project will be completed —

Power would be sold to UP & L

For Financing
1. Possible three groups will finance =
2. Final Plans will be prepared =

⇒ Catch 22
→

Study completed by Dr Griffeth
Fish loss can be mitigated —

F+G.
Concerned about dewatering the 3000 feet
They would like the 5 cfs of water saved the remain in the stream =

BLM
Jim — Give a history — read ~~the Statement~~ the policy of IWRB

Dr Griffeth
29,200 feet of fish would be used ~~to ... fish~~ as fish habitat —
Existing section ~~70~~ 300-400 fish per mile ~~70# per~~ 35# per acre — for 2 acres of habitat
3000'
New ditch 6 acres with 50# per acre —
335# to 640# in the new section —

Ditch and ~~pa~~ stocks would carry 70 to 80 cfs —

BLM — concerned about ditch icing

Fragile Ice — won't occur
Would have a full time operator

Fish plan is simply a sketch

Fish & Game - Concern

1. Lack of definate plan - both construction plan & fishery plan
2. Financing of project. Loss that will occur if project is partially completed or is abandoned -
   Wants a firm commitment to finance the project =
3. Need 5 cfs minimum flow - purpose of riparian habitat - Maintaining

BLM

1. Availability of the water
2. Financial ability of the project
3. Must have a more complete fishery plan -

Wagoner -

1. Concerned about livestock water in the 3000 feet section lost -
2. Cattle drink from the new ditch -

Ben Wilding -

1. Water saved must go to the water users - otherwise injury would occur.

D&D Enterprises -

1. Water saved must go to the water users -
2. 5 cfs diverted through the old channel would being lost without a chance of recovery -
3. Lack of plans -
4. Lack of definate financing

How should we proceed

Prepare an analysis

30 days from the [redacted] letter for preliminary engineering report

Preliminary FERC permit is in place

- Dept to prepare an analysis of Birch Creek water right and compare it with the stream flow records at [redacted] 8 mile site stream gage records -

- Write a letter to the applicant requesting additional information

  Preliminary Engineering plans of the project sufficient in detail to allow a cost estimate to be made and allow a determination of the effects of measures you plan to incorporate in your new ditch

SEPT 2, 1983

BIRCH POWER CO.
D & D - George Peterson - did not Protest
Ben Wilding - self
Wm T Simmons
~~C. A~~ MACK Wagener - self
Fish & Game - Vergil Moore & Wm. Dillon
BLM - Jim Esget

APPlicant - Ted Sorensen (self)

CONFERENCE—
Sorenso—
2.5 fps scouring vel designed to not scour.
1.5 fps minimum to prevent mossing.

D & D has no problem w/ Project but is concerned about proper financial capability.
There is no bond requirement if development failes.
Sorensen
If Project fails waterusers can go back to Reno ditch.
75% Return fixed.

Financial - need right of way, contract with UP&L or Idaho Power, Fevc permit, water right permit. then can obtain financing, wheeling costs ~5%

MICROFILMED

Protestant ISSUE #1 — Financial Capability

Financing dependant upon Contract w/ Utility

To get there:

1. Easement from BLM
2. FERC Permit
3. Water Permit

(speculation issue)

Applicant Claims Idaho Power or UP&L must buy power UP&L must wheel to Idaho Power if Idaho Power signs contract.

PROTESTANTS ISSUE #2 — De-watering Fish and Concerns.

1. Dewatering 3000 ft of Birch Crk F&G wants saved water to go down stream
- What good would 5 cfs do?
- F&G also counting on additional flow to improve Game habitat.

BLM — Jim Esget -

Nov 6, 1979 BLM applied for mi-flow → Board Policy statement

BLM needs dept action to act — Easement

F&G - Water rights are being met ~45 cfs excess goes down stream.

MICROFILMED

PROTESTS ~~should be withdrawn under following conditions~~: ISSUES:

F&G — 1. Lack of definite plans to review.

2. Fishery plan just a draft

3 Concerned about lack of financial capability

4. Project maintenance

5. Fishery habitat is gamble

~~Be willing~~

6. Need 5 cfs committment below diversion.

7. Fish screens & Fish Passage

BLM — 1. Availability of water & Financial soundness

2. Icing Problem?

BLM claims they can not take a resource loss for personal gain.

3. Effect of earlier water rights upstream.

WAGONER — 1. lower end is used for grazing. Concerned that livestock will not have water.

BEN WILDING

1. Concerned about letting water go past diversion dams to Provide for habitat.

2. assurance that water supplies to ranch can still be delivered

D & D – 1. Saved water belongs to water users.
2. Lack of Plans
3. Lack of Cost figures
4. Lack of Financing.

[3000 ft — only issue] –?

Sorensen going for exemption to Ferc Permit!

BLM wants to know that water is available.

Sorensen will provide Plans & financial capability.
send letter to Sorensen.
Water Rights analysis

Reschedule for ~ Nov 1,
ck w/ Sorensen first.

MICROFILMED

BLM - 1.9 - ~~3.6~~ 2.3 cfs loss/mile
SORENSEN - had measured last week
Wilding - Thompson said 4%/mile
several years ago before bentinite was
dumped.

Dr. Jack Griffith -
Presently in reach ~3~~5~~ #/acre (2 acres)
Proposed Project 3 times area habitat
Bio-mass would be increased to
29,~~5~~00 feet of stream. 335-640 #
compared to present 70 #
- Will fish & Game concede habitat
loss for larger habitat gained?

ISU would put a graduate student on
full time to monitor fishery.

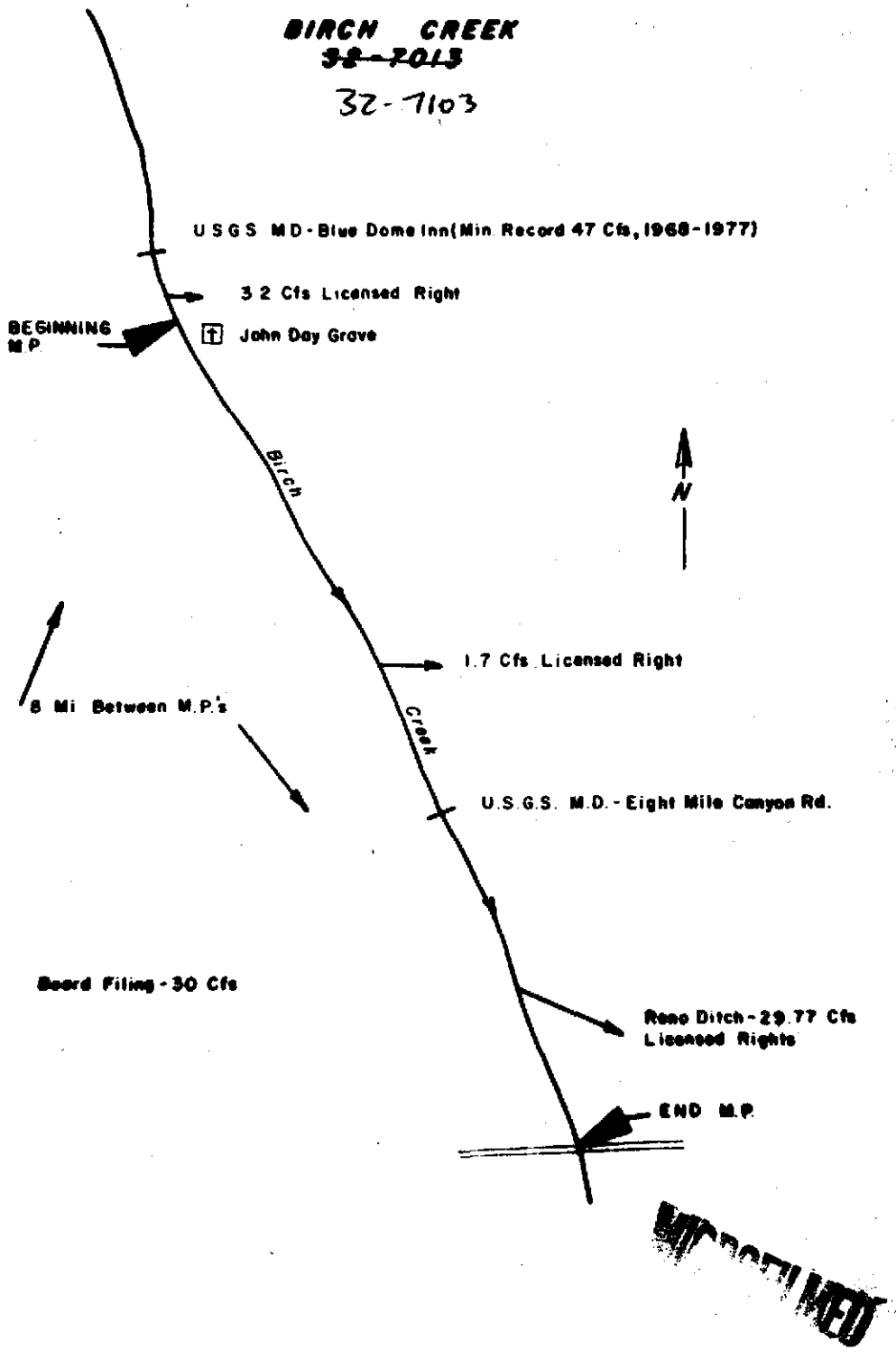
- BLM - Concerned about icing.

- Ditch would be designed to carry
70 to 80 cfs.

Sorensen - Frazzle ice will only
be a problem up stream of diversion
2.5 cfs stream will not freeze over
Griffith -
Holding ponds in ditch to prevent fish
loss if water has to be dried up.
300 Fish - 400 Fish/mile

WITHDRAWN

Maintaining catch rate — ?
1 fish/hour


BIRCH CREEK
~~38-7013~~
32-7103
USGS MD - Blue Dome Inn (Min. Record 47 Cfs, 1968-1977)
3.2 Cfs Licensed Right
BEGINNING M.P.
John Day Grove
Birch
N
1.7 Cfs Licensed Right
8 Mi Between M.P.'s
Creek
U.S.G.S. M.D. - Eight Mile Canyon Rd.
Board Filing - 30 Cfs
Reno Ditch - 29.77 Cfs Licensed Rights
END M.P.

TITLE OF CASE: James B. Reno, et al, Plaintiffs vs. J. R. Richards, et al, Defendants

SOURCE: Birch Creek — PAGE: 3

WATER DIST: 32-D — COUNTY: Clark

JUDICAL DIST: 7th — JUDGE: James G. Gwinn

DATE OF DECREE: 2-6-22 — RECORDED IN BOOK NO. 5 AT PAGE NO. 499 — FILE NO. 32-1

PRI.	NO.	DECREED OWNER / NAME / PRESENT OWNER	AMT. (INCHES OR SEC. FT.)	PRIORITY	OTHER WATER RIGHTS FROM SOURCE	REMARKS, LAND TO BE IRRIGATED, ETC.	ST.
32	062	Wood Live Stock Co.	3.2	9-10-82	1894 Decree-Thomas and David Miller	Lots 2, 3, 4, SE SW, Sec. 19-10N-30E	3.2
32	060	Jerome F. Reno	3.2	5-10-83	1894 Decree-Frank Reno who is Jerome F. Reno	S½SE¼, SE¼SW¼, Lot 4, Sec. 10; NE NW¼, W½E½ Lot 1, Sec. 15-8N-32E	6.4
32	065	Jennie C. & Franklin A. Reno Trans. #29	0.0 (3.2)	5-10-84	1894 Decree - J. R. Richards	E½SW¼, W½SE¼, Sec. 21-7N-31E	9.6
32	059	James B. Reno	6.4	5-10-84	1894 Decree-W. A. Tyler	W½, Sec. 13-8N-31E	16.0
32	060	Jerome F. Reno	3.2	5-10-86	1894 Decree-Frank Reno who is Jerome F. Reno	See Right 2	13.2
32	090	C. B. Watts	1.6	5-10-86	1894 Decree-½ right of W. M. Johnson	W½SE¼, NE¼SW¼, SE¼NW¼, Sec. 23-10N-30E	20.8
32	093	Edward M. Kaufman	1.6	5-10-86	1894 Decree-½ right of W. M. Johnson	E½SW¼, Sec. 29; N½NW¼, Sec. 32; NW¼SW¼, Sec. 29, NE¼SE¼, Sec. 30-10N-30E	22.4
32	070	Clara Granger & F. E. Granger 256 & 257 Trans. # 0.0 (3.2)		8-19-86	1894 Decree - S. Kuharski	E½SW¼, Sec. 25; E½NW¼, Sec. 36; all in 8N-30E	25.6
32	068	Wood Livestock Co.	3.2	5-10-87	1894 Decree-Thomas and David Miller	E½NW¼, N½NE¼, Sec. 30, SW¼SE¼, Sec. 19-10N-30E Includes all waters of Miller Springs	2[illegible]
32	061	Jerome F. Reno Trans. #256	1.6 (3.2)	5-10-88	1894 Decree-Winfield A. Scott & Elizabeth Scott	SW¼SW¼ Sec. 12, SE¼SE¼ Sec. 11, W½NW¼ Sec. 13-10N-2[illegible]	32.0
32	069	Wood Livestock Co.	3.2	5-10-88	1894 Decree William Goddard	SE¼NE¼, N½SE¼, SE¼SE¼, Sec. 24-10N-29E	35.2
32	089	C. B. Watts	2.5	5-10-88	1894 Decree-½ rights of W. M. Kaufman	W½SE¼, NE¼SW¼, SE¼NW¼, Sec. 23-10N-30E	37.7
32	091	Edward M. Kaufman	2.5	5-10-88	1894 Decree-½ right of W. M. Kaufman	Is above priority 5-10-86	40.2
32	102	Samuel Goddard	1.6	5-10-89	1894 Decree same name	No land description given	41.8
32	091	Edward M. Kaufman	.6	5-1-01		Is above priority 5-10-86	44.7
32	063	Jennie C. Reno	3.2	4-1-04		[illegible], W½SW¼, Sec.1-8N-32E, Lot 6&7,Sec.6-8N-33E	47.9
32	062	Franklin A. Reno Trans. #257	0 (3.2)	4-1-04		[illegible] Sec. 7, SW¼ Sec.8-8N-33E.	51.1
32	064	Jennie C. Reno	3.2	4-1-07		[illegible], [illegible], W½SE¼, Sec. 12-8N-31E	54.3
32	0070		2.4	8-19-86			
32	0068	Trans. #256 Torrey A. Reno	1.6	5-10-88		[illegible], [illegible], Sec. 11, W½W¼, Sec. 14-8N-32E	
32	0070		0.8	8-19-86			
32	0062	Trans. #257 Wm Reno	3.2	4-1-04		[illegible] Sec. 7; [illegible], Sec. 8-8N-33E	
32	0065	Trans. #29 Jennie C. Reno	3.2	5-10-88		W½, W½SW¼, Sec. 2-8N-31E; NE¼SE¼, SE¼SE¼, Sec. 1 W½-32E	

MICROFILMED

TITLE OF CASE: Agnes B. Reno, et al, Plaintiffs vs. J. R. Richards, et al, Defendants

SOURCE: Birch Creek — PAGE: 2

WATER DIST: 32-D — COUNTY: Clark

JUDICIAL DIST: 9th — JUDGE: James G. Gwinn

DATE OF DECREE: 9-6-22 — RECORDED IN BOOK NO. 5 AT PAGE NO. 499 — FILE NO. 32-3

PR.	SR.	DECREED OWNER	NAME	PRESENT OWNER	AMT. (INCHES OR SEC. FT.)	PRIORITY	DIVERSION SUBDIV.	SEC.	TWP.	RG.	REMARKS, LAND TO BE IRRIGATED, ETC.	AC.
32	086	Frank C. & Jessie Worthing			1.0	7-29-07					S½SE¼, Sec. 13; NE¼NE¼ Sec. 24; All 10W-29E; SE¼SE¼ Sec. 13; NE¼SE¼, SE¼NE¼ Sec. 14-10N-29E	95.3
32	07[illegible]	George Goddard			.20	5-15-09					NE¼SW¼, W½NE¼, SE¼NE¼, Sec. 2-9N-30E	95.5
32	101	Thomas J. Whiver			2.9	6-4-09					SE¼NE¼, S½SE¼ Sec. 1, SW¼SW¼ Sec. 2-10N-29E	58.4
32	066	Agnes B. Reno			6.4	1-5-10					N½SE¼, N½SW¼ Sec. 10-8N-32E; S½NW¼, S½NE¼, Sec. 15-8N-32E	64.8
32	156	Agnes B. Reno			1.0	4-1-10					S½NE¼ Sec. 11-8N-31E	65.8
32	065	Samuel Goddard			.20	5-10-10					SE¼NW¼, NE¼SW¼, NW¼SE¼, Sec. 9-9N-30E	66.0
32	077	George Goddard			.20	5-15-10					NE¼NW¼, W½NE¼, SE¼NE¼, Sec. 9-9N-30E	66.2
32	07[illegible]	John Goddard			.14	10-1-10					W½SW¼, Sec. 5, W½NW¼ Sec. 8-8N-31E	66.3
32	134	Alfred L. Goddard			.14	10-1-10					E½SE¼, Sec. 5; E½NW¼ Sec. 7-8N-31E	66.[illegible]
32	086	Samuel Goddard			.20	5-1-11					SE¼NW¼, NE¼SW¼, NW¼SE¼, Sec. 9-9N-30E	66.68
32	075	George Goddard			.20	5-15-11					NE¼NW¼, W½NE¼, SE¼NE¼, Sec. 9-9N-30E	66.88
32	075	John Goddard			.26	5-15-11					W½W¼, Sec. 5, W½NW¼ Sec. 8-8N-31E	67.14
32	08[illegible]	Alfred L. Goddard			.20	5-15-11					E½SE¼, Sec. 6, E½NE¼ Sec. 7-8N-31E	67.34
32	087	Samuel Goddard			.20	5-1-12					SE¼NW¼, NE¼SW¼, NW¼SE¼, Sec. 9-9N-30E	67.54
32	076	John Goddard			.80	5-15-12					W½SW¼, Sec. 5; W½NW¼, Sec. 8-8N-31E	68.34
32	08[illegible]	Alfred L. Goddard			.46	5-15-12					E½SE¼ Sec. 6; E½NE¼ Sec. 7-8N-31E	68.80
32	073	George Goddard			.80	5-15-13					SE¼NW¼, W½NE¼, SE¼NE¼, Sec. 9-9N-30E	69.6
32	084	Alfred L. Goddard			.20	5-15-13					E½SE¼ Sec. 6, E½NE¼ Sec. 7-8N-31E	69.8
						NICHOLIA CREEK						
32	09[illegible]	Oliver Bingam			1.0	11-6-20					S½NW¼, SW¼ Sec. 21; N½NW¼ Sec. 28-12N-29E	

32-7128 - Birch Power Company

Third Floor Conference Room Idaho Falls State Office Building
Friday, September 2, 1983 - 9:00 a.m.

ROSTER OF ATTENDANCE

HEARING OFFICER Bob Fleener & Ron

Name	Address	Representing
Virgil Moore	1515 Lincoln Rd Idaho Falls 83401	D. Fish & Game
William B Dillon, III	P.O. Box 25, Boise, ID 83707	ID Fish & Game
James A. Esget	920 Lincoln Road, Idaho Falls	Bureau of Land Management
Ted S. Sorenson P.E.	550 Linden Drive Idaho Falls	Birch Power Co.
Jim DE MORDAUNT	294 APACHE, REXBURG, IDA.	D & D Ranches
Steve Phillips	Star Route Box 15	Dubois - D&D Ranches
Mike Wagstaff	P.O. Box 396	Dubois Idaho (Self as Consultant)
George C. Peterson	485 E. Street Idaho Falls Idaho 83402	Atty - D & D Ranches
Spence Stoddard	Dubois, Idaho	
Cleo Welding	Box 14 A	Dubois Idaho
Ben Welding	Kendall	Idaho
Dr. Jack Griffith	Box 8007 Pocatello	consultant to T. Sorenson

UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS

SENDER INSTRUCTIONS

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- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300

U.S.MAIL

RETURN TO

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE Suite B
150 SHOUP AVE.
IDAHO FALLS, IDAHO 83401

(Name of Sender)

RECEIVED
AUG 23 1983

(Street or P.O. Box)

Department of Water Resources
Eastern District Office

(City, State, and ZIP Code)

PS Form 3811, Dec. 1980

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● **SENDER:** Complete items 1, 2, 3, and 4.
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(CONSULT POSTMASTER FOR FEES)

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   - ☐ Show to whom, date, and address of delivery .. ¢
2. ☐ RESTRICTED DELIVERY ¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $

3. **ARTICLE ADDRESSED TO:**
Tom Kunecke - Z + G.
1515 Lincoln Rd
Idaho Falls, ID 83401

4. **TYPE OF SERVICE:**
   - ☐ REGISTERED ☐ INSURED
   - ☑ CERTIFIED ☐ COD
   - ☐ EXPRESS MAIL

ARTICLE NUMBER
13148

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

5. Richard Preston

DATE OF DELIVERY
AUG 22 1983

POSTMARK

6. **ADDRESSEE'S ADDRESS** *(Only if requested)*

7. **UNABLE TO DELIVER BECAUSE:**

7a. **EMPLOYEE'S INITIALS**

UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS

SENDER INSTRUCTIONS

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PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300

U.S.MAIL

RETURN TO

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE Suite 15
150 SHOUP AVE.
IDAHO FALLS, IDAHO 83401

(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

RECEIVED
AUG 25 1983
Department of Water Resources
Eastern District Office

PS Form 3811, Dec. 1980

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

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2. ☐ RESTRICTED DELIVERY ¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $

3. ARTICLE ADDRESSED TO:
Odell Brandsen - BLM
940 Lincoln Rd
Idaho Falls Id 83401

4. TYPE OF SERVICE:
   - ☐ REGISTERED ☐ INSURED
   - ☑ CERTIFIED ☐ COD
   - ☐ EXPRESS MAIL

ARTICLE NUMBER
13149

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☒ Authorized agent

5. Kathy L McCoy

DATE OF DELIVERY AUG 22 1983

POSTMARK

6. ADDRESSEE'S ADDRESS *(Only if requested)*

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

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- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300



DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE Suite 15
150 SHOUP AVE.
IDAHO FALLS, IDAHO 83401

RETURN TO
Eastern District Office
Department of Water Resources

AUG 25 1983

RECEIVED

(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

PS Form 3811, Dec. 1980

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(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
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   - ☐ Show to whom, date, and address of delivery .. ¢
2. ☐ **RESTRICTED DELIVERY** ¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $

3. **ARTICLE ADDRESSED TO:**
Wm. J. Simmons
Dubois, Id. 83423

4. **TYPE OF SERVICE:**
   - ☐ REGISTERED ☐ INSURED
   - ☑ CERTIFIED ☐ COD
   - ☐ EXPRESS MAIL

ARTICLE NUMBER
13146

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

5. Betty Glover

DATE OF DELIVERY
8-22-83

POSTMARK

6. **ADDRESSEE'S ADDRESS** *(Only if requested)*

7. **UNABLE TO DELIVER BECAUSE:**

7a. **EMPLOYEE'S INITIALS**

UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300

U.S. MAIL

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE Suite B
150 SHOUP AVE.
IDAHO FALLS, IDAHO 83402

RETURN TO

(Name of Sender)

RECEIVED
AUG 25 1983
Department of Water Resources
Eastern District Office

(Street or P.O. Box)

(City, State, and ZIP Code)

PS Form 3811, Dec. 1980

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☑ Show to whom and date delivered ..... ¢
   - ☐ Show to whom, date, and address of delivery.. ¢
2. ☐ RESTRICTED DELIVERY ¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $

3. ARTICLE ADDRESSED TO:
Ben Wilding
Dubois, ID 83423

4. TYPE OF SERVICE:
   - ☐ REGISTERED ☐ INSURED
   - ☑ CERTIFIED ☐ COD
   - ☐ EXPRESS MAIL

ARTICLE NUMBER
13147

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

5. Ben Wilding
DATE OF DELIVERY
AUG 22 1983

POSTMARK
AUG 20 198

6. ADDRESSEE'S ADDRESS (*Only if requested*)

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS
EB

UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE Suite 15
150 SHOUP AVE.
IDAHO FALLS, IDAHO 83401

(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

RETURN RECEIPT

AUG 23 1983

Department of Water Resources
Eastern District Office

PS Form 3811, Dec. 1980

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☑ Show to whom and date delivered ..... ¢
   - ☐ Show to whom, date, and address of delivery .. ¢
2. ☐ RESTRICTED DELIVERY ¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $

3. **ARTICLE ADDRESSED TO:**
Ted Sorenson
550 Lyndon
Idaho Falls 83201

4. **TYPE OF SERVICE:**
   - ☐ REGISTERED ☐ INSURED
   - ☑ CERTIFIED ☐ COD
   - ☐ EXPRESS MAIL

ARTICLE NUMBER
13144

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent
D E Benton

5. **DATE OF DELIVERY**

POSTMARK

6. **ADDRESSEE'S ADDRESS** *(ONLY if requested)*

7. **UNABLE TO DELIVER BECAUSE:**

7a. **EMPLOYEE'S INITIALS**

UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300

U.S. MAIL

RETURN TO

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE Suite 15
150 SHOUP AVE.
IDAHO FALLS, IDAHO 83401

(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

Department of Water Resources
Eastern District Office

AUG 25 1983



PS Form 3811, Dec. 1980

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☑ Show to whom and date delivered ..... ¢
   - ☐ Show to whom, date, and address of delivery.. ¢
2. ☐ RESTRICTED DELIVERY ¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $

3. ARTICLE ADDRESSED TO:
C. A. Wagoner
Aubrey Sd 83423

4. TYPE OF SERVICE:
   - ☐ REGISTERED ☐ INSURED
   - ☑ CERTIFIED ☐ COD
   - ☐ EXPRESS MAIL

ARTICLE NUMBER
13145

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

× C. A. Wagoner

5. DATE OF DELIVERY 8/

POSTMARK
AUG 24 1983

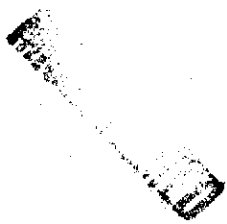
6. ADDRESSEE'S ADDRESS (*Only if requested*)

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

Returned Receipts

32-7128/7136



[redacted]

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE
150 SHOUP AVE.
IDAHO FALLS, IDAHO 83401

NAME AND ADDRESS OF SENDER

Indicate type of mail
- ☐ Registered
- ☐ Insured
- ☐ COD
- ☑ Certified

I certify that we have
- ☐ Commercial Insurance
- ☐ A deductible clause of $

Affix stamp here if issued as certificate of mailing or for additional copies of this bill.
POSTMARK AND DATE OF RECEIPT

TE	NUMBER OF ARTICLE	NAME OF ADDRESSEE, STREET, AND POST-OFFICE ADDRESS	POSTAGE	FEE	Handling Charge	Actual Value (If Registered)	DUE SENDER IF C.O.D.	R. R. FEE	S.D. FEE	S. H. FEE	REST. DEL. FEE REMARKS
1	13144	Ted Sorensen 550 Linden, Dt	20	25				60			32-7128
2	13145	C.A. Wagoner, Dubois									"
3	13146	William T. Simmons Dubois									"
4	13147	Lew Wilding, Dubois									"
5	13148	Jon Leuelleu Jr & L 1515 Lincoln Dt									"
6	13149	Odell Frandsen BLM 946 Lincoln St									"
7											
8				# 9 30							
9											
10											
11											
12											
13											
14											
15											

TOTAL NUMBER OF PIECES LISTED BY SENDER	TOTAL NUMBER OF PIECES RECEIVED AT POST OFFICE	*POSTMASTER, PER (Name of receiving employee)*
6	6	[signature]

The full declaration of value is required on all domestic and international registered mail. Commercial Insurance—Payment of the full registry fee is required on articles valued up to $1,000 or the full amount of the deductible if the deductible exceeds $1,000. The maximum indemnity payable is $25,000 for registered mail, $400 for COD and $400 for insured mail. Special handling charges apply only to third- and fourth-class parcels. Special delivery service also includes special handling service.

FORM MUST BE COMPLETED BY TYPEWRITER, INK OR BALL POINT PEN ☆ U.S. GOVERNMENT PRINTING OFFICE: 1979-301-994

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF PROTESTS AGAINST APPROVAL OF APPLICATION FOR PERMIT NO. 32-7128 IN THE NAME OF BIRCH POWER COMPANY	NOTICE OF HEARING AND/OR CONFERENCE

On September 8, 1982, Birch Power Company filed with the Department of Water Resources an application to appropriate the public waters of the State of Idaho. On September 23, 1982, the Department received a protest against approval of said application from Tom Reinecker, Idaho Department of Fish and Game. On October 12, 1982, additional protests were received from O'dell A. Frandsen, Bureau of Land Management, and Wm. T. Simmons, C.A. Wagoner, Ben R. Wilding.

The Department has set the matter of protest for hearing for Friday, September 2, 1983, at 9:00 a.m. in the Third Floor Conference Room, Idaho State Office Building, 150 Shoup, Idaho Falls, Idaho. The hearing will be held in accordance with provisions of Chapter 2, Title 42, of the Idaho Code and adopted Rules of Practice and Procedure of the Department of Water Resources. Opportunity shall be afforded all parties to respond and present evidence and argument on all issues involved.

Dated this 19th day of August, 1983.

RONALD D. CARLSON

Eastern Regional Supervisor

MICROFILMED

File.

Ted S. Sorenson P.E.-L.S.
CONSULTING ENGINEER
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401

Bus: 208-522-8069
Res: 208-529-2469

October 28, 1982

RECEIVED
OCT 29 1982
Department of Water Resources
Eastern District Office

Mr. Ronald D. Carlson
Eastern Regional Supervisor
Idaho Dept. of Water Resources
150 Shoup
Idaho Falls, ID 83401

RE: APPLICATION 32-7128 - BIRCH POWER COMPANY

Dear Mr. Carlson,

Pursuant to your letter of October 13, 1982, I have met, on behalf of Birch Power Company, with the BLM, Idaho Fish and Game, and members of Water District 32-B.

The BLM and Idaho Fish and Game's concern was that the proposed new diversion 3000 feet upstream from the present diversion would adversely impact fishery habitat. Mr. Jim Esget of the BLM, Virgil Moore and I traveled to Paris, Idaho on October 20, 1982 to inspect a hydroelectric plant of similar nature. By proper design the 34,000 L.F. of power feeder canal would provide increased fishery habitat to offset the 3,000 feet lost in Birch Creek. In addition, 5 cfs minimum streamflow would provide for downstream riparian habitat maintenance. Based upon these conditions, BLM and Fish and Game personnel appear supportive of the project.

Members of water district 32-B were concerned about the impact the project would have on existing irrigational practices. I met with Ben and Cleo Wilding, Cliff Wagnor, Bill Simmons and Steve Phillips of the water district on October 26, 1982. I explained that the project would reduce the bed losses now being experienced in Reno Ditch (about 3% per mile). In other words, the water supply for irrigation could be increased by approximately 250 to 300 inches through elimination of bed losses. I also explained that the water right sought is nonconsumptive and subsidary to all existing water rights. In other words, if the new ditch delivered less water than is now being delivered at the proposed ditch splitter box, they would have the right to demand the power plant be shut down. Mr. Wagnor expressed concern about access to water for range herds. The group concluded that while access for stock water would be curtailed in some areas, increased access would be realized in others. The group's general attitude toward the project appeared favorable to me based upon reduced bed losses and the potential for increased irrigational waters.

Very truly yours,

Ted S. Sorenson, P.E.
Consulting Engineer

TSS:kw

October 13, 1982

Birch Power Company
550 Linden Drive
Idaho Falls, ID 83401

Gentlemen:

Enclosed is a copy of a protest filed against the issuance of a permit pursuant to your Application No. 32-7128. The Department suggests you contact the protestant directly in an effort to determine the nature of the protest and to attempt to resolve the protest.

If you do not advise us within twenty (20) days that the protest has been resolved, the matter will be scheduled for conference and/or hearing. At such a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying the application for permit (Section 42-203, Idaho Code):

1. Will the proposed use reduce the quantity of water under existing water rights?

2. Is the proposed water supply insufficient for the purpose intended?

3. Is the application made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

If this office can be of further assistance, please contact us.

Very truly yours,

RONALD D. CARLSON
Eastern Regional Supervisor

RDC:cw

Enclosure (3)

cc: IDWR - State Office

October 13, 1982

RE: Application for Permit No. 32-7128 BIRCH POWER COMPANY

C. A. Wagoner
Dubois,
Idaho 83423

Dear Mr. Wagoner:

Your protest against the approval of the above referenced application has been received and a copy has been sent to the applicant. The Department suggests you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

If you do not advise us within twenty (20) days that the protest has been resolved, the matter will be scheduled for conference and/or hearing. At such a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying an application for permit (Section 42-203, Idaho Code):

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2. Is the proposed water supply insufficient for the purpose intended?

3. Is the application made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

If this office can be of further assistance, please contact us.

Very truly yours,

RONALD D. CARLSON
Eastern Regional Supervisor

RDC:cw

cc: IDWR - State Office

October 13, 1982

RE: Application for Permit No. 32-7128 BIRCH POWER COMPANY

William T. Simmons
Dubois,
Idaho 83423

Dear Mr. Simmons:

Your protest against the approval of the above referenced application has been received and a copy has been sent to the applicant. The Department suggests you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

If you do not advise us within twenty (20) days that the protest has been resolved, the matter will be scheduled for conference and/or hearing. At such a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying an application for permit (Section 42-203, Idaho Code):

1. Will the proposed use reduce the quantity of water under existing water rights?

2. Is the proposed water supply insufficient for the purpose intended?

3. Is the application made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

If this office can be of further assistance, please contact us.

Very truly yours,

RONALD D. CARLSON
Eastern Regional Supervisor

RDC:cw

cc: IDWR - State Office

October 13, 1982

RE: Application for Permit No. 32-7128 BIRCH POWER COMPANY

Ben Wilding, Watermaster
Water District No. 32-D
Dubois, ID 83423

Dear Mr. Wilding:

Your protest against the approval of the above referenced application has been received and a copy has been sent to the applicant. The Department suggests you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

If you do not advise us within twenty (20) days that the protest has been resolved, the matter will be scheduled for conference and/or hearing. At such a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying an application for permit (Section 42-203, Idaho Code):

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2. Is the proposed water supply insufficient for the purpose intended?

3. Is the application made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

If this office can be of further assistance, please contact us.

Very truly yours,

RONALD D. CARLSON
Eastern Regional Supervisor

RDC:cw

cc: IDWR - State Office

October 13, 1982

RE: Application for Permit No. 32-7128 BIRCH POWER COMPANY

Mr. Tom Reinecker
Regional Supervisor
Department of Fish & Game
1515 Lincoln Road
Idaho Falls, ID 83401

Dear Mr. Reinecker:

Your protest against the approval of the above referenced application has been received and a copy has been sent to the applicant. The Department suggests you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

If you do not advise us within twenty (20) days that the protest has been resolved, the matter will be scheduled for conference and/or hearing. At such a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying an application for permit (Section 42-203, Idaho Code):

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4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

If this office can be of further assistance, please contact us.

Very truly yours,

RONALD D. CARLSON
Eastern Regional Supervisor

RDC:cw

cc: IDWR - State Office

October 13, 1982

RE: Application for Permit No. 32-7128 BIRCH POWER COMPANY

O'Dell Frandsen
District Manager
Bureau of Land Management
940 Lincoln Road
Idaho Falls, ID 83401

Dear Mr. Frandsen:

Your protest against the approval of the above referenced application has been received and a copy has been sent to the applicant. The Department suggests you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

If you do not advise us within twenty (20) days that the protest has been resolved, the matter will be scheduled for conference and/or hearing. At such a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying an application for permit (Section 42-203, Idaho Code):

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3. Is the application made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

If this office can be of further assistance, please contact us.

Very truly yours,

RONALD D. CARLSON
Eastern Regional Supervisor

RDC:cw

OCT 12 1982
Department of Water Resources
Eastern District Office

POLICY STATEMENT OF IDAHO WATER RESOURCE BOARD ON BIRCH CREEK

At the request of the Bureau of Land Management, the Idaho Water Resource Board on November 6, 1979 filed an application for a minimum stream flow on Birch Creek in Butte County. On July 8, 1980 the Department of Water Resources held a public hearing upon the application in Dubois as required by law. It was apparent to the members of the Idaho Water Resource Board attending that hearing that there was considerable confusion among persons holding prior water rights and others concerning the nature of a minimum flow. There was also uncertainty among the Board members about the necessity and the extent of the minimal flow under the application as filed. The Board asked the Director of the Department of Water Resources to withhold further action on the application.

In November of 1980 the Board adopted guidelines on minimum flow applications which allowed for an informal public meeting in the nature of a conference prior to proceeding with a formal public hearing. On November 19, 1981 such a meeting was held in Dubois and was attended by approximately 40 farmers, an attorney, several legislators and by representatives of the Bureau of Land Management and the Idaho Fish and Game Department. A full, frank and candid discussion was held from which the following salient facts emerged:

1. Birch Creek in the area covered by the application from a point below the Reno Ditch diversion upstream eight miles to the north boundary of the John Day Rest Area qualifies for protection under the minimum stream flow law. The stream provides a blue ribbon trout fishery which is heavily used by local fishermen. Maintenance of the minimum flow as sought is essential to maintaining the fishery resources and to the continued use of the John Day Rest Area.

2. Most of the land contiguous to Birch Creek is owned by the federal government and is managed by the Bureau of Land Management. There does not appear to be any foreseeable threat of diversion from that reach of the stream.

3. The historic manner of operation by those holding prior water rights both upstream and downstream has been compatible with the

FILE COPY

high quality fishery and the recreational use of the stream. It is evident from the discussion at the meeting that there exists a high degree of cooperation and good will between the irrigators and the local federal and state personnel charged with the responsibility for the fish and recreational use of Birch Creek.

4. On December 8, 1981 O'dell A. Frandsen, Assistant Manager for the Bureau of Land Management, wrote to M. Reed Hansen, chairman of the Idaho Water Resource Board to request that application for minimum flow be withdrawn but that the Board make a statement recognizing the need to protect the flows in Birch Creek.

Based upon the foregoing facts, the Board resolves as follows:

1. The Idaho Water Resource Board hereby recognizes and declares that protection of the existing flows as identified in the application for permit received November 16, 1979 and as supported by testimony at the formal public hearing on July 8, 1980 for Birch Creek from a point below the Reno Ditch diversion upstream eight miles to the north boundary of the John Day Rest Area is in the local public interest and is compatible with and supported by the State Water Plan. Th Board requests that the Director enter this statement or a summary as expressing the policy of the Idaho Water Resource Board as in oppositio to any diversion for any out of stream use at any subsequent time. Nothing in this statement shall be construed as in any manner affecting any prior or present existing water right or use.

2. The Idaho Water Resource Board requests that the Director terminate and withdraw the application for a minimum stream flow on Birch Creek without prejudice.

United States Department of the Interior

IN REPLY REFER TO
7250.4

BUREAU OF LAND MANAGEMENT
Idaho Falls District
940 Lincoln Road
Idaho Falls, ID 83401

OCT 8 1982

Mr. Ernest Carlsen
Idaho Dept. of Water Resources
Eastern Region
150 Shoup
Idaho Falls, ID 83401

RECEIVED
OCT 12 1982
Department of Water Resources
Eastern District Office

RE: Application for permit No. 32-7128 Birch Power Company

Dear Mr. Carlsen:

District Bureau of Land Management staff have reviewed application for permit No. 32-7128 by Birch Power Company. On September 15, 1982, Ted S. Sorenson, representing Birch Power Company, met with us to discuss the design and requirements for installation of his project. His designs showed forethought and consideration of resource values.

Field examinations of the site were completed with BLM and Idaho Dept. of Fish and Game personnel on October 1, 1982. These field measurements have shown large numbers (near 1,000 fish per mile) of ~~native~~ wild* rainbow trout inhabiting Birch Creek between the proposed headgate and Reno Ditch. About 60% of these fish are in the catchable (8" or over) size range. Road access to this reach of stream for fishing and recreational use is excellent. Riparian habitat value is high throughout the reach for antelope, sagegrouse, raptors, rabbits and non-game birds.

During the period 1979 to 1981, our BLM District requested a minimum flow application by the Idaho Water Resource Board for 22.5 cfs (July thru February) and 28 cfs (March thru June) for spawning thru this stretch of stream. Enclosed is the policy statement of that Board.

Based on our recent field measurements and upon our past efforts to obtain minimum flows in this reach of Birch Creek, we would take a position consistent with the policy statement of the Idaho Water Resources Board regarding Birch Creek.

Sincerely,

O'dell A. Frandsen
District Manager

Enclosure

*Changed per telecon with O'dell Frandsen/EMC 10/12/82

Oct. 10, 1982

We the water Users of Birch Creek water Distrik 32-D oppose the building of a power plant on our stream We want to make mare thorough study of ~~sucket~~ is wanted befor we grant permision to Do that

Signed

Watermaster — Ben R. Wilding

Wm T. Simmons

E. A. Hagoney

RECEIVED
OCT 12 1982
Department of Water Resources
Eastern District Office

IDAHO DEPARTMENT OF FISH AND GAME
REGION 6
1515 Lincoln Road
Idaho Falls • Idaho • 83401

September 22, 1982

Mr. Ernest Carlsen
Assistant Regional Supervisor
Department of Water Resources
Eastern Region
150 Shoup Avenue
Idaho Falls, Idaho 83402

Dear Ernie:

Re: Appl. No. 32-7128
Birch Power Company

We have recently begun discussion with representatives for Birch Power Company concerning their proposal for hydropower generation. We will be studying their proposal for fishery and wildlife impacts. Present information available to us indicates that the request for 45 cfs would negatively impact the fishery of 3000 feet of Birch Creek.

Until we have the opportunity to assess the fishery in the proposed development area we would like to register a protest to this application. We have informed Mr. Sorenson that this would be our action at this time.

Thank you for the opportunity to comment on this proposal.

Sincerely,

Tom Reinecker
Regional Supervisor
Region 6

RECEIVED
SEP 28 1982
Department of Water Resources
Eastern District Office

September 16, 1982

RE: Application for Permit No. 32-7128 BIRCH POWER COMPANY

Ben Wilding, Watermaster
Water Distridt No. 32-D
Dubois, Idaho 83423

Dear Mr. Wilding:

We are enclosing a copy of an application that may be of interest to your water districtP Please review the application and submit any comments you may have to our Department as soon as possible. The last date of protest is October 11, 1982, and we are required to take final action shortly thereafter.

If we may be of further assistance, please feel free to contact us.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:cw

Enclosure

September 16, 1982

RE: Application for Permit No. 32-7123 BIRCH POWER COMPANY

Mr. Tom Reinecker
Regional Supervisor
Department of Fish & Game
1515 Lincoln Road
Idabo Falls, Idaho 83401

Dear Tom:

We are enclosing a copy of an application that may be of interest to your agency. Please review the application and submit any comments you may have to our Department as soon as possible. The last date of protest is October 11, 1982, and we are required to take final action shortly thereafter.

If we may be of further assistance, please feel free to contact us.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:cw

Enclosure

September 16, 1982

RE: Application for Permit No. 32-7128 BIRCH POWER COMPANY

Bureau of Land Management
940 Lincoln Road
Idaho Falls, ID 33401

Gentlemen:

We are enclosing a copy of an application that may be of interest to your agency. Please review the application and submit any comments you may have to our Department as soon as possible. The last date of protest is October 11, 1982, and we are required to take final action shortly thereafter.

If we may be of further assistance, please feel free to contact us.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:cw

Enclosure

STAFF SHEET FOR POWER GENERATION

INITIAL REVIEW BY Ernie. APPLICATION NO. _____

DATE REQUESTED	IN FILE	
_____	9/24/82	Form 205/206
✓ _____	_____	Financial statement if operating capacity is more than 500 HP. 0.37 MW. 373 KW.
✓ _____	_____	Statement declaring what the applicant proposes to do with the generated power. (NOT MANDATORY)
_____	Okay.	Efficiency is between 85% and 60%

P = kilowatts .74 x hp 666.00

Q = c.f.s.

H = feet

e = efficiency

$$e = \frac{P\ (11.8)}{QH} = \frac{(666)\ (11.8)}{(45)\ (278)} = \frac{7858.8}{12510} = .628 \times 100 = 62.8\%$$

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Eastern Region

150 Shoup Ave.
Idaho Falls, Idaho 83402
(208) 525-7161

SEPTEMBER 15, 1982

The Standard Journal
P. O. Box 10
Rexburg, Idaho 83440

Gentlemen:

Enclosed you will find a legal notice which we wish to have published on the dates indicated (once a week for two consecutive weekly issues) in your newspaper. We have allowed ample time for you to submit a galley proof to this office for review before the first publication date. If you cannot publish the notice on the proposed dates, please contact us immediately.

An affidavit of publication must be submitted to the Department along with the publication bill. Your cooperation is appreciated.

Please send the affidavit of publication and publication billing to this office before OCTOBER 11, 1982.

Yours truly,

RONALD D. CARLSON
Supervisor
Eastern Region

Encl.

NOTICE OF APPLICATION FOR WATER RIGHT

Notice is hereby given that the following application(s) have been submitted for permit to appropriate the public waters of the State of Idaho:

If issued, the permit(s) will be subject to all prior water rights. Protests against the granting of any permit must be filed with the Director of the Idaho Department of Water Resources, 150 Shoup Ave., Idaho Falls, Idaho 83402 on or before OCTOBER 11, 1982.

A. KENNETH DUNN

Director

Published 9/23 & 9/30.

32-2128

BIRCH POWER CO.

550 LINDEN DR., IDAHO FALLS, ID 83401

Source: BIRCH CREEK tributary to SINKS

Date Filed: 09/08/1982

Amount: 45.00 CFS

Diversion Point: NENW Sec 03 T 08N R 30E, CLARK Co.

Use: POWER (45.00 CFS) from 01/01 to 12/31

Place of Use: NENE Sec 17 T 08N R 31E

Diversion Means: HEADGATE, DITCH, PENSTOCK & POWER HOUSE

SORENSON ENGINEERING, P.A.
CONSULTING ENGINEERS
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401
208-522-8069

Before the

FEDERAL ENERGY REGULATORY COMMISSION

APPLICATION FOR LICENSE

FOR THE

BIRCH CREEK WATER POWER PROJECT

A MAJOR WATER POWER PROJECT

(5 megawatts or less)

CLARK COUNTY

IDAHO

Prepared by:

Sorenson Engineering, P.A.
550 Linden Drive
Idaho Falls, ID 83401

January 28, 1985

BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

APPLICATION FOR LICENSE FOR A MAJOR
UNCONSTRUCTED WATER POWER PROJECT
5 MEGAWATTS OR LESS

1) BIRCH POWER COMPANY applies to the Federal Energy Regulatory Commission for license for the Birch Creek water power project, as described hereinafter. Preliminary Permit number is 7194-000.

2) The location of the project is:

State or Territory: State of Idaho

County: Clark County

Township or nearby town: 30 miles NW of Terreton, Idaho

Stream or other body of water: Birch Creek

3) The exact name, address and telephone number of the applicant is:

BIRCH POWER COMPANY
550 Linden Drive
Idaho Falls, ID 83401
(208) 522-8069

4) The exact name and business address of each person authorized to act as agent for the applicant in this application are:

Ted S. Sorenson, P.E.
Consulting Engineer
550 Linden Drive
Idaho Falls, ID 83401
(208) 522-8069

5) BIRCH POWER COMPANY is a corporation incorporated under the laws of the State of Idaho.

6)(i) The statutory or regulatory requirements of the State of Idaho that affect the project as proposed with respect to bed and banks and the appropriation, diversion and use of water for power purposes, with respect to the right to engage in the business of developing, transmitting and distributing power and in any other business necessary to accomplish the purposes of the license under the Federal Power Act are:

A. Article XV of the Idaho Constitution, in chapters 1 and 2, Title 42, Idaho Code, addresses the appropriation of water for beneficial use with the State of Idaho. The right to use such water is gained by application for permit and license to the Idaho Department of Water Resources. An application for hydro power development has been filed and memorandum of decision rendered. A final permit will be granted, contingent upon issuance of license, that is herein applied for from the Federal Energy Regulatory Commission. A copy of that finding is attached following this section.

B. Chapter 38, Title 42, Idaho Code, the Stream Channel Protection Act, was an act to regulate the alteration of the beds and banks of Idaho Streams. This act is also administered by the Idaho Department of Water Resources. A separate application for a Stream Channel Alteration Permit is necessary, however, when the alteration is intended to divert appropriated waters from a stream, an application to appropriate water issufficient and a separate application for a Stream Channel Alteration Permit is not necessary. A permit to appropriate water from the stream carries with it the right to alter the stream bed and bank to accomplish the diversion.

C. Chapter 9, Title 36, Idaho Code, deals with the protection of fish in Idaho Waters. Section 36-906 requires suitable fish screening devices and fish ways to be constructed at all power sites to the specifications of the Idaho Department of Fish and Game.

D. Chapter 11, Title 50, Idaho Code, grants to Idaho Counties, the right to establish planning and zoning commissions and grants regulatory authority to the counties to govern building standards and local use classification. A zoning concurrence must be obtained from Clark County before this hydro project can be constructed.

6) (ii) The steps which the applicant has taken or plans to take to comply with the statutory or regulatory requirements sited above are:

A. Regarding appropriation for water benefits ro use with the State of Idaho, the applicant has made two water rights filings (#32-7128 and #32-7136) for the purpose of hydro power development. The Idaho Department of Water Resources has issued a memorandum of decision finding the issuance of this water right permit is consistent with the laws and regulations of the State of Idaho. A copy of that decision is included in Exhibit E Section 2.

B. Regarding the Stream Channel Protection Act, no separate action by the applicant is required.

C. Regarding the protection of fish in Idaho Waters, the decision of the Department of Water Resources finds the protection of fish has been accomplished by the project. This action is concurred with by the Idaho Department of Fish and Game as discussed in Exhibit E hereafter.

D. Regarding planning and zoning commission regulatory authority, when water rights and FERC license are in hand, the applicant will submit the documents and final design of this project to the Clark County Planning and Zoning Commission. This is the final prerequisite before any construction can take place.

No more specific approvals or actions are required apart from licensing of the project by the Federal Energy Regulatory Commission. Advisory copies of the Power Sales Contract and Interconnection Contract with applicable public utilities will be filed with the Idaho Public Utilities Commission.

7) The project proposes to develop the hydroelectric potential of Birch Creek via diversion from Birch Creek into a 5.6 mile canal and 2.9 mile penstock. Water would then be returned to Birch Creek or be routed for downstream irrigation.

(i) Proposed installed generating capacity is 3 megawatts.

(ii) The project would utilize an unconstructed dam.

8) Lands of the United States affected are shown in Exhibit G. Lands are surveyed lands. Public lands of the United States affected are:

(i)	National Forest	None
(ii)	Indian Reservation	None
(iii)	Public Lands under the jurisdiction of the Bureau of Land Management	95 acres
(iv)	Other: U.S. Dept. of Energy	60 acres
(v)	Total U.S. Lands	155 acres

9) Construction of the project is planned to start within 12 months and is planned to be completed within 36 months from the date of issuance of license.

VERIFICATION

State of Idaho)
)ss
Bonneville County)

Ted S. Sorenson, P.E., being first duly sowrn deposes and says that: He is the President of BIRCH POWER COMPANY, the applicant and the Engineer, that he has read the foregoing application and knows the contents thereof; and that the same are true to the best of his knowledge and belief.

Ted S. Sorenson P.E.
Ted S. Sorenson, P.E.
President and Engineer

Subscribed and sworn to before me, a notary public of the State of Idaho, this 28th day of January, 1985

David E. Benton
Notary Public
Nonexpiring Commission

(SEAL)



EXHIBIT A

EXHIBIT A

BIRCH POWER COMPANY proposes to divert water from Birch Creek through an earthen diversion structure to 34,900 L.F. of earthen feeder ditch and 15,900 L.F. of 48" and/or 42" diameter steel penstock to a power plant. Approximately 0.5 miles of new three phase electrical transmission line will be required.

The water would then be routed to either irrigation or returned to Birch Creek through an earthen ditch.

All of the preceeding would be new construction. No existing dams or impoundments would be utilized. The mode of operation would be run of the river.

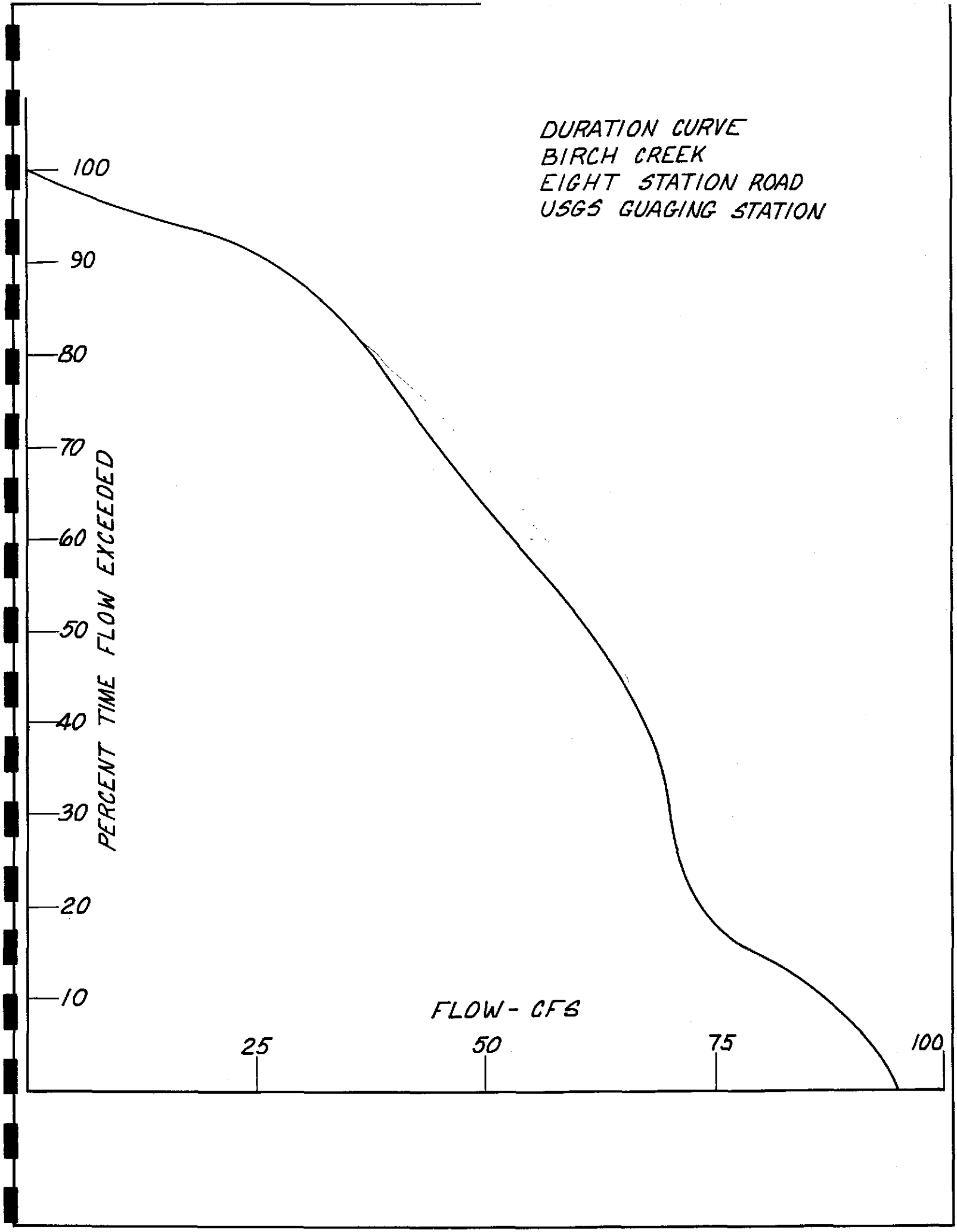
1)	(i)	Existing & Future Generating Units	None
		Proposed Generating Unit	One
		Proposed Generating Output Capacity	2850 KW
	(ii)	Type of Hydraulic Turbine	Impulse or Reaction Type (Frances)
	(iii)	Power Plant Operation	Manual Start, Auto Shut Down, Run of the River
	(iv)	Average Annual Generation	15.5×10^6 KW-HRS
	(v)	Power Plant Design Head	532 feet
		Power Plant Average Head	518 feet
	(vi)	Area of Pipeline Intake Forebay	1/3 acre
		Surface Elevation	5653.5
		Net Storage	2/3 Acre-Ft
		Gross Storage	2 Acre-Ft
	(vii)	Plant Hydraulic Capacity	75 cfs
		Average Birch Creek Flow	49.9 cfs

Birch Creek is spring fed with watershed consisting of approximately 454 square miles. The lage drinage area contributes to the stabilityof the spring flow. Attached is the flow durationcurve for the Eight Mile USGS Gauging Station which is located upstream from the diversion approximately 1.5 miles. Also included is the average monthly flow via ten years of record.

(viii)	Earthen Dam	10' high compacted native soils
	Feeder Ditch	34,900 L.F. Open Channel Trapezoidal Earthen - 85 cfs capacity
	Intake Facility	Concrete w/Steel Bar Screen
	Penstock	15,900 L.F. 42" and/or 48" diameter steel pipe

	Powerhouse	Concrete base, prefabricated steel building
	Transmission Line	0.5 miles new 3 phase, 12.4 KVA to existing Utah Power & Light Transmission Line. Reno Subcircuit #1 located 7 miles from Reno Substation. 3 - #I/O ACSR Conductors 1 - #2 ACSR Conductor
	Generator Voltage	2400 Volt
	Transformer	One (1) 3,000 KVA, 7200/12470Y 2,400 volt, Pad Mounted Transformer
(ix)	Estimated Project Capital Cost	$3,600,000.00

2) The purpose of the project is to produce a clean, renewable resource as electrical power (which will reduce the dependency on foreign imports of oil) for sale to Utah Power and Light Company.


DURATION CURVE
BIRCH CREEK
EIGHT STATION ROAD
USGS GUAGING STATION
100
90
80
70
60
50
40
30
20
10
PERCENT TIME FLOW EXCEEDED
FLOW - CFS
25
50
75
100

BIRCH CREEK
AVERAGE MONTHLY FLOW - USGS GAUGING STATION
EIGHT MILE CANYON GAUGE
1970 THRU 1980

MONTH	FLOW (CFS)
JANUARY	70*
FEBRUARY	70*
MARCH	74
APRIL	74.3
MAY	54.3
JUNE	45.3
JULY	44.1
AUGUST	45.4
SEPTEMBER	46.4
OCTOBER	60.9
NOVEMBER	67*
DECEMBER	67*

*PRORATED FROM BLUE DOME USGS GAUGE STATION



EXHIBIT E

ENVIRONMENTAL REPORT

1) GENERAL DESCRIPTION OF THE LOCALE

EXHIBIT E

ENVIRONMENTAL REPORT

1) GENERAL DESCRIPTION OF THE LOCALE:

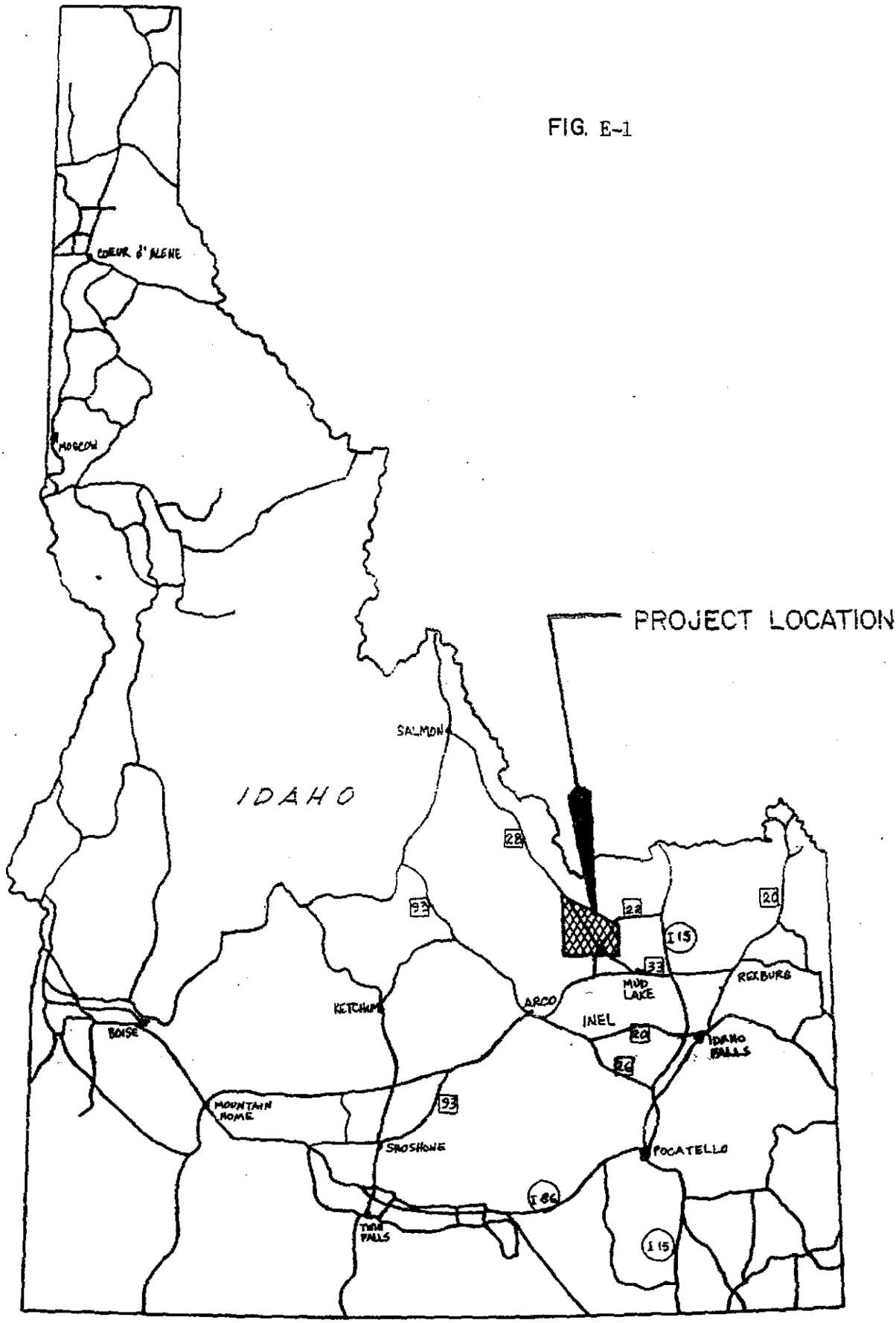
The area encompasses the Birch Creek watershed; 290,000 acres in Butte, Clark and Lemhi counties, Idaho. The area is approximately 28 miles north of Mud Lake on State Highway 28. The watershed lands lie in the plains and talus slopes of the Beaverhead Mountains on the east and the Lemhi mountains on the west. State Highway 28, a primary route from Idaho Falls to Salmon, is a major north/south access route through the valley. The predominant feature on the valley floor is the spring fed Birch Creek. Water feeding Birch Creek originates from the springs in the upper reaches of the valley. The stream flows southeasterly through the valley and sinks into the Snake River aquifer unless otherwise diverted.

Approximately 20 miles downstream from the headwaters, Birch Creek is completely diverted at the Reno Ditch to irrigate lands on private property.

The area is rural with no major population centers. Public lands are used for livestock grazing, wildlife habitat, watershed and recreation. Agriculture is the main income source in the area. General vegetation types include sagebrush, salt bush, mountain shrub, woodland and meadow. Yearly precipitation ranges from 6.4 to 10.5 inches and averages 8.7 inches. Temperatures vary widely. The average annual temperature is approximately 44°F but yearly temperatures range from 102°F in the summer to -30°F in the winter.

The elevation ranges from approximately 4900 feet at the Birch Creek sinks to approximately 11,800 on Bell Mountain. Figure E-1 on the following page shows the general location of the project.

FIG. E-1


PROJECT LOCATION
IDAHO
COEUR d' ALENE
MOSCOW
SALMON
BOISE
KETCHUM
ARCO
INEL
MUD LAKE
REXBURG
IDAHO FALLS
MOUNTAIN HOME
SHOSHONE
POCATELLO
TWIN FALLS
I 15
I 86
93
20
26
28
33
22

2) REPORT ON WATER USE AND QUALITY

2) REPORT ON WATER USE AND QUALITY

Birch Creek is the major feature of the valley floor that drains the area between the southern end of the Lemhi mountains in the west and the Beaverhead mountains in the east. The stream originates from a complex of springs in the upper portion of the valley. The creek meanders through private, state and national resource lands. The water is completely diverted into the Reno Irrigation ditch approximately 20 miles downstream from the headwaters. The stream system is an enclosed basin where undiverted water sumps out and becomes part of the Snake River Aquifer.

The stream carries a flow of high quality water on a perennial basis that averages between 35 and 75 cfs. Birch Creek is considered medium to rich in abundance and quantity of aquatic organisms. The proposed project would be located in the lower reaches of Birch Creek. The project would essentially replace the existing Reno Ditch. This would be accomplished by movement of the present diversion, approximately 3,000 feet upstream. The Reno Ditch waters would then be diverted through a new feeder canal approximately 34,500 lineal feet to the penstock intake. The water would then be routed about 15,900 lineal feet through 42" - 48" diameter steel pipe to a powerhouse. The waters would then be routed downstream for subsequent irrigational use.

Presently, no irrigation withdrawals occur between the proposed point of diversion and the outfall from the power plant. The attached Figure E-2 illustrates the present situation of the water allocation in Birch Creek. Also attached as Table E-1 are the flow measurements at the USGS Gauging Station at Blue Dome and included as Table E-2 are the flow measurements at the Eight Mile USGS Gauging Station. Please note that the proposed diversion is approximately 3,000 feet upstream from the existing diversion. At the present time the total flow from Birch Creek is diverted into the Reno Ditch. Figure 2 also illustrates the current irrigational withdrawal practices as well as estimates of the current bedloss in Birch Creek and Reno Ditch. This high bedloss is due to high velocities which scour the silts and clay materials which would otherwise seal the gravel material.

The lower reaches of Birch Creek flow over coarse gravel deposits, approximately 100 to 400 feet in depth. This accounts for the high bedloss and this, coupled with the high velocity accounts for the excessive bedloss. The proposed project would seek to eliminate a portion of the excess bedloss in the Reno Ditch via installation of a shallow grade canal which would be sealed with bentonite and/or soil polymers. This sealing would be successful over a long term due to reduction of the velocity in the canal to the range of 1.5 to 2.0 feet per second. The bedloss data for Reno Ditch is summarized in Table E-3.

The impact of the project would be as follows:

The excessive bedloss in Reno Ditch would be eliminated. The approximate additional waters available for use that are not now available is 10-12 cfs. By decision of the Idaho Department of Water Resources, 5 cfs would be bypassed permanently at the proposed diversion to flow downstream for riparian habitat maintenance to and beyond the Reno Ditch Diversion. This will have the benefit of providing water beyond the present Reno Ditch diversion which has not existed since about the turn of the century. This will be of benefit for riparian development, stock watering and wildlife watering. The additional 5-7 cfs would be available for downstream use by the ranches. This would provide waters for them to irrigate approximately 250 additional acres of land. The ranchers have this land which currently goes dry each year for lack of water.

Also attached as Table E-4 is the water quality data for Birch Creek.

As mitigation for the lost fishery in the 3,000 feet between the existing diversion and the proposed diversion, the applicant has negotiated with the Idaho Department of Fish and Game and the Bureau of Land Management to develope the first 1.5 miles of the new feeder ditch into a fishery habitat. To that end, the applicant has retained the services of Dr. Jack Griffith, Ph.D., Idaho State University. A plan has been developed to increase the fishery habitat by 300% by development of the first 1.5 miles of the new feeder ditch into this fishery habitat. This area would be fenced. In addition, a riparian habitat plan has been developed in conjunction with the Bureau of Land Management. A copy of Dr. Griffith's report and the memo of understanding with Idaho State University and the Memo of Understanding with the Bureau of Land Management with respect to Riparian habitat development is also attached. The fishery habitat would be sealed and then overlain with gravels as needed.

2) (i) The previous Figure E-1 gives the description of the existing stream flow uses in the project area. The impact of the construction of the project would be to increase by 5 cfs the amount of water that would be available to bypass the diversion for downstream riparian habitat development and big game watering. In addition, approximately 5-7 additional cfs will be available for irrigation purposes.

The project would essentially divert all the water from Birch Creek at the proposed diversion except 5 cfs to maximum of 75 cfs. This amount woult then be routed through the feeder ditch penstock to the powerhouse. All waters emanating from the powerhouse would be available for downstream irrigational use. No irrigational use is currently taking place nor is anticipated between the point of diversion and the point of discharge of the power plant. The project would not have any adverse impact on any existing or proposed use of the project waters for irrigation, domestic water supply, industrial or other purposes. The Idaho Department of Water Resources has issued a Memorandum of Decision with respect to allocation of the water to satisfy all users equitably. A copy of the decision is included at the end of this section.

2) (ii) There are no significant seasonal variations in the existing water quality for Birch Creek which would be affected by the proposed project. There would be no significant impact upon nutrients, ph, total desolved solids, alkalinity, hardness, dissolved oxygen, bacteria or temperature. The project would have a minor impact upon suspended sediments turbidity in that the new feeder ditch will be at a much lower velocity. Any sediment loads which would come down Birch Creek would have a tendency to settle out in the feeder ditch to further enhance the seal of the feeder ditch and also remove the turbidity prior to downstream use for irrigation.

2) (iii) There are no existing lakes or reservoirs on Birch Creek. An approximate 10' high diversion structure would be placed in Birch Creek to divert waters into the proposed feeder canal. This diversion structure would be built with provision for a maximum of 5 cfs bypass flow into the downstream channel. Provisions to bypass any greater flows would be provided downstream 1.5 miles at the conclusion of the fishery habitat reach. This provision was provided at the request of the Idaho Department of Fish and Game and the Bureau of Land Management to prevent dewatering of the fishery habitat reach during bypass operations. The 10' high diversion structure will provide approximately two acres of surface area varying in depth from 2 to 8 feet. This pond would provide a pool during winter conditions for accumulation of slush ice that occasionally occurs in Birch Creek. This will allow a reservoir for this ice so water may be routed downstream to the fishery habitat reach.
This would also provide water flow continuity for powerplant operation.

2) (iv) No impacts would be realized with respect to the proposed construction operation of the project facility on water quality parameters such as nutrients, temperature, ph. A minor impact would be realized upon downstream flows in that the downstream flow for irrigation would be increased, which is a beneficial use. In addition, the downstream flow in the existing Birch Creek channel below the existing Reno Ditch diversion would be increased as a beneficial use for riparian habitat development. A minor impact would be realized upon turbidity in that water flowing into the ditch would have an opportunity to settle out the existing sediments that occur briefly during spring runoffs. It should be noted, however, that Birch Creek is primarily a spring fed stream and the sediment load in the stream is very low. No impact will be realized with respect to ph nutrients , temperature, etc.

2) (v) The federal and state agencies contacted by the applicant find no significant impact on the water quality of the project. Significant negotiations, as previously mentioned, have been conducted over the past two years with respect to allocation of stream flows during the project construction and operation. The applicant has negotiated with all parties and reached a tentative conclusion via the Idaho Department of Water Resources for the allocation of the additional flows available as a result of the bedloss elimination due to construction of the project. Essentially, the extra water will be split between the

irrigators for irrigation and the Idaho Department of Fish and Game for downstream riparian and wildlife uses. The applicant can and will comply with all of these requests as set forth in the decision by the Idaho Department of Water Resources included at the end of this section.

2) (vi) The impact on the groundwater in the vicinity of the proposed project would not be significant. The existing groundwater table is located approximately 500 feet below the ground surface. The project is located on the lower reaches of Birch Creek. The upper reaches of Birch Creek, approximately ten to fifteen miles from the project site, is where Birch Creek emanates from springs. No impact would be realized upon these springs.

2) (vii) Certification under Section 401 in the Water Pollution Control Act - Attached is a copy from the Idaho Department of Health and Welfare, Division of Environment's statement concerning the impacts of the project. Mr. Mark Torf has indicated he will provide a final certification upon review of this appendix, therefore, a final copy of the certification will be forwarded upon receipt.

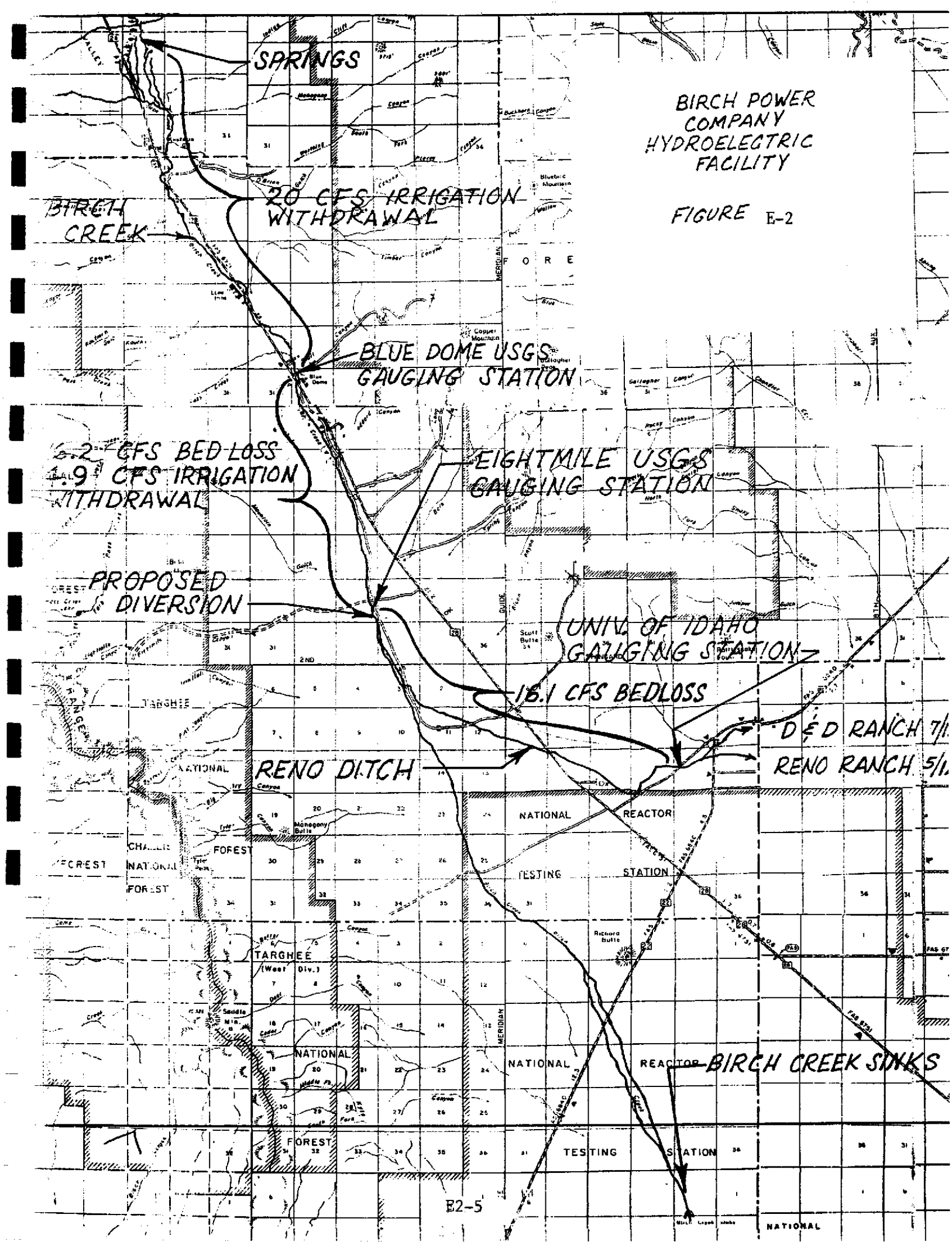

SPRINGS
BIRCH CREEK
20 CFS IRRIGATION WITHDRAWAL
BLUE DOME USGS GAUGING STATION
6.2 CFS BED LOSS
1.9 CFS IRRIGATION WITHDRAWAL
EIGHTMILE USGS GAUGING STATION
PROPOSED DIVERSION
UNIV. OF IDAHO GAUGING STATION
16.1 CFS BEDLOSS
D & D RANCH
RENO DITCH
RENO RANCH
BIRCH CREEK SINKS
NATIONAL REACTOR TESTING STATION
TARGHEE NATIONAL FOREST
BIRCH POWER COMPANY HYDROELECTRIC FACILITY
FIGURE E-2

Table E-1

Birch Creek at Blue Dome Inn*

USGS GAUGING STATION

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1970-71	72.5							76.4	73.1	69.1	72.8	79.8
1971-72	84.3							83.3	73.3	72.0	72.3	71.0
1972-73								67.4	69.8	76.0	71.5	67.4
1973-74									71.4	65.0	70.8	69.3
1974-75								111	82.1	60.7	62.2	
1975-76									60.4	55.6	67.1	76.6
1976-77									61.6	58.5	60.1	67.5
1977-78	83.5	84.3	82.2	85.4	87.3	84.0	88.1	82.0	62.1	60.3	62.6	73.0
1978-79									57.6	63.0	62.3	60.3
1979-80									67.9	63.1	56.4	64.8
TOTALS	240.3	84.3	82.2	85.4	87.3	84.0	88.1	193.0	679.1	643.3	658.1	491.3
AVERAGE	83.5	84.3	82.2	85.4	87.3	84.0	88.1	96.5	67.9	64.3	65.8	70.2

*In cubic feet per second

Table E-2

BIRCH CREEK AT EIGHT-MILE CANYON ROAD

USGS GAUGING STATION

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
0-71								47.4	46.3	46.2	49.6	55.3
1-72	64.0							59.1	50.1	51.6	51.8	52.6
2-73								48.3	44.7	53.5	53.5	46.2
3-74								53.1	47.1	43.7	49.3	42.7
4-75							71.3	71.1	48.3	38.3	37.1	36.8
5-76								41.8	41.2	36.0	45.4	50.7
6-77									42.1	40.5	42.7	49.5
7-78	65.7						77.2	64.8	41.1	40.7	39.7	44.0
8-79	53.0							53.7	44.4	44.5	43.9	40.7
9-80								49.5	47.8	45.8	40.7	45.8
erage	60.9						74.3	54.3	45.3	44.1	45.4	46.4

NOTE: All flows shown in cfs.

1 cfs = 50 inches

Table E-3

FLOW DATA

UNIVERSITY OF IDAHO GAUGING STATION
VS.
EIGHT MILE CANYON GAUGING STATION

Date	Flow at* Eight Mile Canyon cfs	Flow at ** Road Crossing 1 Mile SW of Reno Ranch cfs	Bedloss cfs
June 6, 1980	49	34	15
June 12, 1980	47	37	20
June 16, 1980	48	31	17
June 20, 1980	49	33	16
June 25, 1980	48	32	16
June 28, 1980	45	27	18
July 14, 1980	45	27	18
July 18, 1980	48	33	15
July 21, 1980	46	32	14
July 24, 1980	47	32	15
August 2, 1980	42	26	61
August 14, 1980	39	24	51
August 20, 1980	39	26	13
August 25, 1980	43	25	18
August 28, 1980	43	27	16
Sept. 13, 1980	44	28	16
Sept. 22, 1980	48	33	15
AVERAGES	45.2	29.2	16.06

*USGS Gauging Station -
Eight Mile Road - Birch Ck.

** U of I Gauge Station, Data taken 1980 only -
Reno Ditch - readings taken by Don Shenton

13116970 BIRCH CREEK NEAR KAUFMAN GUARD STATION, NEAR LONE PINE, ID

LOCATION.--Lat 44°15'14", long 112°59'00", in NW¼SE¼ sec.27, T.11 N., R.29 E., Lemhi County, Hydrologic Unit 17040216, 1.8 mi (2.9 km) upstream from Kaufman guard station and 5.5 mi (8.9 km) northwest of Lone Pine.
DRAINAGE AREA.--Not determined.
PERIOD OF RECORD.--November 1977 to September 1978 (discontinued).
PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: December 1977 to September 1978 (discontinued).
EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 20.0°C July 14; minimum, 3.0°C Feb. 16, 18, 19.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
NOV												
29...	1300	37	277	9.0	6.0	11.0	1	--	--	22	160	22
JAN												
16...	1420	37	304	8.7	-3.0	8.5	1	9.7	105	8	170	14
MAR												
01...	1330	32	290	8.3	-5.0	10.0	2	10.2	113	0	160	29
APR												
06...	1510	39	290	8.7	7.0	12.5	1	9.6	114	7	170	19
MAY												
10...	1440	35	288	8.7	14.0	16.5	1	9.6	123	13	160	9
JUN												
07...	1630	35	*317	8.5	22.0	15.5	1	8.6	124	5	160	25
JUL												
18...	0925	35	295	8.2	15.5	13.0	0	8.9	106	0	160	23
AUG												
30...	1630	27	297	8.3	19.0	13.5	1	8.3	100	14	170	28

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)
NOV												
29...	40	15	5.0	6	.2	.9	140	14	138	.3	.0	--
JAN												
16...	42	15	5.1	6	.2	.9	170	10	156	.6	--	--
MAR												
01...	39	15	4.7	6	.2	.9	160	0	131	1.3	--	23
APR												
06...	42	16	5.1	6	.2	.9	170	7	151	.6	--	24
MAY												
10...	40	15	4.9	6	.2	.9	160	12	151	.6	--	24
JUN												
07...	41	15	5.3	7	.2	.8	160	2	135	.8	--	35
JUL												
18...	42	14	5.0	6	.2	.9	170	0	140	1.7	.2	23
AUG												
30...	44	14	5.2	6	.2	.9	170	0	140	1.4	--	24

* Not a field determination.

TABLE E-4

13116970 BIRCH CREEK NEAR KAUFMAN GUARD STATION, NEAR LONE PINE, ID--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)
NOV											
29...	3.5	.2	164	.22	16.4	.24	.00	.35	.35	.59	2.6
JAN											
16...	3.4	.2	177	.24	17.9	.20	.00	.08	.08	.28	1.2
MAR											
01...	3.6	.2	169	.23	14.8	.19	.00	.01	.01	.20	.89
APR											
06...	3.5	.2	176	.24	18.5	.15	.03	.12	.15	.30	1.3
MAY											
10...	4.1	.2	180	.24	17.8	.11	.00	.34	.34	.45	2.0
JUN											
07...	3.5	.2	179	.24	16.9	.08	.00	.11	.11	.19	.84
JUL											
18...	3.4	.2	180	.24	17.0	.18	.00	.66	.66	.84	3.7
AUG											
30...	3.4	.1	173	.24	12.6	.09	.01	.26	.27	.36	1.6

DATE	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ANTIMONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)
NOV											
29...	.00	.00	40	2	4	300	0	70	1	0	0
JAN											
16...	.00	.00	--	--	--	--	--	--	--	--	--
MAR											
01...	.00	.00	--	--	--	--	--	--	--	--	--
APR											
06...	.00	.00	--	--	--	--	--	--	--	--	--
MAY											
10...	.01	.03	--	--	--	--	--	--	--	--	--
JUN											
07...	.00	.00	--	--	--	--	--	--	--	--	--
JUL											
18...	.01	.03	30	0	2	200	0	50	1	0	0
AUG											
30...	.00	.00	--	--	--	--	--	--	--	--	--

DATE	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)
NOV											
29...	2	50	6	0	.0	3	5	1	0	6	.00
JAN											
16...	--	--	--	--	--	--	--	--	--	--	--
MAR											
01...	--	--	--	--	--	--	--	--	--	--	--
APR											
06...	--	--	--	--	--	--	--	--	--	--	--
MAY											
10...	--	--	--	--	--	--	--	--	--	--	--
JUN											
07...	--	--	--	--	--	--	--	--	--	--	--
JUL											
18...	4	40	6	0	.0	0	4	1	0	10	.00
AUG											
30...	--	--	--	--	--	--	--	--	--	--	--

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	DI-AZINON, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	METHYL TRITHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV											
29...	1300	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
JUL											
18...	0925	.00	.00	.00	.00	.00	.00	.00	6.0	.00	.00

13116970 BIRCH CREEK NEAR KAUFMAN GUARD STATION, NEAR LONE PINE, ID--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1					---	---	8.0	3.5	10.0	6.0	11.5	4.0
2					---	---	8.5	4.5	10.0	7.0	10.5	3.5
3					---	---	9.5	6.5	12.5	7.5	11.0	4.5
4					---	---	9.0	6.5	11.5	7.0	10.5	7.5
5					---	---	9.0	7.0	10.5	7.5	12.0	7.5
6					---	---	10.0	6.5	11.5	7.5	12.0	7.0
7					---	---	10.5	6.0	10.0	6.5	11.5	6.5
8					---	---	9.0	7.5	10.5	6.0	11.0	8.5
9					---	---	10.5	7.0	8.5	5.5	14.0	7.0
10					---	---	9.5	7.0	10.5	6.5	13.5	6.0
11					---	---	10.5	7.0	8.5	3.5	12.5	7.0
12					---	---	11.5	7.0	11.5	5.5	11.5	6.0
13					---	---	10.5	6.5	12.0	5.5	12.5	5.0
14					---	---	9.5	8.0	10.0	6.0	10.5	5.5
15					---	---	9.5	6.5	11.0	4.0	13.0	6.5
16					---	---	9.5	7.0	11.0	3.0	13.5	6.5
17					---	---	11.0	7.0	11.0	5.5	13.5	6.5
18					---	---	10.5	6.5	9.0	3.0	14.5	7.5
19					9.5	5.0	10.0	7.5	6.5	3.0	15.5	7.5
20					8.0	4.5	10.0	6.5	11.5	4.5	14.0	7.0
21					7.5	6.5	10.5	7.0	11.0	6.0	15.0	8.0
22					8.0	7.0	10.5	8.5	12.5	6.0	12.5	8.5
23					10.5	6.5	7.0	3.5	10.5	7.0	12.5	9.0
24					10.0	6.5	7.0	4.5	13.5	8.0	15.0	7.0
25					10.5	6.0	9.5	5.0	12.5	8.5	14.0	8.5
26					10.5	6.0	10.5	6.0	12.5	7.5	14.5	8.5
27					9.5	5.5	9.5	6.5	12.5	6.5	14.5	8.5
28					10.0	5.5	10.5	8.0	10.0	5.5	15.5	8.5
29					9.5	7.0	12.0	8.0	---	---	15.5	8.5
30					10.5	6.0	10.0	5.0	---	---	14.5	9.0
31					7.0	3.5	11.0	8.0	---	---	14.0	9.5
MONTH					10.5	3.5	12.0	3.5	13.5	3.0	15.5	3.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.0	8.5	15.0	9.5	17.5	8.0	18.5	10.0	19.5	10.5	16.5	10.5
2	13.5	8.0	15.5	9.0	15.5	8.5	18.0	10.5	18.5	10.5	17.0	9.5
3	12.5	7.5	16.5	8.0	15.5	10.5	17.0	10.0	19.0	10.5	17.5	11.0
4	11.0	8.0	13.0	6.5	17.0	9.5	16.5	10.5	19.0	10.5	18.0	11.0
5	15.0	7.0	10.5	5.5	18.0	9.5	16.5	9.5	17.0	10.5	14.5	12.0
6	13.0	5.5	13.5	6.5	18.0	10.5	16.5	10.5	19.5	11.0	16.0	11.5
7	14.0	5.5	13.5	8.0	17.0	9.5	19.5	10.0	19.0	10.5	16.0	11.0
8	14.5	7.5	15.5	7.0	18.5	10.0	18.0	10.5	19.0	10.5	15.5	9.5
9	14.5	6.5	16.0	8.5	18.0	10.0	19.0	10.5	19.0	10.5	16.0	9.5
10	15.0	7.0	17.0	9.5	13.5	8.5	16.5	10.0	16.0	10.5	12.0	10.0
11	13.5	6.5	14.0	8.0	16.0	8.5	18.0	10.0	19.0	10.5	15.0	9.5
12	15.5	6.5	16.5	7.5	17.0	9.5	19.0	10.0	15.0	10.5	11.5	9.0
13	13.5	7.0	16.5	9.5	19.0	11.0	18.5	10.5	16.0	10.0	15.5	9.5
14	14.0	8.5	17.5	10.0	17.5	10.0	20.0	10.5	16.0	9.5	16.0	9.5
15	13.0	6.5	17.0	7.5	16.5	9.0	18.5	11.5	16.5	9.5	16.0	9.5
16	13.0	8.0	13.0	8.5	16.5	8.5	19.0	10.5	13.5	10.0	15.5	8.5
17	13.5	6.5	13.5	7.5	18.0	9.5	19.0	10.0	16.5	9.0	15.5	7.5
18	16.0	7.0	9.5	7.5	16.0	9.5	18.5	10.5	17.0	9.5	10.5	6.0
19	14.5	8.5	16.0	8.0	17.5	10.0	19.0	10.0	16.5	9.5	13.5	7.0
20	13.5	9.0	15.5	9.5	16.0	9.5	16.5	10.5	17.0	9.5	15.0	7.5
21	11.0	6.5	17.0	9.5	17.5	10.0	18.5	9.5	17.0	9.5	14.0	9.0
22	14.5	7.0	15.5	9.5	18.5	9.5	19.0	10.0	16.5	10.0	14.5	9.0
23	15.5	6.5	15.5	9.5	18.5	10.0	19.5	10.5	16.5	9.5	16.5	9.5
24	14.0	8.5	13.0	7.5	18.5	9.5	19.0	10.5	16.5	9.5	16.5	9.5
25	14.0	9.5	11.0	8.5	15.5	9.5	19.5	10.5	17.0	9.5	17.0	9.5
26	13.0	9.0	16.5	8.0	17.0	9.5	19.5	10.5	17.5	10.5	16.5	10.0
27	13.0	9.0	17.0	8.5	18.5	9.5	18.0	11.5	17.5	10.0	16.0	10.5
28	13.0	9.0	17.5	9.0	18.0	10.0	18.5	12.0	17.5	10.0	15.0	9.5
29	15.0	9.5	16.0	8.5	18.5	10.0	19.0	11.0	18.5	10.0	16.5	9.0
30	13.0	9.0	13.5	7.5	18.5	10.0	19.5	10.5	16.0	10.5	15.5	9.5
31	---	---	14.5	8.0	---	---	18.5	10.5	17.0	10.5	---	---
MONTH	16.0	5.5	17.5	5.5	19.0	8.0	20.0	9.5	19.5	9.0	18.0	6.0
YEAR	20.0	3.0										

MUD LAKE-LOST RIVER BASINS

13116980 BIRCH CREEK AT KAUFMAN GUARD STATION, NEAR LONE PINE, ID

LOCATION.--Lat 44°14'29", long 112°58'15", in SE¼SW¼NW¼ sec.35, T.11 N., R.29 E., Lemhi County, Hydrologic Unit 17040216, Targhee National Forest, 0.6 mi (1 km) upstream from Kaufman guard station and 4.6 mi (7.4 km) northwest of Lone Pine.
DRAINAGE AREA.--Not determined.
PERIOD OF RECORD.--November 1977 to September 1978 (discontinued).
PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: December 1977 to September 1978 (discontinued).
EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 19.5°C July 26, Aug. 6; minimum, 2.0°C Jan. 1.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
NOV												
28...	1720	79	269	8.0	.5	7.5	2	--	--	24	170	15
JAN												
16...	1435	76	302	8.0	-2.0	7.5	1	10.7	113	8	160	20
MAR												
02...	1430	49	316	8.1	-6.0	8.5	2	10.1	109	19	160	0
APR												
05...	1500	83	269	8.8	10.0	14.0	1	9.6	117	0	170	27
MAY												
11...	1315	80	*321	8.7	5.5	11.0	1	10.0	114	11	170	23
JUN												
08...	1500	74	330	8.7	19.5	17.0	1	9.1	124	7	160	29
JUL												
18...	1030	72	318	8.4	19.0	12.5	1	9.9	117	11	160	17
AUG												
30...	1515	46	293	8.4	25.0	14.5	1	9.3	114	17	160	17

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV												
28...	40	16	5.4	7	.2	1.1	160	14	155	.5	--	4.8
JAN												
16...	40	15	5.2	7	.2	1.0	150	10	140	.4	--	4.5
MAR												
02...	41	15	5.0	6	.2	.9	200	0	160	2.5	24	4.9
APR												
05...	41	16	5.7	7	.2	1.0	150	12	143	.4	24	5.2
MAY												
11...	42	16	5.5	7	.2	1.0	170	5	150	.6	25	5.5
JUN												
08...	39	15	5.8	7	.2	1.0	150	5	131	.5	33	5.1
JUL												
18...	41	15	5.4	7	.2	1.0	170	2	143	1.1	23	4.7
AUG												
30...	41	14	7.1	9	.2	1.0	150	12	143	1.1	23	4.5

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)
NOV												
28...	.2	183	.25	39.0	.32	.06	.00	.02	.34	1.5	.01	.03
JAN												
16...	.2	172	.23	35.3	.22	.00	.07	.07	.29	1.3	.05	.15
MAR												
02...	.2	165	.22	22.0	.25	.01	.01	.02	.27	1.2	.00	.00
APR												
05...	.2	177	.24	39.7	.16	.04	.17	.21	.37	1.6	.00	.00
MAY												
11...	.2	186	.25	40.2	.16	.00	.17	.17	.33	1.5	.01	.03
JUN												
08...	.2	178	.24	35.7	.13	.01	.30	.31	.44	1.9	.00	.00
JUL												
18...	.2	181	.25	35.4	.16	.00	.22	.22	.38	1.7	.01	.03
AUG												
30...	.2	172	.23	21.4	.05	.01	.25	.26	.31	1.4	.00	.00

* Not a field determination.

13116980 BIRCH CREEK AT KAUFMAN GUARD STATION, NEAR LONE PINE, ID--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1					---	---	6.0	2.0	8.5	5.0	10.0	3.5
2					---	---	6.0	3.0	8.5	6.0	9.0	2.5
3					---	---	7.5	5.0	10.5	6.0	9.0	2.5
4					---	---	7.5	5.5	9.5	6.0	9.0	5.5
5					---	---	7.5	5.5	9.0	6.5	10.5	6.0
6					---	---	8.0	5.5	10.0	6.5	11.0	5.0
7					---	---	8.5	4.5	8.5	5.5	10.0	4.5
8					---	---	7.5	6.0	9.5	5.0	10.0	6.5
9					---	---	8.5	5.5	7.5	5.0	11.5	5.5
10					---	---	8.0	5.5	8.5	5.5	11.5	4.5
11					---	---	9.0	5.5	8.0	3.5	10.5	4.5
12					---	---	9.5	5.5	9.5	5.0	10.5	4.5
13					---	---	8.0	4.0	9.5	4.0	11.0	3.5
14					---	---	8.0	6.5	9.0	4.0	8.5	4.5
15					---	---	8.0	6.0	9.0	3.5	11.5	4.5
16					---	---	6.0	5.5	9.5	3.0	12.0	4.0
17					---	---	9.0	6.0	9.0	4.0	12.5	4.5
18					---	---	8.5	5.5	7.5	3.0	13.5	5.0
19					7.0	4.0	8.5	6.0	8.5	2.5	13.5	5.5
20					6.5	3.0	8.0	5.5	10.0	4.0	13.0	5.5
21					6.0	5.0	8.5	5.5	8.5	4.5	13.5	5.5
22					7.0	5.5	9.5	3.5	10.5	4.0	11.0	6.0
23					6.5	5.0	6.0	2.5	9.0	5.5	11.0	7.0
24					6.5	5.5	6.5	3.5	11.5	6.5	14.0	5.5
25					6.0	4.5	6.0	4.0	10.5	6.5	13.0	6.5
26					8.5	4.5	8.0	5.5	10.5	6.0	13.0	6.0
27					6.0	4.0	8.0	5.0	11.0	5.5	13.5	6.0
28					8.0	4.0	8.5	4.5	9.0	4.0	14.5	6.0
29					7.5	5.0	10.0	5.0	---	---	14.0	6.5
30					8.5	5.0	8.5	3.5	---	---	13.5	7.0
31					5.5	3.0	9.0	5.5	---	---	13.5	7.0
MONTH					8.5	3.0	10.0	2.0	11.5	2.5	14.5	2.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.0	6.5	13.0	7.0	16.5	6.0	17.0	7.5	19.0	9.0	17.0	9.0
2	11.0	5.5	14.5	7.0	14.5	8.5	17.5	8.5	18.5	9.0	17.0	8.5
3	11.5	5.5	15.5	5.5	14.0	8.5	15.5	8.0	19.0	9.0	16.5	10.0
4	10.0	4.5	10.5	4.0	16.0	7.5	14.5	8.5	19.0	9.0	17.5	10.0
5	14.5	5.5	9.0	3.5	18.0	7.0	15.0	6.0	16.5	9.0	15.0	11.0
6	11.0	4.0	11.5	4.5	17.0	8.0	15.0	8.5	19.5	10.0	15.5	11.0
7	11.5	4.0	12.0	5.5	19.5	7.5	18.0	8.0	19.0	9.0	18.0	10.0
8	13.0	5.0	14.5	5.0	18.0	7.5	16.5	8.5	19.0	9.0	15.5	8.5
9	12.0	4.0	15.0	6.0	17.0	8.0	16.5	8.0	18.5	8.5	16.0	8.0
10	14.0	4.5	16.0	7.5	11.5	7.0	17.0	8.5	16.5	9.0	11.5	9.5
11	12.5	4.5	12.5	5.5	15.0	6.5	17.0	8.0	18.5	9.0	13.5	8.5
12	14.0	4.0	15.5	5.5	16.0	7.0	18.5	8.0	13.5	9.0	10.5	8.0
13	12.0	5.0	15.5	7.0	16.0	8.5	17.5	8.0	14.5	9.5	14.5	8.5
14	12.5	5.5	16.5	7.5	17.0	8.0	19.0	8.5	15.0	8.5	15.5	8.5
15	11.0	5.0	16.5	5.5	16.5	7.5	17.0	9.5	16.5	8.0	16.0	8.0
16	11.0	5.5	11.5	4.0	15.5	6.0	16.0	9.5	12.0	9.5	15.5	8.0
17	11.5	4.5	12.0	5.0	17.5	7.5	18.0	8.0	16.0	8.0	14.5	7.0
18	14.0	4.5	8.0	6.0	14.0	7.0	18.5	8.0	17.0	8.0	10.0	5.5
19	13.5	5.5	14.0	6.5	16.5	8.0	17.5	8.5	16.5	7.5	13.0	6.5
20	11.5	4.5	14.0	6.5	17.0	8.5	13.5	9.0	17.0	8.5	14.5	6.0
21	8.5	5.0	16.0	6.5	17.5	7.5	18.0	7.5	17.0	8.5	14.0	7.5
22	12.5	5.0	14.0	8.0	17.5	7.5	18.5	8.0	16.0	9.0	14.5	7.5
23	14.0	5.0	14.5	7.5	16.0	7.5	19.0	8.0	16.5	8.0	16.0	8.0
24	12.5	5.5	12.5	5.5	17.0	7.5	17.5	8.5	17.0	8.5	16.5	8.0
25	12.5	7.0	9.5	6.0	14.0	7.5	19.0	8.5	17.0	8.5	16.5	8.5
26	11.0	7.0	15.0	5.0	16.0	7.0	19.5	8.5	17.5	9.0	16.5	8.5
27	12.0	7.0	15.5	6.0	18.0	7.0	16.5	10.0	18.0	9.5	15.5	9.0
28	11.5	7.0	17.0	6.5	17.0	8.0	18.0	11.0	17.0	8.5	14.0	9.0
29	13.5	7.0	15.5	6.0	17.5	8.0	18.0	9.5	17.5	9.0	16.0	8.0
30	10.5	6.5	11.5	5.0	17.5	7.5	19.0	9.0	15.0	9.0	15.0	8.0
31	---	---	13.0	5.5	---	---	18.0	9.0	17.0	9.5	---	---
MONTH	14.5	4.0	17.0	3.5	18.0	6.0	19.5	7.5	19.5	7.0	18.0	5.5
YEAR	19.5	2.0										

13116990 BIRCH CREEK NEAR LONE PINE, ID

LOCATION.--Lat 44°13'46", long 112°58'30", in NE¼SE¼NE¼ sec.3, T.10 N., R.29 E., Clark County, Hydrologic Unit 17040216, 200 ft (61 m) upstream from State Highway 28 crossing and 3.7 mi (6.0 km) northwest of Lone Pine.
DRAINAGE AREA.--Not determined.
PERIOD OF RECORD.--November 1977 to September 1978 (discontinued).
PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: December 1977 to September 1978 (discontinued).
REMARKS.--No temperature record Dec. 31 to Jan. 15, Jan. 26 to Feb. 28 due to equipment malfunction.
EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 21.0°C Aug. 11.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
NOV												
28...	1510	95	251	8.9	.5	8.0	2	--	--	21	170	32
JAN												
16...	1230	94	298	8.6	-2.0	6.0	6	10.8	109	11	170	27
MAR												
01...	1130	85	304	7.8	-4.0	5.0	2	11.0	109	0	170	--
APR												
05...	1245	103	282	8.7	9.0	12.5	1	9.6	114	7	170	24
MAY												
10...	1315	101	282	8.7	12.5	12.5	1	9.7	115	14	170	0
JUN												
07...	1430	92	305	8.5	20.0	15.5	1	8.6	118	6	170	30
JUL												
18...	1120	93	321	8.6	19.5	14.0	1	9.4	114	7	160	20
AUG												
29...	1645	43	* 310	8.5	26.0	17.5	2	8.2	108	22	150	7

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)
NOV												
28...	42	16	5.3	6	.2	1.0	140	14	138	.3	.0	--
JAN												
16...	42	16	5.1	6	.2	1.0	150	12	143	.7	--	--
MAR												
01...	41	16	5.0	6	.2	1.0	--	0	--	--	--	27
APR												
05...	42	16	5.4	6	.2	1.0	150	14	146	.6	--	26
MAY												
10...	43	16	5.2	6	.2	1.0	190	14	179	.7	--	27
JUN												
07...	41	16	5.5	7	.2	.9	160	5	140	.9	--	36
JUL												
18...	41	15	5.1	6	.2	.9	150	10	140	.7	.4	25
AUG												
29...	37	15	7.1	9	.2	1.1	160	7	143	.9	--	25

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)
NOV											
28...	4.8	.2	168	.23	43.1	.28	.00	4.3	4.3	4.6	20
JAN											
16...	5.1	.2	182	.25	46.2	.23	.01	.04	.05	.28	1.2
MAR											
01...	4.8	.2	182	.25	41.8	.26	.03	.03	.06	.32	1.4
APR											
05...	5.3	.2	178	.24	49.5	.17	.04	.15	.19	.36	1.6
MAY											
10...	5.6	.2	190	.26	51.8	.15	.09	.05	.14	.29	1.3
JUN											
07...	5.1	.2	185	.25	46.0	.14	.01	.16	.17	.31	1.4
JUL											
18...	4.7	.2	180	.24	45.3	.16	.00	.20	.20	.36	1.6
AUG											
29...	4.7	.1	179	.24	20.9	.09	.01	.50	.51	.60	2.7

* Not a field determination.

13116990 BIRCH CREEK NEAR LONE PINE, ID--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ANTIMONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)
NOV 28...	.00	.00	40	2	3	300	0	60	1	0	0
JAN 16...	.00	.00	--	--	--	--	--	--	--	--	--
MAR 01...	.01	.03	--	--	--	--	--	--	--	--	--
APR 05...	.01	.03	--	--	--	--	--	--	--	--	--
MAY 10...	.01	.03	--	--	--	--	--	--	--	--	--
JUN 07...	.00	.00	--	--	--	--	--	--	--	--	--
JUL 18...	.01	.03	20	0	2	300	0	50	1	10	0
AUG 29...	.01	.03	--	--	--	--	--	--	--	--	--

DATE	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)
NOV 28...	2	40	8	0	.0	5	6	0	0	0	.00
JAN 16...	--	--	--	--	--	--	--	--	--	--	--
MAR 01...	--	--	--	--	--	--	--	--	--	--	--
APR 05...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--	--
JUN 07...	--	--	--	--	--	--	--	--	--	--	--
JUL 18...	3	30	4	10	.0	5	1	1	0	10	.00
AUG 29...	--	--	--	--	--	--	--	--	--	--	--

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	DIAZINON, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	METHYL TRITHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 28...	1510	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
JUL 18...	1120	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

13116900 BIRCH CREEK NEAR LONE PINE, ID--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1					---	---	---	---			10.0	2.0
2					---	---	---	---			8.5	1.0
3					---	---	---	---			9.0	1.0
4					---	---	---	---			8.5	4.5
5					---	---	---	---			10.5	5.0
6					---	---	---	---			11.0	4.0
7					---	---	---	---			9.0	3.0
8					---	---	---	---			9.5	5.5
9					---	---	---	---			11.0	5.0
10					---	---	---	---			11.5	3.0
11					---	---	---	---			10.5	3.0
12					---	---	---	---			10.0	3.0
13					---	---	---	---			10.0	2.0
14					---	---	---	---			8.0	2.5
15					---	---	---	---			11.0	3.0
16					---	---	7.0	4.5			11.5	2.5
17					5.0	4.5	8.5	4.5			11.5	2.5
18					8.0	3.0	7.5	4.0			13.0	3.5
19					8.0	2.5	7.5	5.0			13.0	4.0
20					5.0	1.0	7.0	4.0			13.0	4.0
21					5.0	3.0	7.5	4.5			13.0	4.0
22					5.5	4.0	8.5	1.5			10.0	4.5
23					8.5	3.5	4.5	.5			10.0	6.0
24					8.0	4.0	5.0	1.5			12.0	4.0
25					8.0	3.0	4.5	2.0			11.5	5.0
26					8.5	3.0	---	---			11.0	4.5
27					7.5	2.0	---	---			11.0	5.0
28					7.0	2.0	---	---			12.5	4.5
29					7.0	3.5	---	---			13.0	4.5
30					8.0	3.5	---	---			12.0	5.5
31					---	---	---	---			12.0	5.5
MONTH					8.5	1.0	8.5	.5			13.0	1.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.5	5.5	14.0	7.5	17.0	5.5	18.0	7.5	20.0	9.0	17.5	9.0
2	10.0	4.5	14.5	7.0	15.5	6.5	19.0	8.5	20.0	9.0	18.0	9.0
3	10.5	4.0	13.5	5.0	15.0	8.5	16.5	7.5	20.0	9.0	17.5	11.0
4	9.5	4.5	11.0	3.5	16.5	7.5	15.5	9.0	20.0	9.0	17.5	10.5
5	13.0	4.0	9.5	4.5	18.5	7.5	15.5	7.5	17.0	9.5	16.0	12.0
6	11.0	5.0	11.5	4.5	18.0	8.0	18.0	8.5	20.5	10.5	16.0	11.5
7	11.0	4.0	12.5	5.0	16.5	7.5	20.0	8.0	20.0	9.0	18.0	10.5
8	13.0	5.5	14.5	5.0	19.5	7.5	18.5	8.5	20.0	9.0	16.0	8.5
9	12.0	3.5	15.0	8.0	18.0	8.0	19.5	8.5	18.5	8.5	16.0	8.0
10	10.0	4.5	13.5	7.5	12.0	7.5	14.5	8.5	16.5	10.0	12.5	10.0
11	13.0	4.5	12.5	5.5	15.0	6.5	19.0	8.5	21.0	9.0	13.5	8.5
12	14.5	5.5	13.5	5.5	16.5	7.0	19.5	8.0	15.5	9.0	13.0	8.0
13	12.0	5.0	16.0	7.5	19.0	9.0	20.0	9.0	15.0	10.5	14.0	8.5
14	12.5	5.5	16.5	7.5	18.5	7.0	20.5	8.5	16.0	8.0	15.5	8.5
15	11.5	5.5	16.5	8.5	17.0	7.5	19.5	10.5	17.0	8.0	16.0	8.0
16	11.5	5.5	12.0	4.5	16.0	6.5	20.5	10.0	13.0	10.0	15.5	8.0
17	11.5	4.0	12.0	5.0	19.5	7.5	20.0	8.0	16.5	8.0	14.5	6.5
18	14.0	4.5	8.5	6.5	14.5	7.0	19.5	8.5	17.5	8.0	10.0	5.0
19	13.0	5.5	14.5	8.5	17.5	8.0	19.5	8.5	17.0	7.5	13.0	6.5
20	12.0	6.5	14.5	6.5	19.0	6.5	14.5	9.5	17.5	8.5	14.5	5.5
21	9.5	5.0	16.0	7.0	18.5	8.0	19.5	8.0	17.5	8.0	13.5	6.5
22	13.0	4.5	15.0	7.5	19.0	7.0	19.5	8.5	16.5	9.0	14.0	7.0
23	14.5	5.0	15.0	7.0	19.5	7.5	20.0	8.0	16.5	8.0	15.0	7.5
24	12.5	5.5	13.0	5.5	18.5	7.5	18.0	8.5	17.0	8.0	15.5	7.5
25	13.0	7.0	10.0	6.0	15.0	7.0	20.0	8.5	17.5	8.0	16.0	7.5
26	11.5	7.0	15.0	5.0	17.0	7.5	20.5	8.5	17.5	9.0	15.5	7.5
27	12.5	7.0	16.0	6.0	19.5	7.5	17.5	10.5	18.5	9.5	15.0	8.0
28	11.5	7.5	17.5	6.5	18.5	7.5	20.0	11.5	17.0	8.0	14.0	8.5
29	13.0	7.5	16.0	6.5	20.0	7.5	19.0	10.0	18.0	8.5	15.0	7.5
30	11.5	7.0	12.0	5.0	18.5	7.5	20.5	9.5	16.0	9.0	14.0	7.0
31	---	---	14.5	5.5	---	---	20.5	9.0	18.0	10.5	---	---
MONTH	14.5	3.5	17.5	3.5	20.0	5.5	20.5	7.5	21.0	7.5	18.0	5.0
YEAR	21.0											

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATIONS FOR PERMIT NOS. 32-7128 AND 32-7136 IN THE NAME OF BIRCH POWER COMPANY	PROPOSED MEMORANDUM DECISION AND ORDER

On September 8, 1982, Birch Power Company filed with the Department of Water Resources Application for Permit No. 32-7128 to appropriate 45 cubic feet per second less a minimum of 5 cubic feet per second for fish propagation from Birch Creek in Clark County. The water would be diverted in the NE1/4NW1/4, Sec. 3, Twp. 8N, Rge. 30E and used to generate 900 horsepower in the NE1/4NE1/4, Sec. 17, Twp. 8N, Rge. 31E.

Notice of the application was published in the Rexburg Journal on September 23 and 30, 1982 and was subsequently protested on September 23, 1982 by the Idaho Department of Fish and Game. On October 12, 1982, additional protests were received from the Bureau of Land Management and from William T. Simmons, C. A. Wagoner, and Ben R. Wilding.

On January 3, 1984, Birch Power Company filed with the Department of Water Resources Application for Permit No. 32-7136 to appropriate an additional 30 cubic feet per second from Birch Creek to be used in combination with Application No. 32-7128.

Notice of this application was published in the Rexburg Journal on January 19 and 26, 1984 and subsequently protested on February 1, 1984 by the Bureau of Land Management. Additional protests were received from the Idaho Department of Fish and Game, and Ben Wilding, Watermaster of Water District 32-D, on February 2 and 3, 1984, respectively. A petition for D & D Enterprises to intervene in the matter of Application for Permit No. 32-7128 was received on September 16, 1983. The applicant had previously advised the Department he would not object to such a petition so on February 23, 1984, the Department issued an order allowing D & D Enterprises to intervene in the matter.

The protests and petition to intervene cited several reasons for objecting to the proposed project which are summarized as follows:

1) Diversion of 75 cubic feet per second at the proposed diversion point would have an adverse impact on the fishery and riparian habitat along the 3,000 feet of Birch Creek between the proposed point of diversion and the Reno

Ditch diversion.

2) The construction of the proposed diversion would be incompatible with the interests of the water users of Birch Creek.

3) The applicant's plans are inadequate to allow an assessment of possible detrimental effects.

4) The application contains no proof of a firm commitment to finance the project and the applicant has not demonstrated financial ability to complete it.

5) Information provided on the application is not sufficient to evaluate feasibility of the project.

6) The application appears to be made for speculative purposes.

On April 5, 1984, a combined hearing was held in Idaho Falls, Idaho to consider the objections against Applications for Permit No. 32-7128 and 32-7136. Present at the hearing and representing the applicant were Ted Sorenson, owner of Birch Power Company and Ray Rigby, Attorney at Law. The protestants present at the hearing were William Dillon, Deputy Attorney General and Virgil Moore, Regional Fisheries Manager representing the Idaho Department of Fish and Game; Ben Wilding, Watermaster representing Water District 32-D, Birch Creek; Jim Esget, District Hydrologist and Robert McCardy, Wildlife Biologist representing U.S. Bureau of Land Management; and George Peterson, Attorney at Law representing D & D Enterprises. The following evidence was obtained during the hearing and considered in reaching this decision.

Review of Evidence

1) Applications for Permit Nos. 32-7128 and 32-7136

2) Hearing tapes numbered 1 through 9.

3) Applicant's Exhibit No. 1, Birch Power Company Preliminary Design and Report.

4) Applicant's Exhibit No. 2, letter from Don McGahey, General Manager of Midstate Distributing, Inc. dated April 4, 1984.

5) Applicant's Exhibit No. 3, letter from Brian D. Holt, Director Consumer Service, Planning and Research for Utah Power and Light Company, dated February 14, 1984.

6) Applicant's Exhibit No. 4, letter from Lyle J. Larson, Assistant Vice-president, Continental Bank & Trust Company, dated January 6, 1984.

7) Applicant's Exhibit No. 5, letter from Lyle J. Larson, Assistant Vice-president, Continental Bank & Trust Company, dated October 24, 1983.

8) Applicant's Exhibit No. 6, a report by J. S. Griffeth, PhD, entitled "Feasibility of Developing a Trout Population in the Proposed Birch Creek Hydroelectric Project Feeder Ditch" dated April 5, 1984.

9) Applicant's Exhibit No. 7, photos of Birch Creek in vicinity of proposed diversion.

10) Applicant's Exhibit No. 8, photos of riparian habitat along Reno Ditch.

11) Applicant's Exhibit No. 9, photos of general area where feeder ditch will be constructed.

12) Applicant's Exhibit No. 10, order from Federal Energy Regulatory Commission issuing preliminary permit to Birch Power Company, Project No. 7194-000 issued September 7, 1983.

13) Protestant's Exhibit Fish and Game No. 1, letter from Tom Reinecker, Region VI Supervisor, Idaho Department of Fish and Game, dated March 26, 1984.

14) Policy Statement of Idaho Water Resource Board on Birch Creek.

15) Court decree entitled Agnes B. Reno, et al vs J. R. Richards, et al dated September 6, 1922 adjudicating water rights on Birch Creek and tributaries.

Birch Creek flows in a southeasterly direction from Gilmore Summit down through Birch Creek Valley and adjacent to State Highway 28 for several miles. Birch Creek is used heavily by campers and fishermen partially because of the ease of access to the creek and because picnic and camping areas have been developed along it. About 3 miles above the proposed point of diversion Birch Creek turns more south and diverges from Highway 28 until at the proposed point of diversion it is about 1 1/2 miles west of the highway. The creek continues in a southerly direction about 3000 feet to the diversion structure for the Reno Ditch where during most of the time the entire flow is diverted leaving the channel of Birch Creek below the diversion without water.

The Reno Ditch takes the water from the east side of the creek and runs in a east-southeasterly direction about 5 miles before it is used. The slope of the ditch is steep enough so that the velocity of water is between 5 and 8 feet per second.

The applicant plans to divert the water from Birch Creek about 3000 feet upstream from the Reno Ditch diversion into a feeder ditch with a flatter slope with the velocity of the water reduced to 1.8 to 2.25 feet per second.

The water would be conveyed for about 5 1/2 miles in the feeder ditch then enter a steel penstock leading downhill to the generation facility located adjacent to the Reno Ditch. The water leaving the generation facility would return directly to the Reno Ditch for use by the irrigators.

The applicant claims that the water lost to seepage in the new feeder ditch will be at least 5 cubic feet per second less than in the 3000 feet of Birch Creek and in the approximately 5 miles of the Reno Ditch to the point where the water is returned to the Reno Ditch. This possible decrease in water loss raises the question of whether the water previously lost to seepage should be used to fill the decreed rights of the irrigators on the Reno Ditch or should it be used to provide a minimum flow in the Birch Creek channel downstream from the proposed point of diversion.

The hearing officer has considered the evidence and reviewed the testimony, and based upon his understanding of the law, proposes the following Findings of Fact, Conclusions of Law and Order:

FINDINGS OF FACT

1) Birch Power Company, the applicant, is a corporation qualified to do business in the State of Idaho, under the laws of the State of Idaho.

2) The applicant has applied to the Department of Water Resources for 45.0 cubic feet per second under Application for Permit No. 32-7128 and 30.0 cubic per second under Application for Permit No. 32-7136.

3) The applicant, through Ted Sorenson sole owner verbally deleted at the hearing all reference to the intent of the applicant to leave 5.0 cubic feet per second maintenance flow in Birch Creek between the proposed point of diversion and the Reno Ditch diversion.

4) The applicant has filed an application to divert water from Birch Creek in the NE1/4NW1/4, Sec. 3, Twp. 8N, Rge. 30E, convey this water through 5 miles of feeder ditch and 1 mile of penstock to a point in the NE1/4NE1/4, Sec. 17, Twp. 8N, Rge. 31E, where it will be used to generate 1,600 horsepower under 278 feet of head. This plan is option A in Applicant's Exhibit 1. Option B shown in Exhibit 1, but not shown on the application, would use the same feeder ditch but would use about 3 miles of penstock to a generating station in the NE1/2SE1/2, Sec. 15, T8N, Rge. 31E. The effect on Birch Creek and the downstream users would be the essentially the same for both options.

5) Based upon the records of the USGS gaging station at Eight Mile Canyon Road, flows at the proposed point of diversion are expected to range

consistantly from 41.0 cubic feet per second to 75.0 cubic feet per second with flows in excess of 75.0 cubic feet per second occurring primarily in the period from October to May.

6) Water normally conveyed through the Reno Ditch for irrigation purposes will be the same water used for power generation during the irrigation season.

7) The proposed point of diversion is approximately 3,000 feet upstream from the head of the Reno Ditch.

8) Diversion of water from Birch Creek during the summer months is subject to regulation by the watermaster of Water District No. 32-D, Birch Creek.

9) Losses in the Birch Creek channel between the proposed point of diversion and the Reno Ditch are estimated at 1.0 cubic foot per second.

10) Loss measurements in the Reno Ditch indicate 9.0 cubic feet per second or approximately 22% of the water diverted is lost between the proposed point of diversion and the point where the water will be returned to the Reno Ditch from the generation facility.

11) The use of sealants by the applicant in the feeder ditch is expected to reduce the loss by 5 cfs or 50% between the proposed point of diversion and the point where the water is returned to the Reno Ditch.

12) The water lost to seepage has never been used for irrigation by those water users on the Reno Ditch.

13) Utah Power and Light to whom the power will be sold, and General Electric, the major supplier of the electrical equipment, have reviewed the project and found it financially feasible.

14) The Continental Bank & Trust Company has a verbal contract with Birch Power Company to secure or provide the best available financing. The bank would finance the project itself or arrange financing with several other alternate sources which are available pending the issuance of a water right permit.

15) Existing riparian habitat will be lost along that portion of the Reno Ditch and Birch Creek where dewatering is expected to occur. The existing riparian habitat is mainly willows and other brushy plants along Birch Creek and grasses but no woody plants along the Reno Ditch.

16) The fishery existing in Birch Creek below the proposed point of diversion will be eliminated. A maintenance flow of 5 cubic feet per second bypassing the proposed point of diversion is not sufficient to maintain a

fishery, but would be sufficient to provide stockwater and maintain the riparian zone along the 3000 feet of Birch Creek being dewatered.

17) The first 1 1/2 miles of the feeder ditch is being designed to support a riparian zone and create a fishery habitat where the population density of trout should equal the fishery existing in Birch Creek below the proposed diversion. A continuous flow of water must be maintained in that section of the feeder ditch to assure a fishery.

18) A grazing allotment administered by the BLM has used for many years, the Reno Ditch and Birch Creek below the proposed point of diversion for the watering of 4,000 sheep from April 1 to June 30. The proposed feeder ditch is also located within this grazing allotment.

19) Under a trailing allotment administered by the BLM, 450 head of cattle have watered along the 1 1/2 miles of Birch Creek below the proposed point of diversion between November 1 and February 1.

20) Section 42-113, Idaho Code charges the Department with recognizing and protecting water rights for instream livestock use and other purposes based on priority.

21) On September 7, 1983, the applicant received from the Federal Energy Regulatory Commmission a preliminary permit to conduct investigations and secure data necessary to determine the feasibility of the project.

CONCLUSIONS OF LAW

1) The water that will be saved by sealing the feeder ditch is essentially new water that has never been available for use by the Reno Ditch irrigators, therefore, the existing irrigation rights will not be injured if the water being saved is used to provide stockwater and preserve the riparian habitat along the natural stream channel.

2) Streamflows at the proposed point of diversion have been shown to be adequate for the project as designed for the use of 75 cubic feet per second.

3) The adverse impacts to riparian habitat caused by the appropriation and diversion of water from the 3,300 feet of stream will be sufficiently mitigated by the establishment of 1 1/2 miles of riparian zone plus the riparian vegetation that will naturally occur in the remaining length of the feeder ditch and the riparian vegetation that will be maintained by the minimum flow left in the natural channel.

4) Establishing 1 1/2 miles of fishery habitat in the feeder ditch as shown in Applicant's Exhibit 6, will mitigate the loss of 3,000 feet of fishery

below the proposed point of diversion as long as feeder ditch is not dewatered.

5) Stockwatering use from Birch Creek predates diversion and use of water under the two Birch Power Company applications.

6) Water rights established for instream livestock use on the 3,000 feet of Birch Creek above the Reno Ditch diversion must be satisfied.

7) The applicant has sufficient financial resources to complete the project.

8) The diversion of water under these permits when conditioned to protect the existing irrigation and stockwater rights and to mitigate the riparian, fish and wildlife values, is in the public interest.

9) The applicant is entitled to have both permits approved for a combined diversion of 75 cubic feet per second.

ORDER

IT IS, THEREFORE, HEREBY ORDERED that Applications for Permit Nos. 32-7128 and 32-7136 be APPROVED subject to the following limitations and conditions:

1) Subject to all prior water rights.

2) A measuring device and lockable controlling works of a type acceptable to the Department shall be permanently installed and maintained as part of the diverting works. A second measuring device shall be installed near the end of the feeder ditch so that the amount of water lost in the feeder ditch can be determined.

3) Use of water under these permits is subject to control by the watermaster of State Water District No. 32-D, Birch Creek.

4) Eleven percent of the flow of Birch Creek at the diversion to the feeder ditch, the amount of water saved by the new ditch or 5 cubic feet per second whichever is the least, shall be allowed to flow past the feeder canal diversion in the natural channel of Birch Creek.

5) The feeder canal shall be constructed and maintained in a manner that will reduce the amount of seepage loss by about 5 cubic feet per second.

6) The first 1 1/2 miles of ditch must be designed, constructed, maintained and operated in a manner that supports a fishery as shown in Applicant's Exhibit No. 6.

7) Provisions shall be made to return the water to Birch Creek at the end of the first 1 1/2 mile of feeder ditch to assure that the section of feeder ditch will not be dewatered if the generator malfunctions or icing occurs or any

other event necessitates that the water not be conveyed to the generator.

8) These permits are subject to the provisions of Sections 42-205 through 42-210, Idaho Code restricting sale, transfer, assignment, or mortgage of these permits. Failure to comply with these provisions is cause for immediate cancellation of the permits.

9) This project shall be operated in a manner that will not conflict or interfere with future diversion of water for irrigation or other beneficial consumption.

10) Project construction shall commence within one year from the date of permit issuance and shall proceed diligently to completion unless it can be shown to the satisfaction of the Director of the Department of Water Resources that delays were due to circumstances over which permit holder had no control.

11) The diversion and use of water under this permit and any license subsequently issued is subject to review by the Director on the date of expiration of any license issued by FERC or if no license from FERC is issued, then thirty (30) years from the date the permit is issued. Upon appropriate findings relative to the interest of the public, the Director may cancel all or part of the use authorized herein and may revise, delete or add conditions under which the rights may be exercised.

12) These permits do not constitute Idaho Public Utilities Commission or Federal Energy Regulatory Commission approval that may be required.

Dated this 21 day of November, 1984.

Bobby D. Fleenor

BOBBY D. FLEENOR
Hearing Officer

STATE OF IDAHO

DEPARTMENT OF HEALTH AND WELFARE

Division of Environment
150 North 3rd Avenue
Pocatello, Idaho
83201

July 6, 1984

Mr. Ted Sorenson
550 Linden Drive
Idaho Falls, Idaho 83401

Dear Mr. Sorenson:

We have received your letter requesting Section 404 Water Quality Certification for the proposed Birch Creek Power Facility.

The division will consider water quality certification after we have received the Exhibit "E" portion of your license application. Specifically, we will be interested in mitigation of construction impacts to water quality and the maintenance of an acceptable minimum flow to preserve water quality in the reach between the proposed diversion and the Reno ditch.

Please keep us appraised of the status of this project as you proceed toward the license application.

Sincerely,

Mark Torf

Mark Torf
Sr. Water Quality Specialist

MT/jd

cc: Jerry Yoder
Gordon Hopson

EQUAL OPPORTUNITY EMPLOYER

3) REPORT ON FISH, WILDLIFE AND BOTANICAL RESOURCES

3) REPORT ON FISH, WILDLIFE AND BOTANICAL RESOURCES

For a description of the fish, wildlife and botanical resources, please refer to the following documents attached at the end of Section 3:

1. Little Lost - Birch Creek Land Use Decision Summary, U.S. Department of Interior, Bureau of Land Management, Idaho Falls District, Big Butte Resource Area, October 1981.

2. Birch Creek Aquatic Habitat Management Plan, Idaho Falls District, Bureau of Land Management, Idaho Falls, Idaho December 1975.

3. Birch Creek Aquatic Habitat Management Plan - Evaluation & Revision, September 28, 1984, Bob McCarty.

4. Birch Creek Idaho, Stream Survey Report,Bureau of Land Management, Idaho Falls Disctict, Idaho Department of Fish & Game, Idaho Falls, Idaho, July 1976.

5. Feasibility of Developing A Trout Population in the Proposed Birch Creek Hydroelectric Feeder Ditch, by J.S. Griffith, Ph.D., Idaho State University, Pocatello, Idaho, 5 April 1984.

6. Memorandum of Agreement between Idaho State University & Birch Power Company

7. Riparian Habitat Enhancement Plan - Birch Creek, Jack Griffith, Ph.D., Idaho State University, Pocatello, Idaho, April 1984.

8. Birch Creek Hydroelectric Riparian Plan, Idaho Falls District, Bureau of Land Management, Idaho Falls, Idaho, Bob McCarty, Wildlife Biologist, December 21, 1984

9. Correspondence:

   a. National Marine Fisheries, Dale R. Evans, September 16, 1982.

   b. Bureau of Land Management, Bob McCarty, January 28, 1983.

   c. Idaho Department of Fish & Game, Tom Rienecker, March 26, 1984.

   d. U.S. Fish & Wildlife Service, John P. Wolflim, April 14, 1984.

3) (i) Description of Existing Fish, Wildlife and Plant Communities in the Proposed Project Area - See the above documents. No endangered or threatened species are in the project area. A possible candidate listed by the U.S. Fish & Wildlife Service is the Ferruginous Hawk. No significant impact by the project would be realized, however the applicant will provide raptor safe transmission line perches as shown in Exhibit F-9.

(ii) Description of Anticipated Impacts on Fish, Wildlife and Botanical Resources of the Project. Per the proposal of Dr. Jack Griffith, Ph.D., the first mile and a half miles of the feeder ditch will provide an improved fishery habitat to both increase the density and quantity of fish available as compared to the 3,000 L.F. lost. In addition, the area would be fenced to keep livestock from damaging the area. Fisherman access would be provided and riparian plannings would be provided. This will provide mitigation for the impacts of the project and will in fact, improve the environment of the area. The location of the riparian development and fishery habitat development between Birch Creek and State Highway 28 will provide access for fishermen and recreation use as regulated by the Idaho Department of Fish & Game and the Bureau of Land Management.

(iii) Description of Measures of Facilities Recommended by the State or Federal Agencies for Mitigation of Impacts on Fish, Wildlife and Botanical Resources. As mentioned previously, the first 1.5 miles of the feeder ditch will be developed into a new fishery habitat, will be fenced and planted with native species as mitigation effort to improve the project. The fish mitigation efforts was developed in conjunction with Idaho State University and the Idaho Department of Fish and Game. Riparian Development Improvements were developed by the Bureau of Land Management and will be adhered to by the applicant. Therefore, please refer to Dr. Griffith's report listed under Section 3 General and the Report from the Bureau of Land Management authored by Mr. Robert McCarty, wildlife biologist. The measures proposed by the Idaho Department of Fish and GAme and the Bureau of Land Management are acceptable to the applicant. The applicant can and will comply with all recommendations made by State and Federal agencies, i.e. Idaho Department of Fish and Game, B.L.M., National Wildlife Services, etc.

(iv) Mitigation Measures:

a) Functional Design Drawings - See reports of Dr. Griffith and Mr. Robert McCarty and Exhibit F-2 Riparian Zone Canal Cross Section, F-3 Bypass Headworks, F-5 Fencing Details, and Exhibit G-3 Riparian & Stock/Game Water Plan Layout.

b) See Reports by Dr. Griffith and Robert McCarty.

c) Implementation, Construction and Operation Schedule - See reports by Dr. Griffith and Robert McCarty.

d) Estimated Cost of Construction and Operation & Maintenance of the Proposed Facilities - The estimated cost for the riparian development is, initially, $40,000. The estimated cost for the fishery improvement is $50,000 for a total of $90,000.

e) Financing for the mitigation measures of the facility will be provided with the project financing for the hydro facility.

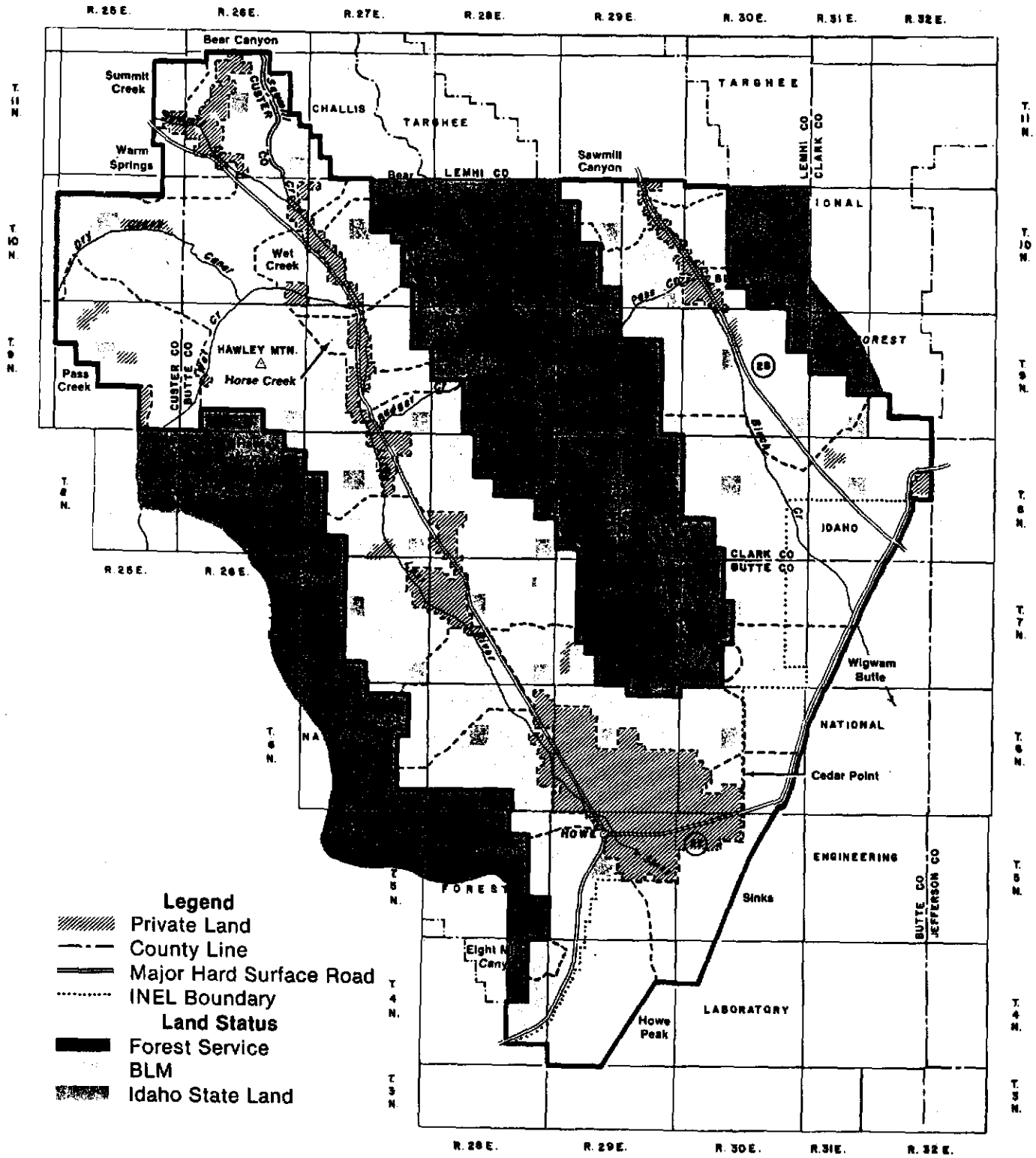
f) The map or drawing showing the proposed project measures is included in Exhibit G - Riparian and Stock/Game Watering Plan Layout.

LITTLE LOST - BIRCH CREEK



U.S. DEPARTMENT OF INTERIOR
Bureau of Land Management
District
Area

Land Use Decisions Summary



MAP 1
LAND STATUS

As the Nation's principal conservation agency, the Department of Interior has basic responsibilities for water, fish, land, wildlife, mineral, park and recreational resources. Indian and Territorial Affairs are also concerns of America's "Department of Natural Resources."

The Department works to assure the wisest choice in managing all our resources so each will make its full contribution to a better United States — now and in the future.

The Bureau of Land Management, an agency in the Department of the Interior, administers programs for conservation and development of the public lands and resources. In Idaho, there are six Bureau of Land Management districts with offices in Idaho Falls, Boise, Burley, Salmon, Shoshone and Coeur d'Alene.

Cover: Birch Creek looking southwest to Lemhi Mountains.

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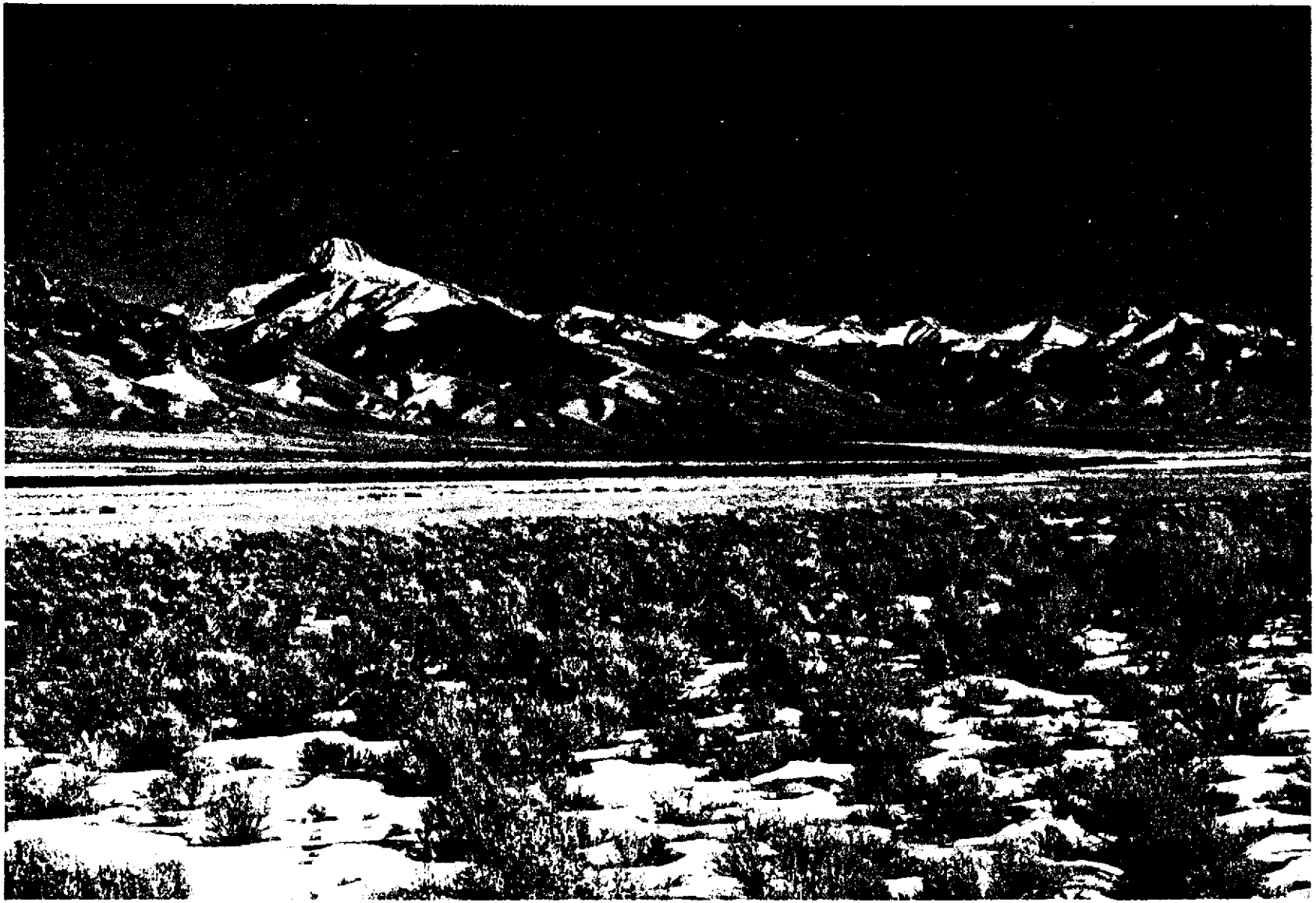
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Bell Mountain in the Lemhi Mountain Range from the Little Lost River Valley. Much of this range is Forest Service land.

INTRODUCTION

This brochure summarizes land use decisions for the Little Lost–Birch Creek Management Framework Plan (MFP).

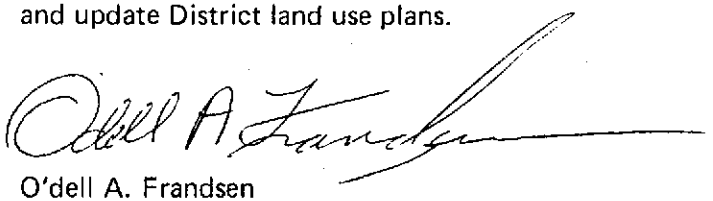
Because of the large number and complexity of the decisions, it is impossible to present all of them in this summary. We have, therefore, summarized only the significant decisions in each resource activity.

The Little Lost–Birch Creek plan and all related documents are available for your review at the District Office in Idaho Falls. The Big Butte Resource Area Manager, as well as my staff and I are available to discuss the decisions and the document with you.

We expect to revise the document from time to time to meet the needs of the people and to cope with changing local and national conditions. Major revisions will be done with full public participation.

My staff and I thank everyone who assisted in this effort, especially those attending our public meetings.

We look forward to working with you in the future to form and update District land use plans.



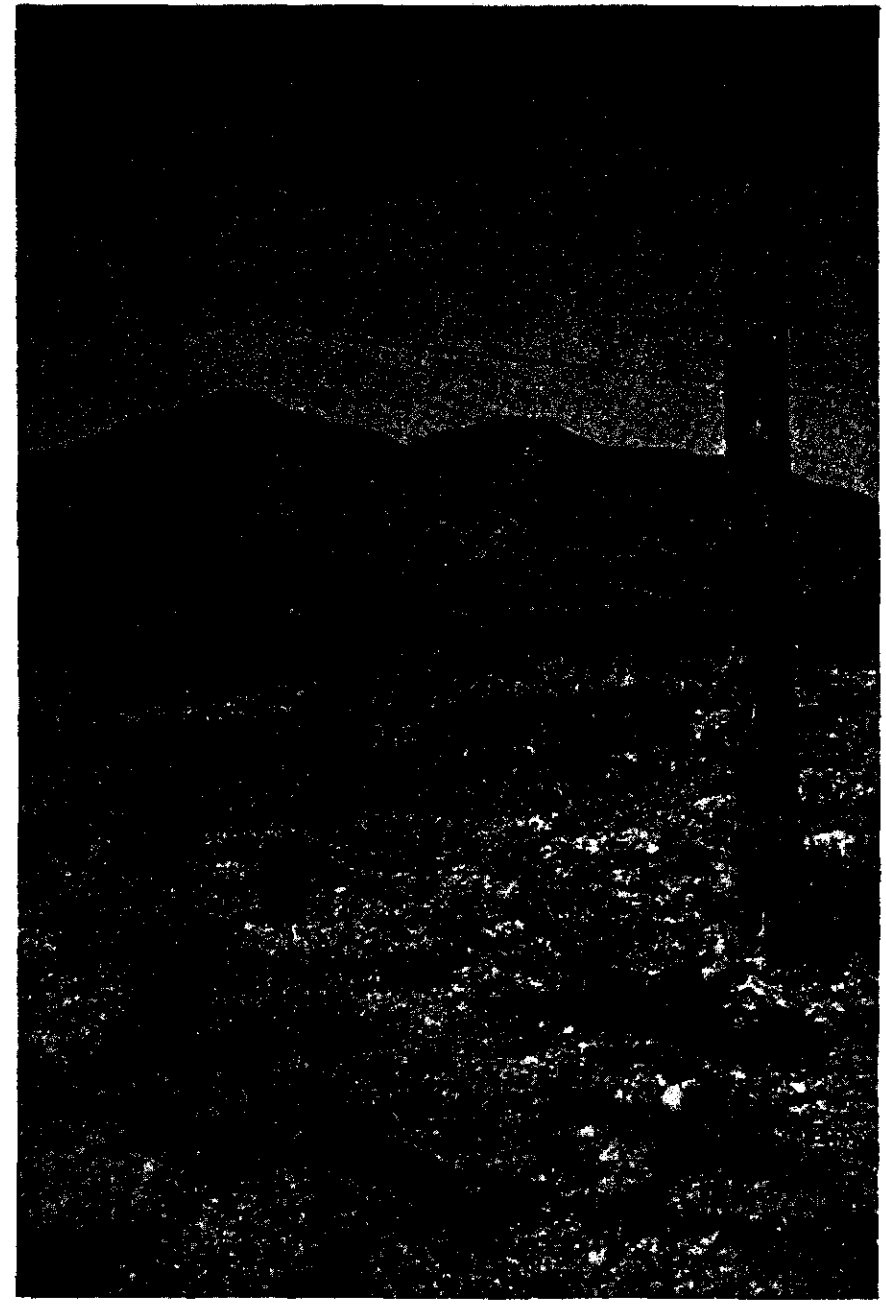
O'dell A. Frandsen
District Manager
Idaho Falls District

October, 1981

General Description

The Little Lost–Birch Creek Planning Unit covers portions of Butte, Clark, Custer and Lemhi counties (see Map 1 inside front cover). The unit contains 434,251 acres, broken down by ownership and allotment in Table 1. The area is rural with no major population centers. Public lands are used for livestock grazing, wildlife habitat, watershed, recreation, fisheries and forestry. Agriculture is the major income source in the area.

General vegetation types include sagebrush, saltbush, mountain shrub type, woodland and meadow. Yearly precipitation ranges from 6.4 to 10.5 inches and averages 8.7. Temperatures vary widely. The average annual temperature in Howe at the foot of the Little Lost Valley is 44° F, but temperatures range from 102° F in the summer to −30° F in the winter. Elevation ranges from 4,778 feet at the Lost River Sinks to 9,752 feet on Hawley Mountain.



Rangeland in the Little Lost River Valley. Hawley Mountain in the background has the Unit's highest elevation at 9,752 feet.

TABLE 1

Little Lost – Birch Creek Unit Acreage By Ownership and Allotment

Allotment	Public Land*	Withdrawn**	State	Private	Total
Bear Canyon	3,538			80	3,618
Bell Mountain	6,633		640	200	7,473
Bernice	22,687		1,840	480	25,007
Briggs Canyon	14,691			80	14,771
Burnt Canyon	5,713			480	6,193
Cedar Point	1,274			840	2,114
Cedarville	19,655		1,900	3,720	25,275
Eight Mile Canyon	1,684				1,684
Hawley Mountain	71,655		5,280	2,660	79,595
Horse Creek	5,559				5,559
Howe Peak	13,277	18,209	560		32,046
Jumpoff	14,677		1,280	580	16,537
Kyle Canyon	711				711
Mahogany Butte	34,935	17,516	2,240	1,200	55,891
Pass Creek	17,949		1,280	1,280	20,509
Sawmill	5,839		640	40	6,519
Sinks		19,781		640	20,421
Spring Canyon	37,005		1,920	2,600	41,525
Summit	3,216				3,216
Uncle Ike	27,872		1,940		29,812
Warm Springs	6,711		640	688	8,039
Wet Creek	6,806			1,280	8,086
Wigwam Butte	5,120	10,167			15,287
Williams Creek	5,363				5,363
	332,570	65,673	20,160	16,848	435,251

* Managed by the Bureau of Land Management.

** Lands withdrawn for use by the Department of Energy for nuclear research and development.

Source: USDI, 1977

Major Issues and Problems

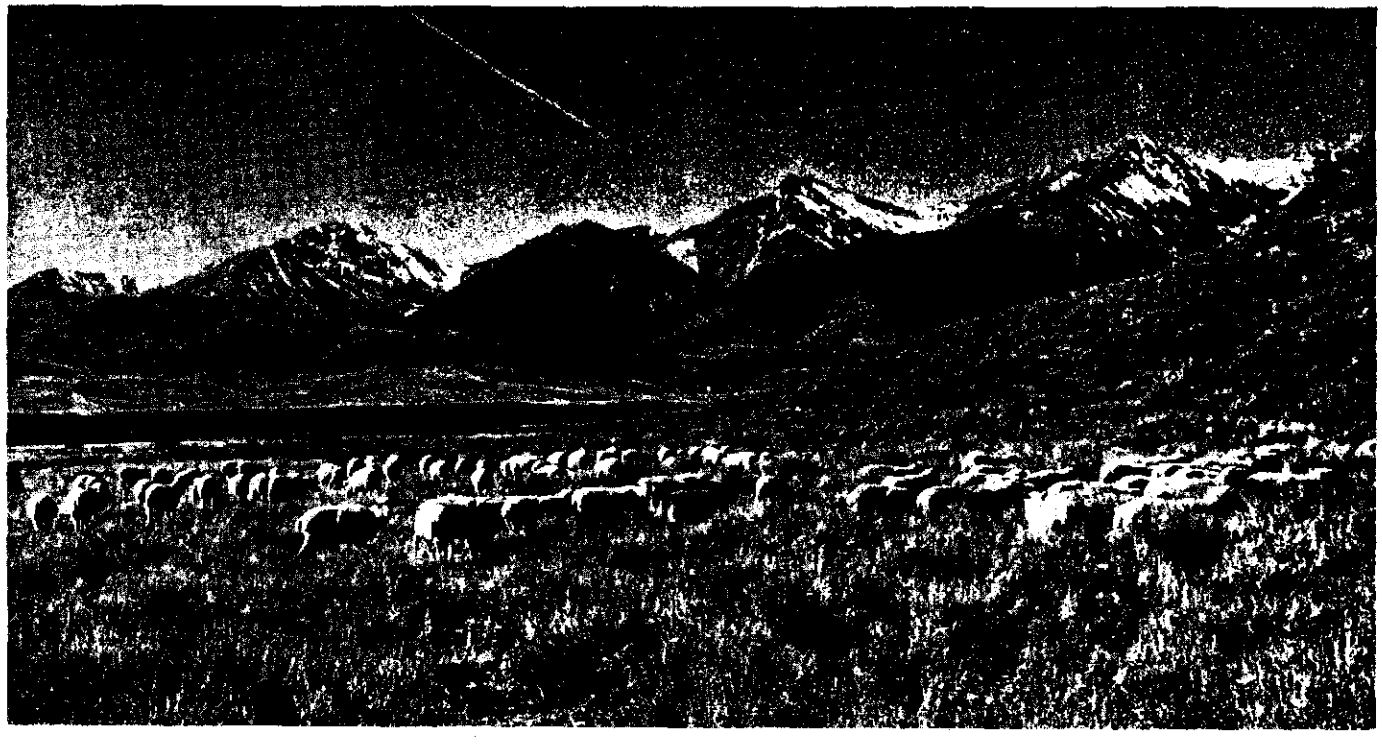
Major issues and problems result from several things: present and potential land use conflicts, unavoidable environmental impacts of resource development, and social and economic impacts on local communities and life styles.

Issues and problems were identified through the BLM's planning process and public participation. The management decisions section describes these issues or problems for each resources.

Significant Management Decisions

Resource and land uses are listed in order of decreasing importance. The ultimate basis for management decisions is the capability of the land itself. Accordingly, geology, climate, soils, topography, wildlife and vegetation along with public demand are major considerations in the Little Lost–Birch Creek MFP decisions.

The following list of decisions is not complete. Persons may examine the complete official document at the Idaho Falls BLM office.



Sheep grazing in Birch Creek Valley. Sheep constitute 38 percent of the livestock use in the unit.

Range Management

Rangeland condition is 1 percent excellent, 33 percent good, 28 percent fair, 26 percent poor and 6 percent seeded. Apparent trend in the area is 84 percent stable or upward, and less than 1 percent downward. The remaining land area consists of Douglas-fir and rock outcrops. Most condition problems are due to poor distribution caused by a lack of water.

Livestock permittees are dependent on Federal land for a large percentage of annual forage requirements for their operations. Other agricultural products, such as hay and grains, are also important in their overall operation.

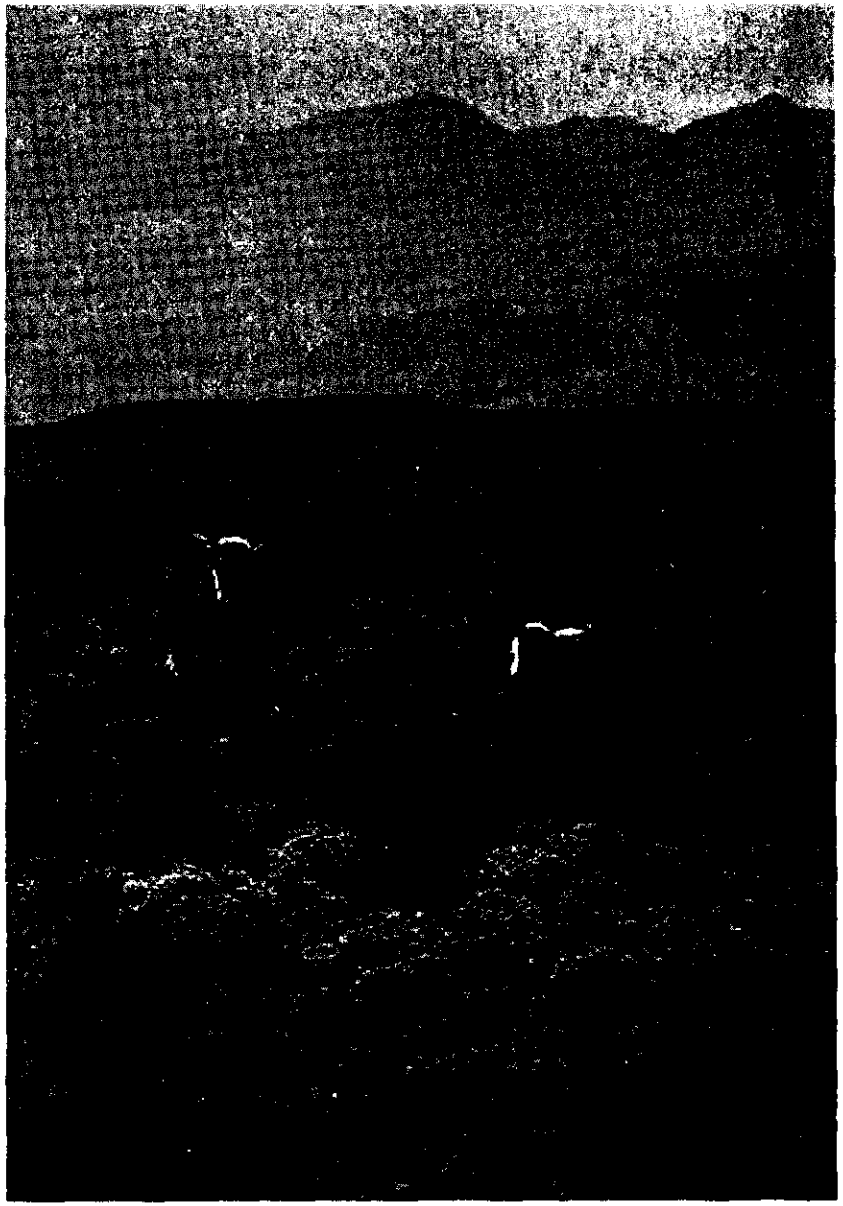
The unit is divided into 24 allotments that are used by ranchers who are primarily from the Little Lost and Big Lost river valleys. Twelve ranchers run in the Pass Creek allotment; the remaining 18 use the other 23 allotments. Eighteen permittees have herd sizes around 205 head, and 12 permittees have an average herd size of 314.

In 1977, these ranchers were authorized 29,874 animal unit months (AUMs); actual use was 21,885 AUMs. Cattle accounted for 62 percent of those AUMs, while sheep constituted 38 percent. (See Glossary for AUM definition.)

Table 2 (page 8) compares existing qualified use, 1977 licensed use and recommended AUMs for the proposed action of the Little Lost–Birch Creek Grazing Environmental Impact Statement (EIS). The livestock grazing would be adjusted from the authorized use of 29,874 AUMs for livestock to 27,800 AUMs (a 7 percent reduction). The licensed use in 1977 was 21,885 AUMs.

The major range management decisions include the following:

PROVIDE 27,800 AUMs FOR LIVESTOCK AS INDICATED IN TABLE 2.



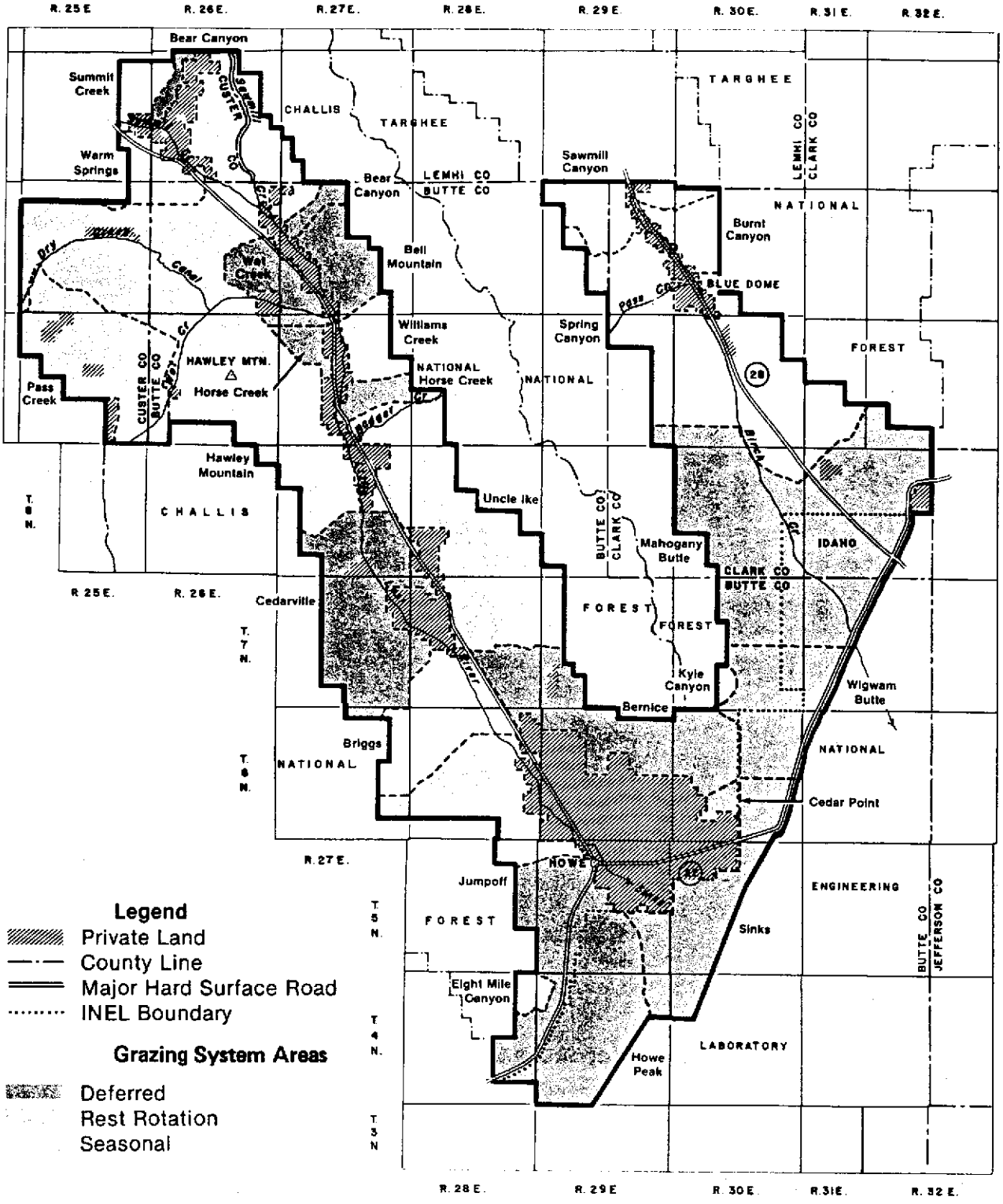
Twelve ranchers graze cattle in Pass Creek allotment in the Little Lost. The Lost River Mountains form the valley's western edge.

TABLE 2

GRAZING MANAGEMENT TREATMENTS AND ALLOCATION OF FORAGE TO DOMESTIC LIVESTOCK

Management Component	Allotment	Federal Land Acreage Public Land	Federal Land Acreage Withdrawal	Authorized Livestock AUMs	1977 Licensed Use (AUMs)	Proposed Level Livestock Use (AUMs) on Fed. Land	Approximate Season of Use	Approximate Number and Class of Livestock	Adjustments From Authorized Livestock Use on Fed. Land AUMs	Adjustments From Authorized Livestock Use on Fed. Land Percent
Deferred Rotation	Bear Canyon	3,538		352	353	327	05/16 to 10/15	66c	-25	-7
	Bell Mountain	6,633		544	547	486	05/16 to 08/30	62c	-58	-11
							11/01 to 12/02	266c		
	Bernice	22,687		919		919	05/01 to 06/15	300c	0	0
							12/16 to 01/15	460c		
	Horse Creek	5,559		643	640	643	05/16 to 07/15	167c	0	0
							10/16 to 11/21	248c		
	Cedarville	19,655		3,594	2,242	*3,767	05/01 to 07/15	723c	+173	+5
							10/01 to 12/19	725c		
	Howe Peak	13,277	18,209	2,400	1,543	2,400	05/01 to 06/11	2,372s	0	0
							11/01 to 01/15	3,206s		
	Mahogany Butte	34,935	17,516	1,810	1,679	1,810	05/01 to 06/30	1,200s	0	0
							12/11 to 02/14	3,300s	0	0
	Sinks		19,781	1,511	1,234	1,434	05/01 to 12/05	205c	-77	-5
	Wet Creek	6,806		602	603	602	05/16 to 07/15	240c	0	0
							10/16 to 12/30	32c		
	Wigwam Butte	5,120	10,167	1,236		861	05/01 to 06/15	417c	375	-33
							11/23 to 01/20	78c		
TOTALS		118,210	65,673	13,611	8,841	13,249				
Rest-Rotation	Hawley Mt.	71,655		5,589	3,865	* 5,612	05/01 to 12/31	10h	+23	+ 1
							05/01 to 11/30	25c		
							05/01 to 01/15	713c		
	Jumpoff	14,677		760	753	562	05/01 to 08/20	120c	-198	-26
							12/01 to 01/11	90c		
	Spring Canyon	37,005		2,979	2,890	2,090	05/16 to 12/04	225c	-889	-30
							05/16 to 06/30	535s		
							10/01 to 01/22	400s		
	Uncle Ike	27,872		903	904	903	05/01 to 06/30	145c	0	0
							10/01 to 10/23	145c		
							11/16 to 01/30	202c		
	Warm Springs	6,711		1,641	1,311	1,285	05/16 to 10/15	257c	-356	-22
	Williams Creek	5,363		335	334	171	05/16 to 06/30	45c	-164	-49
							11/06 to 12/31	45c		
TOTALS		163,283	0	12,207	10,057	10,623				
Seasonal	Briggs Canyon	14,691		720	395	697	05/10 to 05/31	500c	- 23	- 3
							09/07 to 09/27	466c		
	Burnt Canyon	5,713		290	281	* 505	07/16 to 10/31	98c	+215	+74
							09/12 to 09/30	1,620s		
	Cedar Point	1,274		132		92	12/22 to 01/22	125c	- 40	-30
	Eight Mile Cyn.	1,684		225		51	11/01 to 11/30	51c	-174	-77
	Kyle Canyon	711		70	70	43	06/16 to 09/15	16c	- 27	-39
	Pass Creek	17,949		1,965	1,883	1,691	05/18 to 06/30	1,416c	-274	-14
	Sawmill Canyon	5,839		384	88	* 579	07/16 to 08/13	600c	+195	+51
	Summit	3,216		270	270	270	07/01 to 10/29	68c	0	0
TOTALS		51,077	0	4,056	2,987	3,928			-2,074	
GRAND TOTALS		332,570	65,673	29,874	21,885	27,800				

*Proposed livestock use on federal lands exceeds existing stocking rates on these allotments. This resulted from redistribution of livestock use between allotments where the same permittee has a shortage of forage in one allotment and a forage surplus in another. Stocking levels would not exceed carrying capacity in any allotments. The connective lines in the second to last column show which allotments were mitigated through redistribution.



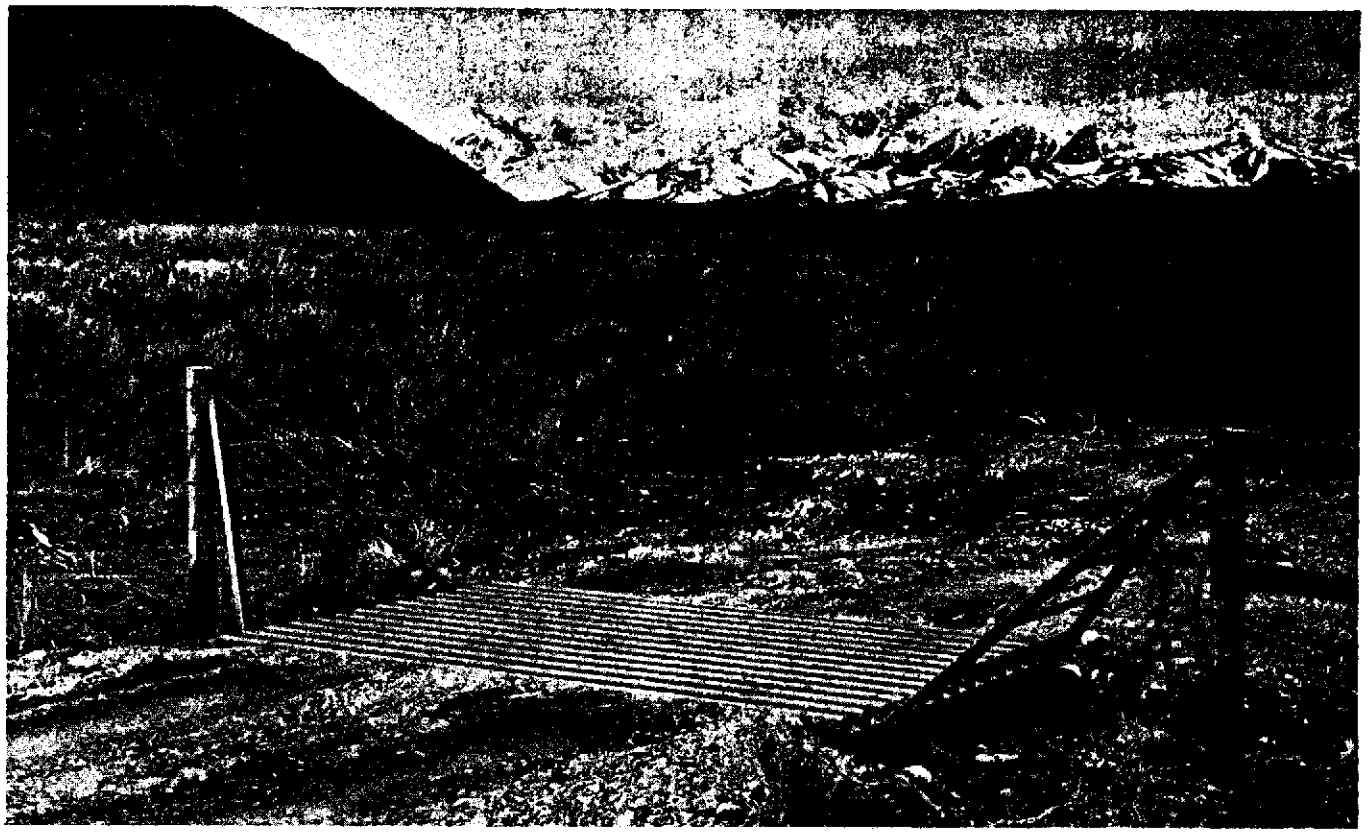
MAP 2
GRAZING SYSTEM
AREAS

This forage allocation provides for the needs of existing antelope and elk populations. For mule deer, forage was allocated to accommodate a 25 percent population increase in Birch Creek Valley and a 10 percent population increase in Little Lost Valley.

IMPLEMENT REST ROTATION GRAZING SYSTEMS ON 163,283 ACRES, DEFERRED ROTATION ON 183,883 ACRES, AND SEASONAL ON 51,077 ACRES.

Some allotment boundaries will be adjusted for better management (see Map 2, page 9).

IMPLEMENT THE FOLLOWING RANGE IMPROVEMENTS: VEGETATION MANIPULATION – 18,500 ACRES, FENCING – 106 MILES, PIPELINE – 81 MILES, SPRING DEVELOPMENTS – 12, WATER TROUGHS – 48, CATCHMENT BASINS – 19, RESERVOIRS – 10, AND WELLS – 1.



Cattleguards help maintain desired livestock distribution while allowing easy access by people.

Wildlife

Deer, elk and antelope are the primary big game species. Heaviest use by all three species occurs in the fall and winter. Populations are estimated at 250 elk, 1,800 deer and 6,000 antelope, the largest antelope herd in the State (see Map 3 for antelope habitat areas). Other big game species include bear, cougar, mountain goat, big horn sheep and moose.

Sage grouse and a wide variety of other upland game inhabit the area along with small populations of waterfowl, fur bearers, and non-game species.

Seventeen streams provide about 80 miles of cold water fish habitat. Trout species include Dolly Vardin, rainbow, brook and cutthroat (see Map 4, page 14).

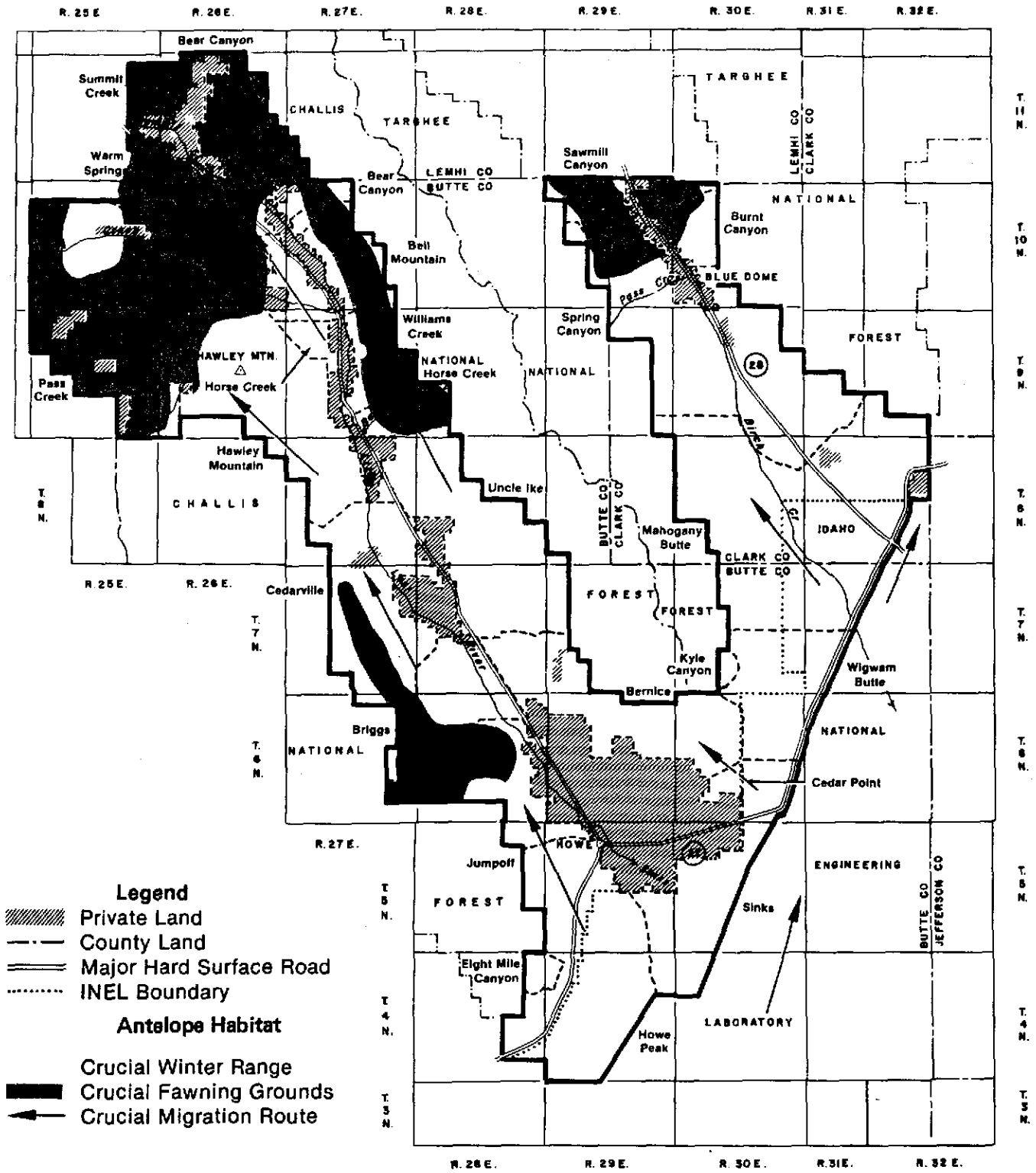
American peregrine falcons and bald eagles, classified as endangered species, migrate through in fall and winter.

Major wildlife decisions include the following:

FURNISH 10,453 AUMs OF FORAGE FOR BIG GAME SPECIES IN THE LITTLE LOST–BIRCH CREEK AREA.



Antelope fawn about 2 hours old. BLM biologists have assisted Idaho Fish and Game biologists in the study of fawning sites.



MAP 3
ANTELOPE HABITAT

Forage was allocated for existing populations of antelope and elk. For mule deer, forage was allocated to accommodate a 10 percent population increase in Birch Creek Valley and a 25 percent increase in Little Lost Valley.

Approximate forage use and animal numbers are broken down as follows:

	Animals	AUMs
Antelope	6,000	6,800
Deer	1,800	2,500
Elk	250	1,200

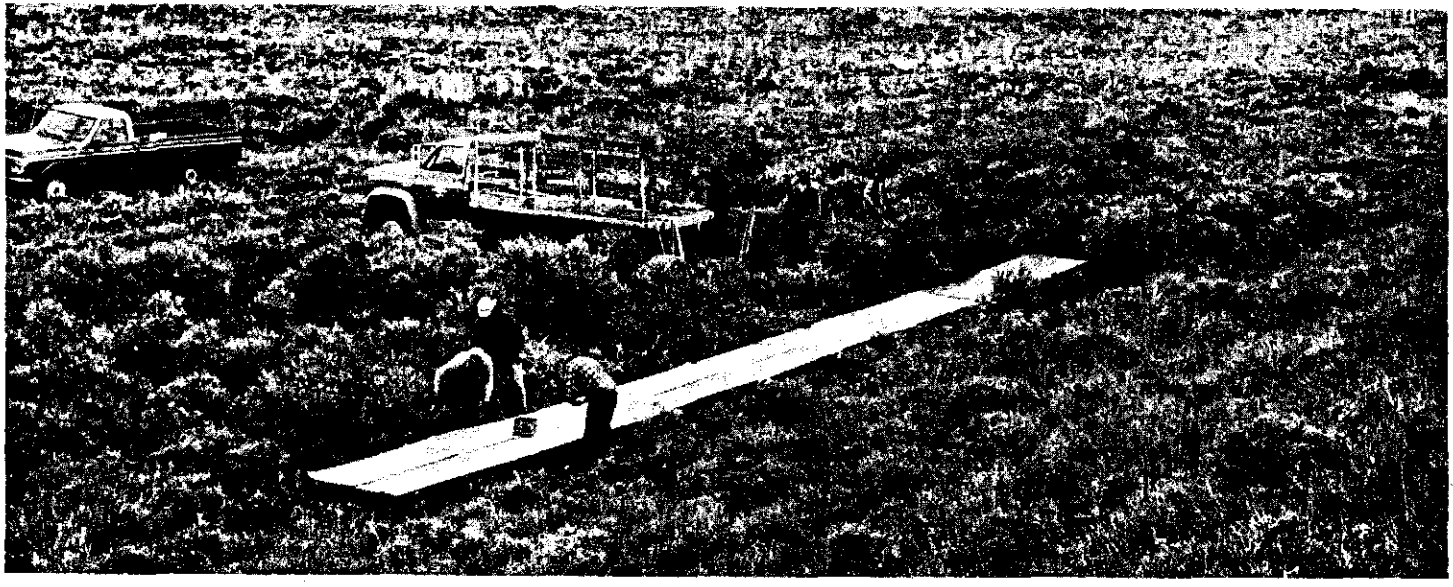
MAINTAIN AND IMPROVE 375,000 ACRES OF UPLAND GAME AND NON–GAME HABITAT BY MAINTAINING VEGETATIVE DIVERSITY, PROVIDING WATER AND CONSIDERING SAGE GROUSE NESTING AND BROOD REARING HABITAT IN ALLOTMENT MANAGEMENT PLANS.

Winter range, brood rearing areas, and permanent water sources are critical areas to sage grouse populations. Maximum diversity of native flora is necessary to provide the habitat requirements for the various upland and non-game species.

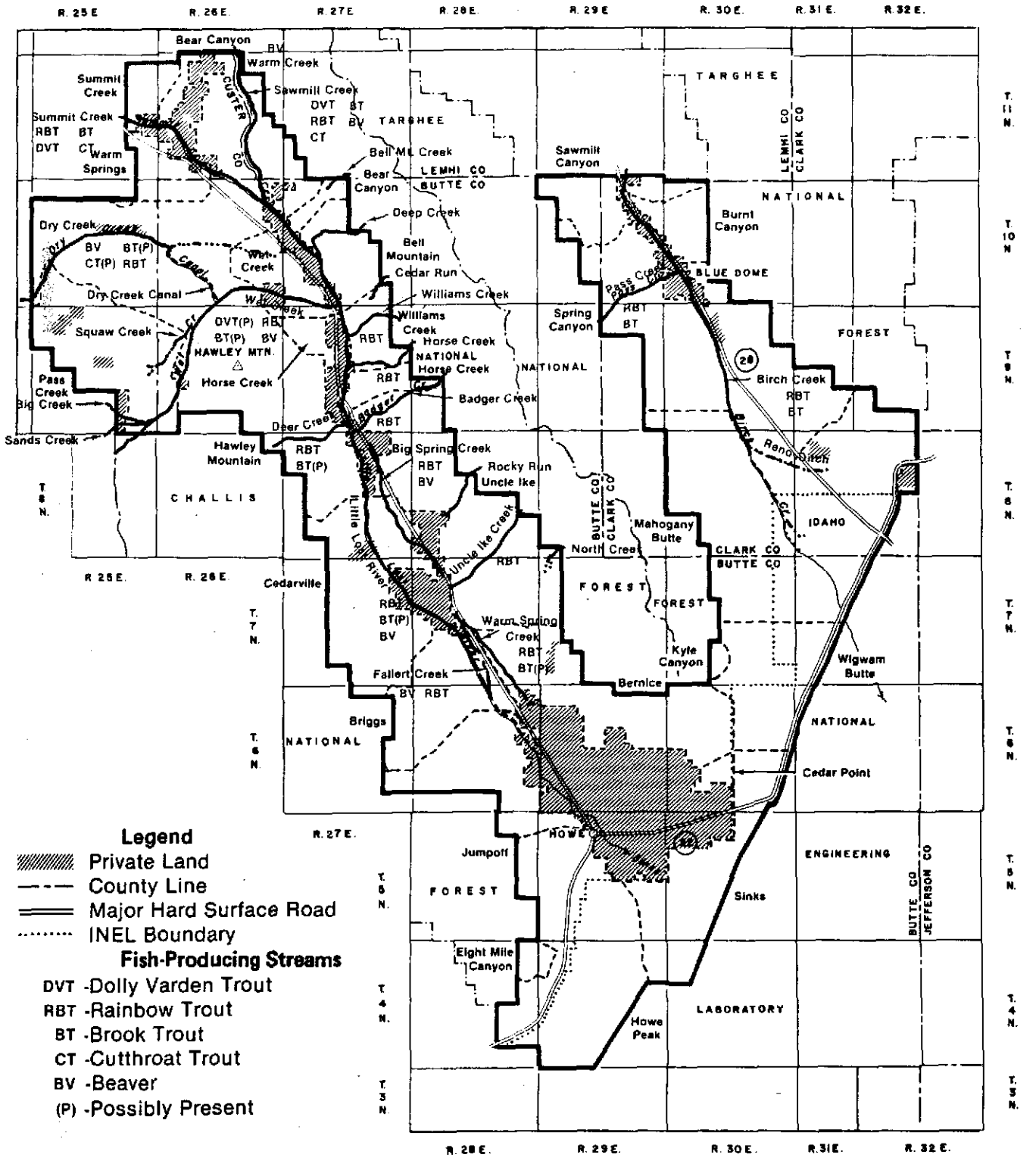
REDUCE SILTATION AND DEGRADATION OF STREAM AND RIPARIAN AREAS THROUGH PROTECTIVE FENCING TO EXCLUDE LIVESTOCK FROM CONCENTRATED USE AREAS.

These are the specific fences:

- 7 miles of Wet Creek
- ½ mile of Summit Creek
- 3 miles of Birch Creek
- 4½ miles of Big Spring Creek
- Squaw Springs.



Members of a local sportsmen's group help a BLM wildlife biologist install a wildlife waterer. The waterer or "guzzler" collects rainfall and provides a water source for many wildlife species.



MAP 4
FISH–PRODUCING STREAMS

Watershed

The unit is comprised of two separate and distinct watersheds, Little Lost and Birch Creek. Each watershed has a perennial mainstream with perennial tributaries which cross considerable amounts of public land.

Erosion ranges from stable to moderate with a few small areas of critical erosion. The relatively light erosion is due to the inherent stability of the soils, a favorable climate and the moderate topography.

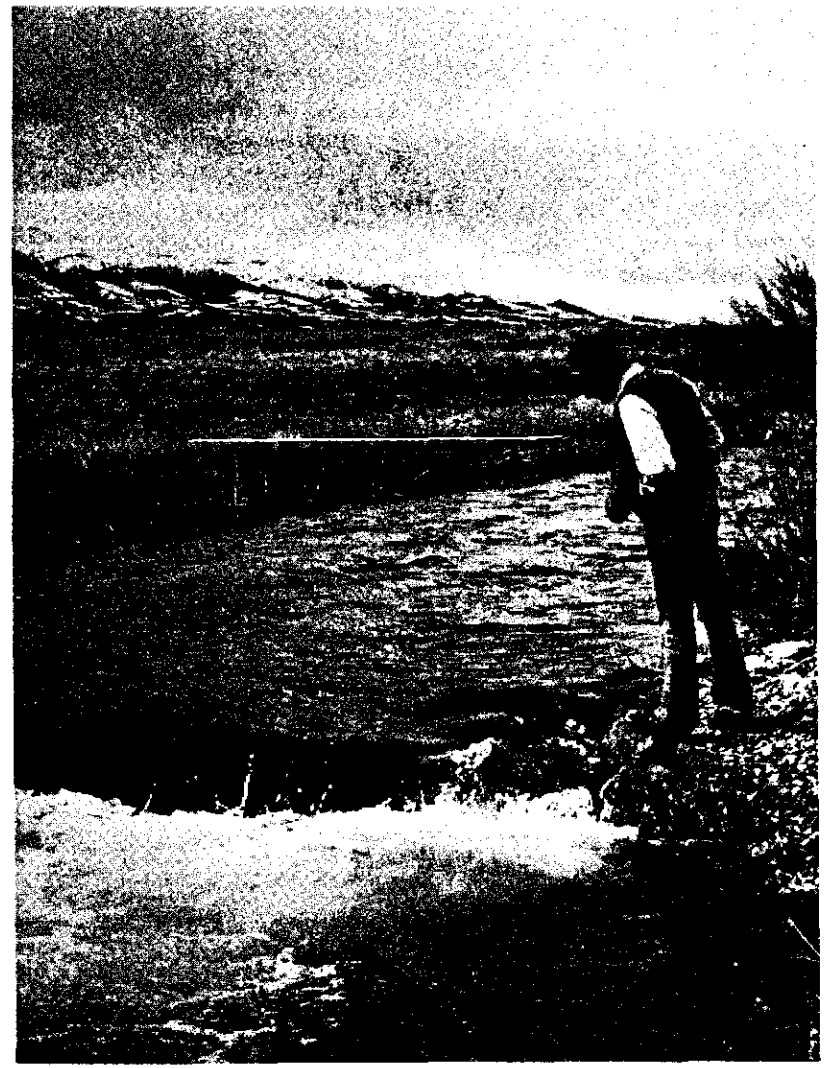
Important watershed decisions include the following:

ROTOBEAT AND SEED ROUGHLY 2,000 ACRES ON THE SECOND FLOOD PLAIN OF BIRCH CREEK.

Increased grass cover is needed to reduce erosion on this site. Grazing management alone would not reduce erosion because of the slow response of the vegetation. Rotobeating and seeding with Siberian wheatgrass and yellow sweet clover will reduce erosion while minimizing adverse impacts to antelope.

CONTROL HEADCUTS AND GULLIES IN HURST CREEK BY HAND–CONSTRUCTING ROCK DAMS IN THE GULLY.

The hand-constructed rock dams will slow water, deposit silt and build the gully floor. Water should percolate through the rocks and spill to the lower level, thus reducing the channel gradient.



A rock dam on Birch Creek was constructed to reduce the silt load and improve fish habitat.

Forest Products

The unit contains about 20,000 acres of forested land, both commercial and non-commercial. About 4,500 acres are considered productive forest land. Of these, 3,736 acres (82 percent) are considered to be problem sites because of adverse locations, slope conditions, fragile sites, and problem reforestation.

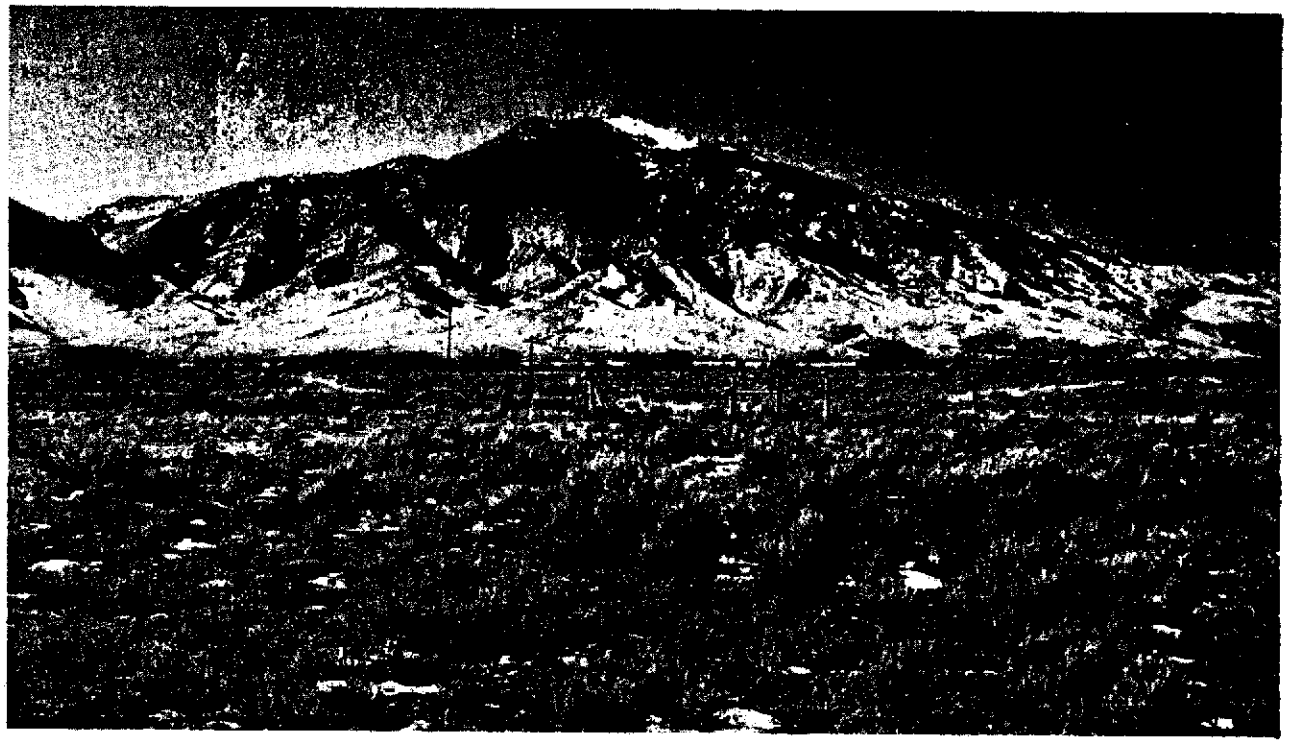
Insect and disease problems have been minor in the past, although dwarf mistletoe is prevalent throughout the unit. Past timber harvests have been small, localized, and with very little impact on the forest land.

Major forestry decisions include the following:

OFFER FOR SALE AN AVERAGE OF 60 MBF PER YEAR FROM ABOUT 1,232 ACRES OF PRODUCTIVE FOREST LAND WITHIN THE PLANNING UNIT.

Timber sale efforts will be concentrated in:

- Donkey Hills
- Sands Canyon
- Skull Canyon
- Goddard Canyon
- Long Canyon.



Hawley Mountain in the Little Lost Valley contains some of the unit's typical forested land. This area is not being harvested because of other important resource values.

Recreation

The area has one developed recreation site: the John Day site along Birch Creek with grills and picnic tables. There are seven undeveloped sites in the Little Lost Valley and two in the Birch Creek Valley. Most recreation use is associated with hunting, fishing and general sightseeing. About 200 cultural sites have been documented; 138 of them are located on public land and 45 on withdrawn lands.

Major recreation decisions include the following:

DEVELOP DAY USE AND OVERNIGHT FACILITIES AT THE CLYDE CREEK SCHOOL SITE, BIG SPRINGS CREEK SITE AND THE WET CREEK / DRY CREEK CANAL SITE.

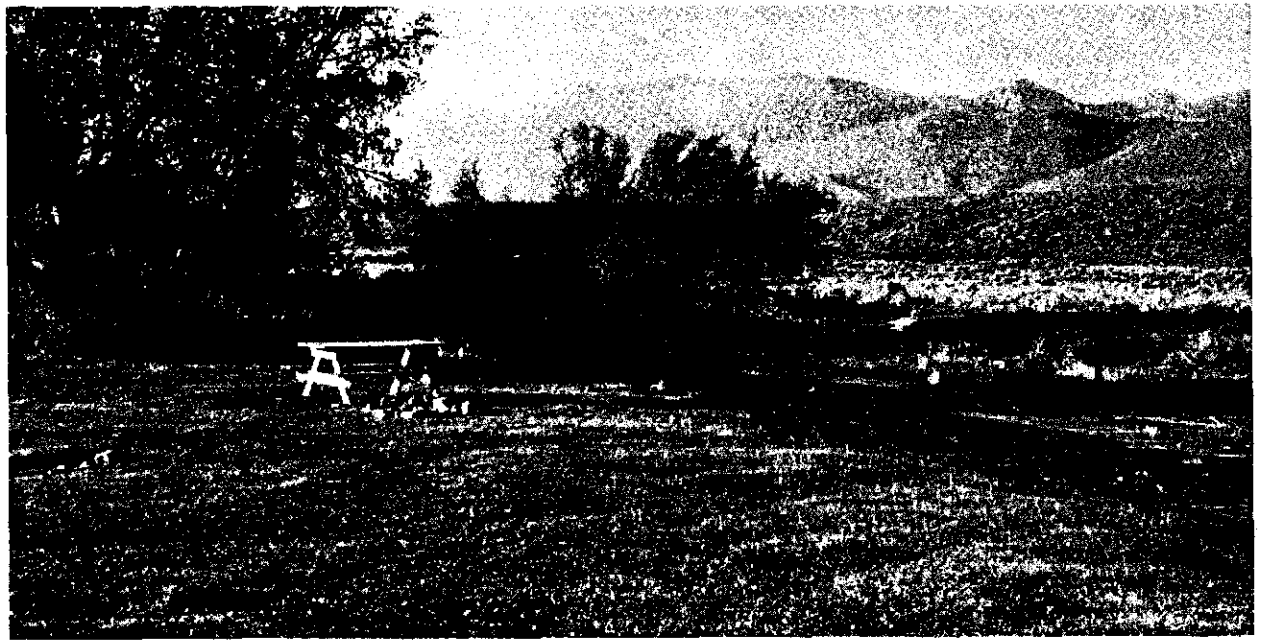
Developing recreation sites at these locations will help distribute visitor use and increase recreation opportunities. Development of these sites would also eliminate some existing damage.

DEVELOP AND MAINTAIN ADEQUATE ACCESS TO IMPORTANT RECREATION AREAS THROUGH EASEMENT ACQUISITION, ROAD MAINTENANCE AND SIGNING.

This will improve the visitor's experience and help eliminate conflicts with private landowners.

PROTECT, PRESERVE AND STABILIZE THE CLYDE CABIN AND THE WARM SPRINGS CREEK TIPI RINGS.

Measures are needed to protect cultural and historic sites from further deterioration and destruction.



John Day Recreation Site along Birch Creek is the unit's only developed site.

Lands

The lands program has served mainly as a support program to other activities and will continue to be so.

Public lands have been classified under the Classification and Multiple Use Act except for several small tracts in the Little Lost Valley. These lands were not classified because they were thought to be suitable for disposal through land law regulations.

Major lands decisions include the following:

PROVIDE PUBLIC LANDS FOR PUBLIC PURPOSES.

The specific sites are Clyde cemetery and the sanitary landfill (Blue Dome—Lone Pine).

ALLOW DESERT LAND ENTRIES WHERE DETERMINED SUITABLE BY LAND EXAMINATION.

Some lands have agricultural potential; however, there may be conflicts with other uses or environmental impacts which would make them unsuitable for disposal.

FENCE AND SIGN MINE SHAFTS AND TUNNELS IN SCOTT BUTTE AREA.

The open mine shafts and tunnels are unsafe and could lead to injuries to public land users.

PROVIDE LAND FOR A DIVERSION STRUCTURE AND PONDING AREA TO BE USED BY THE LITTLE LOST FLOOD CONTROL GROUP.

Public lands are needed to mitigate a winter flooding problem around the town of Howe. The group must first apply for a right-of-way.



Providing rights-of-way is a big part of the lands program. Rights-of-way can be granted for powerlines, roads, and in this case, a water-carrying flume.

Minerals

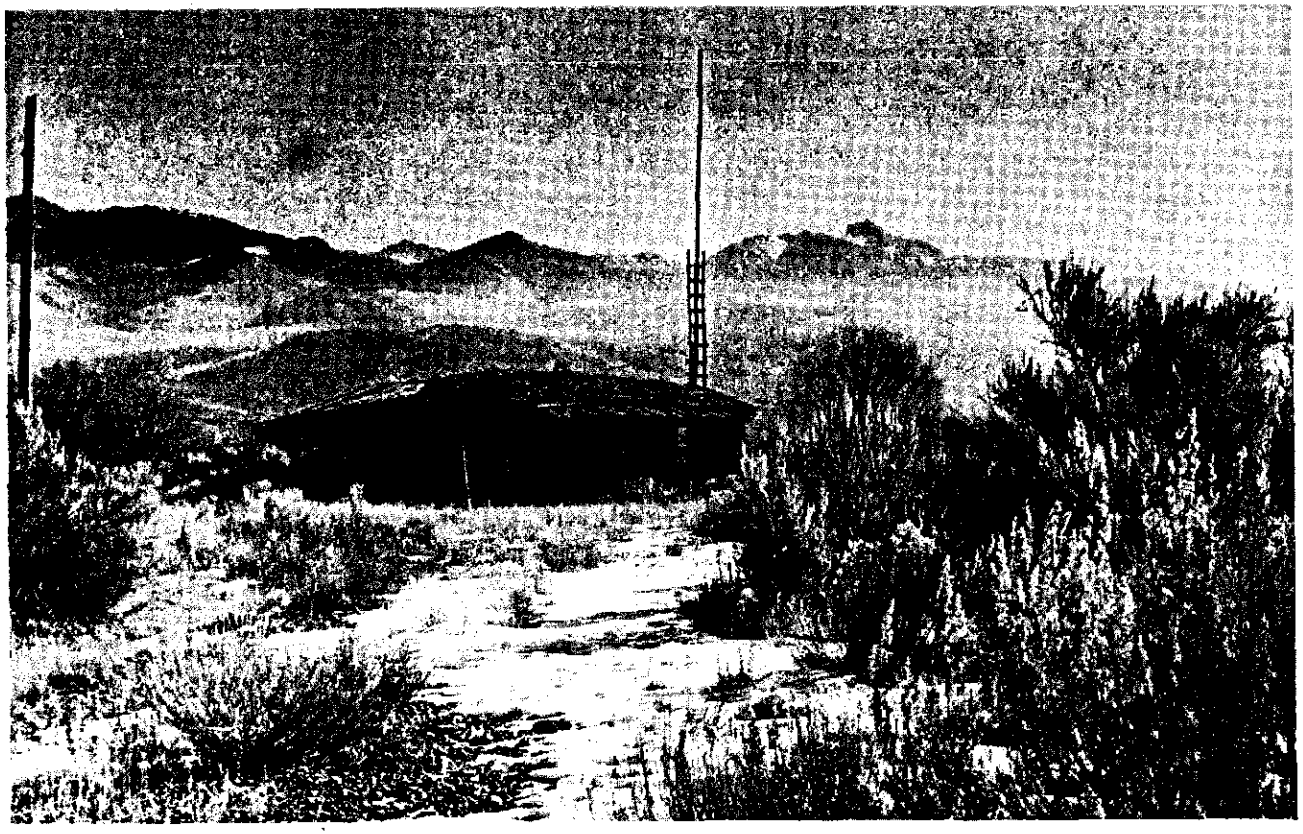
Area mineral production is minimal. Minor amounts of iron ore are extracted from Peterson Canyon, and sand and gravel are mined near most major roads. There has been exploration activity for uranium in Long Canyon and North Creek. Leasing activity indicates an interest in oil and gas, but no production or intensive exploration for any leasable mineral has yet occurred.

Historically, most production came from the Scott Mine, which produced lead, zinc and silver. Most other mineral production came from mines on national forests.

Major mineral decisions include the following:

KEEP FEDERAL MINERAL ESTATE OPEN TO MINING, MINERAL MATERIALS, OIL AND GAS, AND GEOTHERMAL ACTIVITY.

Public lands can supply important leasable and locatable minerals. There is also a continued demand for mineral materials such as sand and gravel.



An old cabin at Clyde in the Little Lost River Valley. The cabin was built in the 1800s, about the same time that mining activity was beginning in the hills beyond.

Environmental Overview

Range Management

Livestock forage decisions are designed to maintain or improve vegetation. Improved range condition and forage production will benefit all activities dependent on a sustained yield of quality rangeland vegetation.

Maintaining a vigorous and healthy vegetative cover is a sound base for multiple-use management of this resource.

Wildlife

Vegetation quantity would increase, providing increased forage for both livestock and wildlife. Terrestrial habitat condition would remain stable or improve. This would meet big game population objectives. Fish populations would increase 50 percent in the fenced area of Wet Creek and Squaw Springs.

Livestock use before June 15 and after October 1 on some allotments would conflict with wildlife use.

Watershed

Environmentally acceptable management practices, mainly the implementation of grazing systems, will improve watershed conditions by correcting the imbalances of past use. Benefits expected are decreased soil erosion, improved vegetative cover and better water quality.

Forest Products

Surface disturbance from harvest, stand improvement and development would have minor, long-term impacts on visual resources, wildlife and watershed. Local economies would benefit from timber sales. The environmental benefit from well-managed forest lands is a more healthy resource that is capable of providing for other uses.

Recreation

Minimal impacts are expected from recreation management decisions. Decisions generally favor environmental protection and present management. The control of surface-disturbing activities and the location of intrusions will preserve historic values and maintain a quality visual resource.

Lands

Environmental impacts from lands and realty actions are generally beneficial. Social and economic factors are most often affected by land decisions.

Minerals

Most of the unit is open to mineral activities under the General Mining Laws. There is little mineral activity in the area, and the environmental impact would be slight.



Strutting sage grouse. Winter range, brood rearing areas, and permanent water sources are critical to grouse populations.

Coordination

Public review was an important part in the preparation of the Grazing Environmental Impact Statement (EIS) and MFP. Throughout the planning process, numerous Federal, State and local agencies, as well as members of the general public offered suggestions to improve the plan. The Big Butte Resource Area staff contacted representatives of these groups to ensure that planning efforts and management decisions did not conflict with the land use plans of other agencies. The staff considered all comments submitted and used as many of them as possible.

The Little Lost–Birch Creek Plan was coordinated with several specific planning efforts. County officials were consulted as the plan was developed and informed of the results. Land use decisions conform with the land use and zoning requirements of the various counties in which the lands are located.

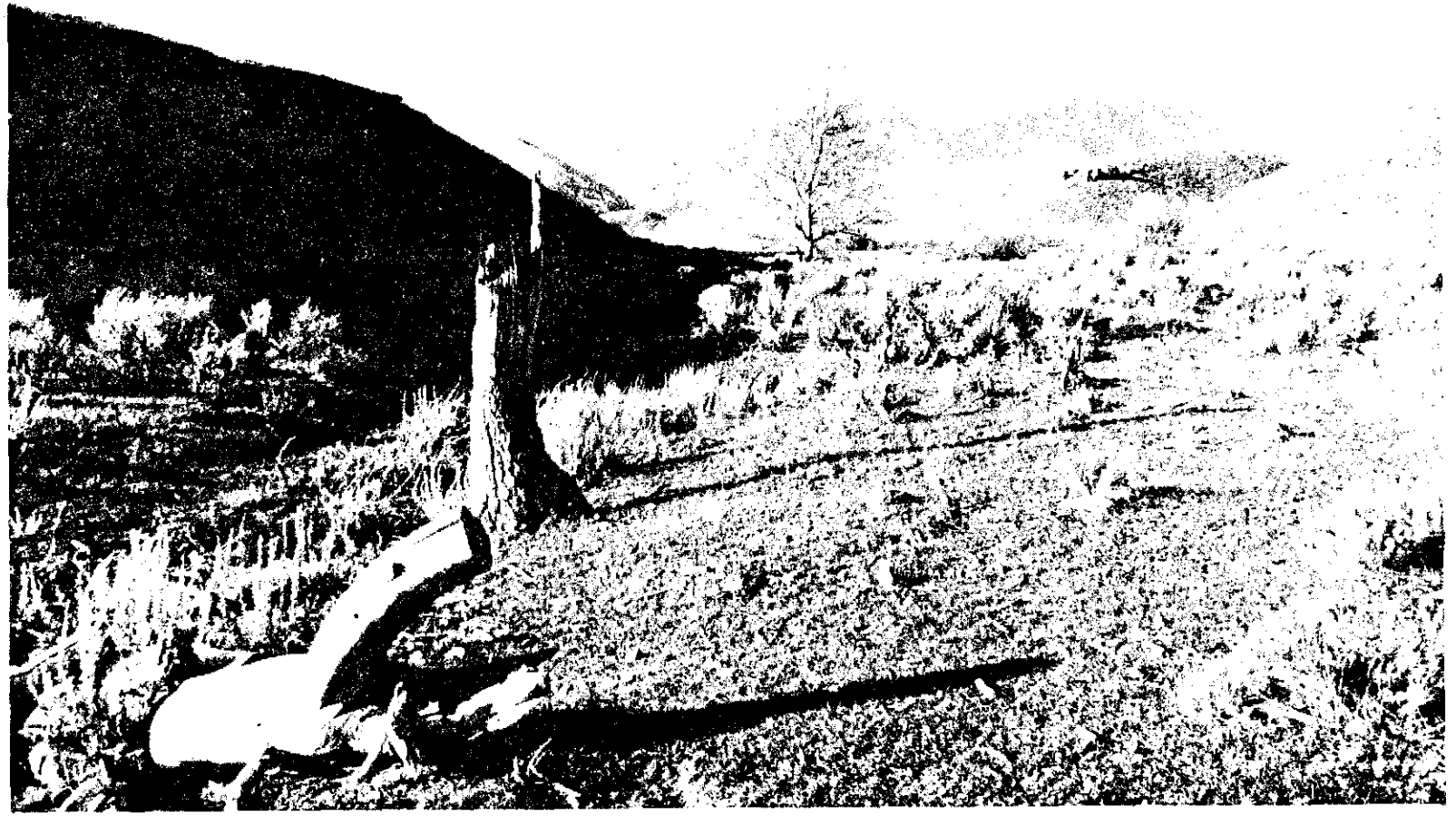
Management Actions

This plan will be followed by on-the-ground actions. Some decisions in the plan will require more detailed planning before implementing.

Development projects are subject to the requirements of the National Environmental Policy Act. An environmental assessment will be prepared for each action. If the impacts are unacceptable, the proposed actions may be modified or rejected. Some decisions have already been or are being implemented.

The MFP decisions will be used in programming and budgeting for the annual work plan. Because on-the-ground actions depend on funding by Congress, it may be some time before some decisions are implemented.

In response to changing resource conditions and management requirements, this plan will be updated and management decisions will be revised as new information becomes available. The public will have opportunities to participate in the planning process when major revisions are made.



The Spring Canyon allotment in the Birch Creek Valley near Pass Creek, looking southwest to the Lemhi Mountains.

Glossary

Allotment Management Plan – A detailed plan for intensively managing and improving a specific grazing allotment.

Animal Unit Month – The amount of forage needed to sustain one cow or five sheep for one month.

Apparent Trend – A one-time observation of the direction in range condition described as upward, stable or downward.

Carrying Capacity – The maximum stocking rate possible without damaging the vegetation or related resources.

Environmental Impact Statement (EIS) – A document that analyzes the environmental impacts of a proposed action and several alternatives.

Grazing Systems

Rest Rotation – Grazing is deferred on various parts of an allotment during succeeding years. The deferred parts are allowed complete rest for one or more years.

Deferred Rotation – Changing the time of year when a pasture is grazed. Use in one pasture is rotated between use in other pastures. This provides each pasture periodic rest during some part of the grazing season.

Seasonal – Grazing is restricted to a specific season.

MFP – A Management Framework Plan is the BLM's land use plan. MFP Step 1 consists of sets of recommendations designed to maximize a single resource. MFP Step 2 considers conflicts in use and social, economic and environmental impacts in sets of recommendations by resource for overall multiple use management. MFP Step 3, which considers all comments and experience gained through the EIS process, includes land use decisions for future multiple use management.

Planning Unit – A portion of a resource area for which inventories and land use plans are developed.

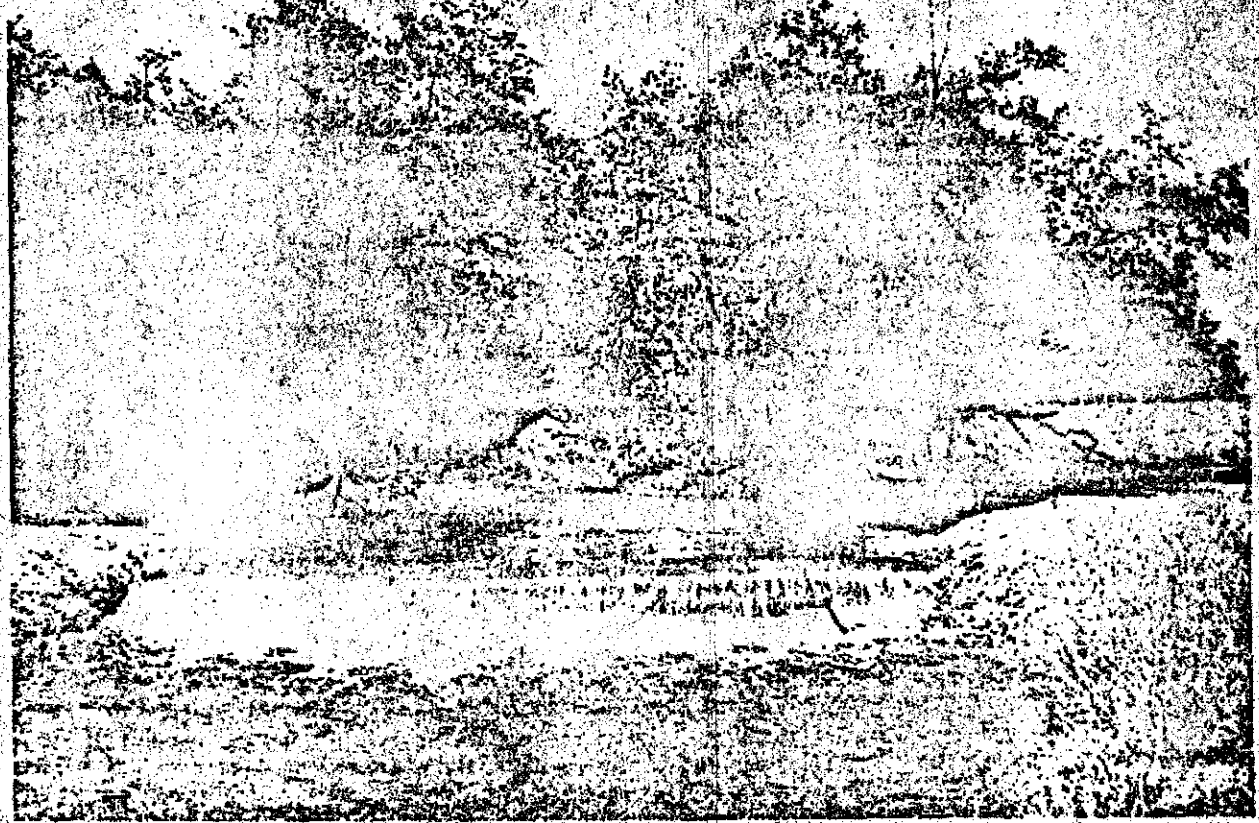
Public Lands – Lands administered by the Bureau of Land Management for multiple uses.

Riparian – Pertaining to or situated on the banks of a river or other body of water. Riparian vegetation is the vegetation found along a river or other body of water.

Rotobeating – A brush control method which uses a mechanical beater to cut heavy brush.

Rock Dams – A check dam designed to momentarily slow the water to allow silt to settle and to control the drop of the water. This reduces the erosive force and improves fish habitat.

BIRCH CREEK AQUATIC HABITAT MANAGEMENT PLAN



IDAHO FALLS DISTRICT

BUREAU OF LAND MANAGEMENT

IDAHO FALLS, IDAHO

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IDAHO FALLS DISTRICT

BIRCH CREEK AQUATIC HABITAT MANAGEMENT PLAN
Wildlife Habitat Area (I-3 WHA-A-L)

Prepared by: Robert Borovicka, Fisheries Biologist
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With assistance and in cooperation with:

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Idaho Falls, Idaho

Concurred: Idaho Fish and Game Department Tom Lamb
Regional Supervisor

12-9-75
Date

Approved: Bureau of Land Management
District Manager

12/9/75
Date

FOREWORD

Birch Creek Valley is the eastern portion of the Birch Creek-Little Lost River Planning Unit. The major feature in the valley is a unique, spring-fed, blue-ribbon trout stream considered to be one of the most important for sport fishing on national resource lands in Idaho.

Birch Creek originates from widely scattered springs in the upper two miles of the valley floor and reaches maximum flow near Kaufman Guard Station. The stream loses 4-1/2 percent of its flow per mile in the 16 miles from Kaufman to the Reno diversion. Flows at the Blue Dome gauging station, midway in this reach, ranged from 53 to 149 cfs from 1967 to 1973.

Birch Creek is in a closed basin. The water sinks into the Snake River Aquifer on irrigated private lands and in the confines of the Idaho National Engineering Laboratory of the Energy Research and Development Administration. The valley is dry with an annual precipitation of approximately seven inches. It is natural that the stream, with average summer flows of 40 to 80 cfs of high quality, is the life support system of aquatic and terrestrial wildlife, domestic animals, and humans in the basin.

Riparian areas and aquatic habitat have been severely abused. Man has altered the channel and historic and recent over-grazing by livestock has adversely affected vegetation and damaged stream banks.

This habitat management plan was designed to enhance and protect riparian and aquatic habitat. Many photos of the stream can be seen in Appendix F.

BIRCH CREEK AQUATIC HABITAT MANAGEMENT PLAN

INTRODUCTION

The planning area encompasses the Birch Creek watershed; 256,000 acres in Butte, Clark, and Lemhi Counties, Idaho (Figure 1). The community of Blue Dome (population six) in the approximate center of the study area is 28 miles northwest of Mud Lake on State Highway 28.

Most national resource lands lie in the plains and talus slopes of the Beaverhead Mountains on the east and the Lemhi Mountains on the west. State Highway 28, a primary route from Idaho Falls to Salmon, is a major north-south access route through the valley. The prominent feature on the valley floor is the spring-fed Birch Creek. Water feeding Birch Creek originates from springs in the Reno area in Township 11 N., R. 29 E. The stream flows southeasterly through the valley and empties into the Snake River Aquifer. Approximately 20 miles downstream from the headwaters, Birch Creek is completely diverted during the irrigation season at the Reno ditch to irrigate lands on private property (refer to Appendix A for flow information, Appendix B for water rights).

Birch Creek is characterized by a constant spring-fed flow, high water quality, and has the reputation of being an excellent trout stream. The stream sections on national resource and state lands are readily accessible.

There are approximately 20 miles of stream habitat that will be affected by the management plan. Over 90 percent of the lands in the drainage are in public ownership. However, approximately 50 percent of the land immediately adjacent to the stream is privately owned.

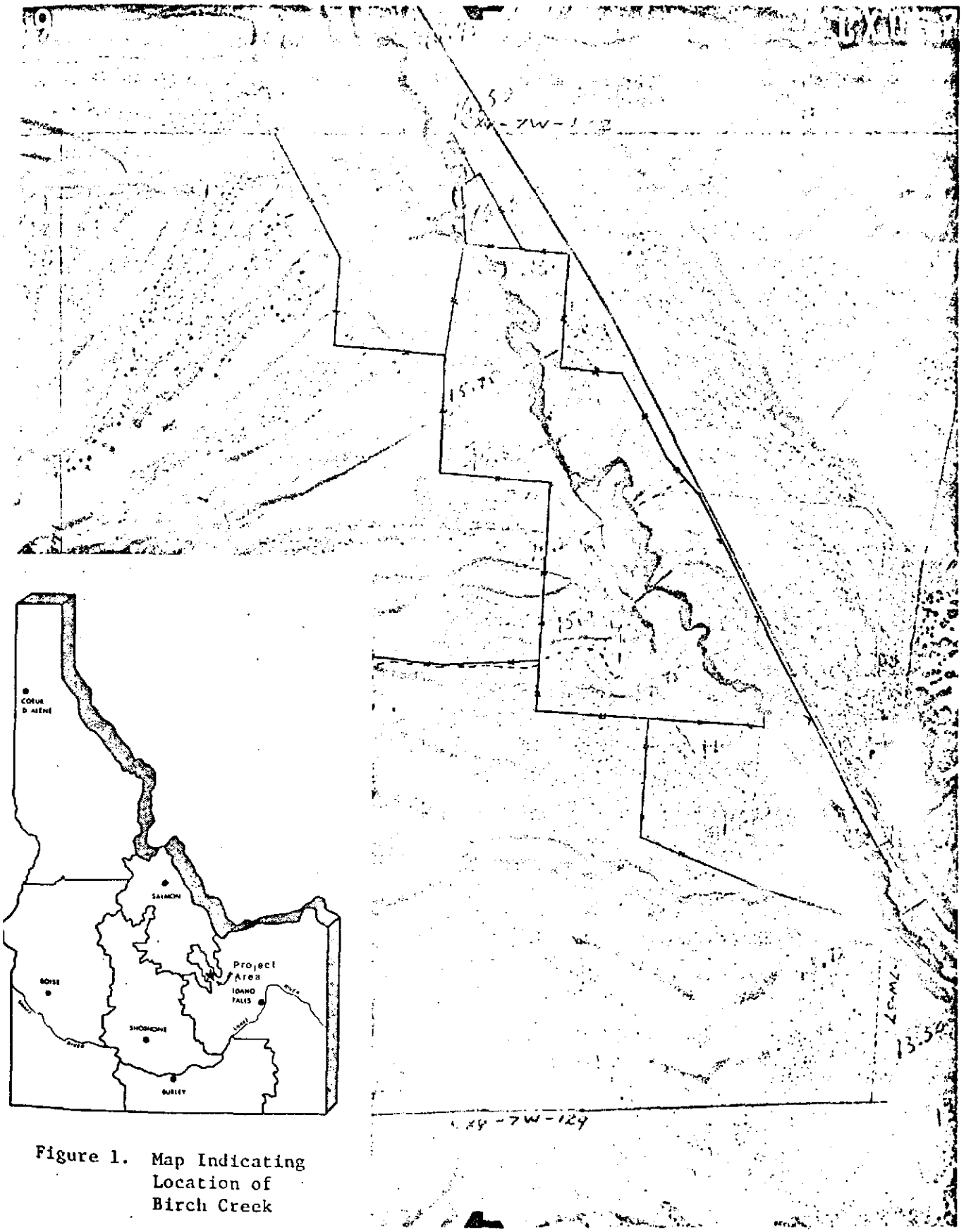


Figure 1. Map Indicating Location of Birch Creek

Channel changes, annual addition of bentonite to the stream by downstream water users, and overuse of riparian habitat by livestock have restricted aquatic improvements (Figure 2). These problems predominate in the lower six miles of stream on national resource lands.



Figure 2. Channel alteration and historic heavy livestock use has reduced riparian vegetation and trout habitat.

Based on experiments by the Bureau of Land Management and Idaho Fish and Game Department, it is assessed that a combination of protection and stream improvement can benefit fish and wildlife in the Birch Creek drainage. The plan for habitat management of Birch Creek was formulated after collection of information by the Bureau of Land Management as recorded in the Unit Resource Analysis (URA), through field jobs in the basin, and management and inventory work by the Idaho Department of Fish and Game.

There is a vivid contrast between the riparian vegetation along Birch Creek and the non-irrigated flood plain and valley floor through which the stream meanders before diversion for other uses. Dominant vegetation along the stream is black birch, willow, small areas of aspen, and a variety of sages, grasses, and forbs. The valley floor is dominated by black sagebrush, Artemisia nova, and is sparsely covered with an understory of native grasses and forbs.

Sport fish found in Birch Creek are rainbow trout, Salmo gairdneri, and brook trout, Salvelinus fontinalis. Both stocked and native populations of rainbow trout dominate the catch and the existing fish population. Approximately 50 to 60 percent of the population sampled with electric shocking devices has been wild. The only other fish in the drainage are the sculpins, Cottus sp. The Idaho Department of Fish and Game annually stocks the stream with approximately 20,000 catchable size rainbow trout. The stream is very rich in benthic insects including preferred trout foods such as mayflies, Ephemeroptera; caddisflies, Trichoptera;

stoneflies, Plecoptera; various trueflies, Diptera; and other common aquatic organisms. Detailed information about the aquatic ecology of Birch Creek is in a thesis by Andrews (1972) on file in the District Office.

Important big game species inhabiting the planning unit are mule deer, Odocoileus hemionus, and antelope, Anilocapra americana. Rare or infrequent big game species include mountain lion, Felis concolor; black bear, Ursus americanus; and Rocky Mountain elk, Cervus canadensis nelson.

Mountain goats, Oreamnus americansus, have recently been introduced into the high areas adjacent to the planning unit. Also, bighorn sheep, Ovis canadensis, were transplanted into Long Canyon in 1976. The herd is expected to be supplemented in 1977 by additional animals brought in from a Salmon River herd. Other wildlife inhabiting national resource lands include the bobcat, Lynx rufus; coyote, Canis latrans; red fox, Fulpus fulva; badger, Taxidae tasus; weasel, Mustela frenata; striped skunk, Methitis mephitis; mink, Mustela vison; porcupine, Eroethizon dorsatus; muskrat, Ondatra zibenthica; and numerous small rodents. Pygmy rabbit, Silvilagus idahoensis; and black-tailed hare, Lepus californicus; are common.

There are upland game birds, both endemic and exotic, that frequent the valley. Native forms are the sage grouse, Centrocereus urephasiamus; blue grouse, Dendragapus obscurus; ruffed grouse, Bonosa umbellus; and mourning dove, Zenada macroura. Exotic species that may inhabit the lower portion of the unit in agricultural areas include the ringneck pheasant, Phasianus colchicus; the grey partridge, Perdix perdix; and chukar, Alectoris chukar.

Birch Creek has a resident mallard, Anas platyrhynchos. Population numbers increase twofold during the migration season when there is an influx of nonresidents. Other waterfowl are common. Important raptors include the turkey vulture, Cathartes aura; goshawk, Acciptor gentilis; sharped-shinned hawk, Accipitor cooperii; redtailed hawk, Buteo jamaicensis; Swainson's hawk, Buteo swainsoni; ferruginous hawk, Buteo regalis; marsh hawk, Circus syaneus; golden eagle, Aquila chrysaetos; and bald eagle, Halicaectus leucocephalus. Falcons known to exist in the area are the peregrine, Falco peregrinus, an endangered species, and more commonly, the prairie falcon, Falco mexicanus.

The Birch Creek Planning Area is in Idaho Fish and Game Management Unit 58. Because of the flat terrain in the valley and the deep talus slopes from the mountain ranges to the valley floor, little runoff reaches Birch Creek. Occasionally, rapid snow runoff creates gulleys. The major perennial tributary reaching Birch Creek is Pass Creek which begins in the Lemhi Mountains. Willow Creek, originating in the Beaverhead Mountains, is intermittent but could influence Birch Creek during spring runoff. Watershed studies indicate that the major source of silt in the stream is from streambank erosion.

There has been a history of protection and improvement of Birch Creek by the Idaho Department of Fish and Game and the Bureau of Land Management. The two agencies entered into a cooperative agreement to protect riparian habitat on national resource lands by fencing out livestock. In areas from which livestock have been excluded from BLM

admininistered land angler access points have been established (Figure 3). Instream structures were placed for fish habitat improvement. The structures have been functional in providing improved habitat for trout (Figures 4 and 5). Fencing in the test area has improved the riparian vegetation, especially for species such as black birch and willow. Breaks in the fences have permitted livestock to use this area. However, response of native grasses and sedges has been spectacular in years of complete protection. There is a noticeable benefit to the aquatic organisms from stabilizing streambanks. Influences of instream structures on trout in improved areas were evaluated by Idaho Department of Fish and Game biologists one year after installation. By then, trout populations had increased by 873 percent compared to 400 percent after a longer stabilization period had occurred.

MANAGEMENT OBJECTIVES

The Birch Creek Aquatic Habitat Management Plan if implemented would improve aquatic habitat which would complement the high productivity of the stream, contributing to higher population numbers of trout, thusly increasing angler success.

Eight years of protecting the riparian habitat on a test area along Birch Creek have demonstrated that streambanks can be stabilized and vegetation improved to reduce erosion and provide cover for fish, wildlife, and aquatic organisms.

Broad Objectives

1. Improve and protect riparian areas
2. Enhance water quality

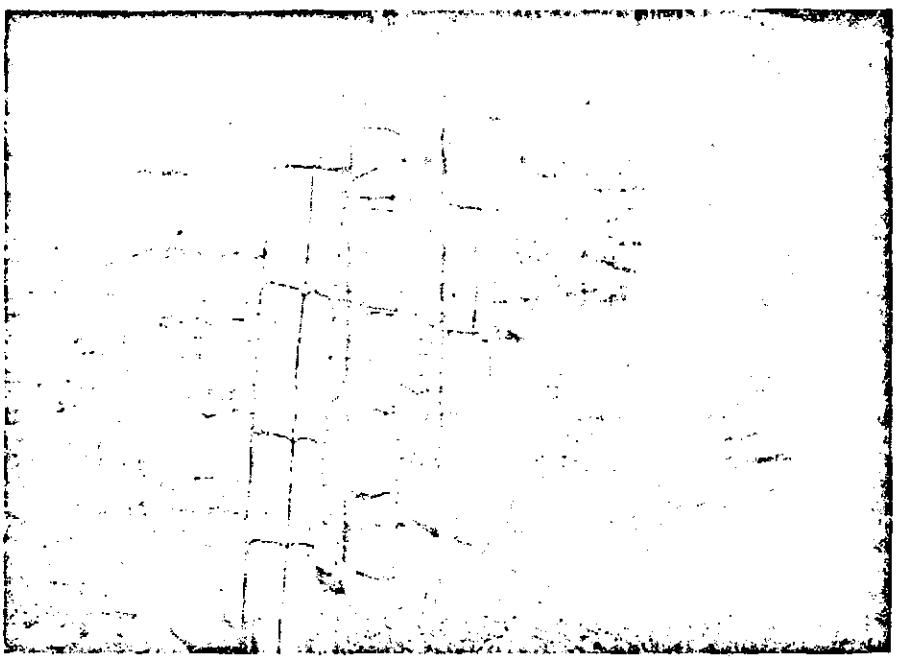


Figure 3. Angler access points to Birch Creek through livestock exclosure.

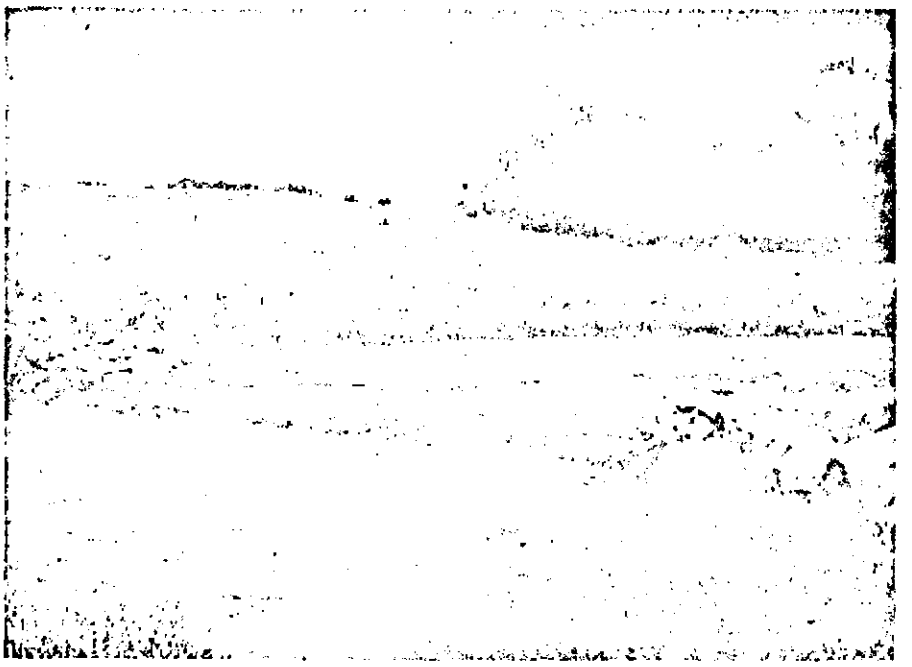


Figure 4. K-Dam in place on Birch Creek. Six-foot deep pool is formed below structure. Riparian vegetation response after one year of protective fencing.

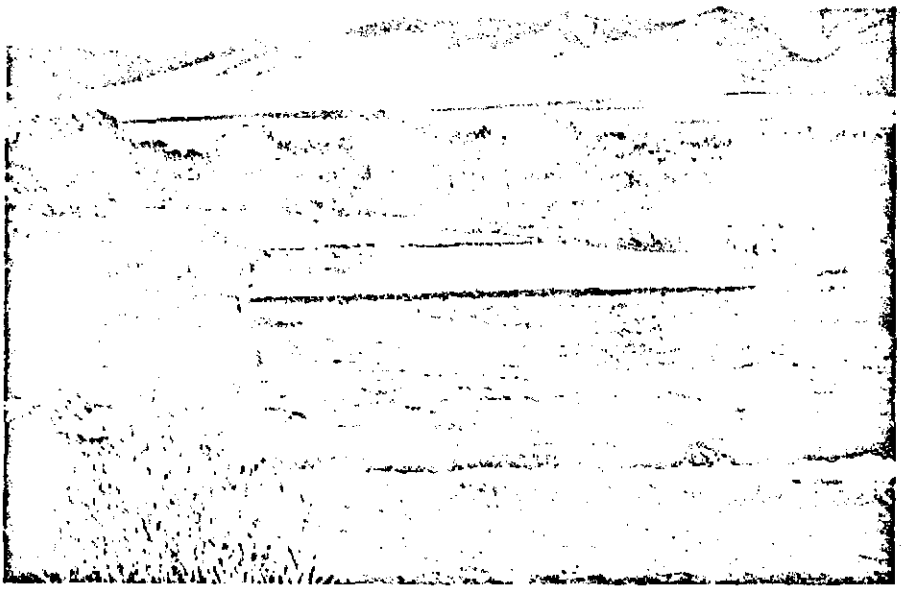


Figure 5. Digger logs placed in upper Birch Creek by Idaho Department of Fish and Game. The structures provided deeper water habitat for trout. The area has had several years' protection from use by livestock.

3. Prevent unusual sediment loads from drainages and streambanks

4. Provide benefits for the multiple uses of water

5. Increase public recreation access

6. Enhance conditions for wildlife through riparian habitat protection

Specific Objectives

1. Protect all riparian vegetation along Birch Creek on national resource lands by control of livestock through a combination of fencing, water development, and shifting of grazing location.

   a. Increase the high shade cover from 20 percent to 50 percent of the stream.

   b. Provide for an increase of streamside overhanging grasses, woody species, forbs, and general ground vegetative cover from 20 percent to 95 percent along controlled portions of the stream.

2. Increase pool riffle ratios from 15:85 to 60:40 on national resource lands.

3. Increase rearing and holding habitat from 20 to 50 percent, or 20,000 to 25,000 fish, of the lower seven miles of stream.

4. Increase deepwater habitat by 100 percent with the goal of increasing the average size of rainbow trout in the lower seven miles of the stream from 8.5 inches to 10.5 inches.

5. Increase angler access from 40 percent to 80 percent of the stream.

6. Assure compliance with state regulations for unrestricted upstream and downstream movement of the trout population.

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7. Reduce the loss of fish in irrigation diversions by 80 percent by improving stream habitat.

8. Protect the habitat of rainbow and brook trout in areas of known spawning and winter concentrations.

9. Reduce riparian habitat destruction by 75 percent by restricting human and vehicular use near streambanks.

10. Increase the quality of habitat for the following wildlife species on the riparian area of Birch Creek by the following percentages:

Deer	10 percent	Waterfowl	5 percent
Antelope	20 "	Song birds	25 "
Furbearers	20 "	Chukar partridge	10 "
Raptors	25 "	Sage grouse	40 "
Shore birds	10 "	Cottontail rabbits	100 "
		Non-game wildlife	50 "

11. Assemble water quality and quantity data and operate the stream gauges on a schedule necessary to evaluate effects of management. Install the equipment necessary for water-quality monitoring of temperature and turbidity. Train BLM employees to operate the equipment.

12. Develop and implement a watershed management system that will comply with these criteria:

a. Dissolved oxygen - saturation

b. Turbidity - Comply with the State of Idaho JTU standards

c. Total dissolved solids - not to exceed 200

d. Fecal bacteria - No more than 10 percent of total samples during any 30-day period to exceed 200/100 ml.

e. Total coliform - No more than 2 percent of total samples during any 30-day period to exceed 1000/100 ml.

13. Through personal contacts, public meetings, and distribution of the Aquatic Habitat Management Plan, make known planning goals and procedures to residents and resource users in the Birch Creek Basin and Idaho Falls District.

14. Provide for the unrestricted flow of water for legal rights at all withdrawal locations on Birch Creek. Use surplus water for controlling livestock use and enhancing aquatic and terrestrial wildlife.

15. Provide public information signs to explain the cooperative Birch Creek Habitat Management Plan.

16. In the development of the objectives, use methods that will retain or improve the open space concept and reduce visual conflicts.

17. Expand public uses such as wildlife viewing, hiking, rock hounding, and backpacking in the Lemhi and Beaverhead Ranges.

MANAGEMENT METHODS

Livestock Grazing

1. The immediate goal is to improve stream habitat by complete removal of livestock use within 250 feet of the stream's centerline. A buffer area will be investigated to consider esthetics, open-space concept, range condition.

2. Eliminate 400 acres from livestock use that are considered for the riparian area of Birch Creek on national resource lands. The elimination of these key 400 acres from livestock grazing is only one percent of the 37,000 adjudicated acres.

3. Develop water for livestock which will result in better use of existing forage. Construction of sixteen reservoirs, two pipeline and spring developments, one ditch and reservoir, and two wells with pipelines has been proposed. However, past experience has shown that reservoirs and wells are not feasible for supplying reliable stock water in Birch Creek allotments. The feasibility of supplying water tanks with pump lines from Birch Creek should be investigated.

4. Re-evaluate livestock forage conditions and trend. Based on condition and trend studies in 1975, areas in good, fair, and poor categories were 32, 48, and 20 percent, respectively. After a new inventory is completed, a grazing system will be developed to achieve overall multiple use objectives.

(Currently there are six livestock operators within the Birch Creek drainage, all economically dependent on national resource lands. There are five allotments with 4,822 AUMs combining both sheep and cattle.)

5. A fencing system will be developed to keep livestock off Highway 28 and away from Birch Creek's riparian vegetation. Several cattle per year have been killed along the highway, and some fencing has lessened this hazard. Fatal accidents to motorists could occur at any time.

6. Through management systems designed specifically for the Birch Creek area, it is anticipated that livestock forage production could be increased from 20 to 30 percent. Management of current grazing systems in the northern end of the Birch Creek drainage will be coordinated with the Salmon District. The Idaho Falls and Salmon Districts will coordinate development and implementation of grazing systems in the upper Birch Creek watershed.

7. Complete an inventory and develop plans for livestock control to protect the vegetative cover of the perennial water areas in the Kyle Creek, Pass Creek, Sawmill, and Spring Canyons.

Discussion

Each year livestock use is allocated for the entire allotment in which there are steep slopes, unwatered areas, and locations with poor livestock access and forage. Presently livestock concentrate on the banks of Birch Creek causing overgrazing, trampling of the banks, siltation of the streams, and loss of fish habitat.

Wildlife Use

Birch Creek is considered one of the most heavily fished trout streams in eastern Idaho. The Idaho Department of Fish and Game determined in 1971 that approximately 12,640 anglers fished Birch Creek for 44,744 hours and caught approximately 50,817 trout.

The fish and other aquatic animals are managed and harvest regulations are enforced by the Idaho Department of Fish and Game. Most rainbow and brook trout are naturally reproduced. The natural stocks are supplemented by the annual planting of 20,000 catchable-size trout during the angling season. The lower portion of the stream below Blue Dome is open to angling the entire year.

Idaho Department of Fish and Game has been engaged in extensive fish habitat improvement in the upper portion of the stream on state-controlled lands and on national resource lands in a cooperative project with the Bureau of Land Management. The Idaho Department of Fish and Game will continue legal and expert management of the fish stocks in Birch Creek and will be the major cooperator to help plan and implement approved habitat protection and improvement. Also, they will be involved with evaluating fish population responses after the plan is effectuated.

Present water quality of Birch Creek is excellent for spawning, rearing, and growth of trout. The high alkalinity and sufficient nutrients contribute to an abundance of aquatic organisms necessary for a productive fishery. However, physical factors such as siltation and applications of bentonite limit the numbers of aquatic organisms in some areas. Water quality in Birch Creek will be maintained by stabilized streambanks, improved range management, protected riparian vegetation, and controlled pollution.

Studies by Idaho Department of Fish and Game have indicated that impaired aquatic habitat in certain stretches of the stream has been a limiting factor for maintenance of a good fish population. In the lower

stream, on national resource lands, abuses such as straightening the channel to rapidly move water to the Reno irrigation ditch have eliminated pools and increased velocity, thus severely reducing the carrying capacity for trout.

In 1966, after inspection of this lower area by Idaho Department of Fish and Game and Bureau of Land Management biologists, a plan was devised to change the pool-riffle ratio to provide rearing and holding habitat for both stocked and wild fish. Instream structures to create pools were planned for the area in the channel below Blue Dome that had been straightened and constructed. The majority of natural obstructions providing fish habitat had been removed to increase the velocity of the water and to lessen percolation through the gravel.

Streamside vegetation in the lower seven miles of stream was in extremely poor condition and banks were unstable and eroded from trampling and overgrazing by livestock. A test area was surveyed in a cooperative program. K-dams were installed to provide pools. Fencing was done to protect riparian vegetation. The livestock exclosures and K-dams have been in place since 1967 and have measurably increased the fish population, improved riparian vegetation, and stabilized streambanks. This experience demonstrated that livestock removal and appropriate in-stream structures can greatly expand the carrying capacity for trout.

Habitat will be improved by protecting and encouraging growth of the riparian vegetation. First, the larger vegetation such as birch, willow, and aspen must be protected and increased to provide shade and cover to the stream. The shading effect from vegetation has protected and prevented increases in temperature due to direct contact with the sun (Lantz,1971; U.S. Forest Service, 1972).

A permanent grass and forb understory in the riparian area will be improved by complete protection. Protection will help increase overhanging vegetation that provides cover for fish and habitat for aquatic food, stabilizes the streambank, and reduces siltation (White, 1967). After a detailed stream study (Appendix C) it was concluded there is a need for varied habitat in large portions of Birch Creek. Some of the needed aquatic habitat will be restored by stabilizing the channel now subject to damage by livestock overuse. If the stream is permitted to meander in a normal manner, eventually fish habitat will also be improved.

Resting and holding areas will be provided by installing the following: 75 rock placements, 3 miles of streambank stabilization, 50 trash catchers, 25 digger logs, 30 log and board dams. A detailed program of implementation is listed in the schedule of the plan.

Cooperation of all private groups, government agencies, and private land owners concerned with the Birch Creek Basin will be needed to prohibit all channel changes except for aquatic habitat improvement. Appropriate regulations for federal, state, and private lands will be enforced to assure that channel changes will not occur.

Siltation of the lower stream will be improved immediately through the elimination of bentonite applications and by stabilization of streambanks. Stabilization of streambanks will also be accelerated by livestock removal, seeding of disturbed bank, and use of rock riprap where necessary.

Areas devoid of higher vegetation will be planted with black birch, willows, wild rose, sinque foil, aspen, and other beneficial species.

Domestic and livestock pollution will be investigated and then, plans for corrective measures will be developed. The Idaho Department of Fish and Game has conducted tests on the Reno irrigation diversion to determine the magnitude and importance of fish loss. In May 1975 diversion of Birch Creek into the Reno ditch (an annual occurance throughout the irrigation season) resulted in the loss of an estimated 2,800 catchable-size rainbow trout.

Other wildlife values in the immediate riparian areas of the stream are important. Protection of the vegetation and improvement of aquatic habitat will be beneficial to all forms of wildlife including big game, upland game, small mammals, raptors, song birds, waterfowl, reptiles, amphibians, and terrestrial and aquatic insects.

Several thousand acres of land and all streams crucial for certain animals have been identified in the Unit Resource Analysis of the Birch Creek Basin. Identified lands include habitat for mule deer, elk, and antelope. Critical habitat for bighorn sheep, mountain goat, sage grouse and waterfowl is also included. The planning area includes all-season ranges for both resident and migratory herds of mule deer. It is expected that the watershed plan in conjunction with the protection of Birch Creek will benefit mule deer herds. Elk habitat is limited in the planning area and no specific improvement activities are recommended for elk.

Antelope are residents of the planning area. Nearly all the home range of these animals is on national resource lands. The fact that succulent vegetation preferred by antelope is found only in a few places during the drier months warrants the protection of riparian vegetation for this important and unique animal. Antelope use could be extended by improving riparian habitat on the few perennial tributary streams to Birch Creek. Implementation of the livestock allotment management plan and the aquatic habitat management plan will benefit antelope.

Timber Management

Opportunities for development of existing stands of timber in the Birch Creek watershed on national resource lands are lacking. Douglas fir mixed with aspen are found in small 40-200 acre patches on the slopes. These existing islands of trees are excellent wildlife areas and should be preserved in their present condition.

There are opportunities for some revegetation of trees along Birch Creek and possibly some tributaries. Selected areas devoid of high vegetation could be restocked with black birch, willows and aspen. Native species compatible with existing vegetation should be established.

Major revegetation will be limited to denuded areas along the lower five miles of stream. After the areas have been protected by fencing, a program should be initiated to plant approximately 1,000 black birch seedlings, 2,000 willow cuttings, and 2,000 aspen stock. Coordination with the Idaho State Department of Lands and U. S. Forest Service personnel will be necessary to determine proper methods of planting to achieve maximum success.

The plan will be coordinated with the U. S. Forest Service so timber harvest operations within the Birch Creek watershed will complement management objectives. Particular attention should be given to new transportation routes and timber management practices that may have an impact on water quality and flow regimes.

Habitat Development and Improvement

The developments and improvements discussed here were chosen after a 1975 stream survey.

Fencing - There is a need to restrict livestock use on the riparian and other lands adjacent to the stream. The critical need is in the portion of the stream on national resource land downstream from Blue Dome to the Reno diversion ditch. Approximately 15 miles of fence will be needed to adequately protect the area. Some of the fencing can be accomplished by moving the existing fence paralleling Highway 28 from the east side to the west side of Birch Creek. Approximately 5 cattle-guards and 15 sportsmen's foot transportation entrances will be needed in the fencing system.

There is also need for streambank stabilization. Approximately three miles of streambanks are in an unsuitable condition. Rock riprap will be required on one-half mile of stream and 15 short gabions will be required in approximately one-fourth mile of stream. The remainder of the disturbed streambanks will be handworked and reseeded with stabilizing grasses and shrubs.

Stream Improvement - The five miles of stream below Blue Dome need more holding water for native and stocked rainbow trout. By installing in-stream devices in the areas where the channel has been straightened or

where there is a need for increasing the pool riffle ratio, holding water areas will be established. Another benefit of installation of in-stream devices will be that water loss rates will be lessened. The in-stream devices will consist of 10 trash catchers, 25 digger logs, and 30 log board dams.

Tree Planting - Many reaches of the stream lack higher vegetation which provides steamside cover and trout habitat. The density of trees and shrubs can be increased by planting older stock on streambanks in selected areas. The plantings will be made only after the area is protected from livestock.

Detailed revegetation plans are listed in the appendix. The initial projects will include establishemt of 200 birch seedlings, 250 aspen, and 2,000 willow cuttings.

Road Maintenance - Improve the stream crossing on the road to Eightmile Canyon on lower Birch Creek. Install gabions at the base level of the streams to permit a firm base for vehicles and provide easy upstream fish migration.

Access Development, Improvement, and Management

The entire length of Birch Creek could be readily accessible to the public from Idaho State Highway 28 that parallels the entire stream. Present access points to spur roads in the lower five or six miles of stream are sufficient for present and future needs.

Public and state lands in the upper section of Birch Creek at Kaufman Guard Station are accessible at Idaho Department of Fish and Game acquisition sites.

Riparian habitat on national resource lands could be enhanced in a few locations by closing and relocating existing dirt access roads away from streambanks to reduce human use. The program would not reduce angler access.

A positive program will be initiated by the Idaho Department of Fish and Game to provide angler access on private lands. Public access areas will be negotiated with individual landowners and special facilities such as stiles (approximately 25) will be installed to protect private fences. Signs will designate prohibited access areas in critical farm areas. Two hundred signs should be printed to explain the cooperative access program (the limitation of access near residences and outbuildings and other critical farmland).

Land Acquisition, Classification, and Withdrawal

Small, springfed stream systems appear to be major nursery grounds for trout that probably provide a constant source of restocking for the entire stream system. The majority of the upper valley is a wetland of excellent wildlife habitat with unique fishing areas especially adapted to artificial fly angling.

A program of land exchange with ranch owners was initiated by the Salmon District of BLM, but no specific exchanges were consummated. The plan of exchange could be continued as the number one priority of the access program of the Habitat Management Plan once the Gilmore Management Framework Plan is completed. The upper tributary system could be better managed for fisheries, wildlife, and public recreational purposes if the area was in public ownership.

Much of the upper valley supports nesting and seasonal populations of migratory waterfowl and shore birds. Approximately 500 acres of upper Birch Creek's tributaries could be considered for acquisition. If land cannot be acquired, negotiations should be initiated for a cooperative management plan with the landowners.

The second priority would be to obtain easements for fisherman access on private land along Birch Creek from above Kaufman Guard Station to a point several miles below Blue Dome.

Water Rights

There are at least four major diversions on Birch Creek to irrigate private lands. Approximately six miles below Blue Dome, the Reno diversion takes the entire flow of Birch Creek during the irrigation season. The diversion does not have a fish screen, and in 1975 it was estimated by the Idaho Department of Fish and Game that at least 2,800 catchable-size rainbow trout were lost during the spring diversion.

Studies will be initiated to enable biologists to determine if a pond could be built near the Reno diversion to hold downstream migrant fish that would normally be lost through the ditch or in the de-watered portion of Birch Creek.

In-stream water flows are reduced below Blue Dome due to upstream diversions and loss of water in the deep gravel deposits of the streambed that flows over the upper Snake River alluvial plain. Because of the water loss, irrigators have straightened the channel and tried to confine meandering areas. Annual additions of bentonite clay are placed in the stream to seal the bottom gravels. United States Geological Survey water

records from 1971 to 1974 are available in Appendix A showing the varied water readings at the stations from Kaufman down to Reno diversion.

To assess whether or not stream improvement devices would decrease flows, a study was conducted in 1976. It was concluded that seepage work be lessened in improved areas because particulate matter, as a result of decreased velocities, would settle and plug interstices of bottom substrates (Appendix D).

Installation of new in-stream fish habitat devices should not be done during the irrigation season to prevent interference with normal flow.

Minerals

The entire Birch Creek watershed has a history of active mineral exploration. Presently, major mineral activity is exploratory with the exception of the open-bed iron ore deposits in the upper portion of the Birch Creek Valley. Future exploration and development of minerals should be compatible with the proposed Habitat Management Plan.

Most mineral activity is located above the extensive talus slopes so that residues or effluent do not reach Birch Creek. The study area is highly mineralized and accelerated activity should be anticipated.

Other

Recreational Management - Primary recreation in the valley is fishing in Birch Creek. The streamside is also used for camping and resting by travelers. The area is expected to increase in popularity as a base from which to explore Beaverhead and Lemhi Mountains. Since it is one of the more popular angling streams in this part of Idaho, the need for overnight camping facilities will probably increase. Camping on NRL

in the lower portion of Birch Creek is not restricted. At least two campgrounds of 25 units with drinking water and complete facilities are needed here. By concentrating camping areas, riparian vegetation can be protected, sanitary facilities can be properly located, and the outdoor experience of angling can be enhanced. The public access points on private land and the Idaho Department of Fish and Game public access area at Kaufman Guard Station are well used. Idaho Department of Fish and Game estimated that 4,901 fishermen caught 50,817 trout. Most use of facilities will be from trout fishermen or campers.

Hunting, rockhounding, snowmobiling, motorcycling, hiking, horseback riding, picnicking, sightseeing, and camping are other recreational uses of the area. The plan may need modification as any one of the uses may increase in popularity.

Individual camping areas on private lands and on isolated state lands along Birch Creek are heavily used and sanitary facilities should be improved. Approximately ten new, small camps should be improved and maintained. Camping and picnicking should be located a sufficient distance from the stream to provide maximum protection of riparian habitat and prevent degradation of water quality.

The improvement of fishery habitat in lower Birch Creek should increase angler success by at least 300 percent. As a result, angler use of this area will increase by at least 150 percent.

Watershed Management - The protection of the water supply and improvement in quality is a primary objective of the habitat management plan. Certain weather conditions cause unusual runoff and opportunities for bedload movement from intermittent tributaries and canyons that enter the stream.

Watershed studies have been completed on Birch Creek. They will be updated and problems identified that may affect water quality. Improved allotment management plans could reduce rapid runoff by use of structures and management.

Much of the sediment found in Birch Creek during periods of thawing and heavy runoff comes from streambank sloughing. Streambank stabilization projects should prevent the immediate washing. Protection of riparian habitat will also reduce siltation.

Several portions of Birch Creek are subject to the development of anchor ice in the winter due to the lack of vegetation. This condition flushes water out of the stream channel and harms fish. Significant physical damage to the stream from anchor ice is not obvious. However, many aquatic organisms may be destroyed. The present watershed is classed as "stable" even with the poor vegetative cover.

MANAGEMENT EVALUATION

Recovery of riparian vegetation will be evaluated on five plots. There will be inventories annually during critical months such as August or early September. Changes in stream habitat, including riffle-pool ratio, will be evaluated by conducting stream surveys. Under this system, any one-quarter mile section can be evaluated and compared with the previous conditions.

Fish population studies by Idaho Department of Fish and Game have provided base line data. After improvement structures are installed, fish will be sampled annually for three years, prior to the stocking season, to obtain information about population responses including growth and standing crop.

Angler access will be evaluated by counting the number of areas made available and cooperative agreements negotiated on private property. Use counts will be conducted during peak recreation times such as holidays and opening days.

If a method is developed to screen or reduce loss of fish in irrigation diversions, state biologists will estimate the decrease in loss rates. Trend counts of wildlife will be conducted in conjunction with ongoing work of the biologists.

IMPLEMENTATION AND COST ESTIMATE

First Year

1. Install 25 rock placements in a selected area of Birch Creek as an initial phase of this type of in-stream structure. $3,000 cost estimate.

2. Construct five trash catchers for experimental study. $500 cost estimate.

3. Install five K-dams below the existing series of structures. $6,000 cost estimate.

Second Year

1. Construct and install twenty stiles to use on private fences in the area of Blue Dome. $750 cost estimate.

2. Negotiate for easements with private landowner.

3. Construct approximately 15 miles of fence to protect riparian areas and the national resource lands of Birch Creek. $75,000 cost estimate. (Examples JDRs in Appendix E).

PROVISION FOR REVIEW AND MODIFICATION

The Birch Creek Aquatic Habitat Management Plan is designed primarily to improve riparian habitat by complete protection from livestock use. Improved vegetation will greatly enhance aquatic habitat, which will be supplemented by in-stream structures and rock placements.

Range management techniques involving various grazing systems may be developed to protect or improve riparian vegetation. If the techniques are viable, the habitat management plan may be modified.

There will be reviews of the evaluation findings, objectives, and methods. If necessary, recommendations will be prepared for updating of habitat inventory and analyses, land use plan and the habitat management plan.

BENEFIT/COST ANALYSIS

Three types of tangible benefits are identified. They would be (1) reduced livestock-associated administrative costs, (2) increase in fisherman days, and (3) increase in hunter days. There would also be some intangible benefits such as better water quality and aesthetic improvements.

Three classes of costs have been identified. Net long-term costs include those for original construction of improvements and fencing. Net annual costs include those for project maintenance, loss of grazing fees,

and loss of AUMs to the livestock industry. Replacement costs would be associated with replacing the improvements and fences at some specified time during the life of the project.

The following assumptions were used in the preparation of the analysis:

1. Life of the project is 50 years.
2. Interest rate equals 6-1/8% (1976 Water Resources Council discount rate).
3. All long-term developments occur in Year 1.
4. All replacements occur at 20-year intervals.
5. Value of one AUM to livestock operators is $3.26 (Total SEPA livestock income/Total SEPA AUMs).

Implement Management Plan

Benefits:

Administrative - (annual savings x present value of 1)
$175 x 15.49 = $2,711

Fisherman days - (increase in use days x build up factor x value of one use day)
$5,600 x 13.72 x 10.00 = $768,320

Hunter days - (increase in use days x build up factor x value of one use day)
$200 x 13.72 x $6.00 = $16,464

Total benefits - $787,495

Costs:

Improvements (original construction costs)		$36,000
Fencing (original construction costs)		$17,465
Net long-term costs		$53,465
Maintenance (annual cost x P.V. of 1)	$750.00 x 15.49	$11,618
Fees foregone	$193.28 x 15.49	$ 2,994
AUM value ($3.26 x 128)	$417.28 x 15.49	$ 6,464
Net annual costs		$21,076

Improvement replacements (original cost x replacement factor)				
	$36,000	x	.42	$15,120
Fencing replacements	$17,465	x	.42	$ 7,335
Net replacement costs				$22,455
Total costs				$96,996

BENEFIT/COST = $787,495/$96,996 = $8.12

For each dollar of costs on the project, $8.12 is returned in benefits.

Alternative - No Management Plan Implemented

Benefits:

AUM value (value of 1 AUM x total AUMs x P.V. of 1)				
$3.26	x	128	x	15.49 $ 6,464
Grazing fees (value of fees x P.V. of 1)				
$193.28	x	15.49		$ 2,994
Total benefits				$ 9,458

Costs:

Administrative (administrative cost x P.V. of 1)				
$175	x	15.49		$ 2,711
Total costs				$ 2,711

BENEFIT/COST = $9,458/$2,711 = $3.49

For each dollar of costs on the action, $3.49 in benefits is returned.

Definitions

Costs

Improvement costs - labor, materials, supervision, and any other costs associated with the development of proposed improvements.

Fencing costs - labor, materials, supervision, and any other costs associated with the development of proposed improvements.

Maintenance costs - annual costs associated with maintenance of proposed improvements and fences.

AUM fees - value of fees paid to BLM for grazing privileges lost by implementation of Aquatic Habitat Plan.

AUM value - value of AUMs lost to the livestock industry by implementation of the Aquatic Habitat Plan.

Replacement costs - cost to replace improvements and fences at some year in the life of the project.

Total costs - summation of all improvement, fencing, maintenance, and replacement costs as well as the costs associated with the loss of AUM fees and AUMs to the livestock industry.

Benefits

Administrative - savings resulting from exclusion of livestock in the management area (administrative work is no longer necessary).

Fisherman days - increase in fisherman use in the management area.

Hunter days - increase in hunter use in the management area.

Total benefits - summation of administrative, fisherman, and hunter benefits.

Benefit/Cost - benefits divided by costs gives a ratio, B:C, stating that for every dollar of costs, so many dollars of benefits accrue (5:1 = for every dollar of cost, $5 of benefits accrue).

SEPA - Social Ecomonic Profile Area. In this instance, the Idaho Counties of Bannock, Bear Lake, Bingham, Bonnerville, Butte, Caribou, Clark, Franklin, Fremont, Jefferson, Madison, Oneida, Power, and Teton.

EVALUATION PLAN

The evaluation of Birch Creek habitat improvement work is an imperative part of the management processes. Evaluation is in progress and should continue as part of the Birch Creek HMP.

1. Fish population studies

   a. The original fenced area with K-dams was inventoried by IDF&G before structures were installed.

   b. Fish population studies were made a year later by IDF&G in the improved area.

   c. Fish populations should be continued to be sampled at least on a 2-3 year interval in the original area.

d. The 1976 fish habitat improvement area was sampled before structures were installed in May 1976. Data will be evaluated in order that base line information can be established for population densities average lengths, species composition, etc.

2. Continuing Program

Overall, a sampling program will be designed to provide data about the influences of habitat improvement on the fishery. The program will involve the following:

a. Plan for IDF&G to perform the fish sampling; if not possible, the BLM staff will perform the work. For all BLM field work, there will be strict adherence to terms stipulated in the supplement to the Master Understanding.

b. Estimate fish population numbers and average lengths and weights in the improved areas early in spring prior to trout stocking.

c. Plan to sample fish populations an adequate number of times after catchable trout have been stocked in order that use by wild and hatchery trout, in improved sections of Birch Creek, can be determined.

d. Sample the benthic community prior to and after improvements to determine influences of structures on species composition and standing crop.

3. Angler success

a. Compile data for the area originally improved in order that effects on angler success can be assessed.

b. Compile creel census data for Birch Creek each year. The information will enable trends to be established.

4. Riparian Habitat Studies

   a. Test plots have been established.

   b. Photographs will be taken annually of test plots in addition to measurements.

   c. There may be a need for more stations to be established in order that vegetation changes can be documented for problem areas.

5. Aquatic Habitat Studies

   a. Riffle-pool ratios have been recorded where improvements are to be made.

   b. After improvements, areas will be resurveyed to document habitat changes.

   c. Aquatic Vegetation

      (1) In sites where major structures (K-dams and trash catchers) are planned, the abundance and types of aquatic vegetation will be documented in August.

      (2) After two years of operation, changes in aquatic vegetation in area influenced by structures will be recorded.

      (3) Range transect techniques will be used to measure vegetation. To establish a record of aquatic vegetation response, photographs will be taken by use of a polaroid lens.

6. Water Flow

   a. Continue USGS Recording Stations.

   b. A gauging station will be installed at the Reno Ditch.

   c. Analyses will be conducted to continue to assess influences of improvement devices on flow rates.

7. Water Quality

a. Idaho Public Health cooperation will be obtained for collecting bacterial water analyses in spring, summer, and winter.

b. Permanent water quality sampling stations will be established.

c. USGS water sampling activities will be supplemented, if necessary.

d. In cooperation with EPA, determine if BLM is complying with PL 92-500 "best management practices" for non-point source of pollution when guidelines are established. Help of EPA may be needed for designing and implementing studies to assess if there is compliance.

8. Wildlife Evaluation

Population Response to Habitat Enhancement or Development

a. Study plots, in accordance with Bureau standards, have already been established. Range plot data studies should be conducted every three years. Photos of the range study plots should be taken yearly. Eight (8) additional study plots should be established in T. 9 N., R. 30 E., secs. 16, 21, 28, and 33.

b. Sweep net surveys will be made prior to and every two years after construction of protective fences to document invertebrate population characteristics or/and changes.

c. Systematic collection of small mammals for the purpose of determining population changes or characteristics will begin in 1977 and will continue annually until 1987.

d. Sage grouse booming ground surveys and production routes will be performed in cooperation with the Idaho Department of Fish and Game beginning 1977. Increases or other changes in population or production rates will be documented and analyzed and compared with regional data for significant variances.

e. Antelope production surveys (doe:fawn ratios) will be performed in cooperation with the Idaho Department of Fish and Game beginning early summer of 1977. Increases or changes in population or production rates will be documented and compared with regional data.

f. Present cooperation with the Energy Research and Development Administration with the Antelope Radio-Telemetry Study will be continued. Significant variation in antelope use in the ensuing years will be correlated with habitat changes.

g. Waterfowl production foot surveys will be performed in selected sections of Birch Creek prior to 1978 and annually after the protective fences are constructed to determine if there are changes in waterfowl use or production.

h. Population surveys on song and insectivorous avian species will be performed in selected sections of Birch Creek prior to 1978 and annually after protective fences are constructed to determine if there are changes in species use or reproduction rates.

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APPENDIX A

BIRCH CREEK FLOW RECORDS

Flow Data May - September for 1973 Water Year. Station Number 13117030 at Eight-Mile Canyon Road near Reno, Idaho.*

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
								-	47	48	60	52
1								-	46	47	56	47
2								-	46	47	56	46
3								-	44	46	58	43
4								-	43	47	58	42
5								-	43	48	58	42
6								-	43	47	58	42
7								-	42	46	58	43
8								-	41	44	54	42
9								56	42	43	54	42
10								62	42	44	56	43
11								60	43	46	58	44
12								60	43	46	56	46
13								60	49	46	54	48
14								52	49	49	56	50
15								48	50	50	56	52
16								48	48	49	54	52
17								48	47	52	49	50
18								49	46	54	49	52
19								52	46	66	49	-
20								52	43	68	50	-
21								52	43	68	52	-
22								50	42	70	52	-
23								48	43	64	49	-
24								48	44	62	50	-
25								49	44	62	50	-
26								49	43	60	50	-
27								48	44	58	50	-
28								45	47	60	50	-
29					------			45	48	60	50	-
30					------			42	------	62	49	------
31		------			------		------					
TOTAL								-	1,341	1,659	1,659	-
MEAN								-	44.7	53.5	53.5	-
MAX								-	50	70	60	-
MIN								-	41	43	49	-
AC-FT								-	2,660	3,290	3,290	-

Flow Data May - September for 1973 Water Year. Station Number 13117020 at Blue Dome Inn near Reno, Idaho.*

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								-	72	73	77	71
2								-	72	72	76	70
3								-	72	71	76	69
4								-	72	72	77	69
5								-	71	72	76	69
6								-	71	72	76	69
7								-	70	72	73	69
8								-	67	73	73	69
9								-	65	72	73	67
10								78	65	72	72	66
11		1						78	65	71	72	66
12								79	65	73	72	65
13								76	65	73	72	66
14								71	69	73	70	66
15								74	70	73	70	65
16								73	69	76	71	64
17								73	69	77	72	66
18								73	70	78	70	66
19								73	70	79	70	66
20								74	70	85	71	-
21								74	70	84	70	-
22								74	70	85	72	-
23								74	71	82	71	-
24								72	71	80	70	-
25								72	71	79	70	-
26								72	72	78	69	-
27								74	72	78	69	-
28								72	72	78	67	-
29					------			70	72	78	67	-
30					------			70	73	78	67	-
31		------			------		------	70	------	77	67	------
TOTAL								-	2,093	2,356	2,218	-
MEAN								-	69.8	76.0	71.5	-
MAX								-	73	85	77	-
MIN								-	65	71	67	-
AC-FT								-	4,150	4,670	4,400	-

Flow Data May - September 1974 Water Year. Station Number 13117030 at Eight-Mile Canyon Road near Reno, Idaho.*

April		May		June		July		August		September	
Gage Height	Discharge	Gage Height	Discharge	Gage Height	Discharge	Gage Height	Discharge	Gage Height	Discharge	Gage Height	Discharge
				1.10 .02	48	1.01 .07	43	1.07 .00	42	1.09 .01	43
				1.10	48	1.04 .04	43	1.08	43	1.10	44
				1.09	46	1.05 .03	43	1.11	46	1.10	44
				1.09	46	1.03	41	1.11	46	1.09	43
				1.10 .02	48	1.03	41	1.09	44	1.09	43
				1.10 .03	50	1.03	41	1.11	46	1.09	43
				1.10	50	1.05	43	1.16	55	1.09	43
				1.10	50	1.05 .03	43	1.18	59	1.08 .01	42
				1.10	50	1.06 .02	43	1.19	60	1.08 .00	43
				1.09	48	1.06	43	1.16	55	1.09	44
				1.10	50	1.08	44	1.15	53	1.09	44
				1.10	50	1.10	48	1.15	53	1.10	44
				1.10	50	1.09	44	1.15 .00	53	1.10	44
		1.20 .00	62	1.09 .03	48	1.09	46	1.15 .01	53	1.10	44
		1.20	62	1.09 .04	50	1.09 .02	46	1.14	50	1.10	44
		1.19	60	1.09	50	1.10 .01	46	1.14	50	1.09	44
		1.17	57	1.09	50	1.10	46	1.14	50	1.09	44
		1.16 .00	55	1.08	48	1.09 .01	44	1.14	50	1.08	43
		1.15 .01	55	1.07 .04	46	1.10	46	1.14	5?	1.08	43
		1.15	55	1.09	44	1.10	46	1.18	57	1.08	43
		1.15	55	1.05 .08	46	1.10	46	1.16	53	1.08	43
		1.15	55	1.02	44	1.05	44	1.14	50	1.07	42
		1.15	55	1.01	44	1.07	43	1.13	48	1.07	42
		1.13	52	1.03 .06	46	1.03	44	1.13	48	1.06	41
		1.10	46	1.02 .07	44	1.07	43	1.13	48	1.06 .00	41
		1.10	46	1.05	44	1.07 .01	43	1.13	48	a	41
		1.09 .01	44	1.03	44	1.07 .00	42	1.12	46		41
		1.10 .02	48	1.03	44	1.09	44	1.10	44		41
		1.10	48	1.02	44	1.09	43	1.09	43		40
		1.12	52	1.01 .07	43	1.07	42	1.09	43	a	40
		1.11 .02	50			1.07 .00	42	1.09 .01	43		
					1413		1356		1529		1281

Flow Data May - September for 1974 Water Year. Station Number 13117020 at Blue Dome Inn near Reno, Idaho.*

	May		June		July		August		September	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
1			1.60	.03 77	1.58	.05 65	1.62	.02 66	1.61	.05 69
2			1.61	.13 78	1.59	66	1.63	67	1.62	70
3			1.60	.12 76	1.60	.05 67	1.65	.02 70	1.62	70
4			1.59	74	1.59	.04 65	1.66	.03 72	1.63	71
5			1.61	77	1.59	65	1.64	70	1.63	71
6			1.60	76	1.59	.04 65	1.63	69	1.63	71
7			1.59	.12 74	1.60	.03 65	1.65	71	1.63	71
8			1.61	.11 76	1.60	.03 65	1.65	71	1.63	.05 71
9			1.60	74	1.60	.02 64	1.66	72	1.63	.04 70
10			1.59	73	1.61	65	1.65	.03 71	1.63	70
11			1.60	.11 74	1.62	.02 66	1.64	.04 71	1.63	70
12			1.59	.12 72	1.61	.01 64	1.64	71	1.63	70
13			1.58	71	1.60	63	1.64	71	1.64	71
14		1.63 [est] .11 85	1.58	71	1.61	64	1.64	71	1.63	70
15		1.64 86	1.57	70	1.61	.01 64	1.63	71	1.63	70
16		1.62 .17 84	1.57	.10 70	1.61	.00 63	1.64	.04 71	1.63	70
17		1.61 .16 82	1.57	.09 69	1.61	63	1.63	.05 71	1.62	69
18		1.62 83	1.58	70	1.61 [est]	.00 63	1.63	71	1.62	69
19		1.60 80	1.60	72	1.62	64	1.63	71	1.62	69
20		1.62 .16 83	1.59 [est]	71	1.63	.00 65	1.67	76	1.62	69
21		1.63 .15 83	1.59	.09 71	1.63	.01 66	1.64	72	1.62	69
22		1.63 83	1.59	.08 70	1.62	65	1.64 [est]	72	1.62	69
23		1.63 83	1.58	.08 69	1.62	65	1.64	72	1.62	69
24		1.63 .16 83	1.59	.07 69	1.62	65	1.64	72	1.62	69
25		1.60 .14 78	1.59	67	1.62	65	1.64	72	1.61 [est] .04 67	
26		1.60 78	1.57	66	1.62	65	1.64	72	a	67
27		1.60 78	1.58	.07 67	1.62	.01 65	1.63	71		67
28		1.60 78	1.58	.06 66	1.63	.02 67	1.62	70		67
29		1.59 .14 77	1.58	66	1.64	69	1.61	69		67
30		1.61 .13 78	1.58	.06 66	1.62	66	1.61	69	a	67
31		1.61 .13 78			1.62	.02 66	1.61	.05 69		
				2142		2015		2194		2079

APPENDIX B

WATER RIGHTS DATA FOR BIRCH CREEK

APPENDIX E

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT

IDAHO FALLS, IDAHO 83401

June 4, 1975

Mr. Ralph Culvertson
Bureau of Land Management
940 Lincoln Road
Idaho Falls, Idaho 83401

Dear Ralph:

Pursuant to your request, please find enclosed information for water rights on Birch Creek and water measurements for the years 1971, 1972, and 1973, 1974.

Very truly yours,

LOY H. JOHNSON
Water Resource Supervisor

LHJ:CW

Enclosures

Actual field data is on file in the

Idaho Falls District Office.

Position	Info.	Act.	Init.
District Mgr			
Resource Mgmt.			
Operations			

RECEIVED
U.S. D.I. JUN 5 1975 B.L.M.
Idaho Falls, Idaho

Administration			
Caribou RA			
Lost River RA			
Med Lodge RA			
Twin Butte RA			

IO 83401

APPENDIX C

STREAM SURVEY DATA FOR BIRCH CREEK

BIRCH CREEK, IDAHO

STREAM SURVEY REPORT

BUREAU OF LAND MANAGEMENT

IDAHO FALLS DISTRICT

IDAHO DEPARTMENT OF FISH & GAME

IDAHO FALLS, IDAHO

JULY 1976

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BIRCH CREEK IDAHO STREAM SURVEY REPORT

Introduction

As a part of the intensive inventory of Birch Creek, a physical stream survey was conducted in June, 1975. The survey was an interagency project between Idaho Department of Fish & Game, Fisheries Division, and personnel from the Bureau of Land Management. Training, assistance and analysis of the survey data were provided by the Fisheries Biologist from the BLM Oregon State Office.

The survey was conducted on the portion of Birch Creek from the Reno Ditch diversion up to and including all the tributaries forming the headwaters, a stream distance of approximately 22 miles.

Personnel involved in the survey were as follows:

R. Culbertson, Wildlife Biologist, Idaho Falls District
R. Borovicka, Oregon State Office, BLM
H. Hendrick, Salmon District, BLM
S. Robinson, Idaho Falls District, BLM
W. Ball, Idaho Department of Fish & Game
P. Jeppson, Idaho Department of Fish & Game

Description

Birch Creek is the major feature of the valley floor that drains the area between the southern end of the Lemhi Mountains on the west and the Beaverhead Mountains on the east. The stream originates from a complex of springs in the upper portion of the valley. The creek meanders through private, state and national resource lands. During the irrigation season, the water is completely diverted into the Reno irrigation ditch, approximately 20 miles downstream from the headwaters. The stream system is in a closed basin where undiverted water sumps out on the Idaho National Engineering Laboratory of the Energy Research and Development Administration. It is presumed that the water becomes a part of the Snake River Aquifer. Limnological data for the creek have been compiled by Andrews (1972).

The stream carries a flow of high quality water on a perennial basis that averages between 53 to 149 cfs. Birch Creek is considered medium to rich in abundance and quantity of aquatic organisms (Table 1).

Table 1, Invertebrate fauna collected in Birch Creek 1970-71. (From Andrews, 1972)

TAXON

Diptera

- Chironomidae
- Simulium sp.
- Tipula sp.
- Dicranota sp.
- Helcidae
- Pericoma sp.

Coleoptera

- Optioservus quadrimaculatus
- Bidessus sp.
- Hydaticus sp
- Dubiraphia sp.

Ephemeroptera

- Baetis tricaudatus
- Ephemerella grandis
- E. inermis
- Rhithrogena hageni
- Paraleptophlebia heteronea
- Ephemerella flavilinea
- Ameletus oregonensis
- A. velox
- Tricorythodes minutus

Plecoptera

- Acroneuria pacifica
- Isoperla fulva
- Arcynopteryx parallela
- Pteronarcella badia
- Alloperla sp.
- Classcuia sabulosa
- Isogonus sp.
- Capnia sp.
- Isoperla mormona
- Pteronarcys californica
- Nemoura sp.
- Isoperla patrica

Trichoptera

- Brachycentrus occidentalis
- Hydropsyche sp.
- Glossosoma sp.
- Arctopsyche grandis
- Lepidestoma sp.
- Helicopsyche borealis
- Hesperophylax sp.
- Limnephilus sp.
- Drusinus sp.
- Micrasema sp.
- Parapsyche elais
- Athripsodes sp.
- Oecetis sp.
- Chimarra sp.
- Rhyacephila vaccua
- Rhyacophila acropedes

Annelida

- Hirudinea

Acarina

- Hydracarina

Amphipoda

- Gammarus lacustris
- Hyalella azteca

Hemiptera

- Callicorixa sp.

Neuroptera

- Sialis sp.

Playhelminthes

- Turbellaria

Mollusca

- Lyrmaea sp.
- Physa sp.
- Gyraulus sp.
- Pisidium sp.
- Sphaerium sp.

Odonata

- Argia sp.
- Ophiogomphus sp.

State Highway 28 parallels and crosses the creek in three locations through the valley. Several unimproved roads parallel the stream on national resource lands. Physical access is available on all NRL and State lands and general fishing is permitted by permission on private lands. Birch Creek is located in Butte, Clark, and Lemhi Counties, Idaho and is in the eastern portion of the Birch Creek-Little Lost River Planning Unit.

The stream is considered one of the most important trout waters on NRL in eastern Idaho and is a very popular fishing area for both residents and tourists. Ease of access, good fish production and interesting outdoor habitat contribute to its popularity in Idaho. The extreme upper portion of the stream has outstanding natural reproduction of trout, both Rainbow and Brook. The lower portion of the water on NRLs contains natural stocks of fish but is periodically stocked by the Idaho Department of Fish & Game with catchable rainbows.

The creek is characterized by having only one live tributary (Pass Creek) in the central portion of the watershed. Pass Creek is entirely diverted for irrigation of fields during the irrigation season.

Methodology

The Physical and Biological Stream Survey Book, 6670-1, was used by field personnel during the survey. Data collected were compiled from the field form and transferred to 6670-2 Forms, Physical and Biological Stream Survey Reports (Exhibit A)*.

The most extensive survey was conducted on the lower nine miles of stream. This section is almost entirely on NRL with some interspersed State of Idaho lands. The reason for the more intensive survey in this area was the condition of the habitat and the opportunity for management on NRL. All of the stream on private lands was surveyed to determine condition of the aquatic habitat, riparian cover and riffle-pool frequency. The upper portion of the stream near Kaufman Guard Station was surveyed to determine the amount of riffle and pool area and the general condition of the aquatic and riparian habitat. Aerial photographs (1-20,000) were used to divide the area in quarter-mile sections for purposes of the survey. Survey data were collected by sub-section in the normal quarter-mile section that is standard for this method of stream survey.

Little water quality data were collected because of the detailed analysis available in the files of Idaho Department of Fish & Game and the data available as a result of the Limnological investigations published in the thesis by (Andrews, 1972).

* A sample Physical and Biological Stream Survey Report Form is attached as Exhibit A. Other supporting data referred to are in Files in the District Office.

Objectives

1. To record the physical parameters by specific location as listed in BLM Stream Survey Manual 6671.

2. To analyze the collected data to determine limiting factors.

3. To inspect and record the need and location of possible habitat improvements as a basis for future fishery habitat improvement.

4. To use the survey as an important part of the intensive inventory of the Birch Creek Aquatic Habitat Management Planning Area.

Results

Physical Survey. The physical inventory that delineated the stream bottom type, including pool area, clearly depicted the contrast between the fishery habitat on NRL as compared to private and protected lands under State ownership. The statistics indicate the low percentage of pool area and streamside cover in the lower nine miles of stream on NRL. The national resource lands have had no protection from livestock grazing in the past, except for a small experimental area. The private lands from river mile 9 up to river mile 17 exhibit almost a 50-50 riffle-pool relationship and 75 percent stream shading. The majority of private lands along the stream have been fenced and have had limited livestock use because of cultivated fields or other agricultural uses. Some physical characteristics of Birch Creek are summarized in Tables 2 and 3 and Figures 1 through 4.

Discussion

Factors that limit the maximum production of fish in the aquatic habitat of Birch Creek are as follows:

1. There is historically heavy utilization of riparian vegetation by livestock along the stream on NRL. This heavy use of the riparian area has broken down stream banks and suppressed growth of woody plants. As a result, fish habitat in the form of pools, undercut banks and deep meanders has been eliminated.

2. Past channel changing activities for water flow movement have increased the velocity of the water and destroyed trout habitat.

3. Increases in water turbidity and sediment due to unstable streambanks affect water quality and cause impaction of gravel and covering of gravel with silt.

Table 2. Characteristics of Birch Creek as Compiled in 1975.

Item		Amount
Gravel -		
Mile	0.00 - 9.00	84,059 square yards
"	9.00 - 17.00	62,050 " "
"	17.00 - 22.00	25,420 " "
	Total	171,529 " "
Pool to Riffle Ratio		32 - 68
Pools		32%
Average area shaded		36%

Table 3. Comparison of percentage of pools and average stream area shaded by one mile sections.
Birch Creek, Idaho, 1975

Pools	Percent Area Shaded	Stream Milepost	Major Land Ownership
9	0	1	National Resource Lands
20	10	2	"
19	10	3	"
28	0	4	"
23	10	5	"
16	10	6	"
18	10	7	"
13	20	8	State-Private
29	50	9	Private
67	90	10	"
45	80	11	"
32	80	12	"
28	70	13	"
50	70	14	"
30	50	15	"
60	90	16	"
44	70	17	Private-State
35	70	18	Private
30	10	19	"
26	0	20	"
0	0	21	"
0	0	22	"

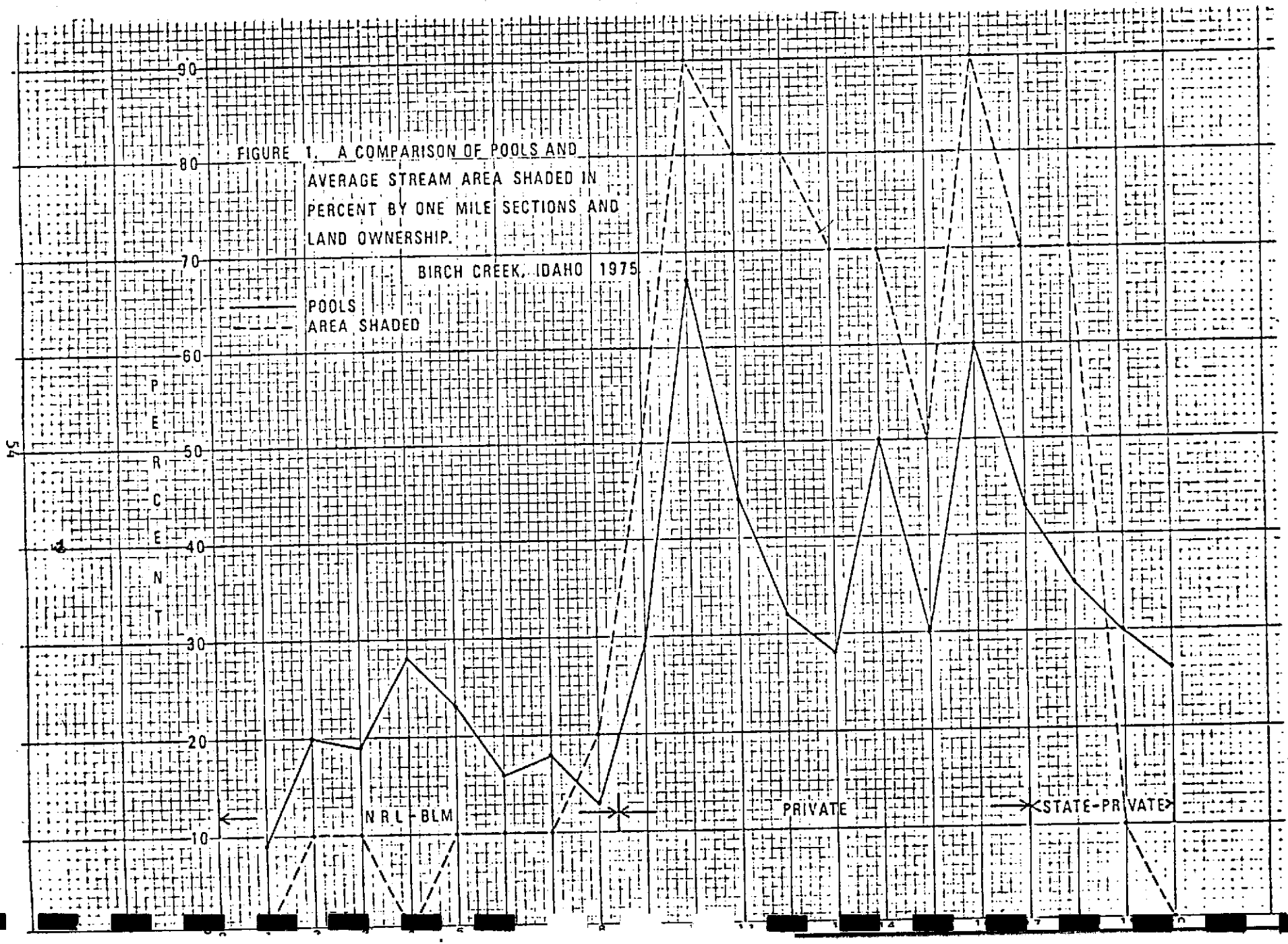
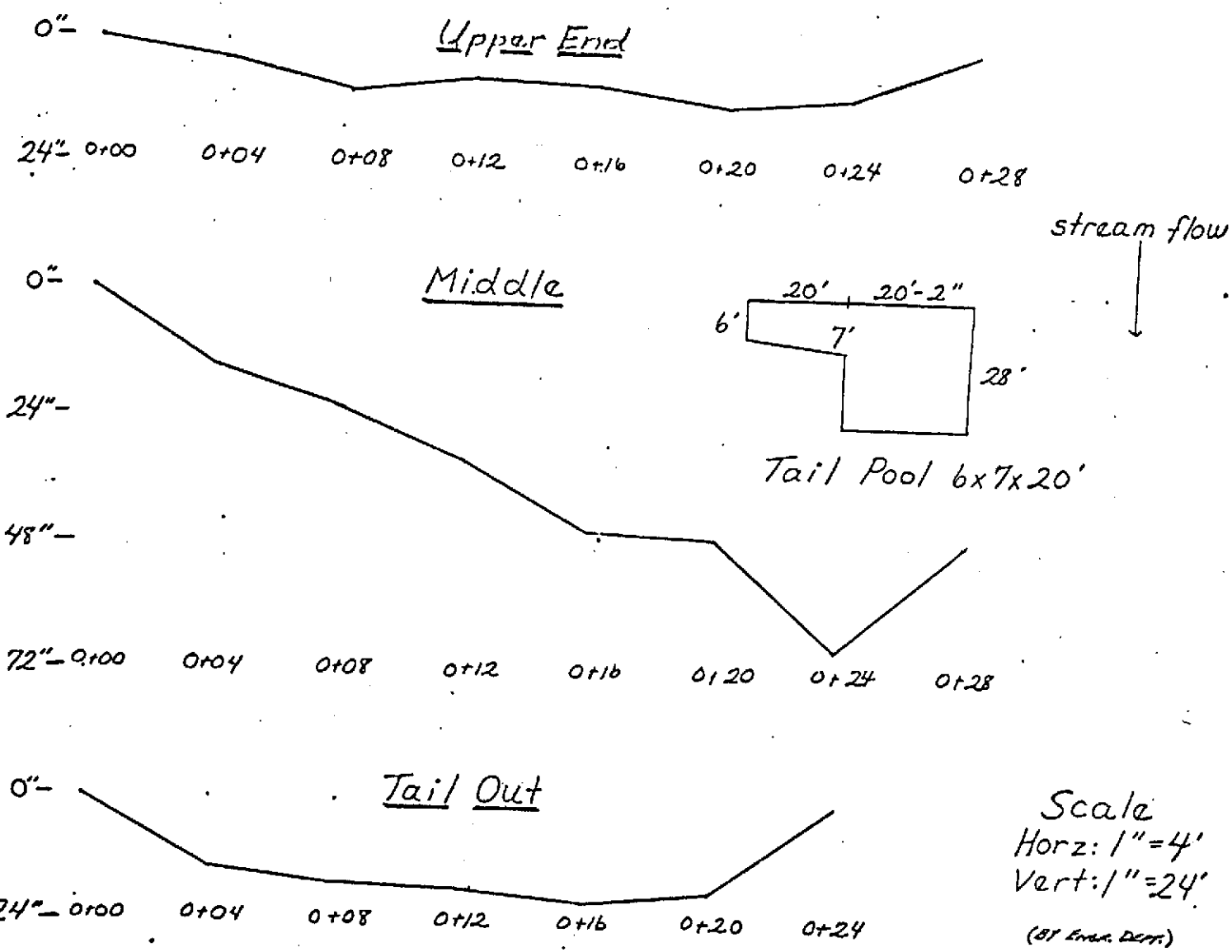
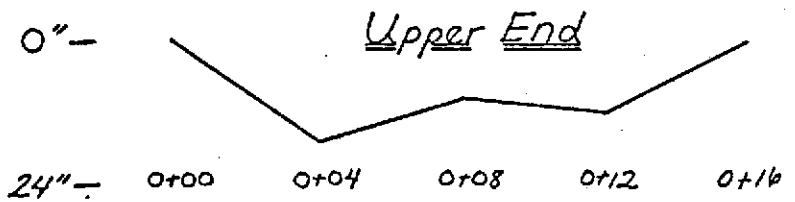
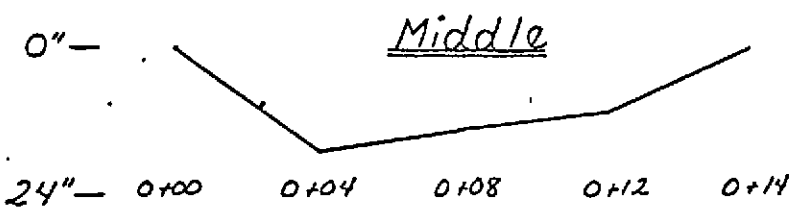


FIGURE 1. A COMPARISON OF POOLS AND AVERAGE STREAM AREA SHADED IN PERCENT BY ONE MILE SECTIONS AND LAND OWNERSHIP.

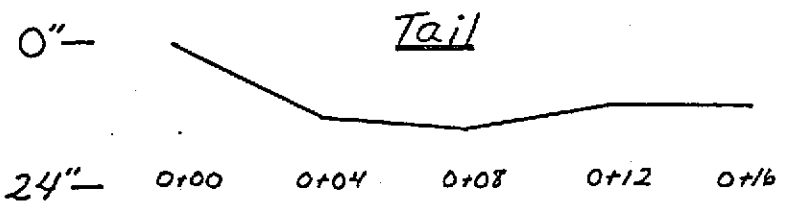

Upper End
0"
24"
0+00
0+04
0+08
0+12
0+16
0+20
0+24
0+28
Middle
0"
24"
48"
72"
Vertical Scale
stream flow
20'
20'-2"
6'
7'
28'
Tail Pool 6x7x20'
Tail Out
0"
24"
Scale
Horz: 1"=4'
Vert: 1"=24'
(BY Engr. Dept.)



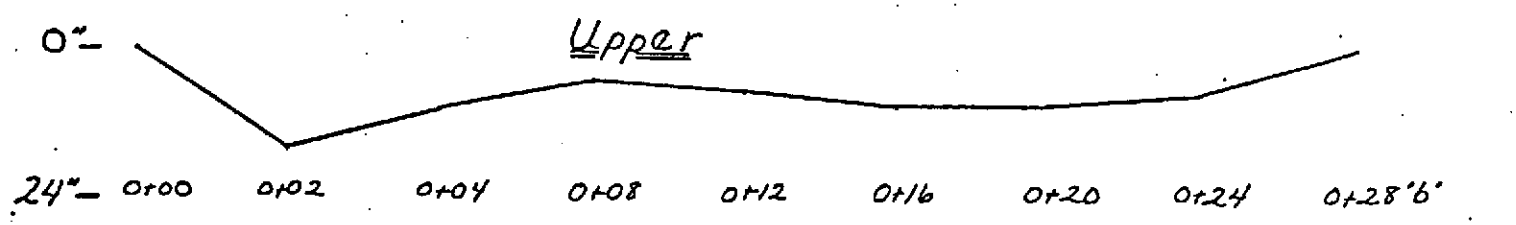
stream flow



Vertical Scale

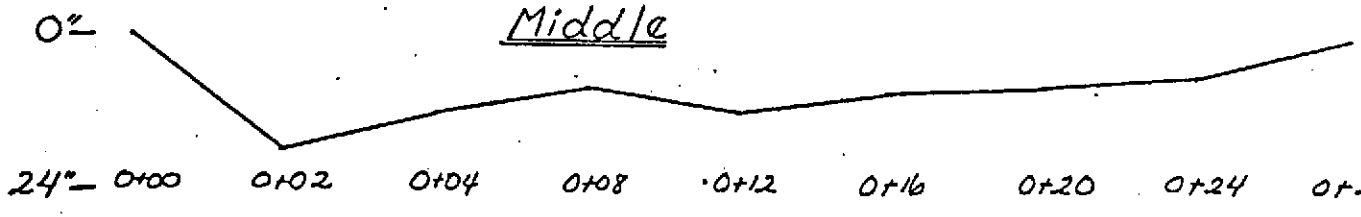


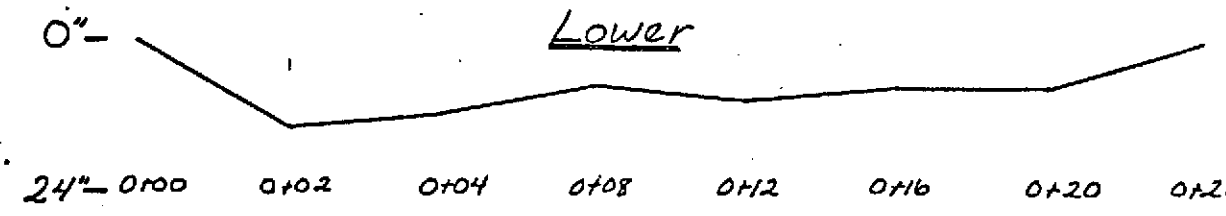
Scale
Horz: 1"=4'
Vert: 1"=24'
(BY ENGR. DEPT.)



stream flow

Vertical Scale





Scale
Horz: 1" = 4'
Vert: 1" = 24'

(BY ENGR. DEPT.)

57

4. Headwater streams need habitat protection to increase trout habitat and to protect water quality.

5. Excessive recreational use by campers along the stream has reduced riparian vegetation in some areas.

6. There may be a serious loss of trout in the irrigation ditches because they are not screened.

7. Winter conditions on the stream are not well documented. The stream habitat changes caused by anchor ice and concentrations of fish in the winter should be investigated.

Recommendations

1. Control livestock use by complete protection of the riparian area on NRL.

2. Use instream structures where necessary to provide the needed trout habitat. Location of structures should be determined from the detailed stream survey results.

3. Control the use of day and overnight camping to limit pressures on the riparian habitat.

4. Implement the Aquatic Habitat Management Plan.

5. Establish baseline studies of fish abundance and evaluate the operational activities.

6. Negotiate for the control of the riparian habitat on the stream and tributary complex above Kaufman Guard Station.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

PHYSICAL AND BIOLOGICAL STREAM SURVEY REPORT

Date 5/28/75 - 6/18/75
1. Surveyor A. Culbertson
H. Hendrick P. Jeppson
B. Borovicka
Agency BLM
Idaho Dept. Fish & Game

2. Stream	a. Tributary	b. Basin
Birch Creek	closed	Snake River

3. Location (stream mouth)	Township	Range	Section
	6 N	32 E	11

4. County	5. State Administration Unit Number	Code Number
Lemhi	Idaho - 6	

6. PHYSICAL SURVEY DATA

a. Station 1.00 - 22.00 to 22.00 distance (miles) 22

b. Stream width (average)
____ ft. today
15-30 ft. when Rainbow Trout spawn
____ ft. when Brook Trout spawn

c. TURBIDITY (Visibility in feet)

MUDDY		MURKY		CLEAR	
<.5	.5-1	1-2	2-5	5-10	10+
			X		

d. Jackson Turbidity Units

e. Temperature: Air °F, Water °F, Time , Flow (c.f.s.) Now , High , Low

f. GRAVEL, POOL AND RUBBLE AREA

SUBSECTION	FISH SPECIES	GRAVEL (sq. yards) GOOD	GRAVEL (sq. yards) MARGINAL	GRAVEL (sq. yards) TOTAL	POOLS SQ. YARDS	POOLS DEPTH	RUBBLE (sq. yards)	TOTAL (sq. yards)
0.00-9.00				84,059	24,266		7,994	116,319
9.00-17.00				62,050	58,820		1,210	122,080
17.00-22.00				25,420	3,780		-	29,200
Total				171,529	86,866		9,204	267,599

G. PERCENT OF SECTION IN POOLS

0	10	20	30	40	50	60	70	80	90	100
			32% X							

h. Gradient
- [ ] Steep (2.5 + %)
- [X] Moderate (1.0 to 2.5 %)
- [ ] Flat (0 to 1 %)

i. AVERAGE STREAM AREA SHADED (percent)

0	10	20	30	40	50	60	70	80	90	100
			X 36%							

j. STREAMSIDE COVER TYPE

LOGGED WITHIN (years) 0-5	LOGGED WITHIN (years) 6-10	GROWTH 2nd	GROWTH OLD	HERB	OTHER
				X	X

7. FISH SPECIES, SIZE, AND ABUNDANCE

Black Birch; Willow; Aspen

a. Method of collection No collections made - ocular observations

SPECIES	SIZE	NUMBER PER 100 FT. 0-5	6-50	50+	SPECIES	SIZE	NUMBER PER 100 FT. 0-5	6-50	50+
Rainbow Tr.	5-12"		X						
Brook Tr.	5-10"			X					

8. LIMITING FACTORS

BARRIERS (type) DAM	FALLS	LOG JAM	CULVERT	HEIGHT (ft.)	PASSABLE YES	PASSABLE NO	CORRECTIONS NEEDED YES	CORRECTIONS NEEDED NO

Other factors No barriers. Unscreened irrigation ditches. Heavy livestock use in many areas. Lack of streamside vegetation. Pools and runs lacking in some areas.

9. Access Possible pollution from livestock. On NRL and state lands. Cooperative agreements needed on private lands.

(Continued on reverse)

APPENDIX D

WATER LOSS ANALYSIS

OPTIONAL FORM NO. 10
JULY 1973 EDITION
GSA FPMR (41 CFR) 101-11.6

UNITED STATES GOVERNMENT

6670

Memorandum

TO : Birch Creek Aquatic Study File Water Loss

DATE: November 22, 1976

FROM : Ralph Culbertson, District Wildlife Management Biologist

SUBJECT: Joint meeting with State of Idaho Water Resource Department Water Users and BLM

On November 10, 1976, a meeting was held at the Idaho Water Resource Department Office between BLM, SIDWR personnel and the water users of Birch Creek.

The purpose of the meeting was to once and for all clarify the Bureau's position as to the use of the waters of Birch Creek for Federal Programs We also wanted to offer assurance to the water users of Birch Creek that the Bureau of Land Management in no way wanted to infringe on their decreed water rightas we developed the fisheries habitat on Birch Creek.

At first the discussion by the water users centered around hypothetical causes why the structures placed by the Bureau would cause excess water losses, but they had no definite facts to prove their theories.

The Bureau presented its findings showing the data collected in cooperation with SIDWR and summarized in a study entitled "Water Loss on Birch Creek an Aquatic Study" which is on file in the district. The study shows a substantial difference between water loss rates in portions of the stream that have had no structures placed and that 1.41 miles of stream that has either K-dams, trash catchers, digger logs or rock placement work done. The rate of water loss for the "Unaltered" (no structures) portion of the stream is 2.3 cfs per mile while the "altered" (with structures) section has a loss rate of only 1.9 cfs per mile which is .4 cfs per mile less loss. It was the Bureau's contention that by slowing the water velocity down, the fine silts came out of suspension and "sealed" the natural gravels somewhat and thereby reduced water loss. The Idaho Water Resource Department and the water users themselves agreed that perhaps this was taking place and with the data at hand could only conclude that the Bureau's action to date has not interferred with any decreed water and may have actually helped the situation.

The discussion turned to our upcoming plans in FY'77 where we told those present that we intended to:

1. Construct 5 K-dams.
2. Construct 5 trash-catchers and place approximately 80 cu yards of boulders (up to 20" diameter) in Birch Creek using YCC hand labor

9010-110

On the proposed project plans very little resistance was encountered and it was agreed that with IWRD help, we would do measurements before, during, and after constructions of the projects to see if there was a significant loss of water.

The water users then wanted to know what practices would be allowed in stream channelization on federal lands.

Ross Sharp informed them that there would be no work allowed in the main stream channel on Federal lands. Small diversions resulting from heavy spring runoff could be turned back into the main channel by working from the outside bank in.

The water users were also informed that the Bureau could not, nor would not, authorize the dumping of bentonite into the stream on Federal lands but that the government has no authority over private actions on private land nor does it want that authority.

Overall I believe the meeting strengthened the Bureau's position on managing the cold water fisheries habitat on NRL and yet gained the respect and cooperation of the water users on Birch Creek.

fba: 11-22-76

Ralph E. Callaston

Calculation

ANALYSIS OF DISCHARGE MEASUREMENTS TAKEN FROM BIRCH CREEK

Introduction:

The rate of discharge was measured at four sites on Birch Creek, of the Little Lost River, Birch Creek Planning Unit, located in the Idaho Falls District, Bureau of Land Management. The rationale behind the location of these four sites was to elucidate two parameters:

1) The amount of water flow into the Reno diversion.

2) The amount of water lost through percolation on a specific 1.41 mile length of stream.

Materials:

The apparatus utilized in measuring the discharge were:

1 type AA current meter
1 100' nylon tape measure
1 stop watch

Methods:

The physical aspects most desirable when selecting a site for measurement are smooth flowing water and little or no slow water by the stream bank. The tape measure is then laid at a right angle intersecting the stream channel and staked down above streamtop level with the 1 foot mark at waters edge.

In this survey all measurements were taken starting from the left bank, except the first which was the right bank. (Right and left determined when facing downstream.) The initial point on the bank was called zero and hence had no depth. The first starting point was as close to the bank as the meter would record, all others at one foot intervals. This procedure was followed for all sites except the Reno diversion which was measured at one-half foot intervals.

The type AA meter is so constructed as to measure the water depth, then can be adjusted to automatically position the meter blades at a distance of 60% of the depth from the bottom. When properly positioned, the number of revolutions of the blades per a given time period was measured.

By determing the ratio of revolutions/seconds either one of two formules were utilized to calculate the velocity at that point. The specifications for the equations are:

$N = \frac{\text{Revolutions}}{\text{Seconds}}$ if $N > 1$ then $V = 2.224N + .016$

V = Velocity at that point if $N \leq 1$ then $V = 2.218N + .022$

Each point on the sites measured had its velocity calculated, then its area. The area was determined by multiplying the depth by the width, the width being defined as the distance from the preceeding point. The point discharge was tabulated by multiplying the area by the velocity. The sum of all discharge calculations for a site gave the total discharge of the stream at that location. Data for the four sites are given in Table I.

Personnel conducting the investigation were Lorne Holmes of the State Water Resources Board in Idaho Falls, Idaho and Sean Farley of the Bureau of Land Management, also of Idaho Falls, Idaho.

Specifics:

Site 1

This was measured at a point approximately one hundred feet downstream of the earthen dam constructed to direct water flow into the Reno diversion. It is pinpointed on aerial photo, Section 3, Township 8 North, Range 30 EAst, C X Q 1W - 102. (See Appendix I).* The maximum depth was 1.2', with a discharge of 1.842 c.f.s. at a distance 4.5' from shore. The maximum discharge was 3.248 c.f.s. at distance 12.0' and depth 0.85'. The width of the stream at this point was 15', with 1.25' on the right bank and .25' on the left being too shallow to record.

Site 2

This was recorded approximately one hundred feet downstream of the 'V' digger log in section 28, Township 9 North, Range 30 East, located on aerial photo C X Q 12W-17. The maximum depth at this site was 1.1' with a discharge of 3.43 c.f.s. at distance 15'. The maximum discharge was 3.54 c.f.s. at a depth of 1.0' and distance 14'. The total width of the stream was 23', with 1.5' on the left bank and 1.0' on the right being too shallow to measure.

Site 3

Measurements here were recorded at a point approximately 80' upstream of the most northerly K-dam south of Blue Dome Inn. This may be found on aerial photo section 16, Township 9 North, Range 30 East, C X Q 12W-16. Maximum depth here was found to be 1.20' with a discharge rate of 3.05 c.f.s., at distance 5'. The maximum discharge was 3.08 c.f.s., at a point 7' from the bank and with a depth of 1.10'. Total stream width was 24' with 1.0' on each bank too shallow to measure.

Site 4

This site was located approximately 60' downstream of the intersection of the southern fence of the bull pasture and the creek. The bull pasture is located approximately ½ mile south of the John Day Historical Site. It is pinpointed on aerial photo section 5, Township 9 North, Range 30 East, C X Q 12W-15. The deepest point was 1.4' with a discharge of 2.37 c.f.s. at distance 23'. The maximum discharge was 4.69 c.f.s. at a depth of 1.4' and distance 21'. The total width of the stream was 24' with 2.5' on the left bank and .5' on the right, too shallow to record.

*Appendices including maps and field data are in Unit Files.

Discussion:

The structures built on the 1.41 mile stretch of altered land were designed to impede water flow and create pools. In doing so, there arose two possible ramifications greatly affecting water loss.

First, the increased surface area of water could allow greater contact with the ground surface and thereby possibly enhance the likelihood of increased percolation.

Second, the slow-down of water would cause a faster rate of sediment deposition which could 'seal' the stream bottom and decrease the water loss through percolation. From an original flow of 53.0 c.f.s. at Site 4, only 37.7 remains at Site 1 to be diverted at Reno diversion. This 15.3 c.f.s. loss can be delineated and charged to specific altered and unaltered sections of the stream. Of this 15.3 c.f.s., 5.6 are lost in a section of unaltered land that has a loss rate of 2.3 c.f.s./mile. The other unaltered stretch of stream is 2.52 miles long and loses 6.9 c.f.s. at a rate of 2.3 c.f.s./mile. However, the altered stream section is 1.41 miles long and loses only 2.7 c.f.s. at a rate of 1.94 c.f.s./mile.

Conclusion:

Data would be indicative that the alteration of the stream as done in such a manner to impede water flow and form pools reduces the loss rate of water through percolation. Depending upon the rate of deposition, its advantages might outweigh the future disadvantages.

Sean Farley 8-5-76

TABLE I

Site No.	Location	Time Measured	Discharge c.f.s.	Distance from Preceeding Site (miles)	Status	Rate of Loss c.f.s./mile
1	NE¼, sec. 3, T. 8 N., R. 30 E.	1030	37.7	0		
2	NE¼, sec. 28, T. 9 N., R. 30 E.	1120	44.6	2.52	Unaltered	2.3
3	NW¼, sec. 16, T. 9 N., R. 30 E.	1215	47.3	1.41	Altered	1.9
4	Sec. 5, T. 9 N., R. 30 E.	1340	53.0	2.44	Unaltered	2.3
			TOTAL	6.37		

APPENDIX E

EXAMPLES OF JOB DESCRIPTION

REPORTS FOR IMPROVEMENTS

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JOB DOCUMENTATION REPORT

I – GENERAL DESCRIPTION — Card 1

5. Job Name (11–30): BIRCH CR ROCK PLACE

LOCATION CODES

6. Special Project Code (31–34):
7. Planning Unit (35–36): 02
8. Sub-Basin (37–38): 42
9. County (39–41): 033
10. Watershed No. (42–44):
11. Allotment No. (45–47):
12. Wildlife Habitat Area (48–50): A03

SITE AND VEGETATIVE DESCRIPTION

13. Present SSF (51–52):
14. % Slope (53–54):
15. Exposure (55):
16. Soil Texture (56):
17. Precipitation (inches) (57–58):
18. Elevation (feet) (59–63):
19. Vegetative Subtype (64–66):

COMPOSITION (Percent)

20. Grasses (67–68):
21. Forbs (69–70):
22. Browse (71–72):

COVER (Percent)

23. Vegetative (73–74):
24. Litter (75–76):
25. Bare Ground (77–78):

II – ANNUAL WORK PLAN INPUT DATA — Card 2

75. Subactivity (11–14): 1285
76. Work Job Code (15–18): 6011

UNITS PLANNED

77. Primary (19–24): 5.0
78. Secondary (25–29):

TIME OF AWARD

79. Fiscal Year (30–31): 77
80. Third (32): 3

TIME OF COMPLETION

81. Fiscal Year (33–34): 77
82. Third (35): 3

BLM COST

83. Method (36):
84. Material (37–41):
85. Contract (42–47):

CONTRIBUTED COST

86. Material (48–52):
87. Labor/Equipment (53–57):

MAINTENANCE

88. Responsibility (58): 1
89. Cycle (59–61): 705

JOB IDENTIFICATION

1. State (2–3): ID
2. District (4–5): 03
3. Job No. (6–9): 4297
4. Transaction Code (10):

III – JOB DETAILS AND BENEFITS — Card 3

37. Primary Job Objective (11): 7

PLANT AND PEST CONTROL

39. Chemical (12):
42. Method (13):
45. Mechanical – Method (14):

ARTIFICIAL REVEGETATION

47. Pounds Seed/Acre (15–17):
48. Seedlings/Acre (18–21):
49. Method (22):
51. AUM's Livestock Forage Added (23–26):
52. Future SSF (27–28):

WATERSHED TILLAGE
54. Method (29):

FACILITIES 55. Type (30):
56. Other Misc. (31):

WATER DEVELOPMENT/CONTROL

59. Structure Type (32):

STORAGE (Ac. Ft.) 60. Flood (33–38):
61. Silt (39–44):

WILDLIFE HABITAT DEVELOPMENT/PROTECTION

62. Type (45–46): 67
63. Primary Species (47–49): 801
64. Animal Months (50–54):
65. Number Increase (55–59):
66. Pounds Fish Increase (60–64): 500
67. Rare/Endangered (65):

VISITOR DAYS ADDED
68. Fisherman (66–69): 1250
69. Hunter (70–73):
70. Other (74–77):

IV – PROGRESS REPORT — Card 4

COMPLETION DATA

UNITS 90. Primary (11–16):
91. Secondary (17–21):

TIME 92. Fiscal Year (22–23):
93. Third (24):

94. Contract No. (25–29): CT

CONTRIBUTION DETAIL

95. Agreement (30):
96. Participant (31):
97. Contributor's Name (32–51):

CONTRIBUTIONS

98. Deposited (52–56):

Undeposited

99. Materials (57–61):
100. Labor, Equipment (62–66):

V – DETAIL ESTIMATE OF UNITS AND COSTS

WORK DESCRIPTION AND MATERIALS (a)	UNITS EA. MILE, ETC (b)	UNITS COST (c)	BLM COSTS MATERIALS (d)	BLM COSTS CONTRACT (e)	COOPERATOR COSTS MATERIALS (f)	COOPERATOR COSTS LABOR (g)
0 MATERIALS Rock placement along five miles of stream by YCC labor (3.5 MM supervision)	5.0 mi.					
TOTALS Materials						
Labor Equipment						

Form 1630-8 (November 1972)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JOB DOCUMENTATION REPORT

JOB IDENTIFICATION
1. State (2–3) . . . 1 D
2. District (4–5) . . . 0 3
3. Job No. (6–9) . . . 4 2 9 6
4. Transaction Code (10) . . . 1

I – GENERAL DESCRIPTION — Card 1

5. Job Name (11–30): B I R C H C R T R A S H C A T C H

LOCATION CODES
6. Special Project Code (31–34) . . .
7. Planning Unit (35–36) . . . 0 2
8. Sub-Basin (37–38) 4 2 — 9. County (39–41) 0 3 3
10. Watershed No. (42–44) . . . 0 0 4
11. Allotment No. (45–47) . . .
12. Wildlife Habitat Area (48–50) . . . A 0 3

SITE AND VEGETATIVE DESCRIPTION
13. Present SSF (51–52) . . . 14. % Slope (53–54) . . .
15. Exposure (55) . . . 16. Soil Texture (56) . . .
17. Precipitation (inches) (57–58) . . .
18. Elevation (feet) (59–63) . . .
19. Vegetative Subtype (64–65) . . .

COMPOSITION *(Percent)*
20. Grasses (67–68) . . . 21. Forbs (69–70) . . .
22. Browse (71–72) . . .

COVER *(Percent)*
23. Vegetative (73–74) . . . 24. Litter (75–76) . . .
25. Bare Ground (77–78) . . .

II – ANNUAL WORK PLAN INPUT DATA — Card 2

75. Subactivity (11–14) . . . 1 2 8 5
76. Work Job Code (15–18) . . . 6 0 1 1

UNITS PLANNED
77. Primary (19–24) . . . 2.5
78. Secondary (25–29) . . .

TIME OF AWARD
79. Fiscal Year (30–31) 7 7 — 80. Third (32) . . . 3

TIME OF COMPLETION
81. Fiscal Year (33–34) 7 7 — 82. Third (35) . . . 3

BLM COST — 83. Method (36) . . . 2
84. Material (37–41) . . . 9 0 0
85. Contract (42–47) . . .

CONTRIBUTED COST
86. Material (48–52) . . .
87. Labor/Equipment (53–57) . . .

MAINTENANCE
88. Responsibility (58) 1 — 89. Cycle (59–61) . . . 7 0 2

III – JOB DETAILS AND BENEFITS — Card 3

37. Primary Job Objective (11) . . . 7

PLANT AND PEST CONTROL
39. Chemical (12) . . . 42. Method (13) . . .
45. Mechanical – Method (14) . . .

ARTIFICIAL REVEGETATION
47. Pounds Seed/Acre (15–17) . . .
48. Seedlings/Acre (18–21) . . . 49. Method (22) . . .
51. AUM's Livestock Forage Added (23–26) . . .
52. Future SSF (27–28) . . .

WATERSHED TILLAGE — 54. Method (29) . . .

FACILITIES 55. Type (30) . . . 56. Other Misc. (31) . . .

WATER DEVELOPMENT/CONTROL
59. Structure Type (32) . . .
STORAGE (Ac. Ft.) 60. Flood (33–38) . . .
61. Soil (39–44) . . .

WILDLIFE HABITAT DEVELOPMENT/PROTECTION
62. Type (45–46) 6 6 — 63. Primary Species (47–49) 8 0 1
64. Animal Months (50–54) . . .
65. Number Increase (55–59) . . .
66. Pounds Fish Increase (60–64) . . . 2 5 0
67. Rare/Endangered (65) . . .

VISITOR DAYS ADDED — 68. Fisherman (66–69) . . . 6 0 0
69. Hunter (70–73) . . . — 70. Other (74–77) . . .

IV – PROGRESS REPORT — Card 4

COMPLETION DATA
UNITS 90. Primary (11–16) . . .
91. Secondary (17–21) . . .
TIME 92. Fiscal Year (22–23) . . .
93. Third (24) . . .
94. Contract No. (25–29) . . . CT

CONTRIBUTION DETAIL
95. Agreement (30) . . . 96. Participant (31) . . .
97. Contributor's Name (32–51) . . .

CONTRIBUTIONS
98. Deposited (52–56) . . .
Undeposited
99. Materials (57–61) . . .
100. Labor/Equipment (62–66) . . .

V – DETAIL ESTIMATE OF UNITS AND COSTS

WORK DESCRIPTION AND MATERIALS (a)	UNITS EA. MILE, ETC. (b)	UNITS COST (c)	BLM COSTS MATERIALS (d)	BLM COSTS CONTRACT (e)	COOPERATOR COSTS MATERIALS (f)	COOPERATOR COSTS LABOR (g)
MATERIALS YCC Labor to install five "Trash Catcher" Dams (0.5 MM)	2.5 mi.		$872.50			
TOTALS Materials			$872.50			
Labor/Equipment						

Form 1630-8 (November 1972)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JOB DOCUMENTATION REPORT

I – GENERAL DESCRIPTION Card 1

5. Job Name (11–30): BIRCH CR K DAMS #3

LOCATION CODES

6. Special Project Code (31–34):
7. Planning Unit (35–36): 02
8. Sub-Basin (37–38): 42
9. County (39–41): 033
10. Watershed No. (42–44): 004
11. Allotment No. (45–47):
12. Wildlife Habitat Area (48–50): A03

SITE AND VEGETATIVE DESCRIPTION

13. Present SSF (51–52):
14. % Slope (53–54):
15. Exposure (55):
16. Soil Texture (56):
17. Precipitation (inches) (57–58):
18. Elevation (feet) (59–63):
19. Vegetative Subtype (64–66):

COMPOSITION (Percent)

20. Grasses (67–68):
21. Forbs (69–70):
22. Browse (71–72):

COVER (Percent)

23. Vegetative (73–74):
24. Litter (75–76):
25. Bare Ground (77–78):

II – ANNUAL WORK PLAN INPUT DATA Card 2

75. Subactivity (11–14): 1285
76. Work Job Code (15–18): 6011

UNITS PLANNED

77. Primary (19–24): 2.5
78. Secondary (25–29):

TIME OF AWARD

79. Fiscal Year (30–31): 77
80. Third (32): 3

TIME OF COMPLETION

81. Fiscal Year (33–34): 77
82. Third (35): 3

BLM COST

83. Method (36): 2
84. Material (37–41): 1100
85. Contract (42–47):

CONTRIBUTED COST

86. Material (48–52):
87. Labor/Equipment (53–57):

MAINTENANCE

88. Responsibility (58): 1
89. Cycle (59–61): 702

JOB IDENTIFICATION

1. State (2–3): ID
2. District (4–5): 03
3. Job No. (6–9): 4295
4. Transaction Code (10):

III – JOB DETAILS AND BENEFITS Card 3

37. Primary Job Objective (11): 7

PLANT AND PEST CONTROL

39. Chemical (12):
42. Method (13):
45. Mechanical – Method (14):

ARTIFICIAL REVEGETATION

47. Pounds Seed/Acre (15–17):
48. Seedlings/Acre (18–21):
49. Method (22):
51. AUM's Livestock Forage Added (23–26):
52. Future SSF (27–28):

WATERSHED TILLAGE 54. Method (29):

FACILITIES 55. Type (30): 56. Other Misc. (31):

WATER DEVELOPMENT/CONTROL

59. Structure Type (32):
STORAGE (Ac. Ft.) 60. Flood (33–38):
61. Silt (39–44):

WILDLIFE HABITAT DEVELOPMENT/PROTECTION

62. Type (45–46): 66
63. Primary Species (47–49): 801
64. Animal Months (50–54):
65. Number Increase (55–59):
66. Pounds Fish Increase (60–64): 500
67. Rare/Endangered (65):

VISITOR DAYS ADDED 68. Fisherman (66–69): 750
69. Hunter (70–73): 70. Other (74–77):

IV – PROGRESS REPORT Card 4

COMPLETION DATA

UNITS 90. Primary (11–16):
91. Secondary (17–21):
TIME 92. Fiscal Year (22–23):
93. Third (24):
94. Contract No. (25–29): CT

CONTRIBUTION DETAIL

95. Agreement (30): 96. Participant (31):
97. Contributor's Name (32–51):

CONTRIBUTIONS

98. Deposited (52–56):
Undeposited
99. Materials (57–61):
100. Labor Equipment (62–66):

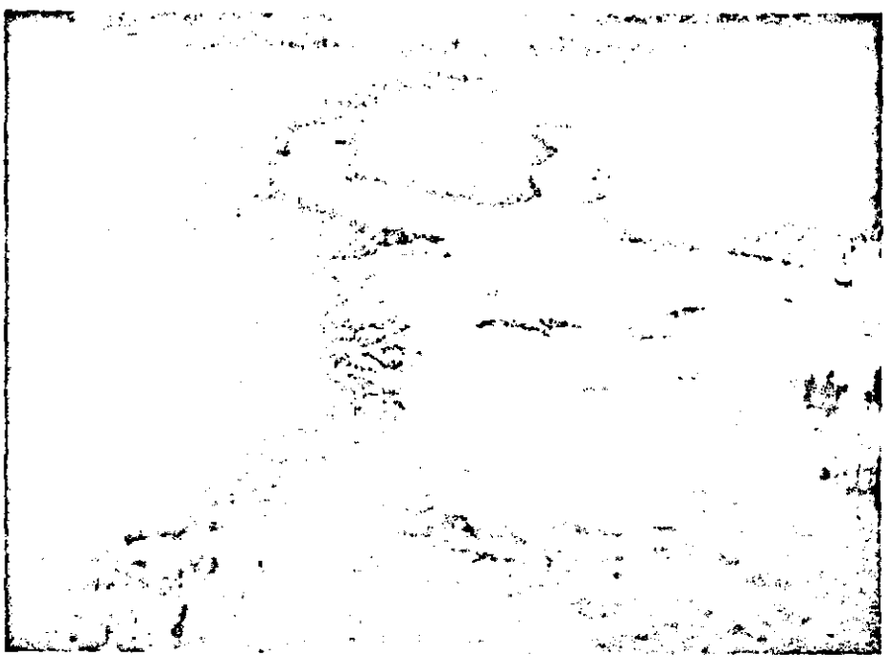
V – DETAIL ESTIMATE OF UNITS AND COSTS

WORK DESCRIPTION AND MATERIALS (a)	UNITS		BLM COSTS		COOPERATOR COSTS	
	EA. MILE, ETC. (b)	COST (c)	MATERIALS (d)	CONTRACT (e)	MATERIALS (f)	LABOR (g)
MATERIALS YCC Labor to Install five "K" Dams (0.5 MM).	2.5 mi.		$1133.			
TOTALS Materials			$1133			
Labor/Equipment						

Form 1630-8 (November 1972)

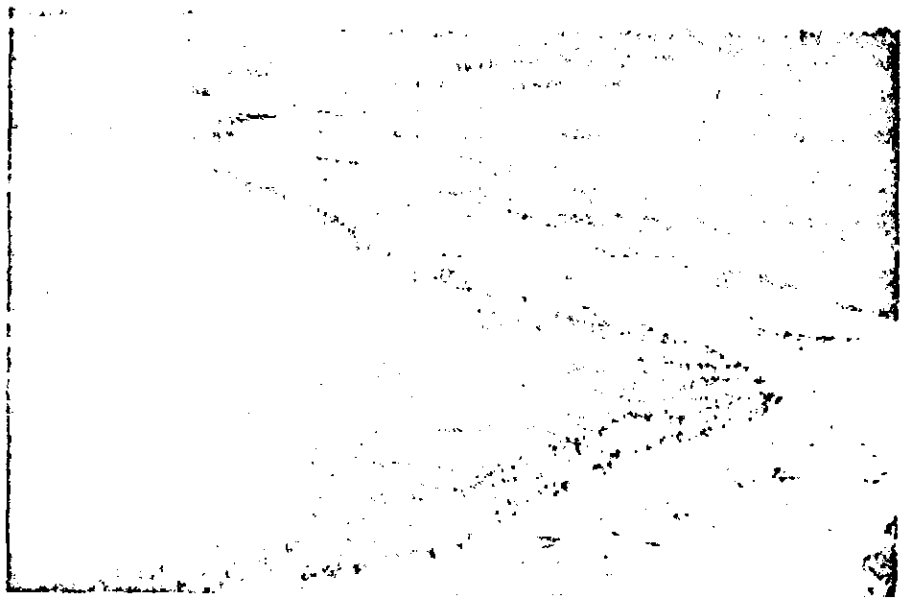
APPENDIX F

P H O T O S

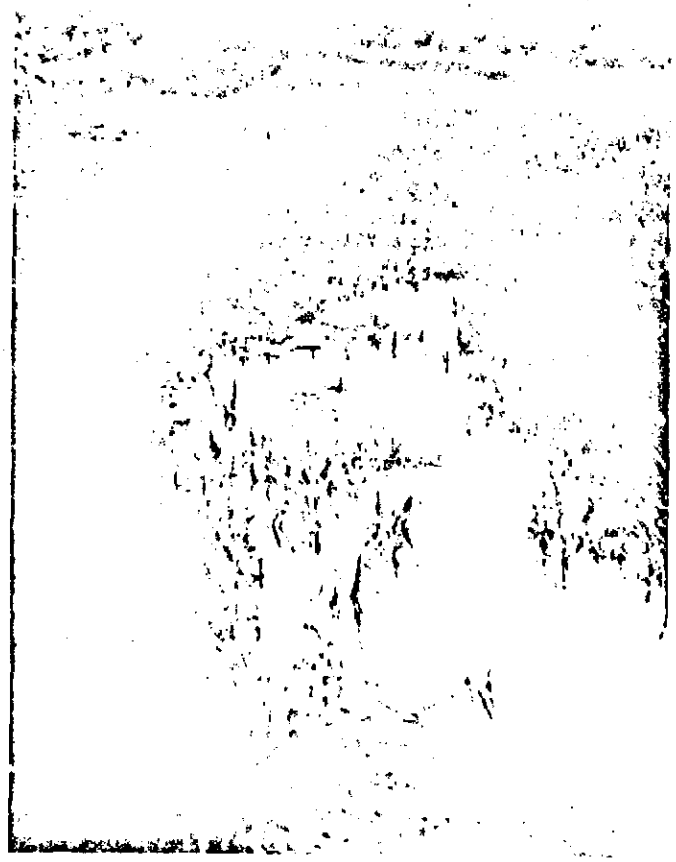


1. B-2, A major Tributary, protected from livestock use. note excellent bank stabilization and riparian habitat condition.*

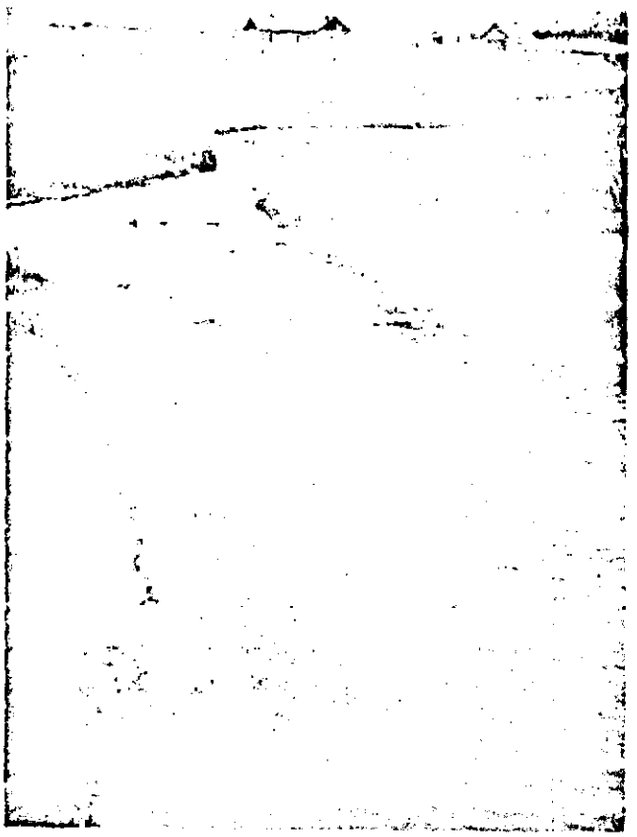
*Specific locations of areas photographed can be identified by use of maps or file in the District Office.



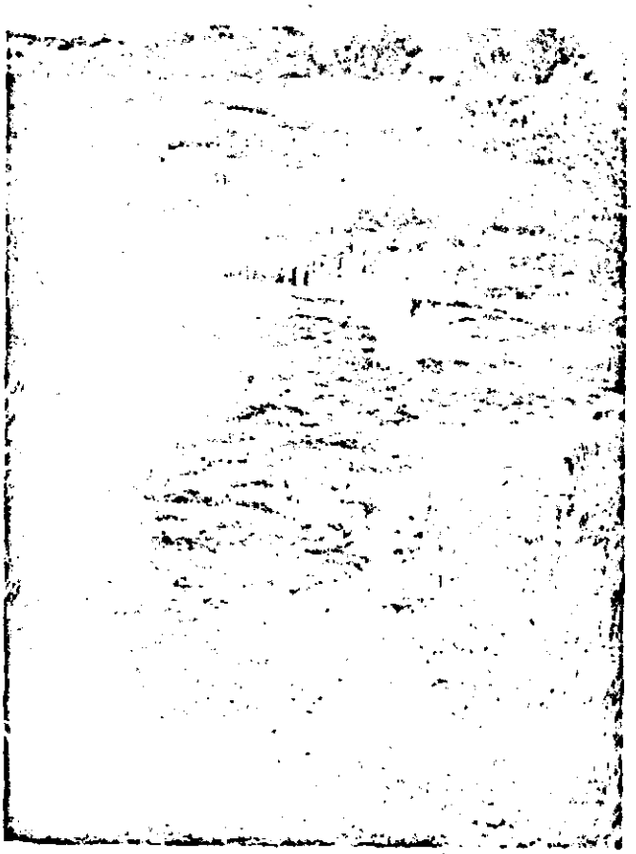
2. Tributary C. Heavy Livestock use has reduced bank "overhang". Note invasion of sagebrush due to a lowering of the water table.



3. Tributary D-2. Livestock grazing has caused siltation. Note the clogging of the tributary by emergent vegetation and the lack of gravels.



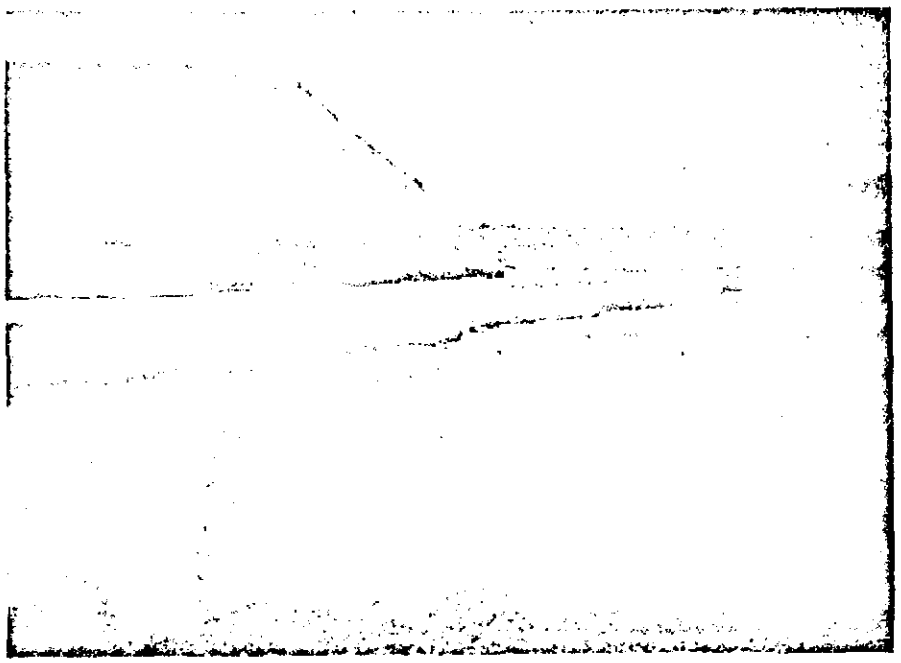
4. Tributary E-2
Good bank build up with "clean" gravel areas for spawning purposes. Area receives only moderate livestock use.



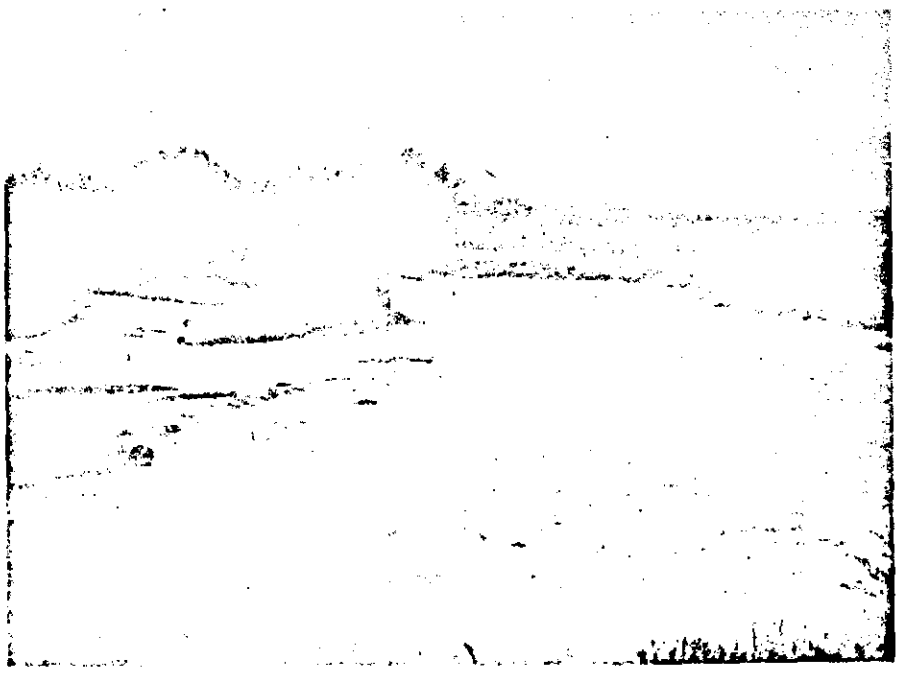
5. Tributary G.
Heavy siltation from "grazed" areas above has allowed vegetation to emerge in tributary channel.



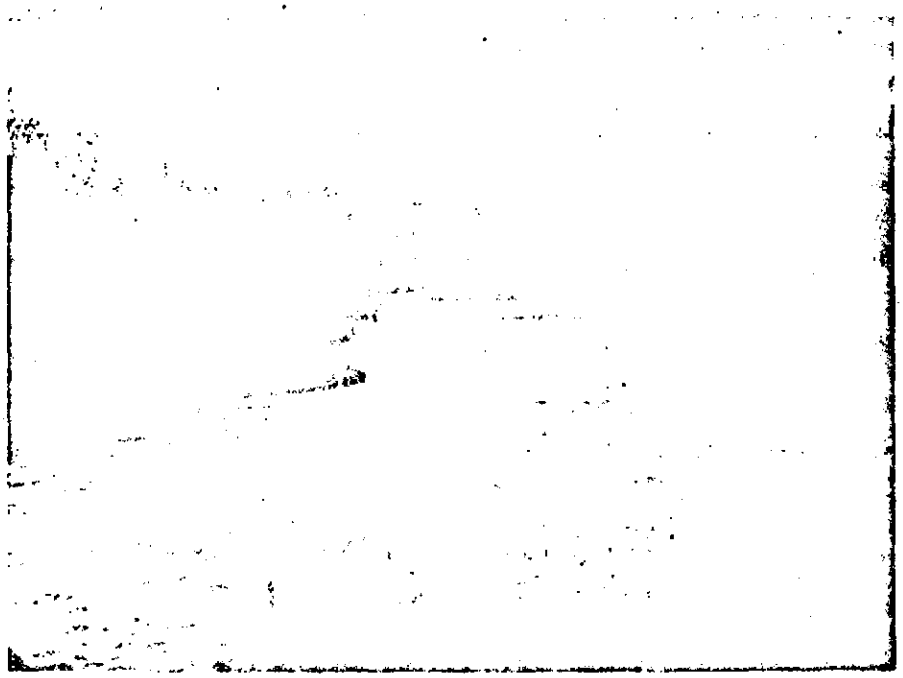
6. Heavy livestock use on a once productive meadow area has reduced its value as wildlife habitat. Tributary F comes in above the bridge and at the left side of the photo.



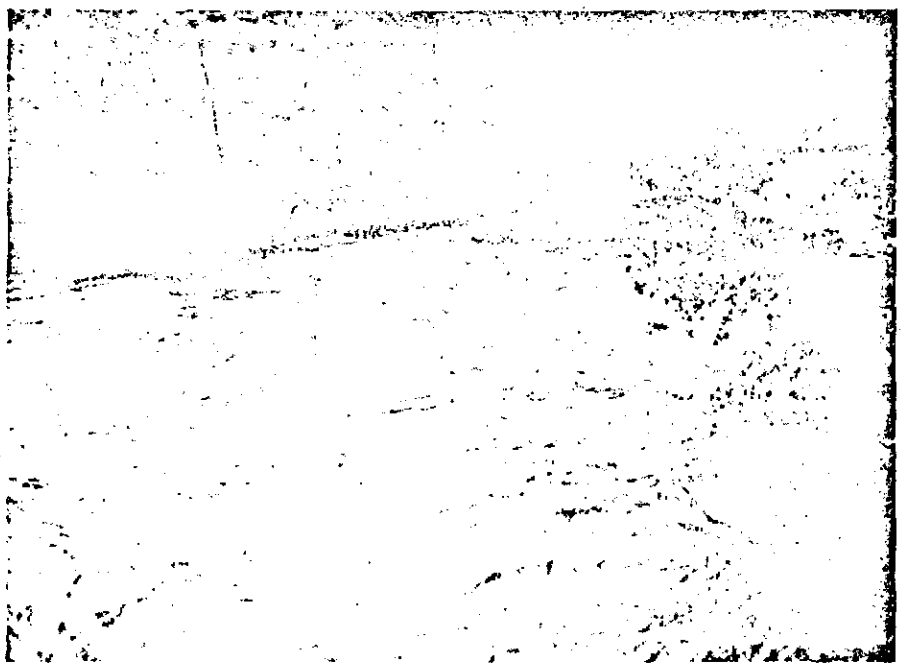
7. Station 17.0 - 18.0. Portions of this section controlled by the Idaho Fish and Game Department. Protected from livestock use the area provides excellent fisheries, waterfowl and non-game habitat.



8. Station 16.0 - 17.00. The section contains good overhead cover but lacks low riparian vegetation. Note bank erosion due to livestock use.



9. Station 15.0 - 16.0. Excellent high shade cover and good bank stabilization. This section generally contains some good "trout water".



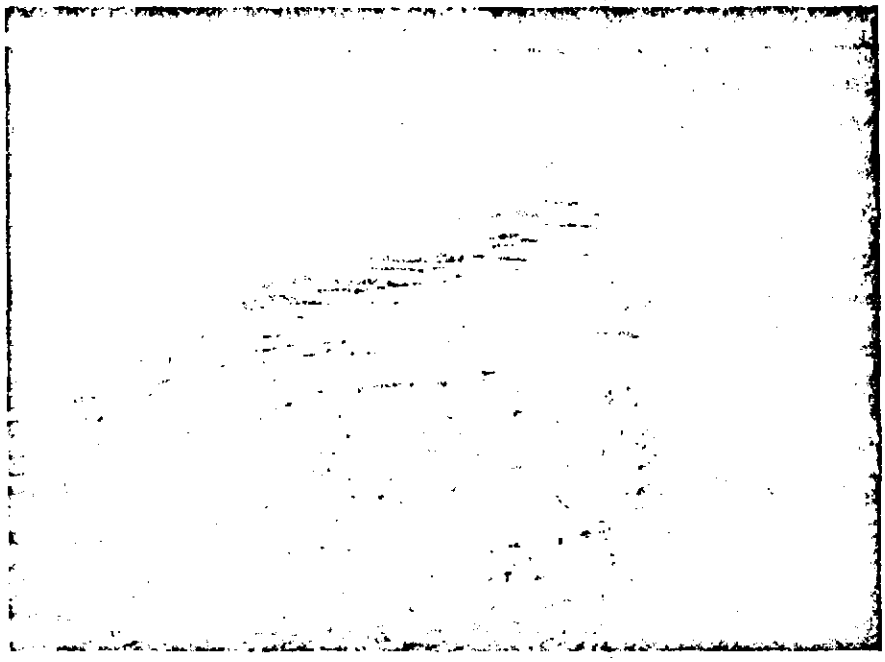
10. Station 14.0 - 15.0. Birch Creek in this area contains good overhead cover and many Class A pools.



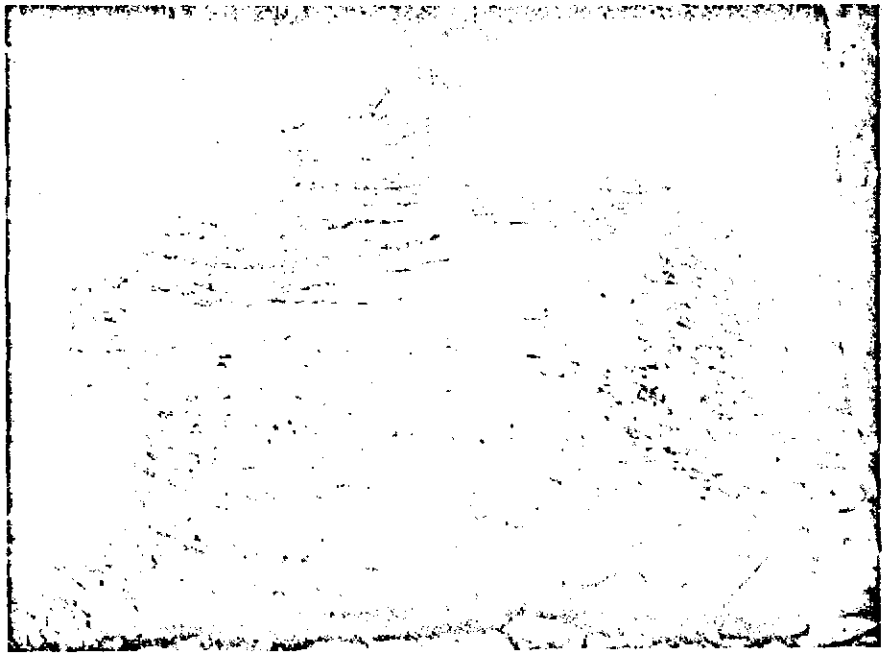
11. Station 13.0 - 14.0. Creation of a "new" channel due to highway alignment in portions of this section has created an "irrigation canal" effect. Note lack of pools for cover and resting areas. Livestock use in this area is rather restricted.



12. Station 13.0 - 14.0. This photo taken downstream from Photo #11 shows the stream as it probably before alteration.



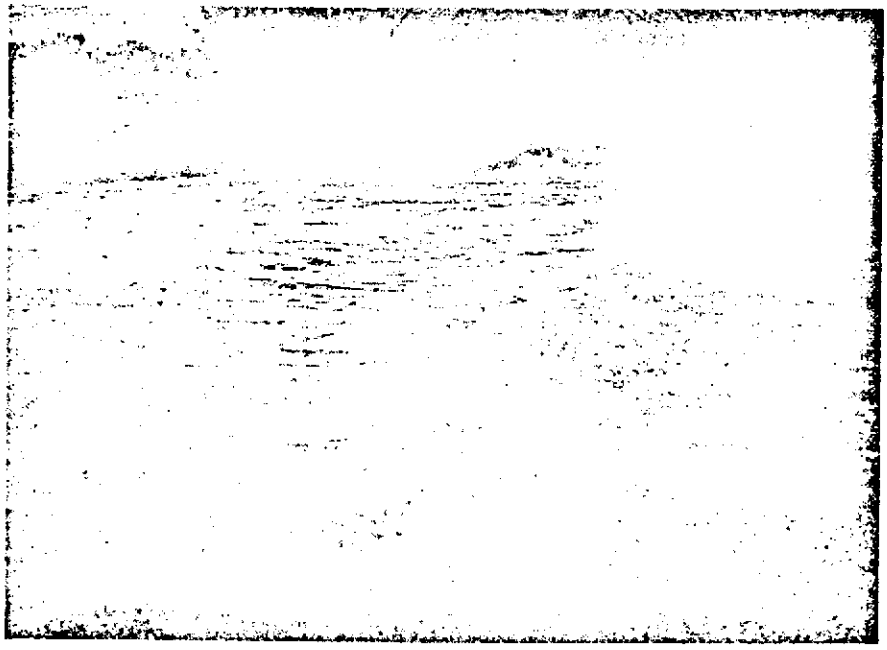
13. Station 12.0 -- 13.0. Note heavy Black Birch cover, but lacks good deep pools.



14. Station 11.0 - 12.0. Fairly diversified trout water but the stream is narrow and fast. Portions of the section are in a "bull" pasture where even 2"-3" diameter Black Birch is being destroyed.



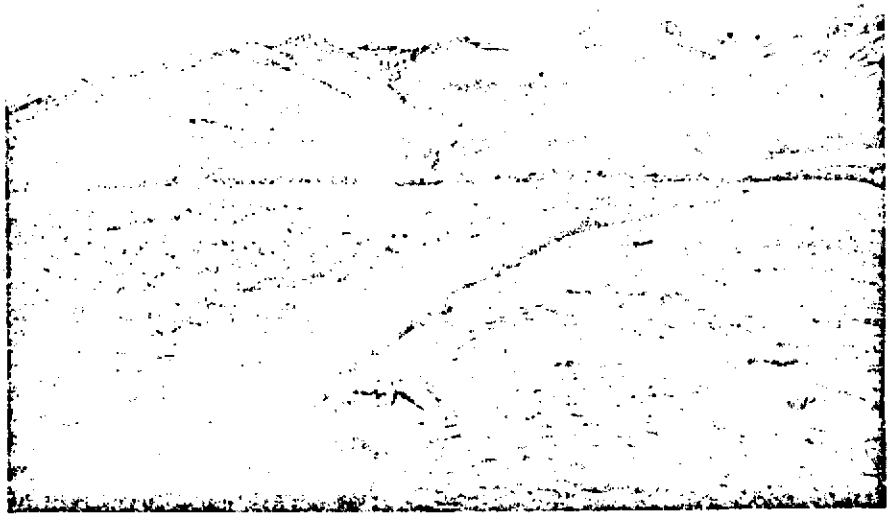
15. Station 10.0 - 11.0. Excellent trout water. Note bank stabilization and abundance of aspen. This section contains best pools in Birch Creek. Old growth aspen is dominant in this area.



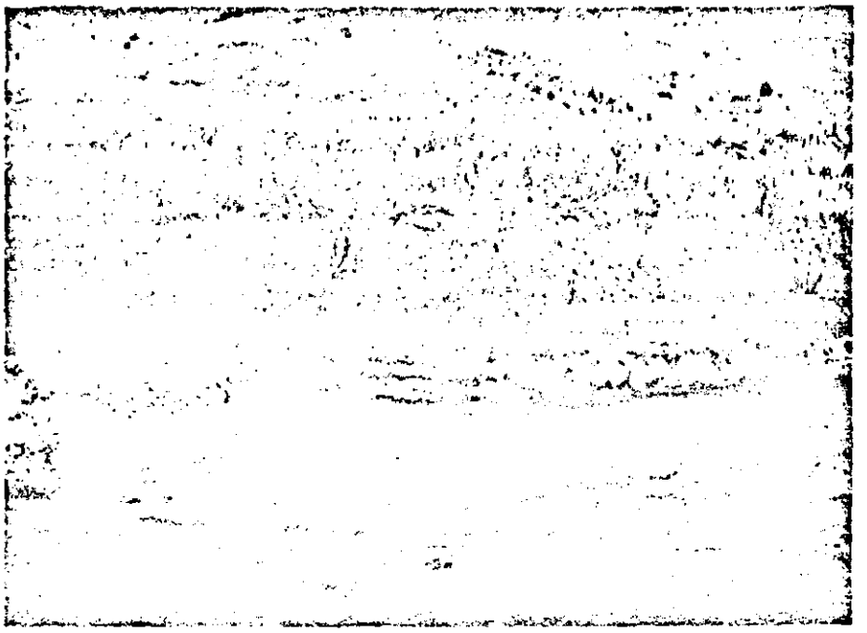
16. Station 9.0 - 10.0. Very little livestock use has allowed the persistence of good riparian habitat. Abundance of Class A pools present.



17. Station 8.0 - 9.0. Section 8. Heavy livestock has caused approximately 30% bank erosion. Note the straight fast water. Public Lands predominate.



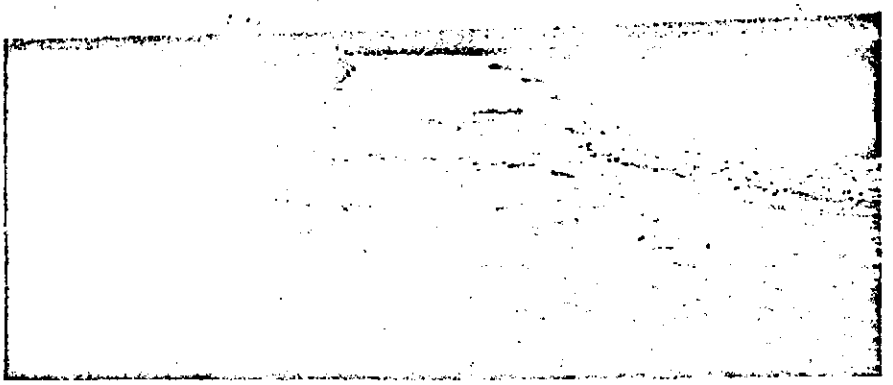
18. Station 7.0 - 8.0. Heavy livestock use has not allowed for any tree reproduction. Bank sloughing in many areas.



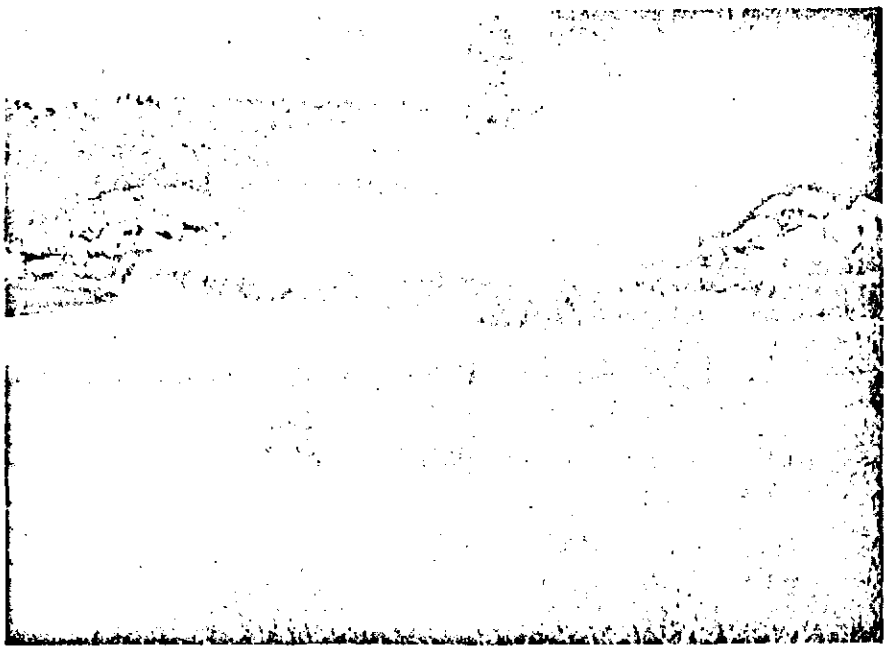
19. Station 6.0 - 7.0. Stream bank sloughing predominates. Very little holding water.



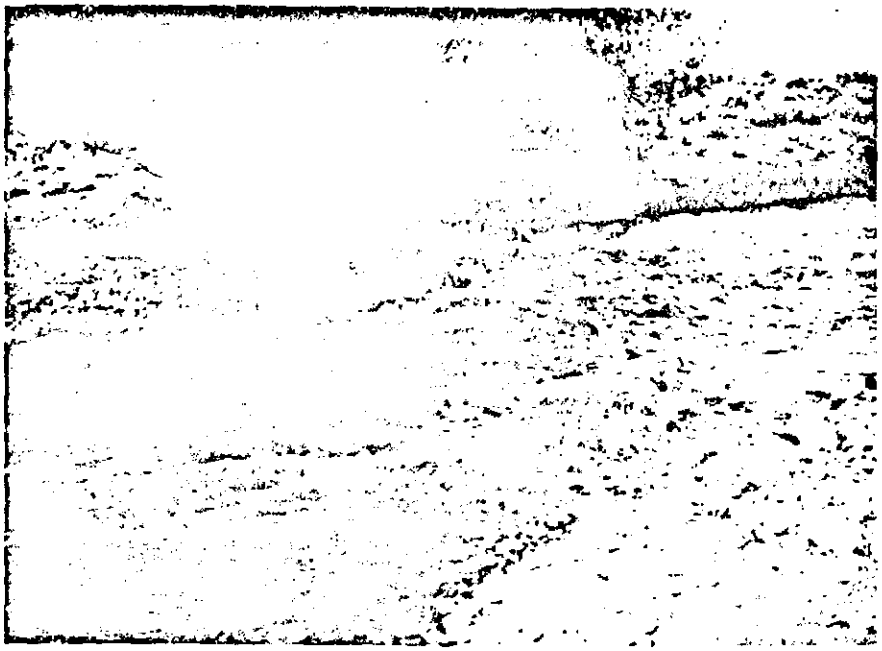
20. Station 5.0 - 6.0. Very little overhead cover. Bank sloughing a common occurence. Altered channel straight and fast.



21. Station 4.0 - 5.0. Heavy livestock and recreation use has impacted this section. Very few holes, most of the holding water consists of runs.



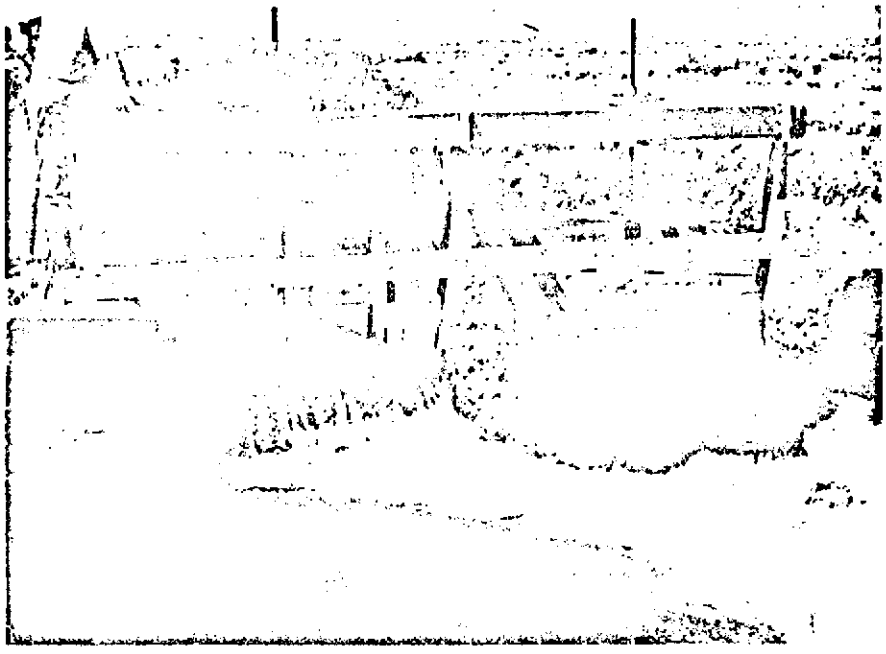
22. Station 3.0 - 4.0. With livestock excluded, the development of K-Dams shows the area's potential. Becoming established.



23. Station 2.0 - 3.0. Stream channel straight, and shallow with fast water in many locations. Poor trout habitat.



24. Station 1.0 - 2.0. Heavy to extreme bark sloughing, very little holding water and/or overhead shade cover.



25. The Reno diversion. The total flow of Birch Creek is directed here during most of the year. No fish screen to prevent down "ditch" loss.

EVALUATION & REVISION OF BIRCH CREEK AQUATIC HABITAT MANAGEMENT PLAN

United States Department of the Interior
Bureau of Land Management

by: Wildlife Biologist, Big Butte Resource Area

September 28, 1984

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Idaho Falls District
940 Lincoln Road
Idaho Falls, Idaho 83401

IN REPLY
REFER TO:

September 28, 1984

TO: Area Manager, Big Butte Resource Area

FROM: Wildlife Biologist, Big Butte Resource Area

SUBJECT: Evaluation and Revision of Birch Creek Aquatic Habitat Management Plan

This Memo updates the Birch Creek Aquatic Habitat Management Plan (HMP). This is the first evaluation and revision of the HMP since authorization on December 9, 1975. Two files have been organized to supplement this Memo. One file contains the map referred to in the project portion of this Memo and other background information. The other file contains pictures of Birch Creek, including instream structures and aerial surveys.

Various improvements have been installed along Birch Creek. The first projects were installed in 1967. This consisted of fourteen K-dams and ½-mile of creek fenced to exclude livestock and vehicles. Since HMP authorization, various other types of instream structures have been installed including trash catchers, digger logs, rock gabions and rock placements. About 5½-miles of fence have been built along the creek as three separate projects. Livestock management has changed with implementation of the Little Lost-Birch Creek Livestock Grazing Environmental Impact Statement in 1978.

Project Summary

The HMP discusses the K-dams and fencing installed in 1967. The back-up file contains several correspondences from Idaho Fish and Game (IF&G) concerning this project. The area was electro-fished last in May of 1977. The fish population was 330 percent higher than before stream improvement. This represents a stabilized population after an initial increase of 868 percent one year after the improvements were installed. The structures are still creating pools in the stream and the fencing graphically illustrates the affects on stream bank and riparian vegetation from exclusion of livestock and vehicles.

More K-dams were proposed in 1975, 1976, 1977 and 1978, however, none were built. Other instream structures were installed but have not lasted as long nor created the excellent pools that the K-dams do. In 1976, 5 trash catchers, 5 digger logs and rocks were placed in Birch Creek. All but one of the digger logs have been destroyed from winter icing. The trash catchers have washed out although some pools still occur below most of the structures. Most of the rocks were too small to create any significant pools. Willow plantings were established along the creek in 1976. Livestock grazing has reduced survival of many of these but some have survived and are growing along the banks.

In 1979, 5 gabions were installed. These structures are still functional although winter ice damage is beginning to wash them out. The trash catchers and gabions, besides being short-lived, are not aesthetic as they are built with hog wire. This not only looks bad, it also snags fish hooks.

Refer to the map for locations by project number of the following items. Individual items are discussed from north to south along the creek:

4326 - Birch Creek Fish Fence - Constructed in 1976. Last maintained 1980 - good condition 1¼ miles.

4523 - Birch Creek Fence - Constructed in 1982 - 1 3/4 miles - good condition.

0599 - Trout Protective Fence - Constructed in 1967 - 1-mile - requires minor maintenance.

4213 - Birch Creek K-dams - Constructed in 1967 - 14 each maintained in 1974.

- #1 - OK - Above exclosure
- #2 - OK - Above exclosure
- #3 - OK - Above exclosure
- #4 - Right side needs rip-rap - Above exclosure
- #5 - OK
- #6 - OK
- #7 - Needs rip-rap on both sides
- #8 - OK
- #9 - OK
- #10 - Water has broken through bottom of stream above K-dam - Needs filling with gravel - still creates a pool but water is not going over K-dam.
- #11 - OK
- #12 - Needs rip-rap on the left
- #13 - Needs rip-rap on the left
- #14 - OK

4326 - Birch Creek protective fence - Constructed in 1977 - 2.3 miles maintained 1981 - good condition.

4265 - Trash catchers (5), Digger logs (5), Rock placements, gabions (5) constructed 1976 and 1979.

- #1 - Digger log - Washed out - No pool
- #2 - Trash catcher - Washed out-pool below.
- #3 - Digger log - OK
- #4 - Trash catcher - OK - Some good pools still available
- #5 - Digger log - ½ washed out
- #6 - Digger log - ½ washed out
- #7 - Trash catcher - ½ washed out - Good pool on the right
- #8 - Trash catcher - washed out in the middle - good pool on the left.
- #9 - Digger log - ½ washed out
- #10 - Gabion - OK
- #11 - Gabion - OK
- #12 - Gabion - OK
- #13 - Gabion needs rip-rap on the right
- #14 - Gabion - OK
- #15 - Digger log-washed out

Rock placement throughout stream but most are too small to create pools.

In 1978, 11 picnic tables, fire grates and garbage cans were installed near the John Day Grave site. This area receives extensive recreation use by campers, fishermen, hunters and ORV riders. Birch Creek is especially popular on opening day of fishing season because it is spring fed. The water is clear when compared to other fishing streams in southeast Idaho which are still having high runoff flows. As many as 200 vehicles have been observed along Birch Creek during opening day of fishing. Fred Morgan has been maintaining these facilities this year.

Fencing has been installed to exclude livestock from 2½-miles of Birch Creek. About 3½-miles still gets used by livestock, although livestock use was reduced by 30 percent (889 AUMs) following implementation of the Little Lost- Birch Creek EIS. The Pass Creek Pipeline (4360) was installed in 1980 to help redistribute cattle away from the creek.

The Spring Canyon Brush Control (4442) was performed in 1981 in the valley pasture. This allowed 2 growing season's rest for the lower 2½-miles of Birch Creek in the Spring Canyon allotment. The current grazing system calls for early spring grazing in this pasture and complete removalof livestock by mid-June to allow riparian vegetation to regrow. The State Section 16 remains unfenced and receives mid-summer grazing use. The Mahogany Butte portion of Birch Creek remains in good condition due to good sheep herding practices by the Ball Brothers. Further detail on livestock management is available in the HMP update file and the allotment files.

Land Aquisitions

An active attempt to exchange the State Section 16 was pursued by BLM. This effort spanned several years until the State Land Board decided not to trade due to mineral conflicts. Several people worked on this effort from the Big Butte Resource Area and the Soda Springs Resource Area. A file is maintained at the Idaho State Office for further detail. The exchange has been dropped due to the State Land Board decision.

No formal attempt has been persued to acquire public easements on private lands along Birch Creek. The general feeling has been that since these lands are not posted, easements are not necessary. Cliff Wagoner has indicated an interest in an exchange of 40 acres of his land on Birch Creek for federal land near his hay field by Goddard Canyon. This exchange would add ¼-mile of Birch Creek to the HMP area.

Water Hearings

A minimum stream flows application was filed by BLM with the Water Resources Board in 1979 for 30 cfs from the John Day Rest Area to below the Reno Diversion. This request was meant to return the water to the old channel when not

Used for irrigation and eliminate the possibility of any upstream dewatering above the Reno diversion. Two hearings were held on this issue and considerable protest was heard from the irrigators. This resulted in the BLM withdrawing its minimum flow request, although the Water Resources Board did establish a policy to oppose any new diversion above the Reno diversion. In 1984, the Water Resources Board reversed this policy statement in light of application from Ted Sorenson for a permit to use Birch Creek Water for Hydro-electric purposes. Further detail on these applications and hearings is available in the HMP update file and the Birch Creek Hydro-electric Right-of-Way File (I-19684).

The hydro-electric proposal submitted by Ted Sorenson would impact 3,000 feet of Birch Creek and about 5 miles of Reno Ditch. Mr. Sorenson's original application included minimum stream flow of 5 cfs and all stream flows in excess of 45 cfs below his diversion point to be delivered to the old Birch Creek channel. He changed this later by reapplication for all flows after his negotiations with the irrigators. Mr. Sorenson has always expressed a desire to mitigate fish and wildlife habitat losses with his project proposal. He has contracted to Dr. Jack Griffith of Idaho State University to provide expertise on habitat development along his proposed ditch. BLM testified at Sorenson's hearing with Water Resources that a minimum flow of 5 cfs down the original channel would be required to help mitigate the habitat lost by diversion. BLM has since filed a claim for open channel use by livestock and wildlife water at the Reno Diversion to equal 4.7 cfs.

Studies and Monitoring

Numerous studies and monitoring of habitat improvements have been accomplished on Birch Creek. The HMP recommended several programs to evaluate the success of the plan. Fish population studies, vegetation response transects, water quality and quantity measurements, and wildlife population monitoring have been accomplished. BLM has funded the stream measurement gage at 8-mile canyon road since 1967 to monitor the effect the stream improvements on water quantity.

Fish Population Studies

Electro-fishing was conducted in cooperation with the Idaho Department of Fish and Game in the 1967 improvement area, the 1976 improvement area, below the proposed Sorenson hydro-electric diversion, and on Reno Ditch. The data is presented in the following table:

Date	Location	Trout/100 ft	% Increase
June 1967	1967 Improvement Area	3	-
May 1968	1967 Improvement Area	26	868
April 1971	1967 Improvement Area	12	400
May 1977	1967 Improvement Area	10	300
May 1982	Sorenson Diversion	5.6	-
October 1982	Reno Ditch	0	-
1976	1976 Improvement Area	3.5	-
May 1977	1976 Improvement Area	8.4	240

The K-dams and fencing to exclude livestock showed dramatic increase in fish the first year after improvement. After 10 years, the population stabilized at 300-400 percent increase. The trash catchers and digger logs showed a smaller increase the year following improvements. This area was not fenced and cattle grazing pressure was heavy. I suspect that populations are even lower now due to the maintenance problems discussed earlier, although no follow up shocking has been accomplished. The area shocked below Sorenson's proposed diversion has no stream improvements, although livestock impacts to the streambanks are less severe. Most of the area lies within the Mahogany Butte allotment which is grazed by sheep in the early spring and late fall. The trout production here is better than both upstream areas shocked prior to improvement. The water velocity in Reno Ditch is too high to support fish except in a few places (near the highway and diversion structures). This data indicates that maximum trout production can be accomplished by reliable structures that create lasting pools (K-dams) and exclusion of livestock.

Visitor Use Survey

BLM has conducted several recreation use surveys on Birch Creek. Aerial counts have been made on opening weekends and ground counts made at other times. This data is summarized in the following table:

John Day Visitor Use

Date	# Vehicles	# Visitors (Est)
03/07/77	26	65
05/27/78	143	515
09/14/77	27	67
06/24/78	79	199
06/25/78	41	121
06/18/78	17	51
06/14/81	8	26
08/08/81	20	32
05/31/81	5	17
05/24/81	10	24
07/25/81	8	25
09/06/81	29	52
08/25/81	3	9
06/29/81	2	6
06/09/81	4	13
06/03/81	2	5
07/14/81	4	12
	428	1,239

2.9 person/vehicle

Week day ave. 7 Vehicles
Week end ave. 23 Vehicles

Majority of activities include fishing, camping, hunting, ORV riding.

Riparian Habitat

Aerial Photo Interpretation - The Birch Creek drainage from Blue Dome to Highway 28 was phtographed in August, 1984. The plan is to monitor vegetation change using the LMS machine and these photos. Follow-up flights will be scheduled as funding permits. Temporary targets were set on-the-ground for this flight. The location of these targets is shown on the map in the HMP update file. These photos will also give quantifiable data on the quality of riparian vegetation below the proposed hydro-electric diversion.

Plots - Range trend plots were established in the 1967 improvement area in August 1975. There has been no follow up on this to date. The location for these plots is available in the District Files (6733).

Transects - In 1984, permanent transects were established on Birch Creek by Roger Nelson. These transects measure vegetation production, streambank condition and channel morphology. They are a part of a large scale BLM program to test a riparian habitat monitoring system devised by Bill Platts of the USFS Range Experiment Station. Four transects are established. Two are within the 1967 stream improvement area. The other two lie just outside the fenced area, one of the north and one to the south. Each transect consists of 10 staked locations along the creek.

Reno Ditch - An inventory of riparian values on Reno Ditch was initiated in 1983. The map and ground photos of this project are available in the HMP update file. The riparian zone along Reno Ditch is narrow and not the quality of Birch Creek. However, it is valuable wildlife habitat.

Water Quality and Quantity

Water quality measurements were taken in 1977-78. Water quantity measurements have beem recorded at 8-mile canyon stream guage and at the Blue Dome stream guage since 1967. These measurements are available in the HMP update file.

Sean Farley conducted a water loss study in 1976 associated with the stream improvements. He found that water loss was decreased by the instream structures. The slowing of water has apparently promoted stream bottom sealing by siltation. This study is also in the HMP update file.

Livestock Monitoring

The Area Range Conservationist has monitored livestock use along Birch Creek since implementation of the Little Lost-Birch Creek EIS. Notes from the Range Conservationists are available in the HMP update file and the allotment files. Spring Canyon allotment use is rotated so that those sections of the creek not grazed season-long. Some improvement of streamside vegetation is evident although no formal studies have been established to document this. The sheep in Mahogany Butte are herded away from Birch Creek during most of the grazing season. Some cattle use occurs in the spring and fall on Mahogany Butte as George Woodie trails his cattle between Howe and upper Birch Creek.

Other Monitoring

Sage grouse strutting, antelope production, and bald eagle winter surveys are performed annually in cooperation with IF&G. Bald eagles have been wintering at the Reno Ranch during recent years in high numbers. Further information is available in the Bald Eagle Inventory File (6840). Antelope production has been good and permit levels have been increased by IF&G. Further detail is available in the Little Lost-Birch Creek Antelope HMP. Sage grouse are recovering from a low population. Seasons have been restricted for sage grouse the last two years due to poor brood production. Strutting ground counts have been down and cold wet springs in 1982 and 1983 reduced brood survival. Extensive research on sage grouse in Birch Creek was completed by Jack Connelly in 1982. His thesis, "An Ecological Study of Sage Grouse in Southeastern Idaho" is available in the district library. A computer file is currently being created to store strutting ground count information. Four strutting grounds in lower Birch Creek are systematically surveyed by IF&G and BLM. These are Richard Butte, Reno Diversion, White Swan and Reno Ditch. Information on these leks will be available on this computer program and the district strutting ground files.

Future Direction

Further development of the aquatic resource is warrented based on this evaluation. Habitat improvements have been successful in providing better fishing opportunities and improved riparian quality. Multiple use demands for livestock grazing, hydro-electric development, recreation and wildlife habitat have increased in recent years. Emphasis on monitoring systems has been promoted by the BLM on critical wildlife habitat areas. The following recommendations for future direction are proposed:

Recommendation #1 - Continue to create pools by artificial instream structure placement. Past experience with trash catchers, digger logs, gabions and rock placements have not provided the response that K-dams and exclusion of livestock has. K-dam construction requires extensive labor and money. Large rocks (greater than 4 feet in diameter) strategically placed in the stream would be relatively cheap and provide significant pools. Begin an active program of large rock placement.

Recommendation #2 - Pursue the exchange of private lands on Birch Creek for public land off the creek whenever the opportunity arises. Cliff Wagoner has indicated a desire to exchange 40 acres on Birch Creek for federal land adjacent to his hay field. Similar potential may exist on other portions of Birch Creek.

Recommendation #3 - Establish permanent photo points along Birch Creek to monitor livestock grazing impacts on stream banks and riparian vegetation. If grazing systems do not provide adequate stream bank structure in 5 years, consider funding to fence the rest of the BLM portions of Birch Creek to exclude livestock. Stream banks are considered adequate when they are completely vegetated to check erosion and reproduction of black birch and willow is occurring. At least 50 photo points should be established.

Recommendation #4 - Assign annual maintenance inspections to area staff for improvements on Birch Creek as follows:

Area Biologist - Instream structures 4265
- Water gaps on all fences
- Trout protective fence 0599
- Campground facilities

Area Range Conservationist - Spring - before livestock turn-out (close water gap gates)
- Birch Creek Fish Fence 4326
- Birch Creek Fence 4523
- Birch Creek Protective Fence 4326
- Pass Creek Pipeline 4360
- Fall - open water gap gates

Maintenance reports will be filled out and filed in the project files. Corrective maintenance will be undertaken as soon as possible by, a) Livestock operators, b) Firecrew, c) Area staff and volunteers. Include maintenance needs identified in the project summary of this memo in 1985 annual work plan. Allocate 1 work month and $500 per year for miscellaneous maintenance needs after FY85. Water gaps should be opened every October to prevent ice damage and replaced every April to prevent livestock damage in exclosures.

Recommendation #5 - Revamp monitoring studies described in the HMP. The following studies will replace those recommended in the original HMP:

A. Support the USFS Range Experiment Station monitoring transects by State Office funding, Area staff assistance on the ground and incorporation of results into a district study file.

B. Continue with Aerial Photo interpretation on LMS machine. Monitor changes in riparian habitat size and quality as funding permits.

C. Continue monitoring livestock use patterns and rotate livestock on pastures which include Birch Creek to allow riparian vegetation regrowth during the summer.

D. Follow up on permanent range trend plots established in 1975 (District file #6733).

E. Organize electo-fishing of 1967 and 1976 stream improvements for spring 1985 to followup on effectiveness of these structures.

F. Continue funding stream gaging station at 8-mile canyon.

Recommendation #6 - Maintain the quality habitat for fish and wildlife along Birch Creek by mitigation measures if the Birch Creek Hydro-electric proposal is authorized. Such mitigation would include, but not be limited to adherance to the stipulations defined in the Idaho Department of Fish and Game letter dated March 26, 1984 (HMP update file).

Recommendation #7 - Continue establishment of trees and shrubs through plantings on banks lacking woody vegetation. Use both natural starts from willows in the spring and experiment with nursery stock cottonwoods.

Recommendation #8 - Expand the camping facilities on Birch Creek to include the area from 8-mile canyon road to the 1967 stream improvement area. This should include but not be limited to 10 picnic tables, fire grates and garbage cans and 2 out-house facilities. Continue to fund campground maintenance through recreation program.

Recommendation #9 - Provide annual updates on progress on structure installation and monitoring to the HMP update file.

Bob McCart

BIRCH CREEK, IDAHO

STREAM SURVEY REPORT

BUREAU OF LAND MANAGEMENT

IDAHO FALLS DISTRICT

IDAHO DEPARTMENT OF FISH & GAME

IDAHO FALLS, IDAHO

JULY 1976

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BIRCH CREEK IDAHO STREAM SURVEY REPORT

Introduction

As a part of the intensive inventory of Birch Creek, a physical stream survey was conducted in June, 1975. The survey was an interagency project between Idaho Department of Fish & Game, Fisheries Division, and personnel from the Bureau of Land Management. Training, assistance and analysis of the survey data were provided by the Fisheries Biologist from the BLM Oregon State Office.

The survey was conducted on the portion of Birch Creek from the Reno Ditch diversion up to and including all the tributaries forming the headwaters, a stream distance of approximately 22 miles.

Personnel involved in the survey were as follows:

R. Culbertson, Wildlife Biologist, Idaho Falls District
R. Borovicka, Oregon State Office, BLM
H. Hendrick, Salmon District, BLM
S. Robinson, Idaho Falls District, BLM
W. Ball, Idaho Department of Fish & Game
P. Jeppson, Idaho Department of Fish & Game

Description

Birch Creek is the major feature of the valley floor that drains the area between the southern end of the Lemhi Mountains on the west and the Beaverhead Mountains on the east. The stream originates from a complex of springs in the upper portion of the valley. The creek meanders through private, state and national resource lands. During the irrigation season, the water is completely diverted into the Reno irrigation ditch, approximately 20 miles downstream from the headwaters. The stream system is in a closed basin where undiverted water sumps out on the Idaho National Engineering Laboratory of the Energy Research and Development Administration. It is presumed that the water becomes a part of the Snake River Aquifer. Limnological data for the creek have been compiled by Andrews (1972).

The stream carries a flow of high quality water on a perennial basis that averages between 53 to 149 cfs. Birch Creek is considered medium to rich in abundance and quantity of aquatic organisms (Table 1).

Table 1, Invertebrate fauna collected in Birch Creek 1970-71. (From Andrews, 1972)

TAXON

Diptera

- Chironomidae
- Simulium sp.
- Tipula sp.
- Dicranota sp.
- Heleidae
- Pericoma sp.

Coleoptera

- Optioservus quadrimaculatus
- Bidessus sp.
- Hydaticus sp
- Dubiraphia sp.

Ephemeroptera

- Baetis tricaudatus
- Ephemerella grandis
- E. inermis
- Rhithrogena hageni
- Paraleptophlebia heteronea
- Ephemerella flavilinea
- Ameletus oregonensis
- A. velox
- Tricorythodes minutus

Plecoptera

- Acroneuria pacifica
- Isoperla fulva
- Arcynopteryx parallela
- Pteronarcella badia
- Alloperla sp.
- Classcuia sabulosa
- Isogonus sp.
- Capnia sp.
- Isoperla mormona
- Pteronarcys californica
- Nemoura sp.
- Isoperla patrica

Trichoptera

- Brachycentrus occidentalis
- Hydropsyche sp.
- Glossosoma sp.
- Arctopsyche grandis
- Lepidostoma sp.
- Helicopsyche borealis
- Hesperophylax sp.
- Limnephilus sp.
- Drusinus sp.
- Micrasema sp.
- Parapsyche elais
- Athripsodes sp.
- Oecetis sp.
- Chimarra sp.
- Rhyacophila vaccua
- Rhyacophila acropedes

Annelida

- Hirudinea

Acarina

- Hydracarina

Amphipoda

- Gammarus lacustris
- Hyalella azteca

Hemiptera

- Callicorixa sp.

Neuroptera

- Sialis sp.

Playhelminthes

- Turbellaria

Mollusca

- Lymnaea sp.
- Physa sp.
- Gyraulus sp.
- Pisidium sp.
- Sphaerium sp.

Odonata

- Argia sp.
- Ophiogomphus sp.

State Highway 28 parallels and crosses the creek in three locations through the valley. Several unimproved roads parallel the stream on national resource lands. Physical access is available on all NRL and State lands and general fishing is permitted by permission on private lands. Birch Creek is located in Butte, Clark, and Lemhi Counties, Idaho and is in the eastern portion of the Birch Creek-Little Lost River Planning Unit.

The stream is considered one of the most important trout waters on NRL in eastern Idaho and is a very popular fishing area for both residents and tourists. Ease of access, good fish production and interesting outdoor habitat contribute to its popularity in Idaho. The extreme upper portion of the stream has outstanding natural reproduction of trout, both Rainbow and Brook. The lower portion of the water on NRLs contains natural stocks of fish but is periodically stocked by the Idaho Department of Fish & Game with catchable rainbows.

The creek is characterized by having only one live tributary (Pass Creek) in the central portion of the watershed. Pass Creek is entirely diverted for irrigation of fields during the irrigation season.

Methodology

The Physical and Biological Stream Survey Book, 6670-1, was used by field personnel during the survey. Data collected were compiled from the field form and transferred to 6670-2 Forms, Physical and Biological Stream Survey Reports (Exhibit A)*.

The most extensive survey was conducted on the lower nine miles of stream. This section is almost entirely on NRL with some interspersed State of Idaho lands. The reason for the more intensive survey in this area was the condition of the habitat and the opportunity for management on NRL. All of the stream on private lands was surveyed to determine condition of the aquatic habitat, riparian cover and riffle-pool frequency. The upper portion of the stream near Kaufman Guard Station was surveyed to determine the amount of riffle and pool area and the general condition of the aquatic and riparian habitat. Aerial photographs (1-20,000) were used to divide the area in quarter-mile sections for purposes of the survey. Survey data were collected by sub-section in the normal quarter-mile section that is standard for this method of stream survey.

Little water quality data were collected because of the detailed analysis available in the files of Idaho Department of Fish & Game and the data available as a result of the Limnological investigations published in the thesis by (Andrews, 1972).

* A sample Physical and Biological Stream Survey Report Form is attached as Exhibit A. Other supporting data referred to are in Files in the District Office.

Objectives

1. To record the physical parameters by specific location as listed in BLM Stream Survey Manual 6671.

2. To analyze the collected data to determine limiting factors.

3. To inspect and record the need and location of possible habitat improvements as a basis for future fishery habitat improvement.

4. To use the survey as an important part of the intensive inventory of the Birch Creek Aquatic Habitat Management Planning Area.

Results

Physical Survey. The physical inventory that delineated the stream bottom type, including pool area, clearly depicted the contrast between the fishery habitat on NRL as compared to private and protected lands under State ownership. The statistics indicate the low percentage of pool area and streamside cover in the lower nine miles of stream on NRL. The national resource lands have had no protection from livestock grazing in the past, except for a small experimental area. The private lands from river mile 9 up to river mile 17 exhibit almost a 50-50 riffle-pool relationship and 75 percent stream shading. The majority of private lands along the stream have been fenced and have had limited livestock use because of cultivated fields or other agricultural uses. Some physical characteristics of Birch Creek are summarized in Tables 2 and 3 and Figures 1 through 4.

Discussion

Factors that limit the maximum production of fish in the aquatic habitat of Birch Creek are as follows:

1. There is historically heavy utilization of riparian vegetation by livestock along the stream on NRL. This heavy use of the riparian area has broken down stream banks and suppressed growth of woody plants. As a result, fish habitat in the form of pools, undercut banks and deep meanders has been eliminated.

2. Past channel changing activities for water flow movement have increased the velocity of the water and destroyed trout habitat.

3. Increases in water turbidity and sediment due to unstable streambanks affect water quality and cause impaction of gravel and covering of gravel with silt.

Table 2. Characteristics of Birch Creek as Compiled in 1975.

Item		Amount
Gravel -		
Mile	0.00 - 9.00	84,059 square yards
"	9.00 - 17.00	62,050 " "
"	17.00 - 22.00	25,420 " "
	Total	171,529 " "
Pool to Riffle Ratio		32 - 68
Pools		32%
Average area shaded		36%

Table 3, Comparison of percentage of pools and average stream area shaded by one mile sections.
Birch Creek, Idaho, 1975

Pools	Percent Area Shaded	Stream Milepost	Major Land Ownership
9	0	1	National Resource Lands
20	10	2	"
19	10	3	"
28	0	4	"
23	10	5	"
16	10	6	"
18	10	7	"
13	20	8	State-Private
29	50	9	Private
67	90	10	"
45	80	11	"
32	80	12	"
28	70	13	"
50	70	14	"
30	50	15	"
60	90	16	"
44	70	17	Private-State
35	70	18	Private
30	10	19	"
26	0	20	"
0	0	21	"
0	0	22	"
		8	

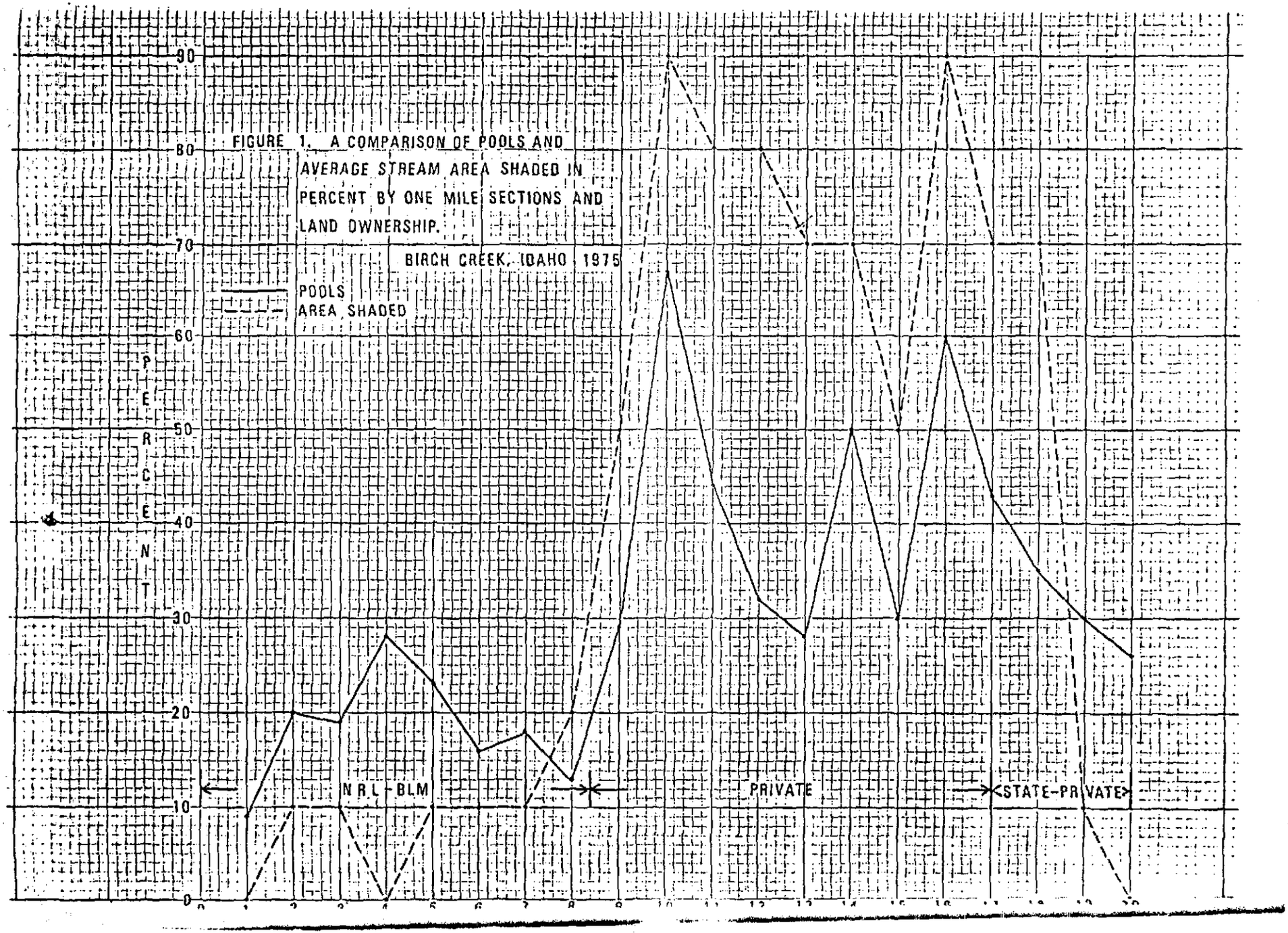
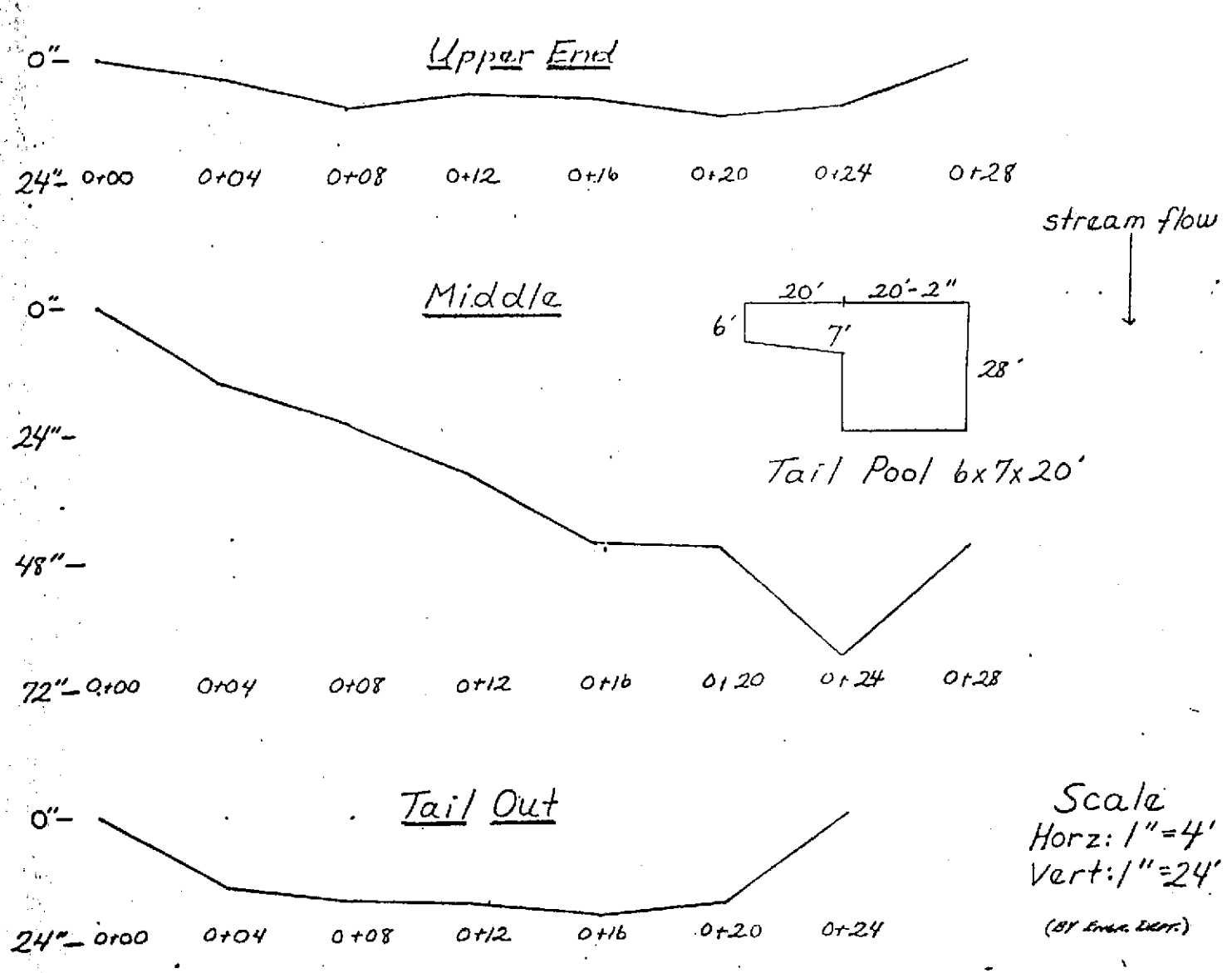
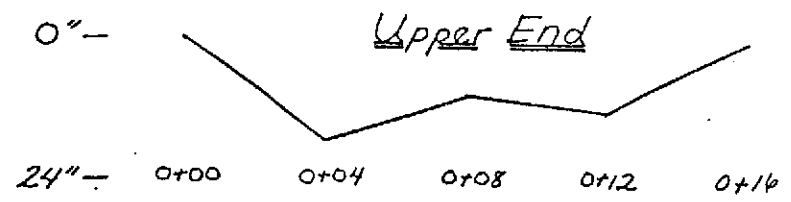
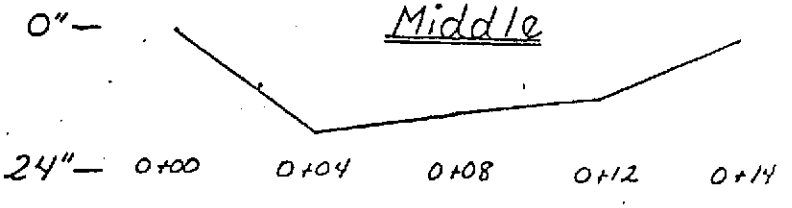


FIGURE 1. A COMPARISON OF POOLS AND AVERAGE STREAM AREA SHADED IN PERCENT BY ONE MILE SECTIONS AND LAND OWNERSHIP.

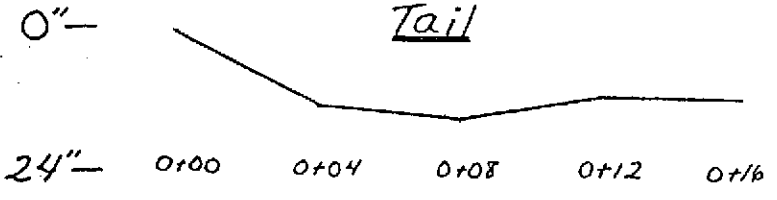

Upper End
0"
24"
0+00
0+04
0+08
0+12
0+16
0+20
0+24
0+28
stream flow
Middle
0"
24"
48"
72"
Vertical Scale
20'
20'-2"
6'
7'
28'
Tail Pool 6x7x20'
Tail Out
0"
24"
Scale
Horz: 1"=4'
Vert: 1"=24'



stream flow

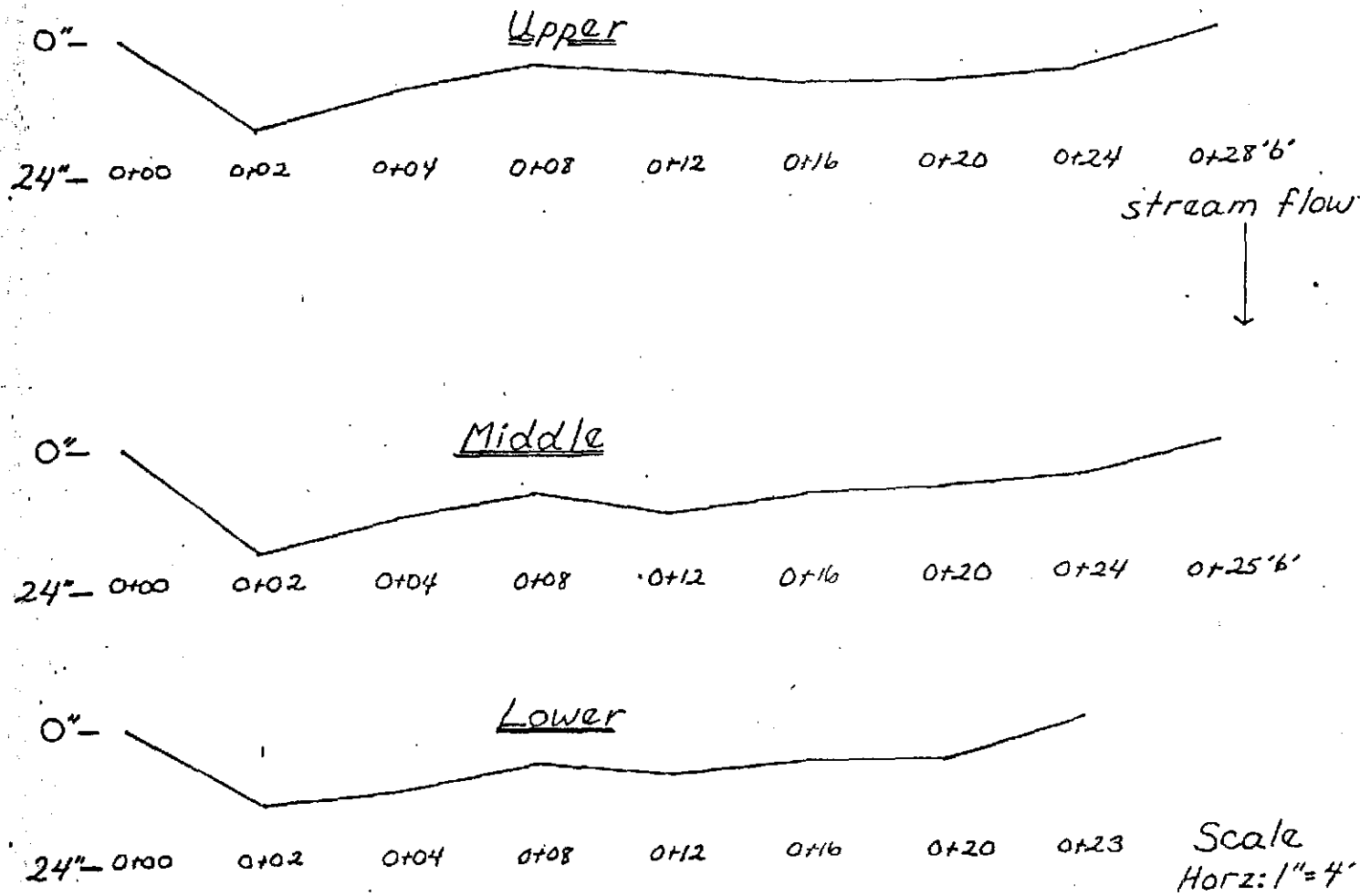


Vertical Scale



Scale
Horz: 1"=4'
Vert: 1"=24'

(BY ENGR. DEPT.)



Scale
Horz: 1" = 4'
Vert: 1" = 24'

(BY ENGR. DEPT.)

4. Headwater streams need habitat protection to increase trout habitat and to protect water quality.

5. Excessive recreational use by campers along the stream has reduced riparian vegetation in some areas.

6. There may be a serious loss of trout in the irrigation ditches because they are not screened.

7. Winter conditions on the stream are not well documented. The stream habitat changes caused by anchor ice and concentrations of fish in the winter should be investigated.

Recommendations

1. Control livestock use by complete protection of the riparian area on NRL.

2. Use instream structures where necessary to provide the needed trout habitat. Location of structures should be determined from the detailed stream survey results.

3. Control the use of day and overnight camping to limit pressures on the riparian habitat.

4. Implement the Aquatic Habitat Management Plan.

5. Establish baseline studies of fish abundance and evaluate the operational activities.

6. Negotiate for the control of the riparian habitat on the stream and tributary complex above Kaufman Guard Station.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

PHYSICAL AND BIOLOGICAL STREAM SURVEY REPORT

Date 5/28/75 - 6/18/75
1 Surveyor A. Culbertson
H. Hendrick P. Jeppson
B. Borovicka
Agency BLM
Idaho Dept. Fish & Game

2. Stream	a. Tributary	b. Basin
Birch Creek	closed	Snake River

3. Location (stream mouth)	Township	Range	Section
	6 N	32 E	11

4. County	5. State Administration Unit Number	Code Number
Lemhi	Idaho - 6	

6. PHYSICAL SURVEY DATA

a. Station 1.00 - 22.00 to 22.00 distance (miles) 22

b. Stream width (average)
____ ft. today
15-30 ft. when Rainbow Trout spawn
____ ft. when Brook Trout spawn

c. TURBIDITY (Visibility in feet)

MUDDY		MURKY		CLEAR	
<.5	.5–1	1–2	2–5	5–10	10+
			X		

d. Jackson Turbidity Units

e. Temperature: Air °F, Water °F, Time , Flow (c.f.s.) Now , High , Low

f. GRAVEL, POOL AND RUBBLE AREA

SUBSECTION	FISH SPECIES	GRAVEL (sq. yards) GOOD	GRAVEL (sq. yards) MARGINAL	GRAVEL (sq. yards) TOTAL	POOLS SQ. YARDS	POOLS DEPTH	RUBBLE (sq. yards)	TOTAL (sq. yards)
0.00-9.00				84,059	24,266		7,994	116,319
9.00-17.00				62,050	58,820		1,210	122,080
17.00-22.00				25,420	3,780		-	29,200
Total				171,529	86,866		9,204	267,599

G. PERCENT OF SECTION IN POOLS

0	10	20	30	40	50	60	70	80	90	100
			32% X							

h. Gradient
- [ ] Steep (2.5 + %)
- [X] Moderate (1.0 to 2.5 %)
- [ ] Flat (0 to 1 %)

i. AVERAGE STREAM AREA SHADED (percent)

0	10	20	30	40	50	60	70	80	90	100
			X 36%							

j. STREAMSIDE COVER TYPE

LOGGED WITHIN (years) 0–5	LOGGED WITHIN (years) 6–10	GROWTH 2nd	GROWTH OLD	HERB	OTHER
				X	X

7. FISH SPECIES, SIZE, AND ABUNDANCE

Black Birch; Willow; Aspen

a. Method of collection No collections made - ocular observations

SPECIES	SIZE	NUMBER PER 100 FT. 0–5	6–50	50+	SPECIES	SIZE	NUMBER PER 100 FT. 0–5	6–50	50+
Rainbow Tr.	5-12"		X						
Brook Tr.	5-10"			X					

8. LIMITING FACTORS

BARRIERS (type) DAM	FALLS	LOGJAM	CULVERT	HEIGHT (ft.)	PASSABLE YES	NO	CORRECTIONS NEEDED YES	NO

Other factors No barriers. Unscreened irrigation ditches. Heavy livestock use in many areas. Lack of streamside vegetation. Pools and runs lacking in some areas.

9. Access Possible pollution from livestock. on NRL and state lands. Cooperative agreements needed on private lands.

(Continued on reverse)

10. Additional Comments

See stream survey narrative.

INSTRUCTIONS

1. District office completes two (2) copies upon request of Stream Surveyor.

2. Submit original to permanent District file and carbon to Stream Surveyor for final stream survey report.

3. See Form 6670–1 for specific instructions.

* U.S. Government Printing Office:1973-784-258/2231 Region 8

APPENDIX D

WATER LOSS ANALYSIS

OPTIONAL FORM NO. 10
JULY 1973 EDITION
GSA FPMR 141 CFR) 101-11.6

UNITED STATES GOVERNMENT

6670

Memorandum

Water Issue

TO : Birch Creek Aquatic Study File

DATE: November 22, 1976

FROM : Ralph Culbertson, District Wildlife Management Biologist

SUBJECT: Joint meeting with State of Idaho Water Resource Department Water Users and BLM

On November 10, 1976, a meeting was held at the Idaho Water Resource Department Office between BLM, SIDWR personnel and the water users of Birch Creek.

The purpose of the meeting was to once and for all clarify the Bureau's position as to the use of the waters of Birch Creek for Federal Programs We also wanted to offer assurance to the water users of Birch Creek that the Bureau of Land Management in no way wanted to infringe on their decreed water rightas we developed the fisheries habitat on Birch Creek.

At first the discussion by the water users centered around hypothetical causes why the structures placed by the Bureau would cause excess water losses, but they had no definite facts to prove their theories.

The Bureau presented its findings showing the data collected in cooperation with SIDWR and summarized in a study entitled "Water Loss on Birch Creek an Aquatic Study" which is on file in the district. The study shows a substantial difference between water loss rates in portions of the stream that have had no structures placed and that 1.41 miles of stream that has either K-dams, trash catchers, digger logs or rock placement work done. The rate of water loss for the "Unaltered" (no structures) portion of the stream is 2.3 cfs per mile while the "altered" (with structures) section has a loss rate of only 1.9 cfs per mile which is .4 cfs per mile less loss. It was the Bureau's contention that by slowing the water velocity down, the fine silts came out of suspension and "sealed" the natural gravels somewhat and thereby reduced water loss. The Idaho Water Resource Department and the water users themselves agreed that perhaps this was taking place and with the data at hand could only conclude that the Bureau's action to date has not interferred with any decreed water and may have actually helped the situation.

The discussion turned to our upcoming plans in FY'77 where we told those present that we intended to:

1. Construct 5 K-dams.
2. Construct 5 trash-catchers and place approximately 80 cu yards of boulders (up to 20" diameter) in Birch Creek using YCC hand labor

5018-110

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

On the proposed project plans very little resistance was encountered and it was agreed that with IWRD help, we would do measurements before, during, and after constructions of the projects to see if there was a significant loss of water.

The water users then wanted to know what practices would be allowed in stream channelization on federal lands.

Ross Sharp informed them that there would be no work allowed in the main stream channel on Federal lands. Small diversions resulting from heavy spring runoff could be turned back into the main channel by working from the outside bank in.

The water users were also informed that the Bureau could not, nor would not, authorize the dumping of bentonite into the stream on Federal lands but that the government has no authority over private actions on private land nor does it want that authority.

Overall I believe the meeting strengthened the Bureau's position on managing the cold water fisheries habitat on NRL and yet gained the respect and cooperation of the water users on Birch Creek.

fba: 11-22-76

Ralph E. Galbraith

Calculation

ANALYSIS OF DISCHARGE MEASUREMENTS TAKEN FROM BIRCH CREEK

Introduction:

The rate of discharge was measured at four sites on Birch Creek, of the Little Lost River, Birch Creek Planning Unit, located in the Idaho Falls District, Bureau of Land Management. The rationale behind the location of these four sites was to elucidate two parameters:

1) The amount of water flow into the Reno diversion.

2) The amount of water lost through percolation on a specific 1.41 mile length of stream.

Materials:

The apparatus utilized in measuring the discharge were:

1 type AA current meter
1 100' nylon tape measure
1 stop watch

Methods:

The physical aspects most desirable when selecting a site for measurement are smooth flowing water and little or no slow water by the stream bank. The tape measure is then laid at a right angle intersecting the stream channel and staked down above streamtop level with the 1 foot mark at water's edge.

In this survey all measurements were taken starting from the left bank, except the first which was the right bank. (Right and left determined when facing downstream.) The initial point on the bank was called zero and hence had no depth. The first starting point was as close to the bank as the meter would record, all others at one foot intervals. This procedure was followed for all sites except the Reno diversion which was measured at one-half foot intervals.

The type AA meter is so constructed as to measure the water depth, then can be adjusted to automatically position the meter blades at a distance of 60% of the depth from the bottom. When properly positioned, the number of revolutions of the blades per a given time period was measured.

By determing the ratio of revolutions/seconds either one of two formules were utilized to calculate the velocity at that point. The specifications for the equations are:

$N = \frac{\text{Revolutions}}{\text{Seconds}}$ if $N > 1$ then $V = 2.224N + .016$

V = Velocity at that point if $N \leq 1$ then $V = 2.218N + .022$

Each point on the sites measured had its velocity calculated, then its area. The area was determined by multiplying the depth by the width, the width being defined as the distance from the preceeding point. The point discharge was tabulated by multiplying the area by the velocity. The sum of all discharge calculations for a site gave the total discharge of the stream at that location. Data for the four sites are given in Table I.

Personnel conducting the investigation were Lorne Holmes of the State Water Resources Board in Idaho Falls, Idaho and Sean Farley of the Bureau of Land Management, also of Idaho Falls, Idaho.

Specifics:

Site 1

This was measured at a point approximately one hundred feet downstream of the earthen dam constructed to direct water flow into the Reno diversion. It is pinpointed on aerial photo, Section 3, Township 8 North, Range 30 EAst, C X Q 1W - 102. (See Appendix I).* The maximum depth was 1.2', with a discharge of 1.842 c.f.s. at a distance 4.5' from shore. The maximum discharge was 3.248 c.f.s. at distance 12.0' and depth 0.85'. The width of the stream at this point was 15', with 1.25' on the right bank and .25' on the left being too shallow to record.

Site 2

This was recorded approximately one hundred feet downstream of the 'V' digger log in section 28, Township 9 North, Range 30 East, located on aerial photo C X Q 12W-17. The maximum depth at this site was 1.1' with a discharge of 3.43 c.f.s. at distance 15'. The maximum discharge was 3.54 c.f.s. at a depth of 1.0' and distance 14'. The total width of the stream was 23', with 1.5' on the left bank and 1.0' on the right being too shallow to measure.

Site 3

Measurements here were recorded at a point approximately 80' upstream of the most northerly K-dam south of Blue Dome Inn. This may be found on aerial photo section 16, Township 9 North, Range 30 East, C X Q 12W-16. Maximum depth here was found to be 1.20' with a discharge rate of 3.05 c.f.s., at distance 5'. The maximum discharge was 3.08 c.f.s., at a point 7' from the bank and with a depth of 1.10'. Total stream width was 24' with 1.0' on each bank too shallow to measure.

Site 4

This site was located approximately 60' downstream of the intersection of the southern fence of the bull pasture and the creek. The bull pasture is located approximately ¼ mile south of the John Day Historical Site. It is pinpointed on aerial photo section 5, Township 9 North, Range 30 East, C X Q 12W-15. The deepest point was 1.4' with a discharge of 2.37 c.f.s. at distance 23'. The maximum discharge was 4.69 c.f.s. at a depth of 1.4' and distance 21'. The total width of the stream was 24' with 2.5' on the left bank and .5' on the right, too shallow to record.

*Appendices including maps and field data are in Unit Files.

Discussion:

The structures built on the 1.41 mile stretch of altered land were designed to impede water flow and create pools. In doing so, there arose two possible ramifications greatly affecting water loss.

First, the increased surface area of water could allow greater contact with the ground surface and thereby possibly enhance the likelihood of increased percolation.

Second, the slow-down of water would cause a faster rate of sediment deposition which could 'seal' the stream bottom and decrease the water loss through percolation. From an original flow of 53.0 c.f.s. at Site 4, only 37.7 remains at Site 1 to be diverted at Reno diversion. This 15.3 c.f.s. loss can be delineated and charged to specific altered and unaltered sections of the stream. Of this 15.3 c.f.s., 5.6 are lost in a section of unaltered land that has a loss rate of 2.3 c.f.s./mile. The other unaltered stretch of stream is 2.52 miles long and loses 6.9 c.f.s. at a rate of 2.3 c.f.s./mile. However, the altered stream section is 1.41 miles long and loses only 2.7 c.f.s. at a rate of 1.94 c.f.s./mile.

Conclusion:

Data would be indicative that the alteration of the stream as done in such a manner to impede water flow and form pools reduces the loss rate of water through percolation. Depending upon the rate of deposition, its advantages might outweigh the future disadvantages.

Sean Farley 8-5-76

TABLE I

Site No.	Location	Time Measured	Discharge c.f.s.	Distance from Preceeding Site (miles)	Status	Rate of Loss c.f.s./mile
1	NE¼, sec. 3, T. 8 N., R. 30 E.	1030	37.7	0		
2	NE¼, sec. 28, T. 9 N., R. 30 E.	1120	44.6	2.52	Unaltered	2.3
3	NW¼, sec. 16, T. 9 N., R. 30 E.	1215	47.3	1.41	Altered	1.9
4	Sec. 5, T. 9 N., R. 30 E.	1340	53.0	2.44	Unaltered	2.3
			TOTAL	6.37		

APPENDIX E

EXAMPLES OF JOB DESCRIPTION

REPORTS FOR IMPROVEMENTS

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JOB DOCUMENTATION REPORT

JOB IDENTIFICATION

1. State (2–3) . . . . . ID
2. District (4–5) 03
3. Job No. (6–9) 4297
4. Transaction Code (10) . . . . .

I – GENERAL DESCRIPTION — Card 1

Job Name (11–30): BIRCH CREEK ROCK PLACE

ATION CODES

Special Project Code (31–34) . . . . .
Planning Unit (35–36) 02
Sub-Basin (37–38) 42 — 9. County (39–41) 033
Watershed No. (42–44) . . . . .
Allotment No. (45–47) . . . . .
Wildlife Habitat Area (48–50) A03

E AND VEGETATIVE DESCRIPTION

Present SSF (51–52) . . . . . 14. % Slope (53–54) . . . . .
Exposure (55) . . . . . 16. Soil Texture (56) . . . . .
Precipitation (inches) (57–58) . . . . .
Elevation (feet) (59–63) . . . . .
Vegetative Subtype (64–66) . . . . .

MPOSITION (*Percent*)

Grasses (67–68) . . . . . 21. Forbs (69–70) . . . . .
Browse (71–72) . . . . .

VER (*Percent*)

Vegetative (73–74) . . . . . 24. Litter (75–76) . . . . .
Bare Ground (77–78) . . . . .

II – ANNUAL WORK PLAN INPUT DATA — Card 2

75. Subactivity (11–14) 1285
76. Work Job Code (15–18) 6011

NITS PLANNED

Primary (19–24) 50
Secondary (25–29) . . . . .

IME OF AWARD

Fiscal Year (30–31) 77 — 80. Third (32) 3

IME OF COMPLETION

Fiscal Year (33–34) 77 — 82. Third (35) 3

LM COST — 83. Method (36) . . . . .
Material (37–41) . . . . .
Contract (42–47) . . . . .

ONTRIBUTED COST

Material (48–52) . . . . .
Labor/Equipment (53–57) . . . . .

AINTENANCE

Responsibility (58) 1 — 89. Cycle (59–61) . . . 705

III – JOB DETAILS AND BENEFITS — Card 3

37. Primary Job Objective (11) 7

PLANT AND PEST CONTROL

39. Chemical (12) . . . . . 42. Method (13) . . . . .
45. Mechanical – Method (14) . . . . .

ARTIFICIAL REVEGETATION

47. Pounds Seed/Acre (15–17) . . . . .
48. Seedlings/Acre (18–21) . . . . . 49. Method (22)
51. AUM's Livestock Forage Added (23–26) . . .
52. Future SSF (27–28) . . . . .

WATERSHED TILLAGE — 54. Method (29) . . . .

FACILITIES — 55. Type (30) . . . . . 56. Other Misc. (31)

WATER DEVELOPMENT/CONTROL

59. Structure Type (32) . . . . .
STORAGE (Ac. Ft.) 60. Flood (33–38)
61. Silt (39–44)

WILDLIFE HABITAT DEVELOPMENT/PROTECTION

62. Type (45–46) 67 — 63. Primary Species (47–49) 801
64. Animal Months (50–54) . . . . .
65. Number Increase (55–59) . . . . .
66. Pounds Fish Increase (60–64) 500
67. Rare/Endangered (65) . . . . .

VISITOR DAYS ADDED — 68. Fisherman (66–69) 1250
69. Hunter (70–73) . . . . . 70. Other (74–77)

IV – PROGRESS REPORT — Card 4

COMPLETION DATA

UNITS 90. Primary (11–16) . . . . .
91. Secondary (17–21) . . . . .
TIME 92. Fiscal Year (22–23) . . . . .
93. Third (24) . . . . .
94. Contract No. (25–29) . . . . . CT

CONTRIBUTION DETAIL

95. Agreement (30) . . . . . 96. Participant (31) . . . .
97. Contributor's Name (32–51)

CONTRIBUTIONS

98. Deposited (52–56) . . . . .
Undeposited
99. Materials (57–61) . . . . .
100. Labor, Equipment (62–66) . . . . .

V – DETAIL ESTIMATE OF UNITS AND COSTS

WORK DESCRIPTION AND MATERIALS (a)	UNITS		BLM COSTS		COOPERATOR COSTS	
	EA. MILE, ETC (b)	COST (c)	MATERIALS (d)	CONTRACT (e)	MATERIALS (f)	LABOR (g)
90 MATERIALS Rock placement along five miles of stream by YCC labor (0.5 MM supervision)	5.0 mi.					
TOTALS Materials						
Labor/Equipment						

Form 1630–8 (November 1972)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JOB DOCUMENTATION REPORT

JOB IDENTIFICATION
1. State (2–3) . . . . . ID
2. District (4–5) 03
3. Job No. (6–9) 4296
4. Transaction Code (10) 1

I – GENERAL DESCRIPTION — Card 1

5. Job Name (11–30): BIRCH CR TRASH CATCH

LOCATION CODES
6. Special Project Code (31–34) . . . . .
7. Planning Unit (35–36) 02
8. Sub-Basin (37–38) 42 — 9. County (39–41) 033
10. Watershed No. (42–44) 004
11. Allotment No. (45–47) . . . . .
12. Wildlife Habitat Area (48–50) A03

SITE AND VEGETATIVE DESCRIPTION
13. Present SSF (51–52) — 14. % Slope (53–54)
15. Exposure (55) — 16. Soil Texture (56) . . . .
17. Precipitation (inches) (57–58) . . . . .
18. Elevation (feet) (59–63) . . . . .
19. Vegetative Subtype (64–66) . . . . .

COMPOSITION (Percent)
20. Grasses (67–68) — 21. Forbs (69–70) . .
22. Browse (71–72) . . . . . .

COVER (Percent)
23. Vegetative (73–74) — 24. Litter (75–76) .
25. Bare Ground (77–78) . . . . . .

II – ANNUAL WORK PLAN INPUT DATA — Card 2

75. Subactivity (11–14) 1285
76. Work Job Code (15–18) 6011

UNITS PLANNED
77. Primary (19–24) 2.5
78. Secondary (25–29) . . . . .

TIME OF AWARD
79. Fiscal Year (30–31) 77 — 80. Third (32) . . . 3

TIME OF COMPLETION
81. Fiscal Year (33–34) 77 — 82. Third (35) . . . 3

BLM COST — 83. Method (36) 2
84. Material (37–41) 900
85. Contract (42–47) . . . . .

CONTRIBUTED COST
86. Material (48–52) . . . . .
87. Labor/Equipment (53–57) . . . . .

MAINTENANCE
88. Responsibility (58) 1 — 89. Cycle (59–61) . 702

III – JOB DETAILS AND BENEFITS — Card 3

37. Primary Job Objective (11) 7

PLANT AND PEST CONTROL
39. Chemical (12) — 42. Method (13) . . . . .
45. Mechanical – Method (14) . . . . .

ARTIFICIAL REVEGETATION
47. Pounds Seed/Acre (15–17) . . . . .
48. Seedlings/Acre (18–21) — 49. Method (22)
51. AUM's Livestock Forage Added (23–26) . .
52. Future SSF (27–28) . . . . . .

WATERSHED TILLAGE — 54. Method (29) . . . .
FACILITIES 55. Type (30) — 56. Other Misc. (31)

WATER DEVELOPMENT/CONTROL
59. Structure Type (32) . . . . . .
STORAGE (Ac. Ft.) 60. Flood (33–38)
61. Silt (39–44)

WILDLIFE HABITAT DEVELOPMENT/PROTECTION
62. Type (45–46) 66 — 63. Primary Species (47–49) 801
64. Animal Months (50–54) . . . . .
65. Number Increase (55–59) . . . . .
66. Pounds Fish Increase (60–64) 250
67. Rare/Endangered (65) . . . . .

VISITOR DAYS ADDED — 68. Fisherman (66–69) 600
69. Hunter (70–73) — 70. Other (74–77)

IV – PROGRESS REPORT — Card 4

COMPLETION DATA
UNITS 90. Primary (11–16) . . . .
91. Secondary (17–21) . . . .
TIME 92. Fiscal Year (22–23) . . . . . .
93. Third (24) . . . . . .
94. Contract No. (25–29) . . . . . CT

CONTRIBUTION DETAIL
95. Agreement (30) — 96. Participant (31) . . .
97. Contributor's Name (32–51)

CONTRIBUTIONS
98. Deposited (52–56) . . . . . .
Undeposited
99. Materials (57–61) . . . . . .
100. Labor/Equipment (62–66) . . . . .

V – DETAIL ESTIMATE OF UNITS AND COSTS

WORK DESCRIPTION AND MATERIALS (a)	UNITS EA. MILE, ETC. (b)	UNITS COST (c)	BLM COSTS MATERIALS (d)	BLM COSTS CONTRACT (e)	COOPERATOR COSTS MATERIALS (f)	COOPERATOR COSTS LABOR (g)
MATERIALS YCC Labor to install five "Trash Catcher" Dams (0.5 MM)	2.5 mi.		$872.50			
TOTALS Materials			$872.50			
Labor/Equipment						

Form 1630-8 (November 1972)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JOB DOCUMENTATION REPORT

I – GENERAL DESCRIPTION — Card 1

Job Name (11–30)
[E][I][R][C][H] [C][R][K] [D][A][M][S] [#][3]

ATION CODES
Special Project Code (31–34)
Planning Unit (35–36) 02
Sub-Basin (37–38) 42 9. County (39–41) 033
Watershed No. (42–44) 004
Allotment No. (45–47)
Wildlife Habitat Area (48–50) A03

LAND VEGETATIVE DESCRIPTION
Present SSF (51–52) 14. % Slope (53–54)
Exposure (55) 16. Soil Texture (56)
Precipitation (inches) (57–58)
Elevation (feet) (59–63)
Vegetative Subtype (64–66)

POSITION (Percent)
Grasses (67–68) 21. Forbs (69–70)
Browse (71–72)

ER (Percent)
Vegetative (73–74) 24. Litter (75–76)
Bare Ground (77–78)

II – ANNUAL WORK PLAN INPUT DATA — Card 2

Subactivity (11–14) 1285
Work Job Code (15–18) 6011

TS PLANNED
Primary (19–24) 2.5
Secondary (25–29)

E OF AWARD
Fiscal Year (30–31) 77 80. Third (32) 3

E OF COMPLETION
Fiscal Year (33–34) 77 82. Third (35) 3

M COST 83. Method (36) 2
Material (37–41) 1100
Contract (42–47)

NTRIBUTED COST
Material (48–52)
Labor/Equipment (53–57)

INTENANCE
Responsibility (58) 1 89. Cycle (59–61) 702

JOB IDENTIFICATION

1. State (2–3) ID
2. District (4–5) 03
3. Job No. (6–9) 4295
4. Transaction Code (10)

III – JOB DETAILS AND BENEFITS — Card 3

37. Primary Job Objective (11) 7

PLANT AND PEST CONTROL
39. Chemical (12) 42. Method (13)
45. Mechanical – Method (14)

ARTIFICIAL REVEGETATION
47. Pounds Seed/Acre (15–17)
48. Seedlings/Acre (18–21) 49. Method (22)
51. AUM's Livestock Forage Added (23–26)
52. Future SSF (27–28)

WATERSHED TILLAGE 54. Method (29)

FACILITIES 55. Type (30) 56. Other Misc. (31)

WATER DEVELOPMENT/CONTROL
59. Structure Type (32)
STORAGE (Ac. Ft.) 60. Flood (33–38)
61. Silt (39–44)

WILDLIFE HABITAT DEVELOPMENT/PROTECTION
62. Type (45–46) 66 63. Primary Species (47–49) 801
64. Animal Months (50–54)
65. Number Increase (55–59)
66. Pounds Fish Increase (60–64) 500
67. Rare/Endangered (65)

VISITOR DAYS ADDED 68. Fisherman (66–69) 750
69. Hunter (70–73) 70. Other (74–77)

IV – PROGRESS REPORT — Card 4

COMPLETION DATA
UNITS 90. Primary (11–16)
91. Secondary (17–21)
TIME 92. Fiscal Year (22–23)
93. Third (24)
94. Contract No. (25–29) CT

CONTRIBUTION DETAIL
95. Agreement (30) 96. Participant (31)
97. Contributor's Name (32–51)

CONTRIBUTIONS
98. Deposited (52–56)
Undeposited
99. Materials (57–61)
100. Labor Equipment (62–66)

V – DETAIL ESTIMATE OF UNITS AND COSTS

WORK DESCRIPTION AND MATERIALS (a)	UNITS		BLM COSTS		COOPERATOR COSTS	
	EA. MILE, ETC. (b)	COST (c)	MATERIALS (d)	CONTRACT (e)	MATERIALS (f)	LABOR (g)
MATERIALS YCC Labor to Install five "K" Dams (0.5 MM).	2.5 mi.		$1133.			
TOTALS Materials			$1133			
Labor/Equipment						

MEMORANDUM OF AGREEMENT

BETWEEN

IDAHO STATE UNIVERSITY AND BIRCH POWER COMPANY

MEMORANDUM OF AGREEMENT

BETWEEN

IDAHO STATE UNIVERSITY AND BIRCH POWER COMPANY

WHEREAS BIRCH POWER COMPANY desires to construct a small hydroelectric facility utilizing waters from Birch Creek, Clark County, Idaho, which would reduce the fish habitat of the existing stream channel by approximately 3,000 feet,

WHEREAS BIRCH POWER COMPANY intends to install approximately 5.5 miles of new feeder ditch leading to the intake of the power penstock, and

WHEREAS it is evident that the feeder channel could be developed to provide habitat for trout and thereby provide mitigation for the above-mentioned loss,

AND WHEREAS both parties agree to cooperate to the fullest extent possible to achieve the development of fishery habitat to maintain a trout population of 335 pounds of fish.

THEREFORE, in mutual consideration of the above, BIRCH POWER COMPANY agrees, upon initiation of the Birch Creek hydroelectric project, to provide:

1. funding to Idaho State University over a five-year period of up to a maximum of $ 25,975 for construction supervision, monitoring of aquatic habitat and fish populations, and evaluation of the subsequent fishery produced, in accordance with the report "Feasibility of developing a trout population in the proposed Birch Creek Hydroelectric Project feeder ditch" by J.S. Griffith, 6 July 1983. The work will consist

of an initial two-year phase during which intensive sampling will be conducted by a graduate student under the supervision of Dr. Griffith. The final three-year phase will consist of monitoring on a less intensive level. Funds will be dispersed according to the attached budget.

2. the necessary materials in the form of rock, wire for rock cribbing, logs, gravel and others as needed, and the equipment as may be required to install the appropriate habitat improvements.

IDAHO STATE UNIVERSITY agrees to provide:

1. services of Dr. Griffith and a graduate student as outlined above to supervise habitat improvement construction and conduct the monitoring and evaluation, and in addition the necessary hand labor as required to complete the construction.
2. appropriate documentation in the form of reports (on an annual basis) and a Masters Thesis describing the development of the aquatic habitat, fish population, and fishery in the feeder channel for the use of Birch Power Company in satisfying committments to the Idaho Department of Fish and Game.

ENTERED INTO AND AGREED TO this 16 day of November, 1983.

BIRCH POWER COMPANY

Ted S. Sorenson, Owner

IDAHO STATE UNIVERSITY

Dr. Clifford M. Trump, Vice-Pres for Admin.

Dr. Jack Griffith, Dept. of Biology

BUDGET: BIRCH CREEK PROJECT

A. Two-year intensive phase, per year:

Personnel			
	salary		fringe
Masters student	$6000		$450
irregular help	1000		75
J.S. Griffith	500		91
total		8116	
Travel			
5,250 miles @ 18¢		945	
Supplies			
boots, jars, nets, misc.		250	
Trailer rental (summer)			
5 months @ $80		400	
University overhead			
11% of salaries		893	
Annual total		$10,604	

B. Three-year monitoring phase, per year:

Personnel			
irregular help	500		91
J.S. Griffith	500		38
Travel			
3 trips of 250 miles @ 18¢		135	
Supplies		100	
University overhead		125	
Annual total		$1,489	

RIPARIAN HABITAT ENHANCEMENT PLAN: BIRCH CREEK

From: Jack Griffith
Box 8007
Pocatello, ID 83209

16 April 1984

Reg 6.

MAY 07 1984

Draft

RIPARIAN HABITAT ENHANCEMENT PLAN: BIRCH CREEK

TO: Ted Sorenson, Birch Power Co.
550 Linden Drive
Idaho Falls ID 83401

FROM: Jack Griffith
Box 8007
Pocatello ID 83209

16 April 1984

In order to provide the best riparian vegetation possible along the proposed new channel leading to power generating facilities of the Birch Creek hydroelectric project, it is recommended that the following procedures be followed:

I. For the approximately 1.5 miles of channel between the point of diversion and Highway 28:

A. Stockpile all topsoil during channel construction and apply this topsoil to surface of channel banks. Bring in additional topsoil if necessary. Chemically treat the B soil horizon if necessary to reduce alkalinity.

B. Shape the channel profile so as to maximize riparian plant growth (within the limitations of bank stability safety). Height of banks above the waterline should not exceed one to two feet. Eckert (1983) found 90% survival of tree and shrub transplants at that contour but only 55% survival at six feet above the water line.

C. Establish rooted cuttings of willow and/or black birch at 2-3 foot intervals on meanders and 5-6 foot intervals along the remaining channel. Siberian pea (Eckert 1983) should also be considered. Procedures for establishing woody riparian plants from cuttings as outlined bt the US Forest Service (attached) should be followed, with planting done in fall and/or early spring.

D. Establish rhizomatous grasses such as streambank wheatgrass and others as recommended by Monsen (1983). Obtain seeds from Native Plants Inc. or other sources. Plant both banks along entire 1.5 mile length.

E. Avoid chemical weed control unless clearly required.

F. Fence riparian zone along entire extent of both banks. Provide water gaps for stock watering, stiles for fishermen, and gates for livestock crossing as required.

FISH & GAME
APR 24

G. Excavate a series of twelve small pools of water in the form of 300 ft^2 lagoons spaced along the channel. Pool depth should be approximately three feet. Addition of these pools will increase the extent of riparian vegetation and provide waterfowl habitat.

II. For the remainder of the channel downstream from Highway 28 to the project powerhouse:

A. Fence the channel, and establish woody vegetation, only on meanders.

B. Follow procedures A, B, D, E, and F as outlined above for the upper portion of channel.

LITERATURE CITED

Eckert, R.E. 1983. Methods for improving mountain communities. pp.67-75 in Managing Intermountain Rangelands, proceedings of symposia in 1981-82. US Forest Service General Tech. Rept. INT-157, Ogden UT Expt. Station.

Monsen, S.B. 1983. Plants for revegetation of riparian sites within the intermountain region. pp. 83-89 in the above proceedings.

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

BIRCH CREEK HYDROELECTRIC RIPARIAN PLAN

December 21, 1984

From: Bob McCarty, Wildlife Biologist
Big Butte Resource Area

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Idaho Falls District
940 Lincoln Road
Idaho Falls, Idaho 83401

IN REPLY REFER TO: 2800

DEC 2 1 1984

To: Area Manager, Big Butte Resource Area

From: Wildlife Biologist, Big Butte Resource Area Bob McCoy

Subject: Birch Creek Hydroelectric Riparian Plan

Ted Sorenson requested a riparian reestablishment plan for the Birch Creek Hydroelectric proposal during our coordination meeting November 6, 1984. The riparian issue has been a key point in the hearings with the State Department of Water Resources. Ted's desire to resolve this issue has prompted a riparian habitat enhancement plan from Dr. Jack Griffith dated April 16, 1984 (attached). This memo supplements Griffith's plan so Ted will have more information for his Federal Energy Regulatory Commission (FERC) permit application.

I have developed an extensive list of requirements to mitigate the habitat losses expected with this proposal. These items have been developed in coordination with several experts and interested parties. Although a formal plan cannot be written until the proposed development has been field surveyed, I believe the requirements outlined in this memo will provide sufficient information for Ted's FERC application.

Background Information

The current proposal involves the originally discussed diversion on Birch Creek. The penstock location has been changed and the new location would dewater all of Reno Ditch (approximately 37,000 feet). Flow would be reduced on Birch Creek below the hydro diversion to a maximum of 5 cubic feet per second (cfs). The precise amount of water to be released in Birch Creek below the diversion is still in question. Five cfs should reach at least 1 mile down the old channel (below Reno Diversion). This area would no longer receive the winter flows that have occurred after the irrigation season when the Reno Ditch is closed.

The riparian areas impacted by the proposal vary in condition. About 15,000 feet of Reno Ditch provides good vertical structure of woody species. Another 22,000 feet is a narrow strip of succulent grasses and forbs. The old channel below Reno Ditch Diversion still supports about 5 miles of intermittent woody vegetation. Understory vegetation is mostly sod-wheat grass and giant wild-rye due to lack of summer water. Birch Creek between Sorenson's proposed diversion and Reno Diversion supports an excellent diversity of woody species and wet understory.

The riparian vegetation on Reno Ditch will gradually revert back to a sagebrush-grass vegetative type. Some of the woody species may take 5 to 10 years to die out, but the understory should revert to dryland vegetation relatively quickly.

The impacts of the proposal to Birch Creek depend on the timing and amount of minimum stream flow allowed past the new diversion. The riparian zone on 3,000 feet between the new and Reno diversions would be reduced, but not lost, with a summer-long flow of 5 cfs. Beyond the Reno Diversion, wet vegetation would increase on the old channel to wherever the water flow reaches.

A continuous flow of 5 cfs throughout the year would continue to provide a high quality riparian zone below the diversion while efforts are made to establish a riparian zone along the new ditch. However, 3000 feet would trend toward dry vegetation for 40 to 50 years until it adapts to the lesser flow. Woody vegetation on the old channel would gradually die out wherever the water percolation no longer reaches their root zones.

Mitigation Requirements

Mitigation requirements should be extensive to allow maximum opportunity to replace these critical habitats. About 33,500 feet of new ditch should be developed in three phases. Each phase should be designed to establish riparian vegetation under a specific time frame.

Further fieldwork will be performed prior to right-of-way approval. Accurate measurements on riparian vegetation lost compared to potential gains will be taken. If the procedures discussed in this memo are undertaken, the riparian situation and livestock distribution should be mitigated. Further requirements may be added later as right-of-way stipulations. If the efforts at riparian reestablishment are successful, quality of riparian habitat could be improved 10-20 percent over the existing situation within 15 years.

The riparian zone canal section design (Exhibit L) should be installed, with some modification, along the entire ditch. The only exception would be in the Phase 3 area where steep slopes may prohibit this design. The primary riparian zone should be varied from 2 to 30 feet rather than 6 to 10 feet on either side of the ditch as indicated on Exhibit L. An average riparian width (both sides of the stream) of 16-20 feet is necessary. Field design should involve varying the width of the riparian zone as the topography allows (i.e. riparian vegetation on meanders could be developed 15-30 feet wide while straight runs could be 2-5 feet wide). The top one foot of the sides of the ditch should be left unsealed to allow water percolation into the riparian zone.

Animal crossings should be developed every 1/2 to 3/4 mile by widening the ditch. This would provide a shallow area for animals to wade across. Riffles could be developed at these crossings if needed for fish habitat.

PHASE I

The ditch from Birch Creek to Highway 28 should provide good riparian vegetation diversity and structure averaging 16-20 feet in width within 5 years. To accomplish this, silt loam, loam or sandy loam topsoil should be hauled and placed in the riparian zone to average 1 foot deep (about 5,000 cubic yards would be required). The old Birch Creek channel is a possible source for this topsoil. Care should be taken not to compact the soil with heavy equipment. Hauling should be accomplished in the fall to prevent excessive soil drying. Substrate should allow sufficient drainage to support cottonwoods. Alkalinity of topsoil should not be high enough to inhibit establishment of woody species. Both sides of the ditch should be fenced to exclude livestock with two watergaps provided for cattle access for drinking. The ditch should be meandered as topography allows.

Reseeding should be done the fall following ditch construction. The riparian zone should be flood irrigated twice a week during the summer until the woody vegetation has become established. Grasses and forbs should be broadcast seeded and covered with soil by mechanical means (i.e. dragging a chain behind a tractor). Woody species should be planted as nursery starts and clumped in areas of deeper topsoil. Native willows starts and birch seeds should be collected on site and grown in a nursery for one year before planting. Willows should be planted close to the stream edge, where maximum soil moisture would promote survival. Cottonwoods should be planted on meanders where topsoil is at least 2 feet deep.

Native sedges should be transplanted in mats from other parts of Birch Creek. Kentucky blue grass should be seeded after the other species have become established to keep it from taking over. Other follow-up plantings may be required depending on success of the first attempt.

A mixture of native and exotic species should be planted to improve diversity. The following species list is a guide and should be updated prior to planting:

Trees and shrubs

Black Poplar	Populus trichocarpa
Narrowleaf Cottonwood	Populus angustifolia
Black Birch	Betula occidentalis
Willow	Salix spp
Rose	Rosa spp
Honeysuckle	Lonicera spp
Big Sagebrush	Artemisia tridentata
Rabbitbrush	Chrysothamnus spp.
Russian Olive	Elaeagnus angustifolia
Three tip Sagebrush	Artemisia tripartita

Grasses and Sedges

Orchard grass	Dactylis glomerata
Basin Wildrye	Elymus cinereus
Bluebunch wheatgrass	Agropyron spicatum
Crested wheatgrass	Agropyron cristatum
Kentucky bluegrass	Poa pratensis
Brome	Bromus spp.
Western wheatgrass	Agropyron smithii
Idaho fescue	Festuca idahoensis
Alta fescue	Festuca arundinacea
Pine grass	Calamagrostis rubescens
Timothy	Phleum pratense
Watersedge	Carex aquatilis
Beaked sedge	Carex rostrata
Nebraska sedge	Carex nebraskensis

Forbs

Alfalfa	Medicago sativa
Small Burnet	Sanguisorba minor
Aster	Aster spp.
Western Yarrow	Achillea lanulosa
Dandelion	Taraxacum spp.
Eriogonum	Eriogonum spp.
Scarlet Globemallow	Sphaeralcea spp.
Milkvetch	Astragalus spp.
Goatsbeard	Tragopogon
China lettuce	Lactuca spp.
Columbine	Aquilegia spp.
Monkey flower	Mimulus spp.
Butter and eggs	Linaria vulgaris
Parsnip	Sium spp.
Buttercup	Ranunculus spp.

The topsoil source should be reseeded to dryland species the fall following soil removal. Six to 12 inches of topsoil should be left at the site to facilitate reseeding operations. Certain species should be seeded with a rangeland drill while others could be broadcast and covered. The following species list is a guide and should be updated prior to planting:

Shrubs

* Big Sagebrush	Artemisa tridentata
* Shadscale	Atriplex confertifolia
+ Fourwinged saltbush	Atriplex canescens
* Three tipped Sagebrush	Artemisia tripartita
+ Winterfat	Ceratoides lanata
+ Rabbitbrush	Chrysothamnus spp.

Grass

* Crested Wheatgrass	Agropyron cristatum
* Russian wildrye	Elymus giganteus
* Bluebunch wheatgrass	Agropyron spicatum
* Giant wildrye	Elymus cinereus

Forbs

+ Eriogonum	Eriogonum spp.
+ Small burnet	Sanguisorba minor
+ Lewis flax	Linum Lewis
+ Goatsbeard	Tragopogon spp.
+ China lettuce	Lactuca spp.
+ Alfalfa	Medicago sativa

* - Drill seeded species
+ - Broadcast seeded species

PHASE TWO

Development of a riparian zone averaging 12-16 feet in width along the ditch from Highway 28 to Scott Butte should be complete within 10 years. This area should be developed similarly to phase one except the topsoil that currently occurs in the area would be used (no hauling from the old channel). Flood irrigation would not be controlled, although some spring flooding is expected. Establishment of seeded species and nursery stock would be more difficult.

Topsoil should be stockpiled during ditch construction and replaced in the riparian zone to a 1-2 foot depth. Soil alkalinity should be tested and adjusted through gypsum treatment to fall within the range for cottonwood establishment.

Topsoil preparation and reseeding should be accomplished as stated in phase one to prevent soil drying and compaction. Reseeding of understory vegetation should be accomplished the fall following completion of the ditch. Woody species should be planted as funding allows to provide vertical structure within 10 years. A temporary fence would be required to exclude livestock while plants become established. Woody vegetation should be clumped as stated in phase one. The species list would be similar to phase one with more emphasis on drought tolerant species. Follow-up plantings would be required depending on the success of the first attempts.

PHASE THREE

Development of a riparian zone averaging 8-10 feet wide along the ditch from Scott Butte to the penstock should be complete within 15 years. No special ditch design would be required. Berms would be topsoil reclaimed from the ditching operation and then reseeded. This area would require experimentation with different species and establishment would be more difficult than the phase one or phase two area.

Reseeded species should be the same as in phase one with more emphasis on drought tolerant species. Willows and cottonwoods should become established on the edge of the ditch, although some treatment for alkalinity may be required.

PIPELINES

Drinking facilities for livestock and wildlife should be developed to maintain current distribution patterns. They should be functional the first summer the water is diverted. Wildlife waterers should be constructed on livestock trough overflow areas. These would consist of a 500 gallon guzzler tank and 1 acre fenced exclosure. Plantings of riparian species should be attempted in these overflow areas. Livestock troughs and associated wildlife waterers should be constructed as follows (refer to map):

Pipeline (#1): 1-1/4 miles with cattle trough located in the NW1/4SW1/4 Section 1.

Pipeline (#2): 1 mile with sheep troughs located in the SW1/4NE1/4 Section 17.

Pipeline (#3): Flow of water in the old Birch Creek channel below the hydro diversion should consistently reach Section 14. If not, then an extension of pipeline #1 or #2 (about 2 miles) would be needed to place water in sheep troughs located in SE1/4 of Section 13.

Sheep Troughs (#4): These troughs are necessary in the SW1/4SE1/4 of Section 10.

Pipeline (#5) Water should be available in the first 2 miles of the outfall ditch during the months of December through February and April through June. If not, a 1-1/4 mile pipeline to sheep troughs located in NE1/4NE1/4 Section 22 would be necessary. During the months of May and June, this need can be satisfied by providing water in the NE1/4 Section 14.

Pipeline (#6): If the Water Resources' final decision regarding flow in the old Birch Creek channel does not assure adequate water for livestock below the creek crossing fence in the NW1/4 of Section 3, then sheep troughs would be needed there. (No wildlife waterer needed.)

For development #1, two 500-gallon troughs with a recharge capability of 5 gallons per minute would be necessary. For developments #2 through #6, four 500-gallon troughs with a 5 gallon per minute recharge would be necessary.

Consultation

The following people were consulted during development of this memo:

Steve Monson	Botanist, Intermountain Forest and Range Experiment Station, Provo, Utah.
Al Winward	Regional Ecologist, USFS, Ogden, Utah
Justin Naderman	Wildlife Biologist, Region 6 IDF&G, Idaho Falls, Idaho
Darwin Jeppesen	Soil Scientist, BLM, Idaho Falls, Idaho
Glenn Devoe	Range Conservationist, BLM, Idaho Falls, Idaho
Tommy Gooch	Range Conservationist, BLM, Idaho Falls, Idaho
Ronald Ball	Livestock operator, Lewisville, Idaho

Robert Ball	Livestock operator, Lewisville, Idaho
Allan Thomas	Wildlife and Fisheries Biologist, BLM State Office, Boise, Idaho
Jim Esget	Hydrologist, BLM, Idaho Falls, Idaho
Ted Sorenson	Consulting Engineer, Birch Power Co., Idaho Falls, Idaho
Marti Wegner	Engineer, BLM, Idaho Falls, Idaho

Summary

Riparian reestablishment plan and pipeline development requirements are presented in tabular form to summarize this memo. The 5 cfs flow past the diversion is a key point to mitigation of this development. If 5 cfs is provided to help maintain and improve the riparian zone below the diversion, and the efforts outlined here are successful, the hydroelectric proposal should improve the present riparian habitat situation.

Riparian Reestablishment Plan

Phase One Area

A. Ditch design as shown on Exhibit L
   1. Allow percolation by not sealing one foot of top of ditch.
   2. Vary riparian zone from 2-30 feet as topography allows.
   3. Average riparian width of 16-20 feet.
   4. Animal crossing every 1/2 to 3/4 mile.

B. Establish riparian vegetation along ditch averaging 16-20 feet wide.
   1. Develop structure and diversity within 5 years.
   2. Meander ditch as topography allows.
   3. Haul in loamy topsoil to average one foot deep.
   4. Fence out livestock except at two watergaps.
   5. Plant area to trees, shrubs, forbs and grass (native and introduced species).
   6. Use nursery to start woody species.

C. Monitor vegetation response and replant unsucessful areas.

D. Reseed topsoil removal source.

Phase Two Area

A. Same as Phase One.

B. Establish riparian vegetation along ditch averaging 12-16 feet wide.
   1. Develop structure and diversity within 10 years.
   2. Reclaim and treat existing topsoil.
   3. Use a temporary fence to exclude livestock while new vegetation is established.
   4. Plant area to trees, shrubs, forbs and grass (native and introduced species.
   5. Irrigation will not be controlled but some highwater flooding should occur.
   6. Nursery starts for woody species would be phased in over 10 year period.

C. Same as Phase One.

Phase Three Area

A. Ditch design would not include riparian zone shown on Exhibit L.

B. Establish riparian vegetation along ditch averaging 8-10 feet wide.
   1. Develop structure and diversity within 15 years.
   2. Reclaim and treat existing topsoil.
   3. Plant area to trees, shrubs, forbs and grass (native and introduced species.
   4. Nursery starts for woody species would be phased in over 15 year period.

C. Same as Phases One and Two.

Pipelines

A. Provide water to livestock and wildlife the first summer water is diverted for locations 1, 2, and 4.

B. Provide water either by pipeline or from an open stream for locations 3, 5 and 6.

C. Plant riparian vegetation in fenced overflow areas

Enclosures:
Birch Power Hydroelectric Facility Plan
Exhibit L
Riparian Habitat Enhancement Plan: Birch Creek.

CORRESPONDENCE:

United States Dept. of Commerce
National Oceanic & Atmospheric Administration
Dale R. Evans, Division Chief

Bureau of Land Management
Robert McCarty, Wildlife Biologist

Idaho Department of Fish & Game
Tom Reinecker, Regional Supervisor

Fish & Wildlife Service
John P. Wolflin, Field Supervisor

Exhibit E

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Environmental & Technical Services Div.
847 N.E. 19th Avenue, Suite 350
Portland, Oregon 97232
(503) 230-5400

F/NWR5/AG/1503-14

SEP 16 1982

Ted S. Sorenson, P.E.
Consulting Engineer
550 Linden Drive
Idaho Falls, Idaho 83401

Dear Mr. Sorenson:

Birch Power Company Hydroelectric Project,
Clark County, Idaho

The National Marine Fisheries Service (NMFS) has reviewed the proposal to develop a small hydroelectric project on Birch Creek in Clark County.

Since Birch Creek is not used by anadromous salmonids, NMFS has no comment on the proposed project.

Sincerely,

for Dale R. Evans
Division Chief

Exhibit E

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Idaho Falls District
940 Lincoln Road
Idaho Falls, Idaho 83401

IN REPLY
REFER TO:

January 28, 1983

Ted S. Sorenson
550 Linden Drive
Idaho Falls, Idaho 83401

Re: Birch Power Company
Hydroelectric Project

Dear Mr. Sorenson:

Here are comments on wildlife impacts of your proposed project.

Wildlife use patterns would change with the change in water availability. Minimum stream flow in Birch Creek would alleviate some of this impact although the Reno Ditch would no longer carry water. Antelope, sage grouse, and many non-game species would be displaced from the Reno Ditch to Birch Creek and the newly constructed canal. During the adjustment period, less mobile species could experience some mortality but most would home in on the new location of water. Sufficient habitat for antelope, sage grouse and non-game species would be provided adjacent to the new canal and eventually riparian vegetation would become established along the new canal. The new canal could provide increased hunter opportunity because it is further from the INEL site and antelope and sage grouse would be less likely to utilize the security of the INEL site during the hunting season. This has been a problem for management in the past.

If you have need for more information, please contact me.

Sincerely,

Thomas W Steel for

Robert McCarty
Wildlife Biologist
Big Butte Resource Area

IDAHO DEPARTMENT OF FISH AND GAME
REGION 6
1515 Lincoln Road
Idaho Falls • Idaho • 83401

March 26, 1984

Mr. Ted Sorenson
550 Linden Drive
Idaho Falls, ID 83401

RE: Birch Creek Hydropower project FERC No. 7194 and Applications for Water Right Permits (No. 32-7128 and No. 32-7136).

Dear Ted:

After review of your "Preliminary Engineering Design and Plan Report - Birch Power Company" and our discussions with you and the BLM, we would like to offer the following comments.

This project design, either option A or B, is significantly different than what we had commented on previously in terms of water needed. The present plan calls for use of all but 6 cfs of the Birch Creek flow as measured at Eight Mile Canyon, up to 70 cfs. Your previous proposal was for a maximum of 45 cfs with all water over 45 cfs to remain in Birch Creek. Both project plans call for a 5 cfs minimum flow for riparian habitat maintenance along the 3,000 ft of Birch Creek below your proposed diversion to the Reno diversion. Our initial lack of opposition to the original 45 cfs project was based on receiving all flows over that amount to remain in the stream bed to help reestablish the poor riparian zone below Reno diversion, by its closure as a result of your new canal. To regain this valuable riparian area, we were willing to accept considerable loss of the fishery productivity.

The present proposed project would preclude the reestablishment of the riparian zone and result in a nearly total loss of fishery below your diversion even with a 5 cfs riparian flow. The necessary minimum fishery flows needed to maintain aquatic productivity is 22 cfs.

To mitigate these impacts you have proposed the construction of fish habitat in the power ditch and the establishment of riparian vegetation along the ditch. The project design presently being considered is acceptable with that proposed mitigation with the following stipulations:

1. No dewatering is to occur for any reason in the ditch from point of diversion to Highway 28 (approximately 1.5 miles). We suggest a return ditch and headgate be built near the highway to divert flow into the Reno ditch as necessary for irrigation when repair and maintenance are needed below this point.

2. No alteration or work below the water line in the power ditch above the highway without consultation and approval of the Idaho Department of Fish and Game (IDFG) and Bureau of Land Management (BLM).

3. The establishment of a fishable wild trout population comparable to that which presently exists below the proposed diversion. Trout are to be replaced in terms of fish/mile not total numbers, so as to maintain catch rates.

4. Design the canal to allow for additional habitat improvement which would increase the densities of trout by 300 percent. Present management plans call for improvement on Birch Creek in the stretch to be impacted by the hydroproject. Improvement projects presently in place on Birch Creek show a 250 to 300 percent increase in trout carrying capacity. We suggest that Dr. Griffith include additional meanders in his final project design for fish habitat. The final plan will have to be submitted to IDFG and BLM for approval.

5. The establishment of a minimum flow of 5 cfs past the diversion in Birch Creek for riparian habitat maintenance. A continuous recording flow measuring device will have to be installed.

6. The establishment of a riparian zone along the power ditch. This will require a riparian habitat enhancement plan be written and submitted to IDFG and BLM for approval

7. No bentoniting or sealing of canal after initial sealing. Gravel will be added to provide substrate for invertebrate production.

8. A permanent diversion on Birch Creek with no headgate. Outlet work would have to be designed to maintain a constant 5 cfs minimum flow. A fish ladder should be included in this design.

9. Permanent closure of Reno ditch once the deliverability of water from the power ditch to the irrigators is shown.

10. Agreement by the Reno Ditch Water Users that the power ditch is Birch Power Company's and that they have no authority over its operation or maintenance.

If these stipulations can be agreed to, then we will remove our protest from both water rights. These stipulations will also become part of the terms and conditions for the FERC exception to licensing. Our stipulations are designed to give the power ditch from Birch Creek to Highway 28 the same protection and productivity that Birch Creek has. Without this protection, the permanence of the mitigation is questionable.

If you have further questions, please let us know.

Sincerely,

Tom Reinecker
Regional Supervisor
Region 6

cc: USFWS
BLM
Water Resources
Fisheries

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Boise Field Office
4620 Overland Road, Room 209
Boise, Idaho 83705

April 4, 1984

Ted Sorenson
Sorenson Engineering
550 Linden Drive
Idaho Falls, Idaho 83401

Re: Early Consultation FERC #7194
License Exemption Application
Birch Creek Hydroelectric Facility
Clark County, Idaho

Dear Mr. Sorenson:

The U.S. Fish and Wildlife Service (Service) has reviewed the correspondence concerning the referenced project received with your letters of January 13 and February 1. We endorse the IDFG letter to you dated March 26, 1984.

We have determined, to the best of our present knowledge, that there are no Federally listed threatened or endangered species present in the area of the proposed project.

Candidate species are included for your information (Attachment A). These species are presently being reviewed by the Service for consideration of listing as threatened or endangered. Candidate species have no protection under the Endangered Species Act (ESA), but if formally proposed and/or listed before the project is constructed, they would be subject to Section 7 of the ESA (Attachment B). We suggest you consider informal consultation with this office (208-334-1806), if the project is likely to affect (adversely or beneficially) a candidate species.

The project could kill or cripple raptors and other birds through electrocution or collision from improperly designed and/or located powerlines and poles. The power transmission system should be designed and located to prevent such losses. A possible reference to assist you is entitled Suggested Practices for Raptor Protection on Powerlines, published by the Edison Electric Institute, 1981.

It is the policy* of the Service to recommend that developers of land and water alteration projects mitigate for losses to fish, wildlife, their habitats and uses thereof. The policy's purpose is to support the nation's need for fish and wildlife resource conservation as well as sound economic and social development through balanced multiple use of the nation's natural resources. Four resource categories are used to indicate the level of recommended mitigation that will be consistent with the fish and wildlife resource values involved. The categories range from high value (Category I), where the FWS would recommend no loss of existing habitat value, to low value (Category IV), where the FWS would recommend minimization of habitat value loss. Normally, when riparian habitat would be adversely affected by a project, we place the habitat in Category II. Under that category, the FWS would recommend that there be no net loss of in-kind habitat value.

Sincerely yours,

John P. Wolflin
Field Supervisor

Attachments

cc w/enclosures:
IDFG, Hdqtrs., Boise
IDFG, Region 6, Idaho Falls
BLM, Idaho Falls (McCarty)
FWS, SE, Boise (1-4-84-185)
FWS, RO, AFA-SE, Portland

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* FWS Mitigation Policy, Federal Register - Vol. 46, No. 15, Jan. 23, 1981, pp. 7656-7663. Approved by Secretary of the Interior, Jan. 13, 1981.

ATTACHMENT A

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES, AND CANDIDATE SPECIES THAT MAY OCCUR WITHIN THE PROPOSED BIRCH CREEK HYDRO PROJECT IN CLARK COUNTY, IDAHO 1-4-84-SP-185

Listed Species

None

Proposed Species

None

Candidate Species

Ferruginous hawk (*Buteo regalis*)

4) REPORT ON HISTORIC AND ARCHAEOLOGICAL RESOURCES

4) REPORT ON HISTORIC AND ARCHAEOLOGICAL RESOURCES

Initially three sites were investigated for the location of the power plant: Site A, Site B and Site C. All three sites utilized the same diversion structure and feeder canal. Site A, B and C merely altered the location of the power plant. Initial consultation and reports by the State Historical Preservation Officer and by Archaeologist Suzanne Miller indicated Site A was located on an archaeological site, therefore Sites B and C were investigated. Site C proved to be acceptable to the State Historical Preservation Office with respect to these items.

Copies of the correspondence with the State Historical Preservation Office and Archaeologist Suzanne Miller follow. The minor mitigation requirements will be adhered to. The cost will be less than $53,000.

In summary, Site C is the acceptable site and has been cleared by the State Historical Preservation Officer and the Bureau of Land Management. This is the site shown on all drawings in Exhibit G.

Exhibit E

6 January 1983

Mr. Ted S. Sorenson
Consulting Engineer
550 Linden Dr.
Idaho Falls, ID 83401

RE: Cultural Resources
Birch Power Co. Hydroelectric Facility
(FERC Appl. No. 6849)

Dear Mr. Sorenson:

At your request, I have reviewed the status of archaeological resources in the area of the proposed Birch Creek Hydroelectric Facility in southeastern Idaho. As you are aware, there is a legal obligation to protect antiquities in situations where federal land and/or funds are involved in ground-disturbing activities. (Applicable laws and regulations include: Antiquities Act, 1906 (P.L. 209); NEPA, 1969 (P.L. 9-190); Executive Order No. 11593, 1971 (36-FR-8921); Public Laws 93-291 (1974) and 96-95 (1979).

The Birch Creek Valley (see Attachment, Fig. 1) is one of the better-known prehistoric and historic areas in Idaho. This is due mainly to large-scale, multi-phase archaeological investigations conducted in the 1960's as one of the principle research efforts of the Idaho Museum of Natural History. This project was directed by Dr. Earl Swanson and involved survey, recording and excavation, and resulted in the identification of a fairly high concentration and variety of archaeological sites in the valley - open campsites, rockshelters and caves, tipi rings, stone quarries, petroglyph and pictograph locales, rock cairns and alignments, and historic sites (Swanson and Bryan, 1964; Swanson, et.al., 1964; Swanson, et.al., 1966). Six of the ten sites in your immediate project vicinity were recorded during this study. Periodic informal and formal small scale surveys were conducted in the valley since then. The Bureau of Land Management authorized a major inventory survey (Kingsbury, 1977) during which previously identified sites were re-located and additional ones recorded (see attachment Fig. 2). The ten sites in your project areas consist of open campsites, of unknown depth, indicated by surface scattering of lithic material and pottery.

The design and route of the feeder and discharge canals, penstock, and power plant site (Fig. 2) which you have proposed adequately avoid all registered archaeological sites, except one, in the project area, protecting them from disturbance during construction and maintenance of the system. The proposed power plant is situated ($NE\frac{1}{4}$,$NE\frac{1}{4}$, Sec. 17, T8N, R31E, Boise Meridian) at the location of 10-CL-70, described as an open site/lithic and pottery scatter, depth unknown, dimensions 40 m. NS x 30 m. EW. This type of site is common to the southern reach of Birch Creek valley and out on the Snake River Plain where localized prehistoric occupation is indicated by scattered surface debris. These sites represent single or intermittant occupation and are frequently found on well-drained ground, near watercourses, and at vantage points on the valley periphery.

In acknowledgement of your proposal to practice avoidance as the practical mitigative procedure with respect to archaeological resources in this project, I concur that it would be feasible to adjust the location of the power plant to avoid 10-CL-70. The site is small and my understanding is that this adjustment would not cause any major engineering problems. The previous archaeological surveys resulted in the identification of known sites and gave indications of site density in the area, information which is sufficient to recommend preliminary archaeological clearance on the project, but I would also remind you that an intensive survey of the right-of-way and easement of the total water system and facility is required before construction can begin.

The major problem at this time is meeting the deadlines, imposed on your application,due to weather and snow cover limitations on access and survey. I have proposed a schedule of activities, to be completed as soon as possible in the spring, to comply with cultural resources obligationsand mitigative action for the Birch Creek Hydroelectric Project. I will submit this plan to the Idaho State Archaeologist/ State Historic Preservation Office (copy enclosed) for his review and comments.

I will gladly respond to any questions you have regarding this phase of your application to the Federal Energy Regulatory Commission and compliance with cultural resource obligations.

References applicable to the archaeology of your project area are:

Butler, B.R.

1978 A Guide to Understanding Idaho Archaeology: The Upper Snake and Salmon River Country (3rd ed.) Idaho State Historic Preservation Office. Boise. 95 pp. + 37 figs.

Kingsbury, L.A.

1977 Final report on 1976 cultural resource inventory of the Little Lost River - Birch Creek Planning Unit. Report to the BLM (Contract #YA-512-CT6-78). Archaeological Reports # 10. Idaho Museum of Natural History. Pocatello.

Pavesic, M.G., M.G. Plew, and R. Sprague

1979 A bibliography of Idaho archaeology: 1889-1976. NARN 13:2:Pt. 2. Memoir #5.

1981 A bibliography of Idaho archaeology:1977-1979. NARN 15:2:248-260.

Swanson, Earl H., Jr. and A.L. Bryan

1964 Birch Creek Papers No. 1: An archaeological reconnaissance in the Birch Creek Valley of eastern Idaho. Occasional Papers of the Idaho State University Museum. No. 13. Pocatello.

Swanson, Earl H., Jr., B.R. Butler, and R. Bonnichsen

1964 Birch Creek Papers No. 2: Natural and cultural stratigraphy in the Birch Creek Valley of eastern Idaho. Occasional Papers of the Idaho State University Museum No. 4. Pocatello.

Swanson, Earl H., Jr., and P. G. Sneed

1966 Birch Creek Papers No. 3: The archaeology of the Shoup Rockshelters in east central Idaho. Occasional Papers of the Idaho State University Museum. No. 17. Pocatello.

Sincerely,

Susanne J. Miller

Susanne J. Miller
Archaeological Consultant
1450 Antares Dr.
Idaho Falls, Idaho 83402
(208) 529-2453

cc: Thomas J. Green
Idaho State Archaeologist
SHPO

Richard Hill
District Archaeologist
Bureau of Land Management

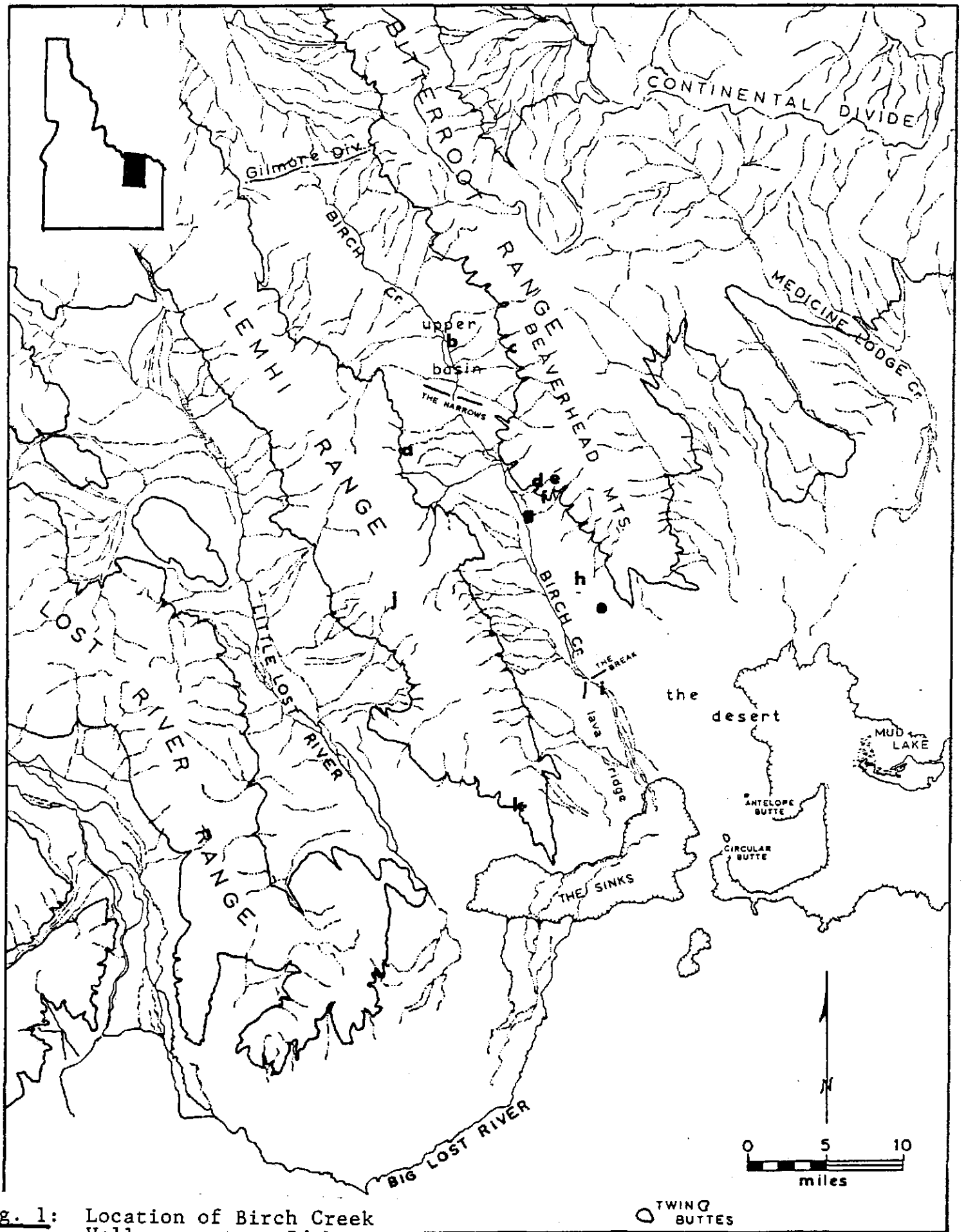


Fig. 1: Location of Birch Creek Valley, eastern Idaho. (From Swanson and Bryan, 1964: Fig. 1)

● Location of proposed facility.

IDAHO STATE HISTORICAL SOCIETY
610 NORTH JULIA DAVIS DRIVE BOISE, 83702

September 24, 1982

Mr. Ted S. Sorenson, P.E.
Consulting Engineer
550 Linden Drive
Idaho Falls, Idaho 83401

RE: Birch Power Company Hydroelectric Facility

Dear Mr. Sorenson:

Thank you for providing information for our review and comment concerning the proposed project referenced above.

We have checked our records and have found that numerous archaeological sites exist in the surrounding areas of the project. In addition, we are particularly concerned about site 10-CL-70, a significant archaeological site which is located directly on the site of the proposed power house. Therefore, we recommend that a professional archaeologist inspect the power house site to determine what impacts, if any, the proposed facility may have upon site 10-CL-70. If the project is determined to have impacts on the site, then plans to mitigate those effects that can be considered adverse to cultural resources will be necessary. Finally, assuming that all heavy construction equipment remains on the access roads and takes care to avoid sites in the surrounding areas, then the project will have no effect upon these sites.

If you have any questions or comments regarding our recommendations, please feel free to contact our office.

Sincerely,

Thomas J. Green bhd

Thomas J. Green
State Archaeologist
State Historic Preservation Office

TJG/bhd

6 January 1983

Dr. Thomas J. Green
State Archaeologist
Idaho State Historical Society
610 North Julia Davis Dr.
Boise, Idaho 83702

RE: Birch Power Co. Hydroelectric Facility
(FERC Appl. No. 6849)

Dear Dr. Green:

Mr. Ted Sorenson, consulting engineer for the Birch Power Co.'s application to the Federal Energy Regulatory Commission for construction of a hydroelectric power generation facility at the mouth of Birch Creek in woutheastern Idaho has requested that I write to you in response to questions by the Commission on the status of cultural resources and archaeological clearance obligation for this project.

I have reviewed the results of previous archaeological work in the Birch Creek project area in a report to Mr. Sorenson (copy enclosed) and would like to solicit your response to a proposal to protect the archaeological resources of this area and allow the project's compliance with federal antiquities regulations applicable to the FERC permit sought in this case.

As outline in the enclosed report and supplementary maps, previous archaeological surveys in the area of the proposed hydroelectric project have located and registered several arcaheological sites and given some indication of site types, distribution and density. The problem at this time is that weather and snow cover conditions preclude access to the area in order to cover the diversion ditches, penstock, and power plant easement areas by intensive ground archaeological survey required at this stage of the permit application. With Mr. Sorenson's aggreement, I would like to request preliminary archaeological clearance for the permit state of this project, with the following commitments and conditions:

1) As soon as possible this spring, site 10-CL-70 should be re-located on the ground and adjustments made in the power plant location so that construction and any activities associate with it do not threaten the site. Mr. Sorenson has indicated that avoidance

of archaeological sites is most feasible and practical in this case and that, due to the terrain, scope, and nature of the project, there is engineering latitude in setting the route and location of the feeder and outflow ditch system and power plant to avoid archaeological sites. The project is now designed in such a way that sufficent avoidance of all known archaeological sites (excluding 10-CL-70) is allowed (see supplemental map).

2) As early as access is possible and before construction, intensive survey inspection of the right-of-way and easement of this project will be made of the ditch and penstock system, power plant, and any non-existing access roads required.

3) A qualified archaeologist retained by Mr. Sorenson will conduct the first two activities of this schedule, reporting the results promptly to your office and the Bureau of Land Management archaeologist. Minor adjustments of the project system can be made in the field, guided by consulation with the arachaeologist. Any major problems with procedures to protect archaeological sites will be brought to the immediate attention of the district BLM archaeologist. Mr. Sorenson has indicated his willingness to cooperate with the stipulations of your office in the cultural resources protection aspects of seeking this permit and will allow sub-surface inspection of any part of the project area during its construction, either by the consulting archaeologist and/or B.M district archaeologist. I would strongly encourage this, as, although sites indicated by surface materials will be avoided by pre-construction planning, the site density is fairly high in the project area and no previous testing or excavation of open sites has been conducted.

It is hoped that this outline will meet standards of compliance for preliminary archaeological clearance and allow protection of cultural resources, under constraints of the season on field work and application deadlines facing Mr. Sorenson.

Thank you for your kind attention and I will respond promptly with additional information you may request.

Sincerely,

Susanne J. Miller
Consulting Archaeologist
1450 Antares Dr.
Idaho Falls, ID 83402
(208) 529-2453

cc: Ted Sorenson ✓
Consulting Engineer
Birch Power Co.

Richard Hill
District Archaeologist
Bureau of Land Management

IDAHO STATE HISTORICAL SOCIETY
610 NORTH JULIA DAVIS DRIVE BOISE, 83702

January 24, 1983

Mr. Ted Sorenson
Consulting Engineer
550 Linden Drive
Idaho Falls, Idaho 83401

Dear Mr. Sorenson:

We have received Ms. Susanne Miller's report concerning the archaeological properties near the Birch Creek power project (FERC Application No. 6849), and we agree with her recommendations. We also agree that the license application should not be delayed because the snow cover will not allow us to relocate several archaeological sites.

We recommend -- as soon as weather permits -- to relocate site 10-CL-70. If the site is indeed in the project area, then an evaluation of the site's significance should be made. If the site is judged significant, then a mitigation plan should be prepared. Also, as soon as weather permits, we recommend that the complete project area be inspected for archaeological properties to insure that unknown sites are not inadvertantly destroyed.

We recommend to the Federal Energy Regulatory Commission that they make recommendations as conditions of the license, but go ahead and issue the license as soon as they can.

Sincerely,

Thomas J. Green
State Archaeologist
State Historic Preservation Office

TJG/bhd

27 January 1983

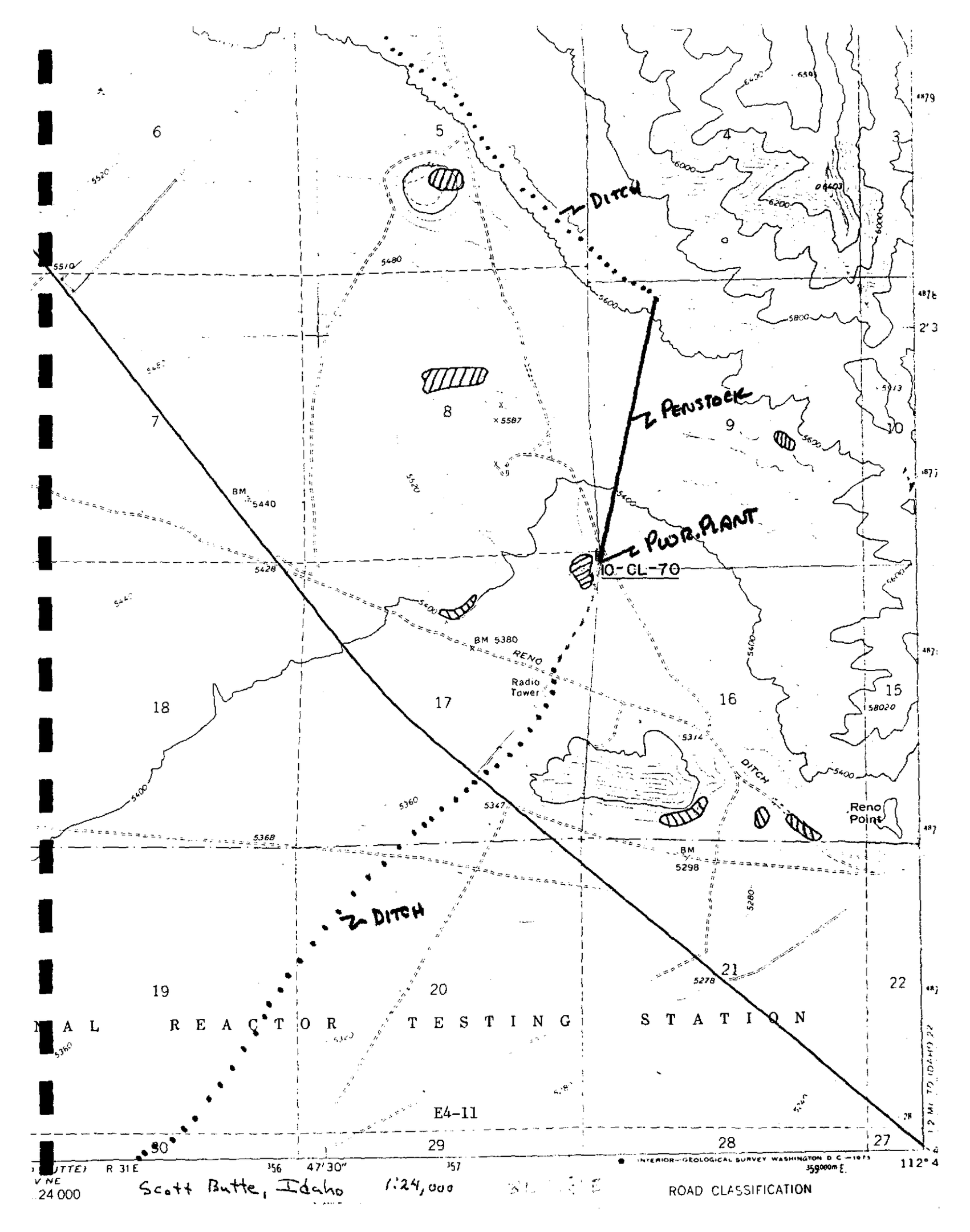
Ted Sorenson
Consulting Engineer
550 Linden Dr.
Idaho Falls, ID 83401

Dear Mr. Sorenson:

For your information, prehistoric archaeological site 10-CL-70 has the following description and location, taken from the site registration form. The site is a prehistoric lithic and pottery scatter, with dimensions of 40 meters N-S and 30 meters E-W, located NE¼, NE¼, NE¼, Sec. 17, T8N, R31E, Boise Meridian (U.S.G.S. Scott Butte 7.5' quad), 100 meters south and 25 meters west of the northeast corner section marker.

Sincerely,
Susanne J. Miller

Susanne J. Miller
Archaeological Consultant
1450 Antares Dr.
Idaho Falls, ID 83402


DITCH
PENSTOCK
PWR. PLANT
10-CL-70
BM 5440
BM 5380
RENO
Radio Tower
DITCH
Reno Point
BM 5298
DITCH
E4-11
N A L R E A C T O R T E S T I N G S T A T I O N
Scott Butte, Idaho 1:24,000
ROAD CLASSIFICATION

IDAHO STATE HISTORICAL SOCIETY
610 NORTH JULIA DAVIS DRIVE BOISE, 83702

February 13, 1984

Mr. Ted S. Sorenson, P.E.
Consulting Engineer
550 Linder Drive
Idaho Falls, ID 83401

RE: Birch Creek Hydroelectric Facility

Dear Mr. Sorenson:

Thank you for informing us of your new diversion route (option B) of the Birch Creek Power facility. The route does avoid archaeological site 10 CL 70, but it appears to run through sites 10 CL 69 and 10 CL 141 (see enclosure). I suggest you have an archaeologist inspect the area where these two sites are located. Hopefully, the feeder ditch can be aligned to miss these two sites.

Sincerely,

Tom Green

Thomas J. Green
State Archaeologist
State Historic Preservation Office

Enc.

TJG/kh

15 March 1984

Ted S. Sorenson, P.E.
Consulting Engineer
550 Linden Dr.
Idaho Falls, ID 83401

RE: Birch Power Co. Option B Archaeological Clearance

Dear Mr. Sorenson:

I have reviewed the information available, including the original site registration descriptions, for known archaeological sites in the vicinity of your Option B hydroelectric water supply system at the mouth of Birch Creek, southeastern Idaho. A fairly recent systematic archaeological survey has been conducted in the area and reported in: Kingsbury, L.A. 1977. Final Report on 1976 Cultural Resource Inventory of the Little Lost River - Birch Creek Planning Unit. Report to the Bureau of Land Management. Archaeological Reports #10. Idaho State Museum of Natural History. Pocatello.

There are three sites - 10CL47, 10CL69, 10CL141 - near the southern lower reaches of the penstock (see attached map) in Section 16, T8N, R31E, Scott Butte 7.5' Quad. 10CL47 is about 1/4 mi west of the proposed route of the penstock and will be unaffected by your proposal. 10CL69 and 10CL141, identified by surface artifact scatters of 50m x 50m and 50m x 20m respectively, are close to each other and near the penstock location where it crosses Reno Ditch and the southern boundary of Section 16.

The size of the sites and the area available for engineering adjustments in locating the penstock may make avoidance of these sites feasible, but in order to meet antiquities compliance and to seek archaeological clearance for the project I would make the following recommendations:

1) As soon as snow cover is lost and ground surface visible, 10CL69 and 10CL1414 should be re-located by a field visit.

2) This information can be used to advise the engineering survey crews in avoiding the sites.

3) If there are anticipated problems with avoiding the sites during construction of the penstock or related activities such as vehicle traffic and equipment stageing, we should consult with the BLM archaeologist regarding mitigation measures. This may entail a commitment to adjusting the location of the penstock, testing the sites for subsurface depth or mapping and recovering surface materials, and/or having an archaeological observer during survey and construction.

4) All field personnel connected with the project should be advised of responsibilities regarding protection of archaeological sites and features under federal antiquities laws. The laws prohibit disturbing or collecting of archaeological materials and reqwuire the reporting of any finds during preliminary work or subsequent construction and excavation.

Please let me know if you have any questions about this response to your request.

Sincerely,

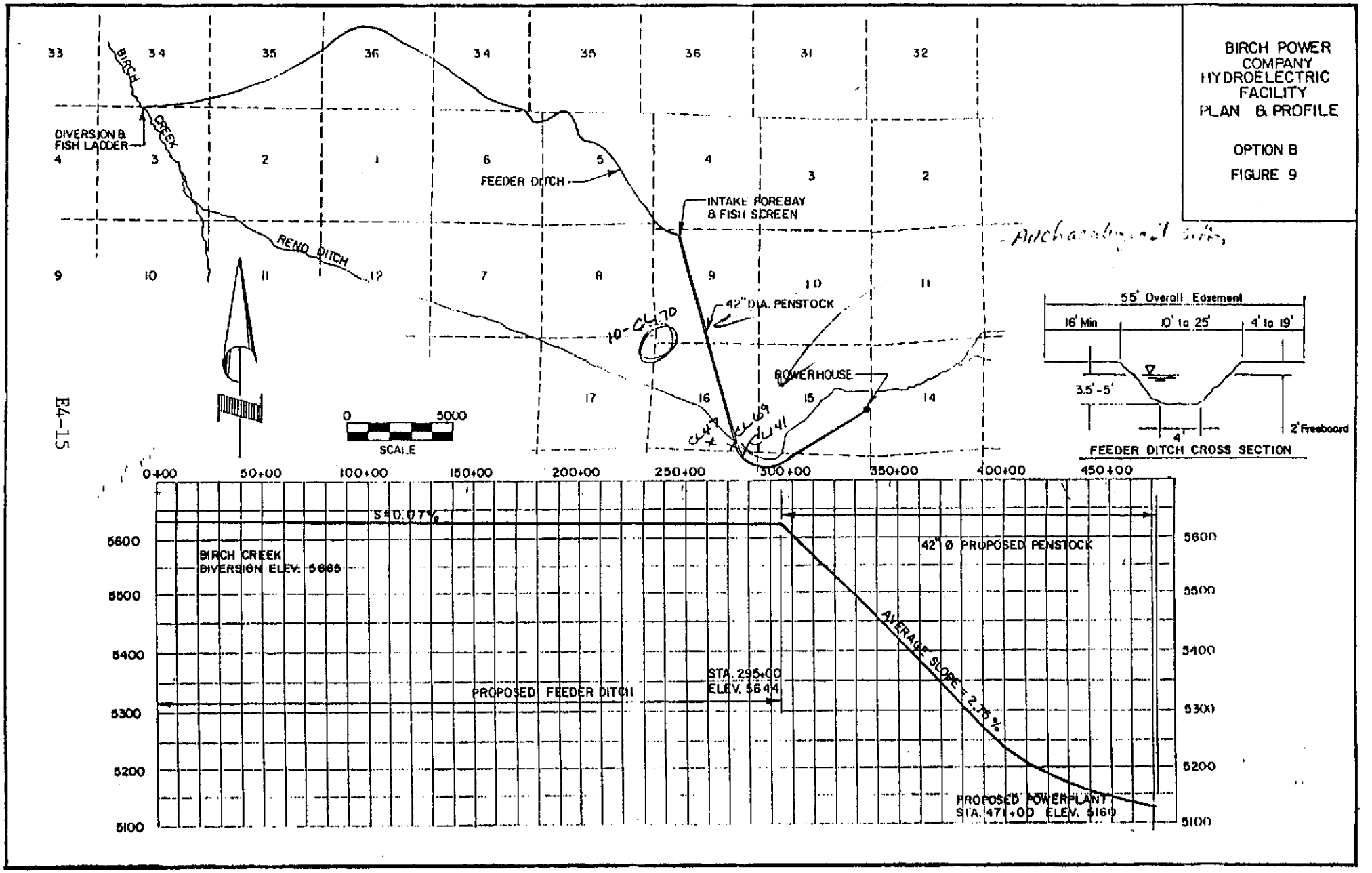
Susanne J. Miller

Susanne J. Miller
Archaeological Consultant
1450 Antares Dr.
Idaho Falls, ID 83402
(208) 529-2453
(208) 236-2680

cc: File

Thomas Green
State Archaeologist

Attachment


BIRCH POWER COMPANY HYDROELECTRIC FACILITY PLAN & PROFILE
OPTION B
FIGURE 9
BIRCH CREEK
DIVERSION & FISH LADDER
RENO DITCH
FEEDER DITCH
INTAKE FOREBAY & FISH SCREEN
42" DIA. PENSTOCK
POWERHOUSE
SCALE
0
5000
55' Overall Easement
16' Min
10' to 25'
4' to 19'
3.5'-5'
2' Freeboard
FEEDER DITCH CROSS SECTION
S=0.07%
BIRCH CREEK DIVERSION ELEV. 5665
42" Ø PROPOSED PENSTOCK
AVERAGE SLOPE = 2.76%
PROPOSED FEEDER DITCH
STA. 295+00 ELEV. 5644
PROPOSED POWERPLANT STA. 471+00 ELEV. 5160
0+00
50+00
100+00
150+00
200+00
250+00
300+00
350+00
400+00
450+00
5600
5500
5400
5300
5200
5100

21 May 1984

Ted Sorenson, P.E.
Consulting Engineer
550 Linden Dr.
Idaho Falls, ID 83401

RE: Cultural Resources, Birch Power Co. Hydroelectric Facility, Birch Creek, Idaho, Option B.

Dear Mr. Sorenson:

At your request, on 19 May 1984, I visited Sections 15, 16, 21,22, T8N, R31E, Clark County, Idaho for the purpose of relocating, identifying and assessing the status of three registered archaeological sites. The sites are near or at the proposed location of the lower reaches of a penstock for the Birch Power Co. hydroelectric facility (see attached Map 1). Section 16 is state land, Section 15 is under Bureau of Land Management control, and 21 and 22 are within the boundaries of the Idaho National Engineering Laboratory, Department of Energy.

Sites 10CL47, 10CL69, and 10CL141 were located and inspected. The sites consist of scatters of stone flakes , prehistoric in origin, and visible on extensively exposed ground surface of light-colored silts and occasional pebble pavement. Isolated flakes, predominately of obsidian, are common throughout the area and may indicate that the three "sites" are features of a single wide-spread occupation between the isolated hill to the west, Reno Point the the hills to its north (attached map 2). 10CL141 (redrawn on Map 2) is larger in size than its original description on state registration forms and has been transected by Reno Ditch and the trails paralleling it on both sides. 10CL141 has been extensively damaged by vehicle traffic, stock trails, channels eroded by over-flow from the ditch, stock and hunting stageing areas and camping, to a minimum distance of 50 m out and parallel to the ditch on the W-SW side. The site materials also show up in the trail on

on the N-NE side of Reno Ditch. Ditch banks, erosion gullies and road cuts were checked for subsurface expressions of the site. None were observed, although some materials may be shallowly buried under slpe deposits on the N-NE portion of 10CL141. 10CL47 and 10CL69 can still be identified as originally described on site registration forms, although they too are extensively disturbed. Some diagnostic artifacts, projectile points, and pottery has been previously collected from 10CL47 and 10CL141.

At this time I can make the following recommendations, which will be sent to the state archaeologist for review and comment.

All three sites, especially 10CL141 are so badly damaged that is may not be feasible to collect information of sufficient value to aid prehistoric studies or to warrant any full-scale mitigation or recovery.

In order to meet archaeological compliance I would recommend archaeological clearance for the project with the following stipulations:

1) Once the exact desired location of the penstock has been determined by your firm, just prior to or at the time the route is surveyed in, an archaeologist should be contacted to:

a) advise the surveyor to avoid the only possible remaining area of 10CL141, on the east side of the ditch, which has any integrity, and to avoid sites 10CL 47 and 10CL69;

b) survey and define the boundaries of the sites, collect any archaeologically diagnostic materials and formal tools, and make a descriptive inventory of stone types and the technology represented by the flake debitage;

c) inspect the unsurveyed portions of the penstock (Option B) right-of-way in the N1/2 Section 16, Sections 15,21,22. (Other sections in the project area have already been inspected and reported; see letters Miller-Sorenson, 15 March 1984; Davis-Sorenson, 8March 1984; Sorenson-Green, 17 Jan. 1984; Miller-Sorenson, 6 Jan. 1984; Miller-Green, 6 Jan. 1984; Green-

Sorenson, 8 Nov. 1983; Miller-Green, 22 Oct. 1983; Miller-Sorenson, Miller-Green, 6 Jan. 1983). This will be necessary because of the high density of sites known to occur in Birch Creek Valley and the possibility of extensions of the 10CL141-47-69 complex.

2) Request that you notify an archaeologist to advise on the location of the penstock and to inspect any sub-surface exposures made during excavation for placement of the penstock, particularly near the archaeological site areas and also in Sections 15,16,21,22. It is not known at this time what width of right-of-way is needed for the penstock and power house, how construction access will be met and what is needed to install the penstock in the area where it parallels and crosses Reno Ditch and in the vicinity of the E-W gravel road at the southern edge of the project.

I hope this account and recommendations will help in the archaeological aspects of your application; please contact me with any questions. Additional documentation and description was made in field notes during the visit to the project area and in ammendments to the site registration forms.

Sincerely,

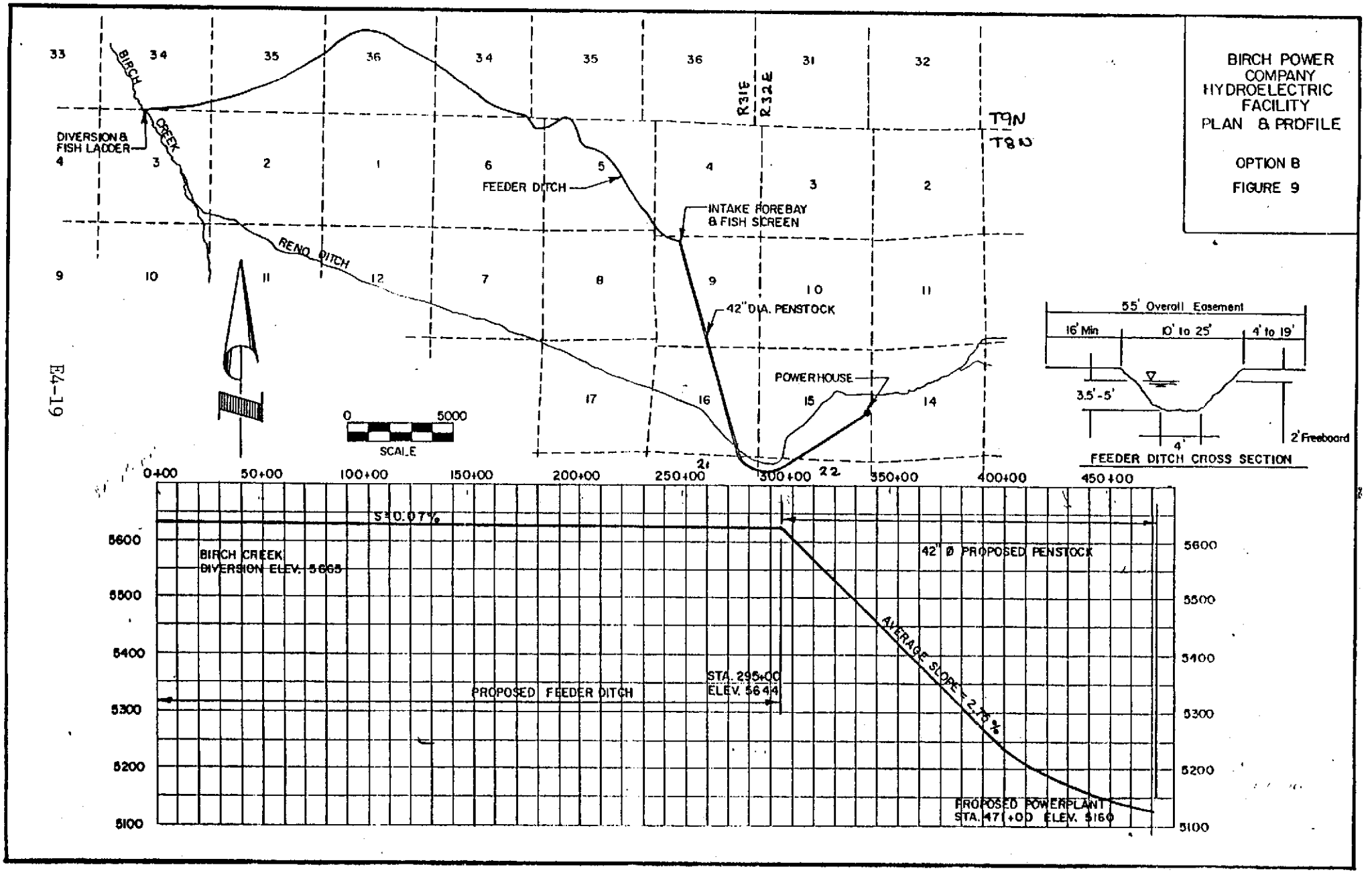
Susanne J. Miller

Susanne J. Miller
Archaeological Consultant
1450 Antares Dr.
Idaho Falls, ID 83402
(208) 529-2453

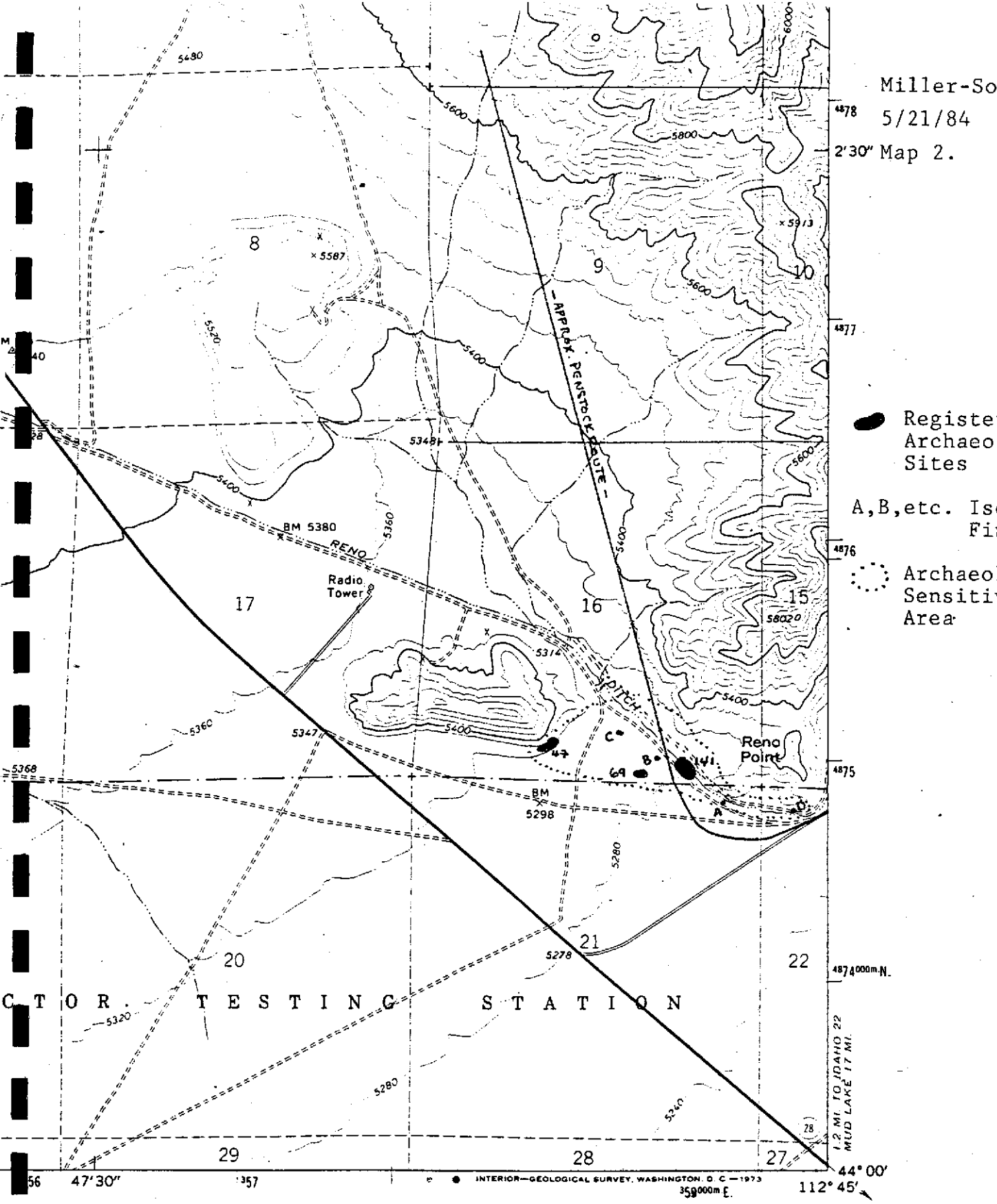
cc: Thomas Green
Idaho State Archaeologist

Richard Hill
Idaho Falls District Archaeologist
Bureau of Land Management

Attachments


BIRCH POWER COMPANY HYDROELECTRIC FACILITY PLAN & PROFILE
OPTION B
FIGURE 9
BIRCH CREEK
DIVERSION & FISH LADDER
FEEDER DITCH
INTAKE FOREBAY & FISH SCREEN
RENO DITCH
42" DIA. PENSTOCK
POWERHOUSE
R31E
R32E
T9N
T8N
SCALE
0
5000
55' Overall Easement
16' Min
10' to 25'
4' to 19'
3.5'-5'
4'
2' Freeboard
FEEDER DITCH CROSS SECTION
0+00
50+00
100+00
150+00
200+00
250+00
300+00
350+00
400+00
450+00
S=0.07%
BIRCH CREEK DIVERSION ELEV. 5665
42" Ø PROPOSED PENSTOCK
AVERAGE SLOPE = 2.75%
PROPOSED FEEDER DITCH
STA. 295+00 ELEV. 5644
PROPOSED POWERPLANT STA. 471+00 ELEV. 5160
5600
5500
5400
5300
5200
5100

E4-19



C T O R . T E S T I N G S T A T I O N

ROAD CLASSIFICATION

Primary highway, hard surface

Secondary highway, hard surface

Light-duty road, hard or improved surface

Unimproved road

Interstate Route U. S. Route State Route

IDAHO

QUADRANGLE LOCATION

E4-20

SCOTT BUTTE, IDAHO

N4400—W11245/7.5

file. Birch Creek

30 July 1984

Ted S. Sorenson, P.E.
Sorenson Engineering
550 Linden Drive
Idaho Falls, ID 83401

RE: Archaeological Clearance, Birch Creek Hydro Project, Southeastern Idaho, Option C.

Dear Mr. Sorenson:

I apologize for the delay in response to your letter of 7/9/84. I have checked with Richard Hill, Idaho Falls District Bureau of Land Management archaeologist, with regard to the archaeological potential in the area of Birch Power Co.'s proposed hydroelectric facility Option C routing of the pipeline. He concurs that, in contrast to the incidence of archaeological sites at lower elevations encountered in the areas of Options A and B, there is a significantly lower chance of of encountering archaeological materials along the bench-top route of the Option C pipeline. He also advises that field inspection should take place along the new pipeline route (Sec. 9, T8N, R31E and Sec. 10,11,14, T8N, R32E, B.M., Clark Co., Idaho) since this route crosses BLM land that has not had previous archaeological inventory. He agrees that this could take place during the surveying of the pipeline right-of-way.

If you would like the archaeological field survey to take place in advance of establishing the final route of the pipeline, please let me know. Recommendations for archaeological clearance could then be made quickly and any minor adjustments in the location of the line could be made at that time.

Sincerely,

Susanne J. Miller

Susanne J. Miller
Archaeological Consultant
1450 Antares Dr.
Idaho Falls, ID 83402
(208) 529-2453

cc: File

IDAHO STATE HISTORICAL SOCIETY
610 NORTH JULIA DAVIS DRIVE BOISE, 83702

October 24, 1984

Mr. Ted S. Sorenson, P.E.
Sorenson Engineering
550 Linden Drive
Idaho Falls, Idaho 83401

Dear Mr. Sorenson:

Option C of the Birch Creek Hydro Project appears to have a lower chance of encountering archeological sites than options A or B. However, their is still some possibility; since this is land managed by the BLM, their archaeologist, Mr. Richard Hill, should be consulted about the project. A final archaeological inspection is probably necessary.

Sincerely,

THOMAS J. GREEN
State Archaeologist
State Historic Preservation Office

TJG/rm
cc: Susanne Miller
Richard Hill, BLM Archaeologist

6 November 1984

Ted Sorenson, P.E.
Sorenson Engineering
550 Linden Dr.
Idaho Falls, ID 83401

RE: Archaeological Survey, Birch Hydro Co. Option C, Clark Co., Idaho.

Dear Mr. Sorenson:

At your request and in compliance with federal cultural resources protection laws, I conducted (11/4/84) a field reconnaissance along the proposed pipeline route for Birch Hydro Co.'s Option C plan (please see attached map). Option C of this project proposes an alternative route for the southern one-third of the project right-of-way and consists of pipeing water from the feeder ditch (A) east-southeastward (through portions of SE 1/4 Sec. 9, T8N, R 31E, S1/2 Sec. 10, SW 1/4 Sec. 11, N 1/2 Sec. 14, T8N, R32E, Clark Co., ID) to a return at Reno Ditch along route Option C.

The archaeological field inspection consisted of walking a zig-zag inspection swath within a 100 m right-of-way along the approximately 2.3 mile length of the Option C portion of the proposed pipeline route shown on the attached map. During the survey a small prehistoric site, consisting of a 45 m NW-SE x 40 m E-W surface scatter of obsidian and ignimbrite flaking debris was encountered and recorded south of the power-line at the base of the ridge in the SW 1/4 Sec. 10. Since this site is near the point where the pipeline will diverge from the powerline to proceed southeasterly, a commitment to avoid the site when the route is surveyed and staked would be the best mitigative policy.

No other archaeological features were noted during the survey and I recommend archaeological clearance as avoidance of the archaeological site noted above appears to be feasible according to your specifications and the nature of the terrain.

I would be glad to meet with you and the Bureau of Land Management archaeologist to discuss evaluation of the archaeological site and mitigative measures.

Sincerely,

Susanne J. Miller

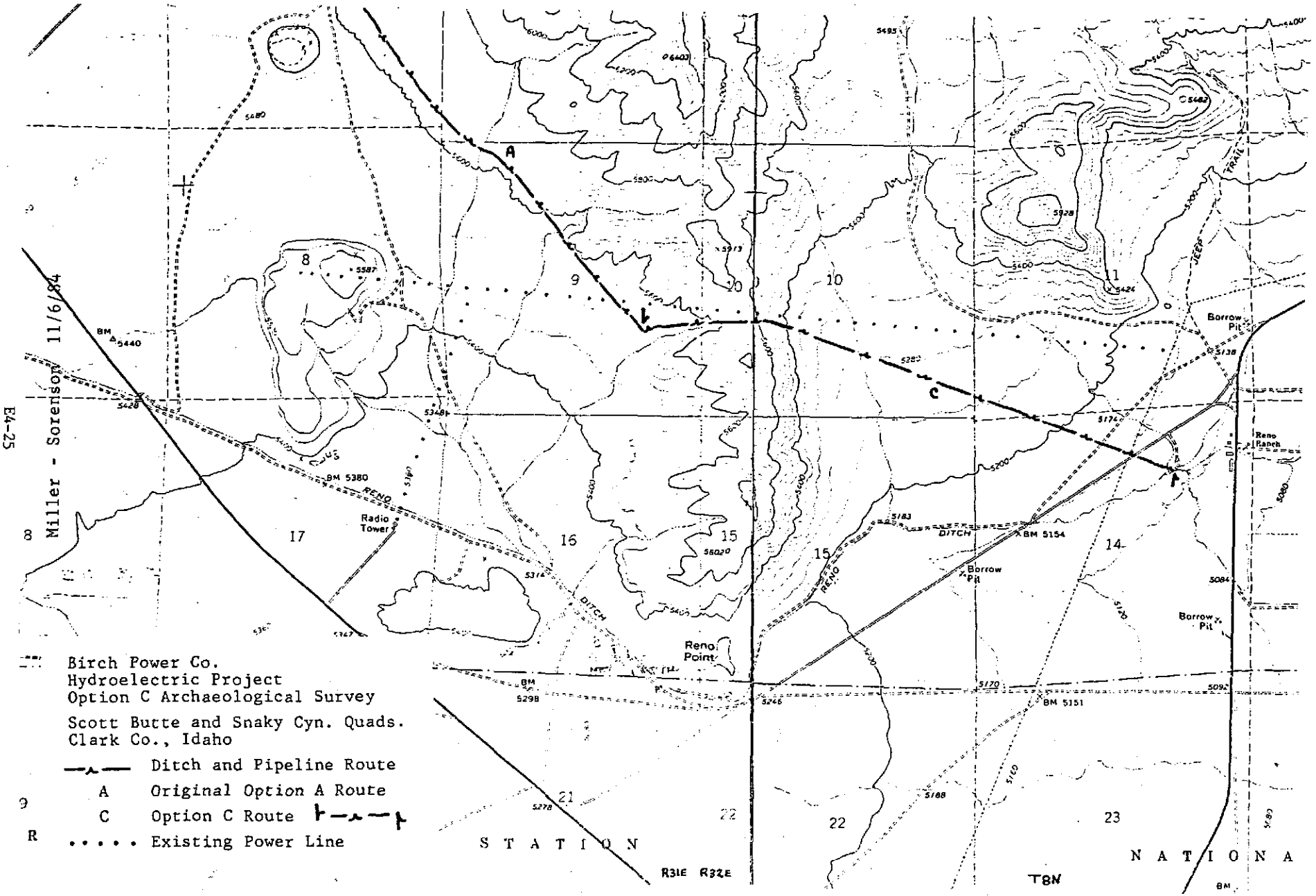
Susanne J. Miller
Archaeological Consultant
1450 Antares Dr.
Idaho Falls, ID 83402
(208) 529-2453

cc: File

Thomas Green
State Archaeologist

Richard Hill
BLM District Archaeologist

Attachment


Birch Power Co.
Hydroelectric Project
Option C Archaeological Survey
Scott Butte and Snaky Cyn. Quads.
Clark Co., Idaho
Ditch and Pipeline Route
A Original Option A Route
C Option C Route
Existing Power Line
Miller - Sorenson 11/6/78
E4-25
Radio Tower
Reno Point
Borrow Pit
Reno Ranch
BM 5380
BM 5154
BM 5151
BM 5298
BM 5440
DITCH
RENO
TRAIL
JEEP
STATION
NATIONA
R31E R32E
T8N

IDAHO STATE HISTORICAL SOCIETY
610 NORTH JULIA DAVIS DRIVE BOISE, 83702

November 21, 1984

Mr. Ted S. Sorenson, P.E.
Sorenson Engineering
550 Linden Drive
Idaho Falls, Idaho 83401

Dear Mr. Sorenson:

As a result of the information obtained by Susanne Miller during her survey of the Option C pipeline route of the Birch Creek Hydroelectric project, we have determined that the project will have no effect on significant archaeological or historical properties as long as the small prehistoric lithic scatter identified by her is avoided by the plans. According to Ms. Miller, this mitigative measure is feasible, and we agree that this condition is necessary to ensure preservation of the site.

If you have any questions regarding our comment, please let us know.

Sincerely,

Thomas J. Green
State Archaeologist
State Historic Preservation Office

TJG/bhd

cc: Susanne Miller

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Idaho Falls District
940 Lincoln Road
Idaho Falls, Idaho 83401

IN REPLY
REFER TO: 8151

December 26, 1984

Mr. Ted S. Sorenson
Sorenson Engineering, P.A.
550 Linden Drive
Idaho Falls, ID 83401

Re: Cultural Resource Inventory and Archaeological Site Protection Recommendations for Birch Hydro Co. Option C, Clark County, Idaho

Dear Mr. Sorenson:

We have reviewed Susanne Miller's (archaeological consultant) cultural resource inventory for Birch Hydro Co.'s ditch/pipeline route, Option C. The archaeological survey's methodology is appropriate, and its site protection recommendations are reasonable. The survey discovered and recorded one, small obsidian surface lithic scatter. If the final ditch/pipeline route avoids this site, Birch Hydro Co.'s proposed hydroelectric project should have no adverse effects on Birch Creek Valley's archaeological values. Archaeological review and special site protection stipulations will still be required for any right-of-way application that is filed for this project.

Sincerely,

W. Bernard Jansen

W. Bernard Jansen
Acting District Manager

5) REPORT ON THE SOCIAL ECONOMIC IMPACTS

5) REPORT ON THE SOCIAL ECONOMIC IMPACTS

(i) Description of the Social Economic Impact Area: The project is located in rural Clark County. The economic base of Clark County is agriculture consisting of hay, grain and cattle operations.

(ii) The employment in the area is primarily agriculture. However, the implementation of this project would require the inflow of construction personnel. The construction personnel are readily available in the Idaho Falls, Idaho area approximately 50 miles to the southeast. Therefore, no adverse impact would be imposed upon Clark County with respect to the influx of workers. In other words, the workers would commute from the Idaho Falls area which has a population base of approximately 50,000 people with a well developed construction support base due to construction on the adjacent National Engineering Laboratory.

(iii) No significant impact would be realized by various governmental facilities and services such as police, fire, health and educational facilities. The project would be built using the existing construction base in the Idaho Falls area.

(iv) On site manpower requirements - During the construction there will be approximately ten full time jobs for a period of eight months. The average payroll per month would be on the order of $40,000 for a period of ten months.

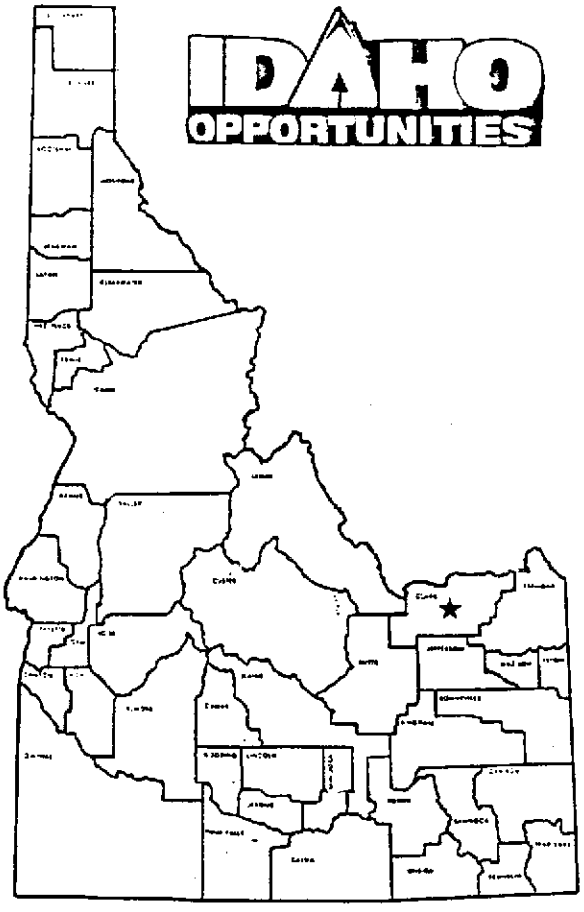
(v) Project personnel who
a) currently within in the project area 0%
b) would commute daily to construction site from places situated outside the impact areas 95% to 100%.
c) would locate on a temporary basis within the project area 0%

(vi) No significant impact would be realized on the existing supply in available housing within the impact area.

(vii) No business or residences would be displaced by the proposed project during or after construction. Minor inconvenience to the flow of water to the downstream irrigators would be realized during the filling and testing of the new feeder ditch and penstock. However this is scheduled to take place during the fall of the year when there is no significant irrigational demand.

(viii) No significant fiscal impact would be realized on an incremental governmental increments in relation to the proposed project. At the conclusion of the project, one full time employee will be retained to operate the project and would live on site. This would have an insignificant impact on school operating costs, road maintenance and repair, public safety and public utilities cost.

For detailed analysis of the Social Economic Impacts of the Clark County area we sought information from the Division of Economic & Community Affairs on statistical indicators of change in Idaho and have included this information herein.



IDAHO OPPORTUNITIES

COUNTY ECONOMIC PROFILES

CLARK COUNTY

DIVISION OF ECONOMIC AND COMMUNITY AFFAIRS
(208) 334-3416

John V. Evans, Governor

I. POPULATION

A. Population Change (Census):

1970	1980	1970-80 % Change
741	798	7.7

B. Persons by Race (1980 Census):

White	Black	Indian
771	0	3

Asian & Pacific Islands	Other	Spanish Origin[1]
0	24	30

C. Population Density (1980 Census):

Persons per Square Mile .5

D. Persons by Age and Sex (1980 Census):

	Numbers		Percent	
Age Group	Male	Female	Male	Female
Under 5	41	39	5.1	4.9
5-9	37	24	4.6	3.0
10-14	35	43	4.4	5.4
15-19	44	37	5.5	4.6
20-24	38	22	4.8	2.8
25-34	57	52	7.1	6.5
35-44	55	55	6.9	6.9
45-54	37	33	4.6	4.1
55-64	41	30	5.1	3.8
65 & Over	41	37	5.1	4.6

[1] Persons of Spanish Origin may be of any Race.

COUNTY: Clark

II. LABOR FORCE DATA — 1981 Year Average

A. Total Civilian Work Force	369
B. Total Unemployed	27
Percent of Work Force	7.3
C. Agricultural Employment (Est.)	161

D. Total Nonag. Covered Employment	228
Food Processing	0
Lumber	0
Chemicals	0
Metals	0
Machinery	0
Other Manufacturing	0
Construction	0
Mining	0
Transp., Comm. & Utilities	0
Wholesale & Retail Trade	34
Finance, Insurance, Real Estate	0
Service & Miscellaneous	18
Government	125

(Zeroes indicate no employment or suppressed data.)

III. ECONOMIC ACTIVITY

Economic Activity, Showing Changes, 1970, 1975, 1980

Year Shown Unless Otherwise Indicated	1970	1975	1980
Average Monthly Nonagricultural Wage *	$ 557	$ 709	$ 775
Annual Nonagricultural Payroll *	$ 676,000	$ 988,000	$ 1,722,000
Personal Income Total	$ 4,412,000	$ 5,188,000	$ 9,335,000
Housing Total	325	NA	445
Number of Retail Establishments	8	5	5
Number of Wholesale Establishments	1	1	0
Retail Sales (Fiscal Year)	$ NA	$ 1,919,489	$ 4,252,355
Wholesale Sales (Fiscal Year)	$ NA	$ NA	$ NA
Gross Sales (Fiscal Year)	$ NA	$ 2,080,442	$ 4,487,638
Number of Farms	71[1]	77[2]	79[3]
Total Land in Farms (Acres)	340,212[1]	361,638[2]	363,944[3]
Value of All Farm Products Sold	$ 2,414,000[1]	$ 7,406,000[2]	$ 10,051,000[3]

* Covered employment wage and payroll.
1 1969
2 1974
3 1978

COUNTY: Clark

IV. HOUSEHOLD INCOME (1980 Census - 1979)

	Households
Under $2,500	31
$2,500 - $4,999	21
$5,000 - $7,499	9
$7,500 - $9,999	47
$10,000 - $14,999	63
$15,000 - $24,999	65
$25,000 - $49,999	27
$50,000 - Over	1

V. COUNTY GOVERNMENT

County Commissioners as of 1/1/83

Charles Vadnais

J. Albert Laird

George Whittaker

VI. GOVERNMENT SERVICES

County Has:

Zoning Ordinance No

Full-time Fire Department 0

Volunteer Fire Department 1

Full-time Law Officers 2

Planning Commission Yes

Public Libraries (Locations)

Dubois

VII. PROPERTY TAXES 1980

A. Property Tax as % of Market Value 1.036%

B. Market Value of all Property $33,558,065

C. Property Tax Collected $ 347,494

VIII. LAND, GEOGRAPHY AND CLIMATE

A. Land Area (Square Miles) 1,763

B. Land Ownership

Federal	State	Cities & Counties	Private
66.3 %	7.9 %	.2 %	25.6 %

C. Distance (in Miles) from:

County Seat Dubois

Boise	278	Phoenix	930
San Francisco	863	Seattle	730
Los Angeles	948	Denver	636
Salt Lake City	253	Portland	704

D. Average Annual Precipitation 10.94

E. Average Temperature *

Winter, High	25.7	Low	9.9
Summer, High	85.5	Low	53.1

* January and July

COUNTY: Clark

IX. FINANCIAL SERVICES AND MEDIA

A. Commercial - Financial

Banks/Bank & Trust Companies 1
Savings & Loan Associations 0

B. Communications in County:

1. Newspapers Published:

Daily	City
None	

Weekly	City
None	

2. Television Stations: None in County; served by translator stations

3. Radio Stations: None in County; served by St. Anthony and Rexburg

4. Telephone Systems: Mud Lake Telephone Cooperative

X. OUTDOOR RECREATION AREAS

A. Public Recreation Areas in County:

Major Community Parks: None

Idaho State Parks: None

National Monuments, Recreation, Wilderness and Primitive Areas: None

National Forest(s): Targhee, Challis National Forests

Other Recreation Areas: Lidy Hot Springs

B. Nearest Public Recreation Areas Outside of the County: Harriman and Henrys Lake State Parks; Kelly Canyon, Bear Gulch and Grand Targhee Ski Areas; Yellowstone and Grand Teton National Parks

XI. EDUCATION (1981 - 1982 School Year)

A. School District(s) in County (Names):

Clark County District

B. Public Schools:

	Number	Enrollment
Elementary	1	90
Junior High	1	44
Senior High	1	44

C. Private Schools in County:

None

D. Nearest Colleges or Vo-Tech Schools:

Junior College

Ricks College

City	County	Enrollment
Rexburg	Madison	6,748

4-Year College or University

Idaho State University

City	County	Enrollment
Pocatello	Bannock	5,810

Vocational-Technical School

Eastern Idaho Vo-Tech

City	County	Enrollment
Idaho Falls	Bonneville	3,340

COUNTY: Clark

XII. HEALTH FACILITIES

A. Hospitals

Name	No. of Beds
None	

XIII. CONVENTION AND MEETING FACILITIES

A. Largest Auditorium:

Lindy Ross School — 250 (Seating Capacity)

B. Largest Banquet Room:

Lindy Ross School — 200 (Seating Capacity)

C. Travel Accommodations:

Motel Rooms — 10 (Number)

XIV. ECONOMIC DEVELOPMENT PROGRAMS & PLANS

A. Development Agencies:

East Central Idaho Development Corporation

B. County or Multi-County Planning Agency:

East Central Idaho Planning and Development Association

XV. TRANSPORTATION

A. Major Highways in County:

	Designation	Direction
Fed. Interstate	15	N-S
Fed. Interstate		
Federal		
Federal		
State	28	N-S
State	22	E-W
State		

B. Air Services

Municipal Airports in County:

Dubois Airport

Private Airports in County:

None

Nearest Scheduled Airline Service If None in County:

Idaho Falls

C. Rail Service:

Railroads Serving County: Union Pacific

Names and Types of Service:

Freight Service

COUNTY: Clark

COUNTY SEAT: Dubois

I. PEOPLE

County's population as percentage of the state total - 1980: 0.1 %

Population: 1950 918 1960 915 1970 741 1980 798

Percent of population change - 1970-80: 7.7 % Idaho - 1970-80: 32.4 %

Population per square mile: 1950 0.5 1960 0.5 1970 0.4 1980 0.5

Percent of 1980 population*: rural 100.0 % urban 0 %

*Census Bureau defines urban as incorporated cities of 2,500 persons or more and urbanized areas. See explanation of urbanized area on page iii.

Components of change - 1970-80:

Births 100 Deaths 100 Net migration less than 50 Percent migration -4.9 %

Persons per household: 1960 3.38 1970 3.33 1980 2.99

Median age: 1970 27.3 Idaho median age: 1970 26.4

Birth rate: 1970 20.2 Fertility rate: 1970 124.0

Birth rate: 1980** 28.8 Fertility rate: 1980** 152.6

Idaho birth rate: 1980** 20.1 Idaho fertility rate: 1980** 88.8

U. S. birth rate: 1979 15.8 U. S. fertility rate: 1979 68.0

**1980 data estimated by Division of Economic & Community Affairs

II. HOUSING AND ECONOMY

Housing 1970:

All housing units: 323 1980: 445

Number of mobile homes or trailers: 28 1980: 64

Number of overcrowded units (1.5+ persons per room): 13 1980: 2

Number of units lacking some or all plumbing facilities: 46 1980: 21

Household composition (% of households by size): 1-2 48.6 % 3-5 37.5 % 6+ 13.9 %

Households eligible for assistance:	Elderly	Families
1980:	50.0	41.6 / 8.4
1970	4	15
1978	0	0

Year structure built:

1969 to March 1970	31	1950 to 1959	25
1965 to 1968	19	1940 to 1949	32
1960 to 1964	32	1939 or earlier	165

New housing units authorized in permit issuing places*:

Place	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Dubois**								--	N/A	N/A

*In most cases the totals do not represent a universal number for the county. Only places issuing permits are recorded.
**Was not identified as a permit issuing place at that time.
***Eleven months reported instead of full year.

Percent of average monthly unemployment - 1979:

Jan.	10.5 %	Feb.	11.5 %	Mar.	10.2 %	Apr.	7.4 %	May	5.8 %	Jun.	5.6 %
Jul.	6.3 %	Aug.	5.7 %	Sep.	5.8 %	Oct.	5.2 %	Nov.	6.2 %	Dec.	8.2 %

Percent of labor force unemployed: 1970 5.7 % 1975 8.7 % 1979 7.0 %

Month and percentage of highest unemployment: 1975 Feb. - 15.5% 1979 Feb. - 11.5%

Month and percentage of lowest unemployment: 1975 Jun. - 4.9% 1979 Oct. - 5.2%

Percent of females (16+) in labor force: 1960 (14+) 30.0 % 1970 48.2 %

Employment - full and part time by place of work (B. E. A. data):

	1967	1970	1977	1979
Total employment	350	399	483	489
Farm proprietors	77	81	92	89
Non-farm proprietors	36	57	25	28
Wage and salary employment				
Federal civilian	43	45	53	48
Military	--	--	(L)	(L)
State and local	59	74	72	69
Manufacturing	(D)	--	0	(D)
Mining	(D)	(D)	(L)	(L)
Construction	(D)	(D)	(D)	(L)
Trans., Comm. & Pub. Util.	13	15	15	15
Trade	23	28	37*	41*
Finance, Insurance & Real Estate	(D)	--	(L)	(D)
Services	(D)	--	(D)	27
Other	--	--	(D)	(D)
Farm	88	77	130	119

(D) Not shown to avoid disclosure of confidential information.
(L) Less than 10 workers.
* Includes only retail trade.

Average Idaho tax return (county) - 1980: $ 319

Average Idaho tax return (state) - 1980: $ 531

Sales tax: 1975* $ 39,772 1979* $ 54,613 1980* $ 50,506

Market value of all property** - 1980: $ 33,558,065

Total property tax collected** - 1980: $ 347,494

Property tax as percent of market value**: County - 1980 1.036 % State - 1980 1.064%

Highest tax code area and tax as % of market value** - 1980: Area (01) - 1.392 %

*Fiscal Year **after homeowner exemption

Per capita income:	1970	$ 5,446	1979	$ 9,972
% of national average:	1970	137.3 %	1979	113.9 %
% of state average:	1970	165.5 %	1979	130.7 %

Median family income - 1969: $ 9,077 Median family income* - 1980: $ 17,500
*HUD estimate

Transfer payments (thousands of dollars - county):
1970 $ 200 1975 $ 381 1979 $ 738

Number of business establishments - 1979: 15

III. EDUCATION AND SOCIAL INDICATORS

Percent of families below poverty level: 1969 5.8 %

Welfare - average number of persons per month in 1980 who utilized:

Old age -- ADC* 12.3 Aid to blind -- APTD** --
*aid to dependent children **aid to permanently or totally disabled

Educational funding levels - FY 80:

State funds per Average Daily Attendance (ADA): Clark County - $1,966

All fund expenditures per ADA: Clark County - $2,347

All fund expenditures per ADA (state average): $ 1,760

Median school years completed (persons over 25): 1970 12.1

Teacher's average salary - 1980:	Male		Female
Elementary	$ 11,678		$ 11,425
Secondary	12,354		11,678
State average - elementary	14,953		14,764
State average - secondary	15,732		15,152
National average		$ 18,162	

Health care - 1979:

Number of persons per M. D. -- Number of hospitals --

Number of persons per M. D. (state average) 838.6

Ambulance services 1 Total hospital beds --

Crime - number of offenses:	1973	1976	1978	1979
Murder	--	--	--	--
Rape	--	--	--	--
Robbery	--	--	2	--
Aggravated Assault	1	--	1	1
Burglary	5	1	9	5
Larceny	9	4	23	22
Motor Vehicle Theft	--	1	1	3

Suicide rate per 100,000 persons - 1979: -- state average: 13.8

Marriage rate per 1,000 persons - 1979: 4.4 state average: 14.8

Divorce rate per 1,000 persons - 1979: -- state average: 7.1

IV. NATURAL RESOURCES

Land Ownership - 1979:	Acres	% Total
Federal land	743,055	66.3
BLM	338,159	45.5
National Forests	358,776	48.3
Other	46,120	6.2
State land	88,462	7.9
Endowment land	88,294	99.8
Fish & Game	168	.2
Parks and Recreation	--	--
Private land	287,395	25.6
County land	1,600	.2
Municipal land	--	--
Total land ownership acres	1,120,512	100.0

Land use* - 1976	Acres	% Total
Urban or built-up land	300	.05
Agricultural land	83,200	7.4
Rangeland	857,600	76.4
Forest land	174,300	15.55
Water	700	.1
Wetland	—	--
Barren land	5,200	.5
Tundra	--	--
Perennial snow or ice	--	--
Total land use acres	1,121,300	100.0

*U.S.G.S. land use/cover classification system. The water category and the rounding and estimating of satellite based data results in slightly higher totals for land use.

V. AGRICULTURE (from 1978 Census of Agriculture - Preliminary Report)

		All Farms 1978	All Farms 1974
All farms	number	79	77
Land in farms	acres	363,944	361,638
Average size of farm	acres	4,607	4,697
Total cropland	farms	66	69
	acres	51,177	38,980
Average per farm, value products sold	dollars	127,229	96,182
Cattle & calves, inventory	number	17,034	19,267
Hogs & pigs, inventory	number	(D)	94

(D) data withheld to avoid disclosing information for individual farms

		All Farms 1978	All Farms 1974	Farms w/sales of $2,500 & over 1978	Farms w/sales of $2,500 & over 1974
Farms by size:					
Under 10 acres	farms	2	2	2	2
10 to 49 acres	farms	--	--	--	--
50 to 179 acres	farms	6	11	5	7
180 to 499 acres	farms	14	10	13	10
500 to 999 acres	farms	11	16	10	15
1,000 to 1,999 acres	farms	11	12	10	12
2,000 acres and over	farms	35	26	31	22
Farms, value of land & buildings					
Average per farm	dollars	1,015,753	571,473	964,720	499,996
Average per acre	dollars	220	122	308	158
Tenure of operator					
Full owner	farms	52	48	48	44
Part owner	farms	20	20	19	17
Tenant	farms	7	9	4	7
Principal occupation					
Farming	farms	60	48	58	46
Other than farming	farms	19	19	13	16

Planning/zoning commission - 1979: yes County comprehensive plan - 1979: no

Subdivision ordinance - 1979: no Zoning ordinance - 1979: no

Miles of road - 1979: interstate 37.14 state 51.79 local 303.78

Motor vehicles registered - 1980: cars 905 Other 123

Per capita total vehicles 1.29

CITY POPULATION

	1970 Census	1980 Census	% Change
Dubois	400	413	3.3%
Spencer	45	29	-35.6%

6) REPORT ON GEOLOGICAL AND SOIL RESOURCES

6) REPORT ON GEOLOGICAL AND SOIL RESOURCES

Following this section is a report from the Department of Interior, Geological Survey, which describes the geological conditions in the area. Also attached is a Soil Conservation Service Report with respect to the soils in the area. Following these reports are several letters of consultation with the Bureau of Land Management with respect to mineral claims in the project vicinity. The claims are inactive. Potential areas of future conflict are along the feeder ditch. The feeder ditch may be relocated slightly in the future as required to allow for the unlikely possible development of mineral claims. The intake structure, penstock and powerhouse are not located in areas of potential conflict with mining claims.

(i) Detailed description of geological features including bedrock, structural features and unconsolidated deposits and mineral resourcess. See attached reports.

(ii) Description of Soils - The potential for mass movement is nil in the area as the soils generally overlay alluvial gravel deposits on slopes 0%-4% and the soils are very shallow in depth from approximately 6" to 2' in depth. The project would be built on slopes not to exceed 1% to 1½% in general.

(iii) Examination of the reports from the Geological Survey and the Soil Conservation Service shows no existing potential soil hazarding problems noted with respect to faults, seepage, subsistance, solution cavities, active abandoned mines, erosion, and mass soil movements. The project is, however, located near the central part of Idaho where recent earthquakes have been experienced approximately 80 miles to the northwest. The project is located in a Zone 3 earthquake area. All structures will be designed for a Zone 4 earthquake.

(iv) No significant erosion or mass soil movement or other impacts on the geological and soil resources due to the construction or operation of the proposed project will be realized. The existing erosion in Reno Ditch, however, would be alleviated through replacement with a shallow grade canal and pipeline system.

(v) Mitigation of Impacts on Soils - All topsoil removed in the zone of excavation will be stockpiled for replacement on the surface following construction. The first 1.5 miles of feeder ditch will have additional topsoils imparted at the direction of the Bureau of Land Management for enhancement of the growth potential of the riparian habitat. This soil will be imported from areas of deep topsoil as shown in Exhibit G-3.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Conservation Division
Area Geologist's Office
345 Middlefield Road
Menlo Park, California 94025

November 21, 1977

Memorandum

To: District Manager, BLM, Idaho Falls District

From: Area Geologist, Pacific Area

Subject: Geology & Mineral Resources Report of the Little Lost -Birch Creek Area, Idaho.

The following report is provided in response to your October 6, 1977 request for information on the geology and mineral resources of the Little Lost-Birch Creek and Big Desert areas. This report contains information on the Little Lost-Birch Creek area only; the Big Desert area report will follow at a later date.

This report includes a description of the geology and mineral resources of the Little Lost-Birch Creek area, a general geologic map of Idaho, a land classification map, a reference list, and mineral record cards of reported occurrences in the area.

The information contained in this report was gathered from published sources which should be consulted for detailed information regarding the geology and mineral resources of this area.

E. Vernon Stephens
for Henry L. Cullins

RECEIVED
U.S. D.I. 28 NOV 1977 B.L.M.
Idaho Falls, Idaho

GEOLOGY OF THE LITTLE LOST-BIRCH CREEK AREA

Introduction

The Little Lost-Birch Creek area is basically within two physiographic provinces which are markedly different in topography and geology. One portion of the area is in the Northern Rocky Mountain province, the other in the Columbia Intermontane province (see fig. 1). The Northern Rocky Mountain province area is characterized by mountainous terrain of the southern Lemhi Range and the Lost River Range, and by inter-mountain valleys of the Little Lost River and Birch Creek. The range and valley area gives way to the Snake River Plain which is part of the Columbia Intermontane province. Fig. 1 shows the provinces and physiographic features within the Little Lost-Birch Creek area.

Several geologic units are exposed throughout this region. The units include Paleozoic sedimentary rocks, Cenozoic volcanic rocks, and Quaternary alluvial deposits. Distribution of these and other rock units is shown on a generalized geologic map of Idaho (appendix A). Other references show in more detail the distribution of geologic units and some include discussions on the geology of various areas in the Little Lost-Birch Creek region; these references include reports by: Shenon (1928), Anderson & Wagner (1944), Anderson (1948), Ross (1961), Walker (1964), Mapel and Shropshire (1973), Nace and others (1975), and Bond (1977).

Sedimentary Rocks

In the Little Lost-Birch Creek area, the Lemhi and Lost River Ranges are composed mostly of layered sedimentary rocks. The oldest of these rocks are Precambrian quartzites which are exposed along the Lemhi Range and at Hawk Mountain in the Lost River Range. Ross (1961) shows a belt exposed on the western flank of the southern Lemhi Range. The belt consists of a purplish quartzite unit with minor argillite beds, a dolomitic quartzite unit, and a massive, nearly white quartzite. This belt of rocks may include the metamorphic siliceous slates reported by Anderson (1948, p. 6). Mapel and Shropshire (1973) show Precambrian siltstone exposed in the Lemhi Range near Magpie Springs.

Paleozoic strata are the principal rocks exposed in mountainous areas of the Little Lost-Birch Creek region. Distribution of Paleozoic rocks can be seen on the generalized geologic map of Idaho (appendix A). The rocks consist of stratified quartzites, dolomites, limestones, and fine-grained clastic rocks. The age of the rock units ranges from Ordovician to Permian. Ordovician rocks consist of quartzites and dolomites of the Kinnikinic quartzite and the

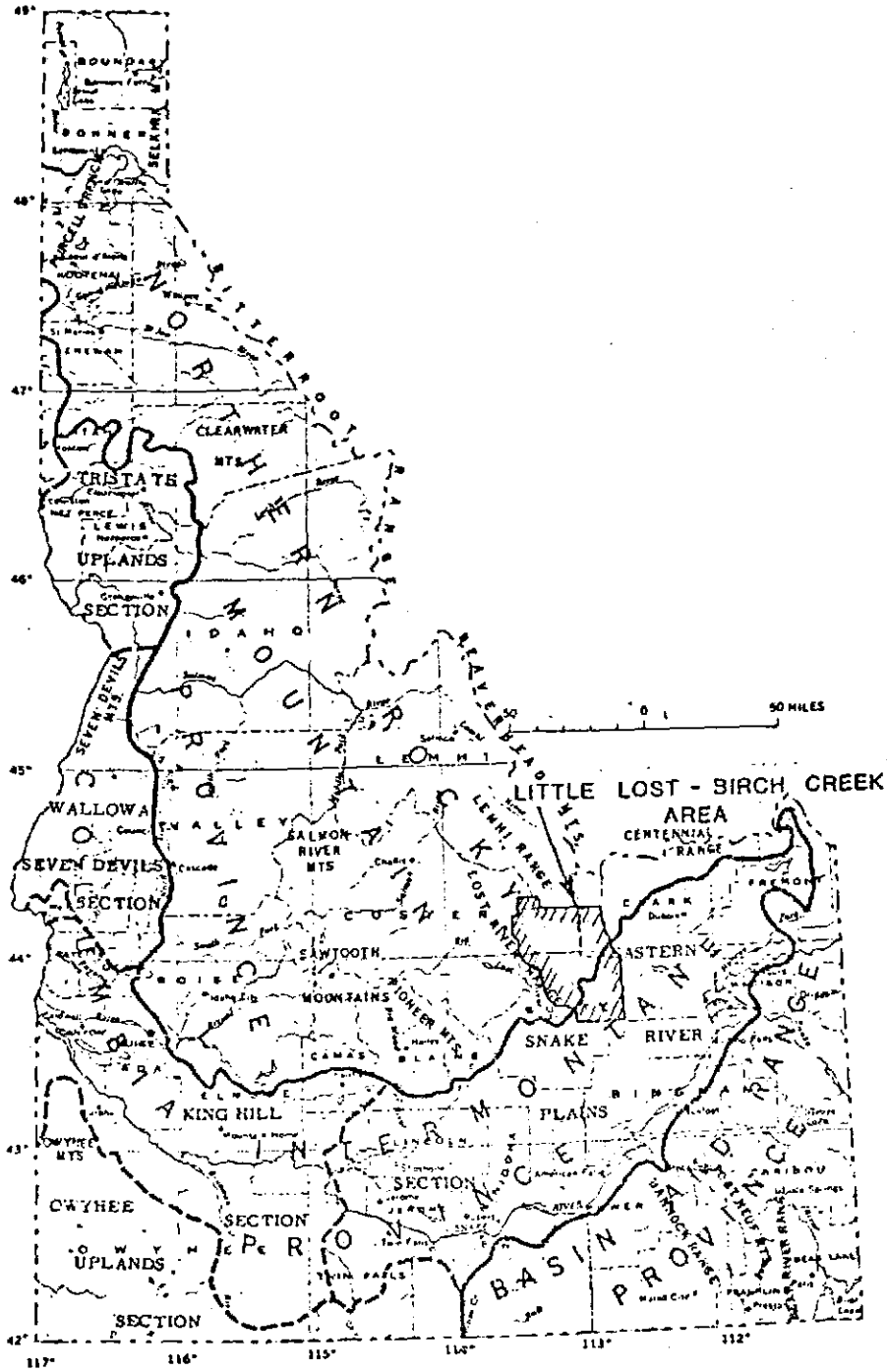


Figure 1. Physiographic provinces and features of Idaho; hatchers outline the approximate boundary of the Little Lost-Birch Creek area.

Saturday Mountain formation. It is reported that the Saturday Mountain quartzite of the Lemhi Range is partly Silurian age (Ross, 1961, p. 207-208). Other Silurian rocks consist of finely crystalline dolomites exposed at Hawley Mountain and mapped by Mapel and Shropshire (1973). Devonian limestones and dolomites of the Beartooth, Jefferson, and Three Fingers formations are exposed at Hawley Mountain and equivalent units are exposed in the southern Lemhi Range area. Younger Paleozoic rocks include Mississippian, Pennsylvanian, and Permian limestones and fine-grained clastic rocks. The younger Paleozoic rocks comprise a major portion of the Lemhi and Lost River Ranges and belong to numerous formations which are reported by Ross (1961) and Mapel & Shropshire (1973).

Volcanic Rocks

Volcanic rocks are extensively distributed in the Little Lost-Birch Creek area. The rocks occur both in the Lemhi and Lost River Ranges and in the Snake River Plain of the Columbia Intermontane province. Tertiary andesitic flows and interbedded pyroclastic rocks of the Challis volcanics occur in the Lemhi Range and Lost River Range. Several isolated flows of silicic lava and associated rocks of the Idavada volcanics occur on the eastern flanks of Lemhi Range; these volcanic rocks are probably Tertiary in age. The youngest and most widespread volcanic unit occurs in the southern portion of the Little Lost-Birch Creek region. Walker (1964) and Nace & others (1975) have mapped and described these rocks in the National Reactor Testing Station area. The volcanic rocks consist chiefly of Quaternary basaltic lava flows and associated rocks of the Snake River group. The basalts range from porous to dense rocks, and associated rocks include cinders, scoria, and slaggy fragments which have accummulated near vents and craters.

Alluvial Deposits

Quaternary deposits of the Little Lost-Birch Creek area consist of unconsolidated or poorly consolidated clay, silt, sand and gravel. Nace and others (1975) and Walker (1964) have mapped and described these deposits in the National Reactor Testing Station of Idaho. The deposits include widespread alluvial fan sediments that flank the sides of the Lost River Range and the Lemhi Range. Ross (1961) has noted Quaternary landslide deposits in the Lemhi Range. Stream channel and flood plain deposits are found in both the Little Lost River and Birch Creek valleys. The Little Lost River, Birch Creek, and other minor drainages empty into the Snake River Plain where Quaternary lake beds and associated beach and bar sediments have accummulated. Quaternary alluvial deposits also include discontinuous windblown sediments in the Snake River Plain area. The wind-laid sediments consist of longitudinal sand dunes and loess deposits that form a veneer over other units.

Structure

Structural features such as folds, flextures, and faults affect many of the rocks observed in the Little Lost-Birch Creek area. Paleozoic rocks of the Lemhi Range and the Lost River Range have been extensively folded and faulted during several episodes of crustal deformation. Many of the Paleozoic rocks have been folded into a series of northwest trending folds. Older faults consist of thrust faults which have crumpled and displaced Paleozoic strata. A thrust fault zone recognized by Ross (1961) occurs along the southwest flank of the Lemhi Range. Downwarping of the Snake River Plain is evident from attitudes of north and south flanking Paleozoic rocks that dip toward the axis of the plain (Nace & others, 1975). Flexture of Cenozoic sediments towards the axis of the plain also indicates downwarping according to Nace & others (1975).

Younger Cenozoic faults with vertical ground and surface displacements cut Quaternary alluvial fans along the western flanks of the Lemhi Range near Howe and the Lost River Range near Arco (see fig. 2). The Howe and Arco fault scarps in the Little Lost-Birch Creek area have been studied by Malde (1971). Walker (1964) notes the alignment of vents and craters along a northwest trending fault and cracks. Other fractures with varying trends also occur in the Snake River Plain. Malde (1971, p. 8b) concludes, from lengths, displacements, and evidence of recent movements, that renewal of large earthquake activity may occur along the Howe and Arco fault scarps.

MINERAL RESOURCES

Geological Survey information indicates that certain lands within the Little Lost-Birch Creek area are valuable prospectively for geothermal steam and associated geothermal resources, phosphate, and oil and gas. These lands are indicated on Appendix C.

Locatable minerals have been reported within certain areas of the Little Lost-Birch Creek area. Enclosed in this report are duplicate copies of mineral record cards which describe areas of reported occurrences. Mineral record cards summarize information on reported occurrences and include references which may be consulted if more detailed information is required. Your attention is also directed to: Idaho Bur. Mines and Geol., Special Report 1 (1964) which contains information on mineral and water resources of Idaho. For the remainder of the Little Lost-Birch Creek area, locatable minerals are not known or reported; however, this information should not be relied on solely as a determination that the land is nonmineral in character.

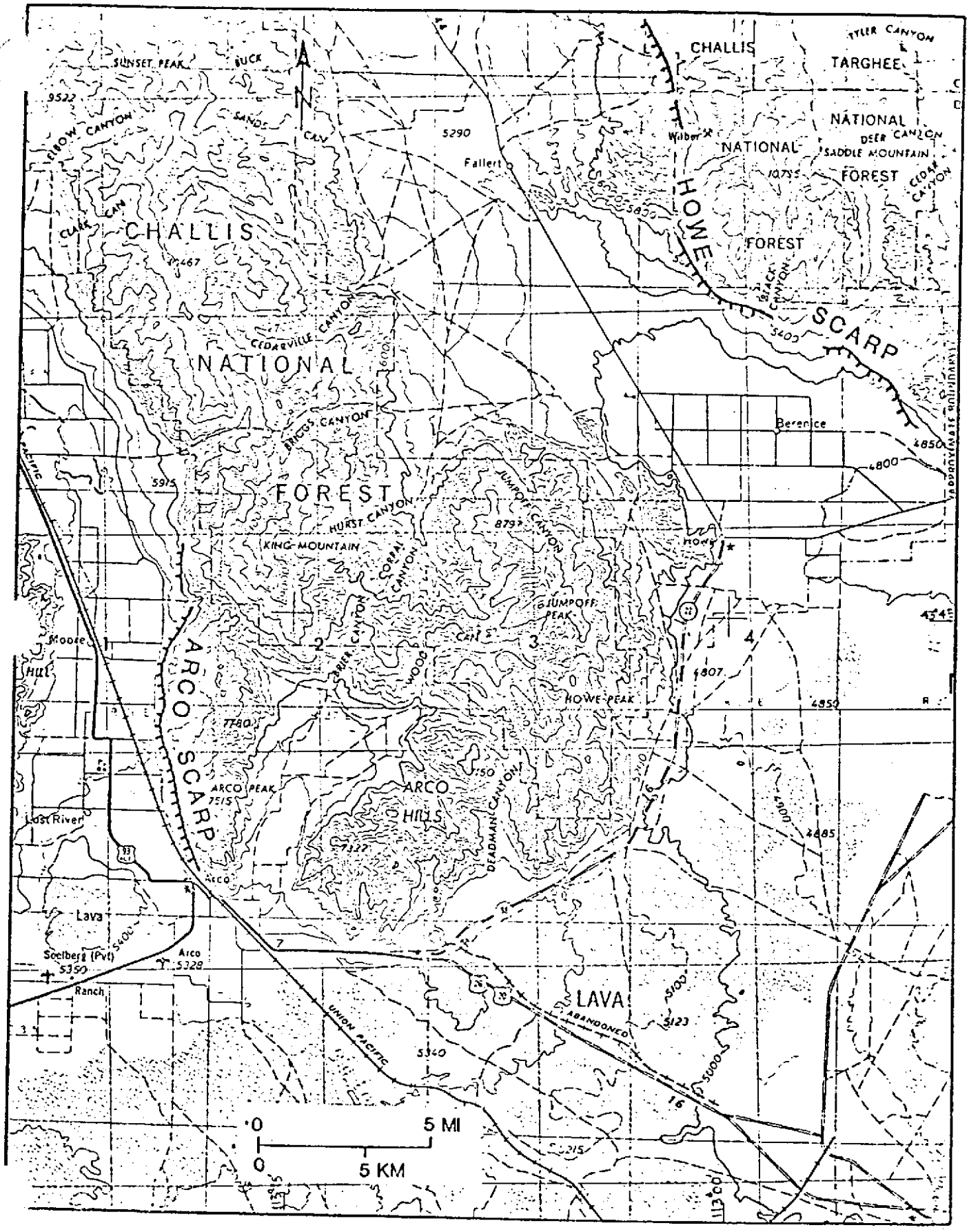


Figure 2. Map showing location of the Arco and Howe fault scarps in Little Lost-Birch Creek area, Idaho (after Malde, 1971, fig. 1).

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APPENDIX B

MAJOR STRATIGRAPHIC AND TIME DIVISIONS IN USE BY THE U. S. GEOLOGICAL SURVEY

Era	System or Period	Series or Epoch	Estimated ages of time boundaries in millions of years [1]
Cenozoic	Quaternary	Holocene	
		Pleistocene	1
	Tertiary	Pliocene	10
		Miocene	25
		Oligocene	40
		Eocene	60
		Paleocene	
Mesozoic	Cretaceous	Upper (Late) Lower (Early)	125
	Jurassic	Upper (Late) Middle (Middle) Lower (Early)	150
	Triassic	Upper (Late) Middle (Middle) Lower (Early)	180
Paleozoic	Permian		205
	Carboniferous systems: Pennsylvanian	Upper (Late) Middle (Middle) Lower (Early)	
	Carboniferous systems: Mississippian	Upper (Late) Lower (Early)	255
	Devonian	Upper (Late) Middle (Middle) Lower (Early)	315
	Silurian	Upper (Late) Middle (Middle) Lower (Early)	350
	Ordovician	Upper (Late) Middle (Middle) Lower (Early)	430
	Cambrian	Upper (Late) Middle (Middle) Lower (Early)	510
Precambrian		Informal subdivisions such as upper, middle, and lower, or upper and lower, or younger and older may be used locally.	> 3,000

[1] Age values given are the Holmes "B" time scale points (Holmes, A., 1947, The construction of a geological time scale: Geol. Soc. Glasgow, Trans. v. 21, pt. 1, p. 145). Dates are rounded to the nearest 5 million years. The errors are unknown, but more recent age determinations by various physical methods are in general agreement with these values.

BLUE DOME SOILS LEGEND

Photo 775-16, St. Anthony, Idaho

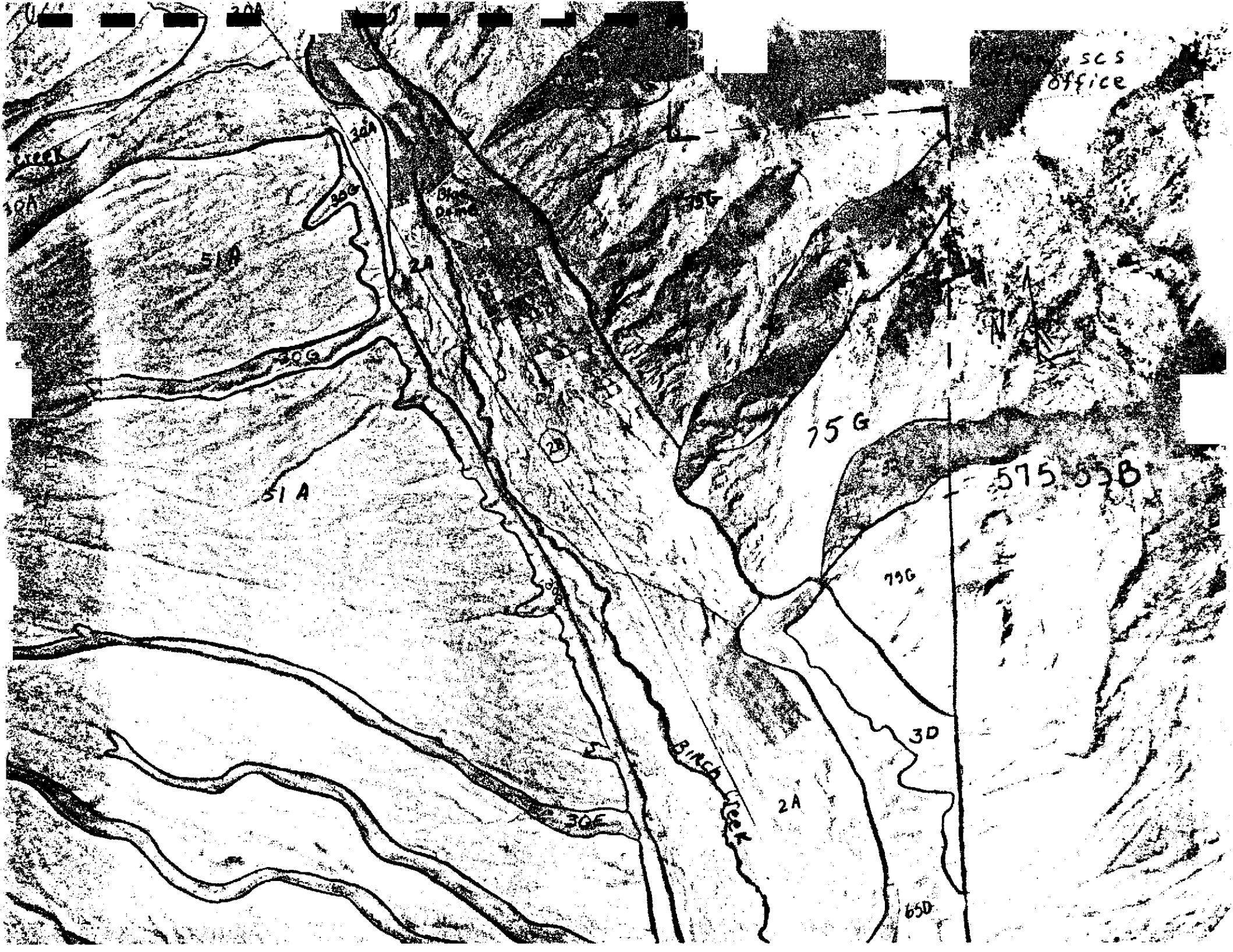
SCS Soils Office

Ray Grow, Party Leader

Prepared January '85

SYMBOL	MAP UNIT NAME
2A	Allhands-Fallert complex, 0 - 4% slopes
30A	Combe loam, 0 to 4% slopes
75G	Torriorthents - Rock outcrop complex, 30 to 60% slopes
30G	Combe loam, 30 to 60% slopes
51A	Nicholia - Bluedome complex, 0 to 4% slopes

Phone (208) 624-4506


SCS
office
Creek
30A
30G
51A
2A
35G
75G
575
52B
79G
3D
BIRCH CREEK
2A
30E
65D

In a representative profile the surface layer is pale brown gravelly loam about 3 inches thick. The subsoil is pale brown very gravelly loam and extremely gravelly sandy loam about 17 inches thick. The substratum is light brownish gray extremely gravelly loamy coarse sand about 40 inches thick.

The Fallert soil has moderately rapid permeability. Root concentration is at depths of 8 to 20 inches. Available water capacity is medium. Runoff is slow and the hazard of erosion is slight.

The complex is used for range, wildlife habitat and recreation. The potential native vegetation consists mainly of bluebunch wheatgrass, blacksage, and big sage (wyomingensis), and also includes Sandberg bluegrass, cheatgrass, Indian rice, Junegrass, Nevada bluegrass, phlox and green rabbitbrush. When the range condition deteriorates, the plants most likely to invade or increase include Sandberg bluegrass, cheatgrass, phlox and rabbitbrush. Practices that could be utilized to maintain range condition are planned grazing system, brush management, reseeding program, water development, fencing to control grazing, and proper grazing use. Seeding will be difficult due to shallow depth of Allhands soils and droughtness. Species commonly used for reseeding include Nordan crested, Whitmore wheatgrasses, and Siberian wheatgrass.

Inclusions of vegetation within this mapping unit are small areas of big sage (wyomingensis). This will occur where the soils have a high available water holding capacity such as greater depths to extremely gravelly material or greater depths to the duripan. It also will occur on the soils that are included within this mapping unit.

2A - Allhands-Fallert Complex, 0 to 4 percent slopes.

This complex consists of level to gently sloping soils on alluvial fans. Elevation is 5400 to 6200 feet. This complex is about 40 percent Allhands gravelly loam and 30 percent Fallert gravelly loam. The remaining 30 percent is (15%) Lien gravelly loam, (10%) Siri very gravelly loam and (5%) a soil similar to Allhands but the duripan occurs below 20 inches.

The Allhands soil is shallow and well drained. It formed mainly in alluvium from mixed sedimentary metamorphic rocks. The mean annual precipitation is about 9 inches, the mean annual air temperature is about 45° F., and the frost-free period is about 80 days.

In a representative profile the surface layer is light brownish gray loam about 2 inches thick. The upper subsoil is pale brown loam about 7 inches thick. The lower part of the subsoil is light yellowish brown extremely gravelly loam about 6 inches thick. The substratum is very pale brown and light gray extremely gravelly loam and loamy coarse sand about 45 inches thick. These soils have duripans at depths of 9 to 20 inches that limit root penetration.

The Allhands soil has moderate permeability. Root concentration is 9 to 20 inches. Available water capacity is low. Runoff is medium, and the hazard of erosion is moderate.

The Fallert soil is very deep and well drained. It formed in alluvium from sedimentary and metamorphic rocks. The mean annual precipitation is about 9 inches. The mean annual air temperature is about 43° F., and the frost-free period is about 80 days.

clover. In the Pass Creek of the Birch Creek drainage the vegetation is dominantly low gray sage. This occurs on the higher part of the fan.

30G - Combe loam, 30 to 60 percent slopes.

This mapping unit is the same as 30A except it has steeper slopes and the extremely gravelly material is closer to the surface. These areas are dominated with chickensage. They have very rapid runoff and very high erosion hazard. Seeding will be impractical on these steep slopes.

30A - Combe loam, 0 to 4 percent slopes

This level to gently sloping soil is on alluvial fans and terraces. It is deep and well drained. Elevation is 6200 to 6500 feet. This soil formed in mixed sedimentary and metamorphic rocks. The mean annual precipitation is about 12 inches. The mean annual air temperature is about 41° F., and the frost-free period is about 50 days.

Included with this soil in mapping are small areas of Nicholia gravelly loam (10 percent), Windfall gravelly loam (10 percent), and Bluedome loam (5 percent).

In a typical profile the surface layer is grayish brown, mildly alkaline, loam about 4 inches thick. The subsoil layer is pale brown, [illegible] moderately alkaline, very gravelly loam about 14 inches thick. The substratum is gray, moderately alkaline, very gravelly loamy coarse sand about 40 inches thick.

Permeability is moderately rapid. Root concentration is at depths of 8 to 18 inches. Available water capacity is low. Runoff is very slow and the hazard of erosion generally is slight.

This soil is used for range, wildlife habitat and recreation. The potential native vegetation consists mainly of big sage (wyomingensis) and bluebunch wheatgrass, but also includes squirreltail, Indian Rice, phlox, granite prickly gila, big goldenweed, and green rabbitbrush. When the range condition deteriorates, the plants most likely to invade or increase include squirreltail, phlox, granite prickly gila, and green rabbitbrush. Practices that could be utilized to maintain range condition are planned grazing system, brush management, reseeding program, water development, fencing to control grazing, and proper grazing use. Seeding will be difficult due to droughtness. Species commonly used for reseeding include crested wheatgrass, yellow sweet

and is underlain by very pale brown extremely gravelly loamy coarse sand to depths of 60 inches.

The Bluedome soil has moderate permeability. Root concentration is at depths of 12 to 24 inches. Available water capacity is high. Runoff is slow, and the hazard of erosion is slight.

This complex is used for range, wildlife habitat and recreation. The potential native vegetation consists mainly of big sage (wyomingensis), low gray sage and bluebunch wheatgrass, but also includes spiny hopsage, rabbitbrush, winterfat, bluegrass and Indian Rice. When the range condition deteriorates, the plants most likely to invade or increase include phlox, cheatgrass, squirreltail and rabbitbrush. Practices that could be utilized to maintain range condition are planned grazing system, brush management, reseeding program, water development, fencing to control grazing, and proper grazing use. Seeding will be difficult due to shallow depth and droughtness. Possible reseeding species are Siberian wheatgrass, and yellow sweet clover.

The Nicholia soils usually have low gray sage and Bluedome usually soils usually have big sage. This is related to the available water holding capacity of the two soils.

51A - Nicholia-Bluedome Complex, 0 to 4 percent slopes

This complex consists of level to gently sloping soils on alluvial fans. Elevation is 6000 to 7200 feet. This complex is about 50 percent Nicholia gravelly loam, and 30 percent Bluedome loam. The remaining 20 percent is Windfall gravelly loam (10 percent) and Combe loam (10 percent). In Birch Creak there is 5 to 10 percent inclusions of Surrett gravelly loam.

The Nicholia soil is shallow and well drained. It formed mainly in alluvium from mixed sedimentary and metamorphic rocks. The mean annual precipitation is about 12 inches, the mean annual air temperature is about 41° F., and the frost-free period is about 50 days.

In a representative profile the surface layer is grayish brown gravelly loam about 2 inches thick. The subsoil is pale brown gravelly loam about 12 inches thick. The duripan is light brownish gray extremely gravelly loamy coarse sand about 17 inches thick. The substratum is light brownish gray extremely gravelly loamy coarse sand to 60 inches. The duripan restricts root penetration.

The Nicholia soil has moderate permeability to the duripan and slow in the duripan. Root concentration is at depths of 8 to 19 inches. Available water capacity is low. Runoff is slow, and the hazard of erosion is slight.

The Bluedome soil is moderately deep and well drained. It formed in alluvium from sedimentary and metamorphic rocks. The mean annual precipitation is about 12 inches. The mean annual air temperature is about 41° F., and the frost-free period is about 50 days.

In a representative profile the surface layer is brown loam about 3 inches thick. The subsoil is pale brown and very pale brown loam about 14 inches thick. The upper substratum is very pale brown loam 17 inches thick. The duripan is very pale brown indurated duripan about 12 inches thick

Of the 60 percent Torriorthents there is 20 percent mountain mahogany. The remaining 40 percent is black sage.

75G - Torriorthents-Rock Outcrop complex, 30 to 60 percent slopes

This mapping unit is the same as 75EF except it has steeper slopes and 5 to 10 percent more rock outcrops. It also has very rapid runoff and very high erosion hazard. Seeding is impractical on the steep, rocky areas.

75EF - Torriorthents-Rock Outcrop Complex, 12 to 30 percent slopes.

This complex consists of moderately steep to steep soils on mountain sideslopes and ridges. Elevation is 4800 to 6200 feet. This complex is about 60 percent Torriorthents and 25 percent Rock Outcrop. The remaining 15 percent is McCaleb loam or a soil like McCaleb but stony throughout the progile.

The Torriorthents are shallow to deep and well drained. They formed mainly in residuum or colluvium from limestone. The mean annual precipitation is about 8 inches, the mean annual air temperature is about 43° F., and the frost-free period is about 80 days.

In a representative profile the surface layer is loam to stony loam about 5 inches thick. The underlying material is loam to very stony fine sandy loam about 15 to 55 inches thick.

The Torriorthents have moderate to moderately rapid permeability. Root concentration is at depths of 6 to 15 inches. Available water capacity is low to high. Runoff is rapid, and the hazard of erosion is high.

The Rock Outcrop is bare exposures of limestone.

This complex is used for range, wildlife habitat and recreation. The potential native vegetation consists mainly of black sage and bluebunch wheatgrass, but also includes shadscale, winterfat, low gray sage, rabbitbrush, Indian Rice and bluegrasses. When the range condition deteriorates, the plants most likely to invade or increase include rabbitbrush and phlox. Practices that could be utilized to maintain range condition are planned grazing system, brush management, reseeding program, water development, gencind to control grazing, and proper grazing use. Seeding will be difficult due to steep slopes, rockiness or stoniness, shallow depth, and droughtness.

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Idaho State Office
3380 Americana Terrace
Boise, Idaho 83706

IN REPLY
REFER TO: 3833 (923 SH)

AUG 19 1983

Mr. Ted S. Sorenson
Consulting Engineer
550 Linden Dr.
Idaho Falls, ID 83401

Dear Mr. Sorenson:

Thank you for your letter of August 2, 1983, concerning the Birch Creek Hydroelectric Project.

A review of our files shows no claims filed in sec. 35, T. 9 N., R. 30 E., B.M., Idaho.

MAPCO Minerals Corporation has mining claims in the S½, sec. 5, T. 8 N., R. 31 E., B.M., Idaho. These are the SB #18, SB #19, SB #20, SB #21, SB #22, SB #23, SB #25, SB #26 and SB #27 lode mining claims. These claims all overlap in the "center" of the S½. No information is given on the certificates of location other than they are lode mining claims.

The same is true for the SW¼NW¼NE¼, sec. 17, T. 8 N., R. 31 E., B.M., Idaho. MAPCO Minerals Corporation has the SB #80 and SB #87 lode mining claims.

We are sending a copy of your letter to Tim Carroll, Geologist, at our Idaho Falls BLM District Office. You may wish to call him at 529-6386 for further information about the area.

Sincerely yours,

Alan B. Tripp

Alan B. Tripp, Chief
Branch of Mining Law & Salable Minerals

cc:
Tim Carroll w/copy of letter
Idaho Falls District

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Idaho Falls District
940 Lincoln Road
Idaho Falls, Idaho 83401

IN REPLY
REFER TO: I-10684

NOV 16 1984

Mr. Ted Sorenson
Birch Power Company
550 Lincoln Drive
Idaho Falls, ID 83401

Dear Ted,

On November 6, 1984, you requested that this office evaluate how your proposed Birch Creek hydroelectric power facility might affect mineral exploration and development operations. The following are results of this evaluation.

According to BLM mining claim records (current as of 9/12/84), the proposed hydro-power structures would cross public lands under 25 to 30 mining claims. These public lands are described as follows:

T. 8 N., R. 31 E.,
Sec. 4: SW1/4
Sec. 5: E1/2,NW1/4
Sec. 6: NE1/4
Sec. 9: W1/2SE1/4
Sec. 10: SW1/4

T. 9 N., R. 31 E.,
Sec. 35: SW1/4

These claims were located by Mapco Minerals Corp. of Denver (20-25 lode claims), E.J. Wilson and Sons of Lidy Hot Springs, Idaho (2 placer claims), and Birch Creek Mining Co. of Idaho Falls, Idaho (3-4 lode claims). No discoveries of economically mineable mineral deposits on the claims have been reported. However, Mapco conducted exploration operations in 1983 that involved the drilling of several holes in the vicinity of the proposed facility. One hole was drilled within 200 feet of the proposed "Inlet Structure" near the center of the E1/2 of Sec. 5, T. 8 N., R. 31 E.

Most of the prospects and mines that occur in the vicinity of the proposed facility were developed when the nearby Birch Creek Mining District was active from the 1880's through the 1940's. Ore minerals reported to occur in this district include copper, lead, zinc, silver, gold, uranium and iron. Industrial-grade limestone may also occur in the area. The only mine currently active in the area is an open-pit iron mine operated by E. J. Wilson and Sons in the N1/2 of Sec. 26, T. 9 N., R. 31 E.

Anticipated impacts to mineral exploration and development operations, impacts that would result from the construction of the proposed facility, would not be very significant. Mining claimants' rights to explore and develop mineral deposits on pre-existing mining claims, without regard for the protection of

right-of-way (R/W) structures, supercede rights granted in a R/W that crosses such claims.

Although a R/W does not withdraw lands from mining claim location, operations conducted on mining claims located on lands within a pre-existing R/W would have to honor the prior rights granted by the R/W. Disturbance of R/W structures would not be allowed unless an agreement between claimant and R/W holder permits such disturbance. The mining of minerals along such a R/W corridor would require compensating the holder of the R/W for any damage to R/W structures. The probability for the occurance of economic mineral deposits along the proposed R/W corridor that crosses lands not presently under mining claims is not known. Therefore, the impacts that this R/W could have on mineral operations on these lands cannot be assessed.

It is not known if or when further mineral exploration or development operations will be planned by existing or future mining claimants for lands in the vicinity of the proposed hydro-power R/W.

Gravel deposits occur throughout most of the lands under the proposed R/W corridor. However, there are other gravel sources in the vicinity of these lands that have sufficient reserves to satisfy future demands for this mineral material.

I hope this evaluation provides the information you require. If you have a need for additional information pertaining to this subject, contact Tim Carroll at our office (529-1020).

Sincerely,

Brent D. Jensen

Brent D. Jensen
Area Manager
Big Butte Resource Area

cc: Mapco Minerals Corp.
Charles E. Wilson
Birch Creek Mining Co./L.S. Merrill

7) REPORT ON RECREATIONAL RESOURCES

7) REPORT ON RECREATIONAL RESOURCES

(i) No lands within the vicinity of the project have been designated for study for inclusion in:

a. National Wild & Scenic Rivers Systems

b. The National Trails Systems

c. Wilderness Area

(ii) The Birch Creek area is heavily used for fishing and day camping. This use will be enhanced. The following improvement will be provided by the applicant to enhance the recreational resources (see Exhibit G-3):

1. Development of 1.5 miles of fishery habitat to mitigate by 300% the habitat lost to fishery.

2. The fishery habitat will be fenced to protect the fishery from livestock depredation. In addition, frequent fence access portals throughout the fishery habitat reach will be provided for fisherman access (see Exhibit F-5).

3. The fishery habitat areas under phase I would receive numerous plantings to develop an Aesthetically pleasing and biologically productive riparian habitat for the fishery and also for day camping, hikes, etc.

(iii) The small diversion impoundment of approximately two surface acres (see Exhibit F-1) would be fenced with pedestrian access for fishing. The maximum fluctuation in water level would be less than one foot. The impoundment would be provided with a fenced buffer zone to protect the fishery and riparian development. The fence would be located a minimum of 100 feet from the shoreline.

(iv) The 1.5 mile reach of fishery habitat will sustain a minimum resident population of 350 rainbow trout 8.5 inches in length or greater. The reach will be stocked with rainbow trout along with other reaches of Birch Creek by the Idaho Dept. of Fish & Game. This combined effect will yield a catch rate of 1 fish per angler hour (see J.S. Griffith Report, Section E3.

(v) Development Schedule and Cost Estimates:

	Date from Start of Construction	Cost
1. Fishery Habitat Improvements	concurrent	$45,000
2. Phase I Riparian Improvements	concurrent	$82,500
3. Phase II Riparian Improvements	10 years	$50,000
4. Phase III Riparian Improvements	15 years	$25,000

(vi) The description of the riparian enhancement and fishery improvements is contained in Section E-3 documents by J.S. Griffith. of Idaho State University and Bob McCarty of the Bureau of Land Management. All recommendations by the Bureau of Land Management and Idaho Department of Fish & Game will be adhered to.

(vii) Drawings - see:

Section G-3	Fishery Habitat, Riparian Habitat, Stock/Game Watering Layout
Section F-2	Riparian Zone Canal Cross Section
Section F-5	Fencing Details

8) REPORT ON AESTHETIC RESOURCES

8) REPORT ON AESTHETIC RESOURCES

Design of the project will be under the direction of the Bureau of Land Management and the Idaho Department of Fish & Game to provide for protection of aesthetic resources. In general, the feeder ditch will be developed over a multi staged program to develop adjacent riparian habitat and to provide integration with the local environment.

(i) Description of aesthetic character of the lands and waters directly and indirectly affected by the proposed facilities - The proposed project would blend well with the aesthetic character of the multiple use of the Birch Creek drainage for both recreational and agricultural use. The penstock would be buried and reseeded. The feeder ditch would be landscaped and fenced over time to provide aesthetic qualities as described previously.

(ii) No significant impacts will be realized on the aesthetic resources from the implementaiton of the proposed project. Minor disruptions will be realized during construction due to the operation of machinery in the area. However, in the long term, the project will be landscaped well with the existing environment and will blend nicely.

(iii) Description of Mitigative Measures Proposed by the Applicant Including Architectual Design and Landscaping. As previously mentioned, the feeder ditch will be fenced and seeded with a native variety of vegetations. The penstock will be buried and the power-house will be set at a low profile with generous utilization of earth-tone colors to blend into the surrounding environment. The maps, drawings and photographs are provided in other sections of this report and are located in Exhibit F and G.

9) REPORT ON LAND USE

9) REPORT ON LAND USE

For a discussion of the current land uses, please refer to the Little Lost Birch Creek Land Use Decisions Summary, as published by the Bureau of Land Management. The existing use of adjacent ground is primarily for livestock and wildlife utilization. A plan has been developed for the maximum beneficial use of the project to meet these ends. Please refer to the report by Mr. McCarty and Mr. Glen Devoe with respect to placement of wildlife and livestock watering troughs throughout the project. Mr. McCarty and Mr. Devloe are with the Bureau of Land Management office.

No impact would be realized on wetlands, floodlands, primary and unique farmland as designated by the U.S. Department of Agriculture, special area management plan of the Office of the National Oceanic Atmospheric Administration. The majority of lands in the area are under the direction of the Bureau of Land Management.

Approximately 250 acres of agricultural land -- owned by downstream irrigators could and would be converted from dry land to irrigated production due to increased water supply through elimination of bedloss. A net benefit to the land owners would be realized.

To that end, the downstream irrigatos have been most cooperative. The downstream irrigators have therefore, signed options to Birch Power Company for the sale of land on which to locate the powerhouse and related facilities.

The following letters provide the status of right-of-way and/or option agreements with all landowners or administrative agencies on which the project is located:

1. Bureau of Land Management
2. U.S. Department of Energy (delegated to BLM - see letter dated January 1985 from BLM)
3. State of Idaho Department of Lands
4. D & D Enterprizes
5. Ben Wilding

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Idaho Falls District
940 Lincoln Road
Idaho Falls, Idaho 83401

IN REPLY
REFER TO: 4130

June 5, 1984

Ted Sorenson
Birch Power Company
550 Linden Drive
Idaho Falls, Idaho 83401

Dear Mr. Sorenson:

As a result of consultation with your company we have substantial agreement on stipulations for a right-of-way grant on your Birch Creek hydro-electric power proposal. The proposed mitigation plan appears to minimize adverse impacts on fisheries, riparian and grazing values in the project area. There will undoubtedly remain some details to be worked out as the right-of-way application is finalized.

We appreciate your cooperation and willingness to resolve the resource impacts of your project.

Sincerely,

Brent D Jensen

Brent D Jensen
Area Manager
Big Butte Resource Area

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Idaho Falls District
940 Lincoln Road
Idaho Falls, Idaho 83401

IN REPLY
REFER TO: I-19684

January 24, 1985

Birch Power Co.
c/o Ted Sorensen
550 Linden Drive
Idaho Falls, Idaho 83401

Dear Mr. Sorensen:

Our research of management responsibilities on Idaho National Engineering Laboratory produced the attached Public Land Orders. Order 2759 states: The authority ..... to issue grants of rights-of-way over such land, is hereby transferred from the Atomic Energy Commission (AEC) (predecessor of Department of Energy at INEL) to the Department of the Interior, provided that any grant under the authority transferred hereby shall be subject to the approval of the AEC and to such terms and conditions as it may specify.

Order 2759 is amended by Order 2954 by addition of a proviso stating: "Provided further that, upon notification to the Department of the Interior, the AEC may issue grants of rights-of-way over such lands under the authority contained in subsection 161q of the AEC Act of 1954 as amended."

In application of these land orders, over the years BLM has granted rights-of-way to non governmental applicants subject to terms and conditions as specified by the Department of Energy (DOE). DOE has constructed rights-of-way for their own purposes without involvement of BLM.

When processing of your right-of-way application for Birch Hydroelectric Project, we will contact DOE for their review and concurrence including any terms and conditions they may feel are necessary.

Sincerely,

Brent D Jensen

Brent D Jensen
Area Manager
Big Butte Resource Area

Enclosures

PUBLIC LAND ORDER 2954

(Idaho 08047)

Idaho

AMENDING PUBLIC LAND ORDER NO. 2759 OF AUGUST 28, 1962

By virtue of the authority vested in the President, and pursuant to Executive Order No. 10355 of May 26, 1952, it is ordered as follows:

Public Land Order No. 2759 of August 28, 1962, transferring from the Atomic Energy Commission to the Department of the Interior authority to issue rights-of-way over public lands set aside for use of the former as a part of the National Reactor Testing Station, is hereby amended by adding thereto the following proviso:

> "provided further that, upon notification to the Department of the Interior, the Atomic Energy Commission may issue grants of rights-of-way over such lands under the authority contained in subsection 161q. of the Atomic Energy Act of 1954, as amended.

(sgd) John A. Carver, Jr.
Assistant Secretary of the Interior

February 28, 1963

Published in Vol 28 No. 45
Federal Register, page 2164,
dated March 6, 1963.
F.R. Doc # 63-2331

(Idaho 09047)

IDAHO

TRANSFERRING FROM THE ATOMIC ENERGY COMMISSION TO THE DEPARTMENT OF THE INTERIOR, JURISDICTION TO ISSUE RIGHTS-OF-WAY OVER CERTAIN LANDS

The authority of the Atomic Energy Commission, as the agency having jurisdiction over the public lands withdrawn or set aside for its use as a part of the National Reactor Testing Station by Public Land Orders No. 637 of April 7, 1950, No. 691 of December 5, 1950, and No. 1770 of December 19, 1958, to issue grants of rights-of-way over such lands, is hereby transferred from the Atomic Energy Commission to the Department of the Interior, provided, that any grant under the authority transferred hereby shall be subject to the approval of the Atomic Energy Commission and to such terms and conditions as it may specify. (Authority: Executive Order No. 10355 of May 26, 1952).

(sgd.) John A. Carver, Jr.

August 28, 1962 Assistant Secretary of the Interior

Federal Register Vol. 27, No. 171
September 1, 1962, page 8704
F.R. Doc. # 62-8796

STATE OF IDAHO

DEPARTMENT OF LANDS

Eastern Idaho Area Office
Route 1, Box 400 (Beeches Corner)
Idaho Falls, Idaho 83401

October 27, 1982

Ted S. Sorenson
550 Linden Drive
Idaho Falls, ID 83401

Dear Mr. Sorenson:

I can appreciate the dilemma you have described in your letter of October 25, 1982. Everyone would, of course, prefer to be last in processing new proposals as by then most questions and concerns have been resolved.

To help you with your application to the Federal Energy Regulatory Commission (FERC) I will make the following statement. Hopefully, it will be sufficient to allow FERC to process your request.

> The easement requested by Birch Power Company for a waterway across Idaho endowment land in Section 36, Township 9 North, Range 30 East, B.M. to move water from Birch Creek for use at a hydroelectric power plant will precede all other such subsequent requests to the state. The Idaho Department of Lands will consider this request as having first priority and this area can recommend its approval by the Idaho State Board of Land Commissioners.- once approval of the project is given by the (1) Idaho Department of Fish and Game, (2) The Idaho Department of Water Resources, and (3) The Federal Energy Regulatory Commission. The Board itself must give their final approval and grant the easement which will include an equitable rental fee and a negotiated percentage of the gross annual proceeds of the project.

Sincerely yours,

L. D. BENEDICK
Area Supervisor

LDB:lw

cc: Chief, Bureau
of Lands

EQUAL OPPORTUNITY EMPLOYER

file
Bird Creek

OPTION AGREEMENT

THIS OPTION AGREEMENT made and entered into as of the 27 day of June, 1984, by and between BEN R. WILDING and ELDA WILDING, husband and wife of Clark County, Idaho, hereinafter referred to as "Seller", and TED S. SORENSON and GAYLE A. SORENSON, husband and wife of Bonneville County, Idaho, hereinafter referred to as "Buyer",

WITNESSETH:

IN CONSIDERATION of the mutual covenants set forth herein, the parties agree as follows:

1. Buyer shall have the exclusive option to purchase, upon the terms and conditions set forth herein, such property as Buyer shall select up to a maximum of two acres from the real estated described in the attached Exhibit A, located in Clark County, Idaho, for the sum of $500 per acre.

2. The above said option shall continue in force and effect until 12:00 midnight, on December 31, 1987.

3. In consideration for the option given herein, Buyer shall pay Seller the sum of $25.00.

4. At any time prior to the expiration of the term of the option given herein, Buyer may exercise the option to purchase given herein by Buyer giving written notice to Seller at the following address: Rural Route, Monteview, Idaho 83454, or to such other address as Seller shall direct by writing delivered to Buyer. Said exercise of the option shall be effective upon deposit by Buyer of said notice in the United States Mail, postage pre-paid, certified mail, to Seller at the aforesaid address, or by personal delivery to Seller. In the event Buyer fails to exercise the option given herein prior to the expiration of the term hereof, this Option Agreement shall lapse and be of no further force and effect.

5. This Agreement shall be binding upon and inure to the benefit of the heirs, personal representatives, administrators, successors and assigns of the paties hereto.

IN WITNESS WHEREOF, the parties have caused their names to be subscribed, all as of the day and year first above written.

FILED FOR RECORD AT 35 MINUTES PAST 11 O'CLOCK A M. THIS 5
DAY OF July 1984 AND RECORDED AS MICROFILM NO. 38630
RECORDS OF CLARK COUNTY, IDAHO R. RHULE LEONARDSON RECORDER

38630 FEE 6.00 FILED ____ MICRFMD ✓ INDXD ✓ PLAT ____
BY Judith Johnson DEPUTY

Ted S. Sorenson

Ted S. Sorenson

Gayle A. Sorenson

Gayle A. Sorenson

STATE OF IDAHO)
) ss.
County of Bonneville)

On this 8TH day of June, 1984, before me the undersigned, a Notary Public in and for said State, personally appeared Ted S. Sorenson and Gayle A. Sorenson, husband and wife, known to me to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

David E Benton

Notary Public for:
Residing at: Idaho Falls Ida
~~My Commission Expires~~:

Ben R. Wilding

Ben R. Wilding

Elda H Wilding

Elda Wilding

STATE OF IDAHO)
)ss.
County of Bonneville)

On this 27TH day of June, 1984, before me the undersigned, a Notary Public in and for said State, personally appeared Ben R. Wilding and Elda Wilding, known to me to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

David E Benton

Notary Public for: State of Idaho
Residing at: Idaho Falls Id
My Commission Expires: cont

Attachment A

LEGAL DESCRIPTION

Beginning at the Northeast Corner of Section 14, Township 8 North, Range 31 East, Boise Meridian, thence South 523.6 feet, thence South along the Section line 361.1 feet; thence North 87°38' West, 195.8 feet; thence South o°54' West, 80 feet; thence South 44°11' East 28 feet; thence South 86°29' East, 123 feet; thence South 3°56' West, 56.7 feet; thence South 89°45' West, 184 feet; thence South 0° 46' East, 18.2 feet; thence South 36°10' West, 131.2 feet; thence South 4°12' East, 250 feet; thence South 85°48' West, 200 feet; thence North 4°12' West, 350 feet; thence North 85°48' East, 200 feet; thence North 4°12' West, 350 feet; thence South 85°48' West, 200 feet; thence South 4° 12' East, 150 feet; thence South 85° 48' West, 695.6 feet; more or less, to the West line of West line of the $E\frac{1}{2}NE\frac{1}{4}$ of said Section 14; thence North 1138.8 feet, more or less, to the North line of said Section 14; thence East along the North line of said Section 14, for 1320 feet, more or less, to the Northeast corner of said Section 14 and the point of beginning.

The above described tract being part of the $E\frac{1}{2}N\frac{1}{4}$ of said Section 14.

Nuart Theater at Blackfoot
Center and Rio Theaters
and Motor Vu Drive In
at Idaho Falls

Double D Ranches - - - Top Quality Herefords

Holiday and Westwood Theaters
at Rexburg
Roxy Theater at St. Anthony
Roxy Theater at Salmon

D & D ENTERPRISES, INC.

P. O. Box 5

REXBURG, IDAHO 83440

December 1, 1984

Ted S. Sorenson
550 Linden Drive
Idaho Falls, Idaho 83401

RE: HYDROELECTRIC PROJECT ON BIRCH CREEK

Dear Mr. Sorenson:

This is to inform you that D & D Enterprises, Inc., an Idaho corporation, is the owner of record of the SE 1/16th of NE¼ of Section 14, Township 8 North, Range 31 East of the Boise Meridian, County of Clark, State of Idaho. There is currently in existence a ditch handling Birch Creek water for irrigation purposes that runs in a southeasterly direction within and for the entire length of the property described above.

D & D Enterprises, Inc. hereby grants you the use of this ditch for the purpose of an outfall flow from your propsed power plant to be located in the immediate area. Recognizing that this grant will at no time interfer with the avaliability and use of this ditch for irrigation purposes.

Regards,

James DeMordaunt-President
D & D Enterprises, Inc.

OPTION AGREEMENT

THIS OPTION AGREEMENT made and entered into as of the 7 day of December, 1984, by and between D & D ENTERPRISES, of Madison County, Idaho, hereinafter referred to as "Seller", and TED S. SORENSON and GAYLE A. SORENSON, husband and wife of Bonneville County, Idaho, hereinafter referred to as "Buyer".

WITNESSETH:

IN CONSIDERATION of the mutual covenants set forth herein, the parties agree as follows:

1. Buyer shall have the exclusive option to purchase, upon the terms and conditions set forth herein, such property as Buyer shall select up to a maximum of two (2) acres from the real estate described in the attached Exhibit A, located in Clark County, Idaho for the sum of $500.00 per acre. Right to purchase shall be for the sole purpose of constructing hydroelectric facilities including powerhouse, penstocks, measurement flumes, outfall ditches and power transmission lines.

2. The above said option shall contine in force and effect until 12:00 midnight, on December 31, 1988.

3. In consideration for the option given herein, Buyer shall pay Seller the sum of $25.00.

4. At any time prior to the expiration of the term of the option given herein Buyer may exercise the option to purchase given herein by Buyer giving written notice to Seller at the following address: P.O.Box 5, Rexburg, Idaho 83440 or to such other address as Seller shall direct by writing delivered to Buyer. Said exercise of the option shall be effective upon deposit by Buyer of said notice in the United States Mail, postage prepaid, certified mail, to Seller at the aforesaid address, or by personal delivery to Seller. In the event Buyer fails to exercise the option given herein prior to the expiration of the term hereof, this Option Agreement shall lapse and be of no further force and effect.

5. This Agreement shall be binding upon and inure to the benefit of the heirs, personal representatives, administrators, successors and assigns of the parties hereto.

IN WITNESS WHEREOF, the parties have caused their names to be subscribed, all as of the day and year first above written.

FILED FOR RECORD AT 31 MINUTES PAST 10 O'CLOCK A M. THIS 21 DAY OF Dec 19 84 AND RECORDED AS MICROFILM NO. 32219
R. RHULE LEONARDSON
RECORDS OF CLARK COUNTY, IDAHO RECORDER
FEE 6.00 FILED ____ INDEXED ____ PLAT ____
BY ____ DEPUTY

9013

Ted S. Sorenson

Gayle A. Sorenson

STATE OF IDAHO)
) ss.
County of Bonneville)

On this 7th day of Dec, 1984, before me the undersigned, a Notary Public in and for said State, personally appeared Ted S. Sorenson and Gayle A. Sorenson, husband and wife, known to me to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

David E. Benton
Notary Public for: Idaho
Residing at: Idaho Falls, Id.
My Commision Expires: cont.

Karen L. Mordaunt
D & D Enterprises

D & D Enterprises

STATE OF IDAHO)
) ss.
County of Madison)

On this 3c day of November, 1984, before me the undersigned, a Notary Public in and for said State, personally appeared James Lee Mordaunt, known to me to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Notary Public for State of Idaho
Residing at: Rexburg, Idaho
My Commission Expires: 12-18-86

Exhibit A

Beginning at the Northeast corner of Section14, Township 8 North, Range 31 East of the Boise Meridian, County of Clark, State of Idaho, Thence West along north section line 1,335.5 feet; thence South along East 1/16th line 1,027.7 feet to the point of beginning. Thence South along East 1/16th line 200 feet; thence North 86 01' East 150 feet; thence North parallel to East 1/16th line 200 feet; thence South 86 01' West 150 feet to the point of Beginning. The above being part of the E½-NE¼ of Section 14, above township and range. All in Clark County, Idaho. Together with all ditch and water rights thereto appertaining and belonging.

10) ALTERNATE LOCATIONS, DESIGNS AND ENERGY SOURCES

10. ALTERNATE LOCATIONS, DESIGNS AND ENERGY SOURCES

(i) Three alternatives were considered in arriving at the selection of the proposed project site. In consideration of maximization of head and therefore available energy resource, the optimum site would be to divert water from Birch Creek upstream from the proposed diversion approximately 3.5 miles near Blue Dome. Although this would provide the maximum head and hence the maximum energy for the project, the impact on Birch Creek would be devastating. Extensive investigative effort was expended in research of an alternative wherein the existing diversion at Reno Ditch would be utilized for the diversion for the new power plant. This proved impossible due to the topographical lay of the land. Therefore, the nearest feasible diversion site is upstream 3,000 feet from the existing diversion. This will allow the feeder ditch to avoid unsuitable terrain in route to the penstock intake. Once the feeder ditch was laid out, three alternative sites for the power plant were considered. Site A provided a fall of approximately 294 feet. Site B would have used the same penstock intake but would route the water around Reno Point toward the existing irrigation splitter box would provide 484 gross feet of head. Site C was investigated wherein the water would be delivered to the existing irrigation diversion splitter box and would provide 531 feet of head.

In discussion and negotiation between the Fish and Game, Bureau of Land Management and the downstream ranchers, in order to make available the maximum amount of water through bedloss elimination, Site C was selected. This site also provided the maximum energy output at the proposed diversion which is 3,000 feet above the existing Reno Point diversion.

(iii) Energy conservation has been the prime concern of land management agencies, realizing that alternative sources are long range in their ability to produce on line power economically. Small hydro production appears to be the most feasible source of power production at this time. The following page tabulates the energy source potential studied and examined by various agencies and organizations in Idaho. It will quite clearly show that small hydro production is the most feasible means of energy production.

(iv) <u>Alternative Means of Obtaining An Amount Of Power Equal To That Provided by the Project If Project Not Authorized</u>

Energy conservation has been the prime concern of land management agencies, realizing that alternative sources of energy production are long ranged in ability to produce on-line, reliable power economically. Small hydro production appears to be the most feasible source of power production at this time.

The following pages will tabulate the energy source potential studied and examined by various agencies and organizations in Idaho. It will quite clearly show that small hydro production is the most feasible means of energy production.

POTENTIAL ENERGY PRODUCTION

SOUTHERN IDAHO

Commodity	Likelihood	Reason
Oil & Gas	Low	Limited exploration; reserves presently unknown.
Wood biomass	Fairly good	Co-generation power production at operating mills looks good, however mills in southern Idaho are not as prevelent as in central and northern Idaho.
		Wood by-product used for gasahol proved economically unfeasible.
Uranium	Low	Environmental problems
Geothermal	Limited	Hot holes abound in Idaho, but most are dry holes. Future may hold some promise for geothermal development with proper exploration and use of the heat exchange concept developed and used on the North Slope in Alaska. Financing for speculation purposes in well exploration remains a serious problem.
Solar	Moderate	Not feasible on a large scale. Being used in some home construction.

Commodity	Likelihood	Reason (cont.)
Wind	Moderate	Idaho Power Company has had six applications for contract negotiations for facilities involving wind power. The south/central Idaho area has moderate amounts of wind, however, this source of power is not reliable
Pumped Storage	Unlikely	Idaho Power Company has evaluated this possibility, however, nothing has developed.
Coal	Moderate	Major source of power for major utilities. Construction of new coal fired plants is very costly and transportation of coal poses problems. Coal slurry pipeline is unlikely in the near future.

11) LIST OF LITERATURE

11. LIST OF LITERATURE

1. Little Lost - Birch Creek Land Use Decision Summary, U.S. Department of Interior, Bureau of Land Management, Idaho Falls District, Big Butte Resource Area, October 1981.

2. Birch Creek Aquatic Habitat Management Plan, Idaho Falls District Bureau of Land Management, Idaho Falls, Idaho December 1975.

3. Birch Creek Aquatic Habitat Management Plan - Evaluation & Revision, September 28, 1984, Bob McCarty.

4. Birch Creek Idaho, Stream Survey Report, Bureau of Land Management, Idaho Falls District, Idaho Department of Fish & Game, Idaho Falls, Idaho, July 1976.

5. Feasibility of Developing A Trout Population in the Proposed Birch Creek Hydroelectric Feeder Ditch, by J.S. Griffith, Ph.D., Idaho State University, Pocatello, Idaho April 5, 1984.

6. Memorandum of Agreement between Idaho State University & Birch Power Company.

7. Riparian Habitat Enhancement Plan - Birch Creek, Jack Griffith, Ph.D., Idaho State University, Pocatello, Idaho, April 1984.

8. Birch Creek Hydroelectric Riparian Plan, Idaho Falls District, Bureau of Land Management, Idaho Falls, Idaho, Bob McCarty, Wildlife Biologist, December 21, 1984.

EXHIBIT F

PROJECT STRUCTURES & EQUIPMENT

F-1 Diversion Structure

F-2 Riparian Zone Canal Cross Section

F-3 Bypass Headworks

F-4 Typical Canal Cross Section

F-5 Fencing Details

F-6 Inlet Structure

F-7 Powerhouse Plan

F-8 Powerhouse Elevation

F-9 Raptors Safe Transmission Line

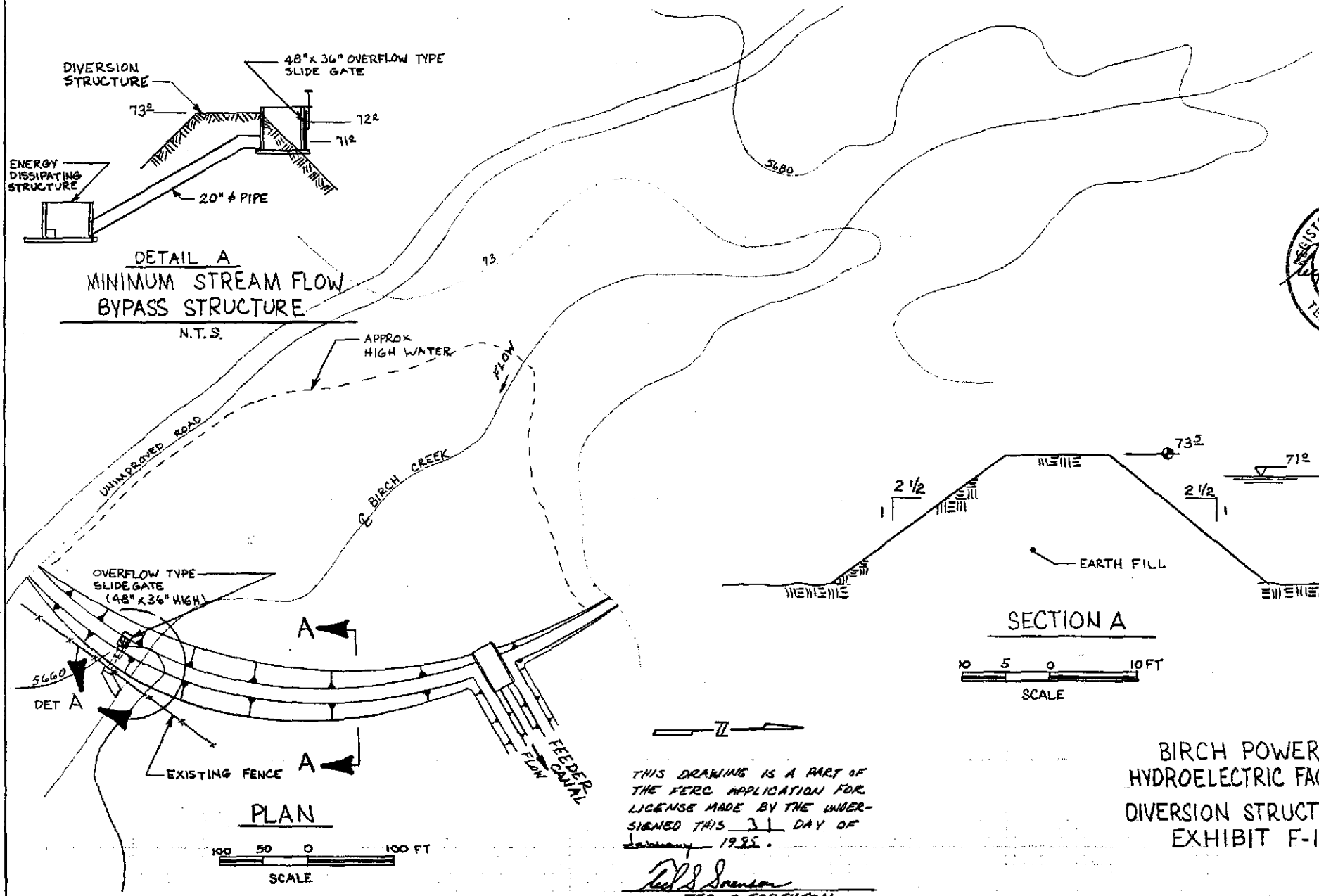


*Note: Large drawings can be found in back pocket.

DETAIL A

MINIMUM STREAM FLOW BYPASS STRUCTURE

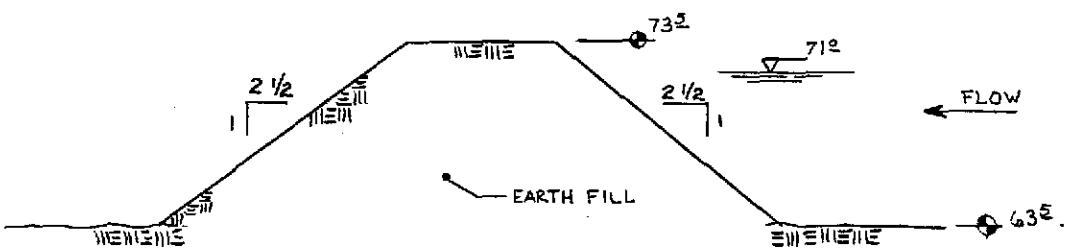
N.T.S.



PLAN

100 50 0 100 FT

SCALE



SECTION A

10 5 0 10 FT

SCALE

REGISTERED PROFESSIONAL ENGINEER
1/31/85
STATE OF IDAHO
TED S. SORENSON

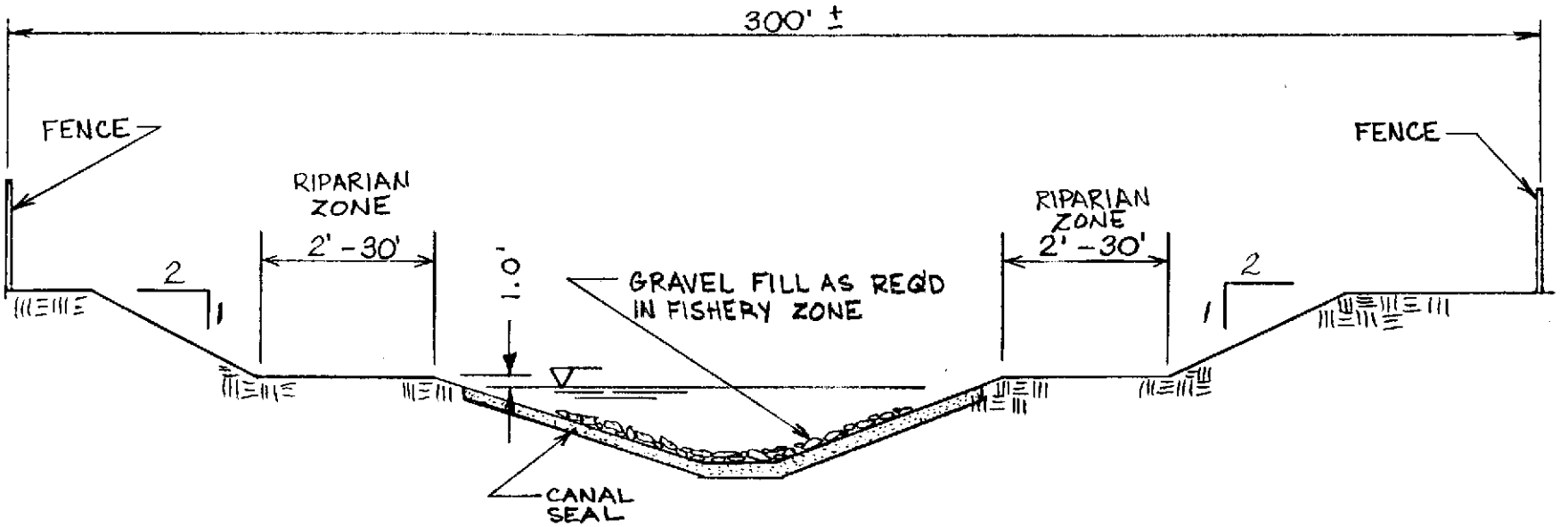
THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 31 DAY OF January 1985.

Ted S. Sorenson

TED S. SORENSON

BIRCH POWER HYDROELECTRIC FACILITY

DIVERSION STRUCTURE EXHIBIT F-1



RIPARIAN ZONE SECTION

10 5 0 10 FT

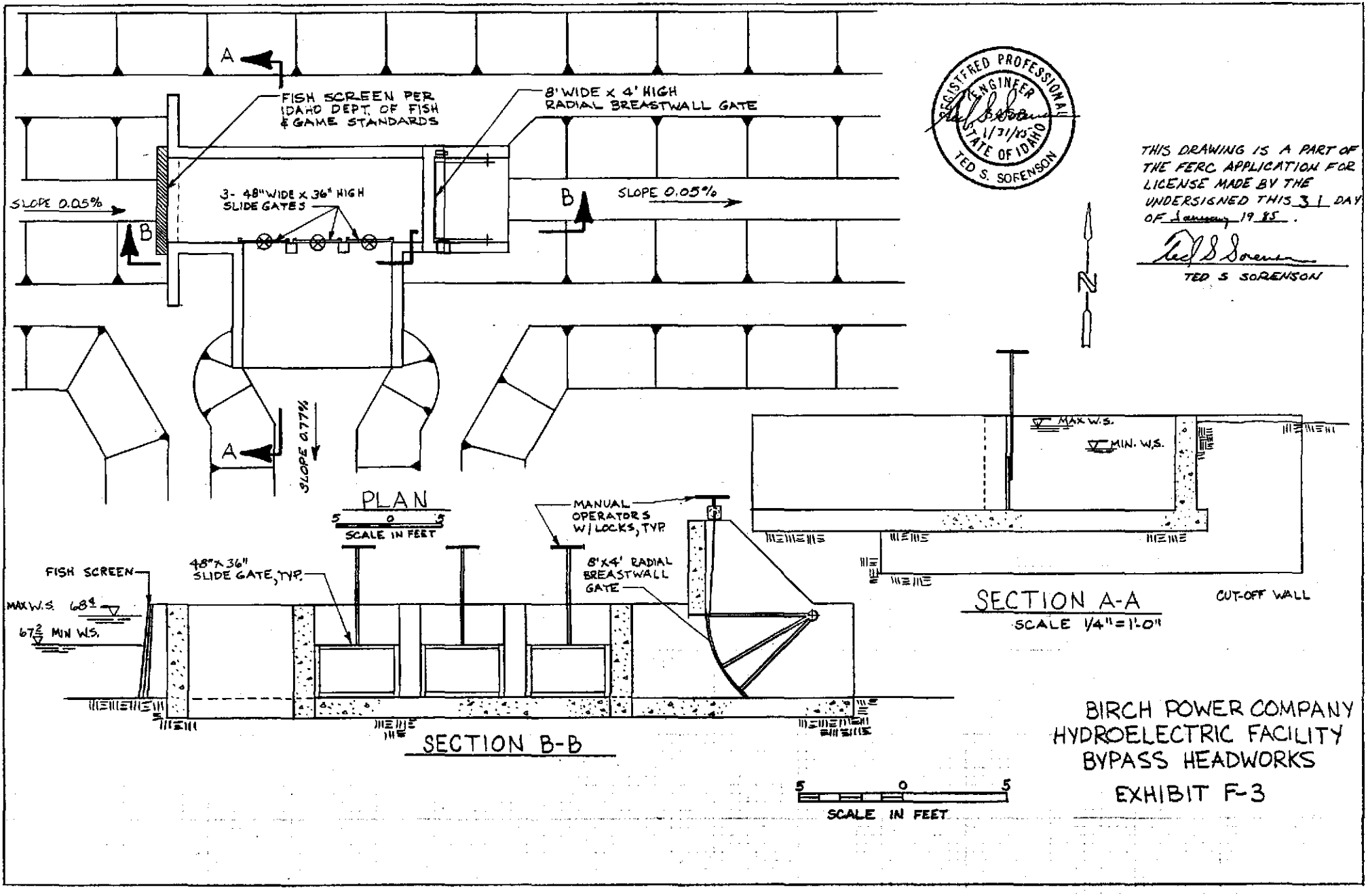
SCALE

REGISTERED PROFESSIONAL ENGINEER
1/31/85
STATE OF IDAHO
TED S. SORENSON

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 31 DAY OF January 1985.

Ted S Sorenson
TED. S. SORENSON

BIRCH POWER HYDROELECTRIC FACILITY RIPARIAN ZONE CANAL SECTION EXHIBIT F-2



THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 31 DAY OF January 19 85 .

Ted S Sorenson

TED S SORENSON

BIRCH POWER COMPANY HYDROELECTRIC FACILITY BYPASS HEADWORKS

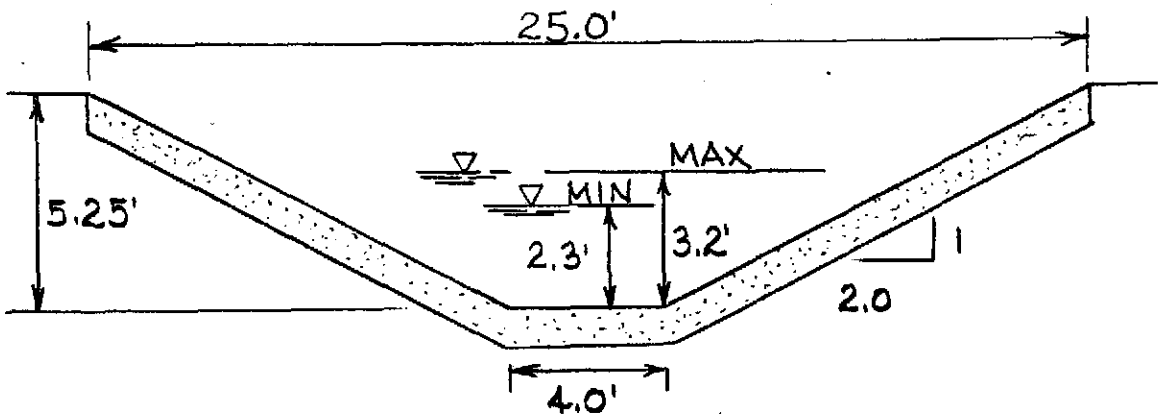
EXHIBIT F-3

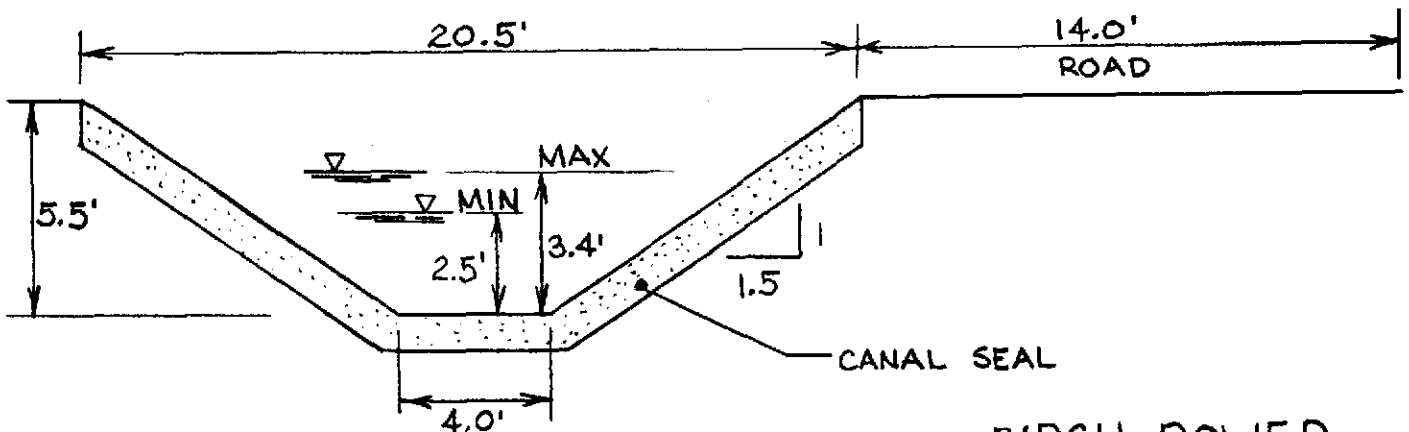
THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 25 DAY OF January 1985

Ted S Sorenson

TED S SORENSON

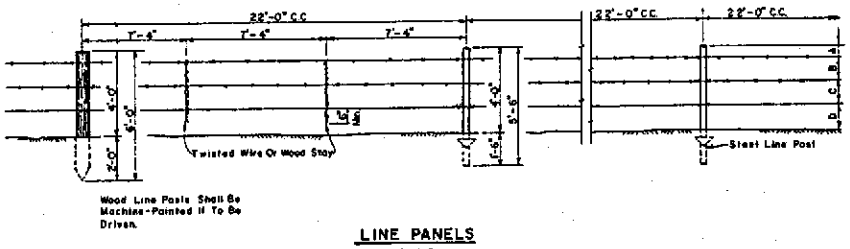
REGISTERED PROFESSIONAL ENGINEER
1/31/15
STATE OF IDAHO
TED S. SORENSON



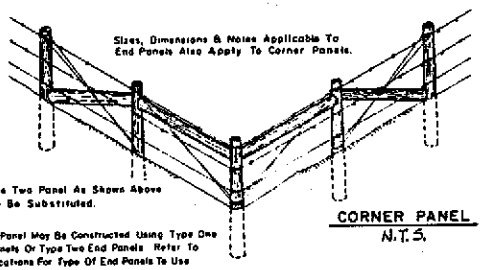




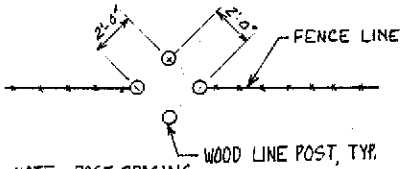
BIRCH POWER HYDROELECTRIC FACILITY EXHIBIT F-4 TYPICAL CANAL CROSS SECTION



LINE PANELS
N.T.S.

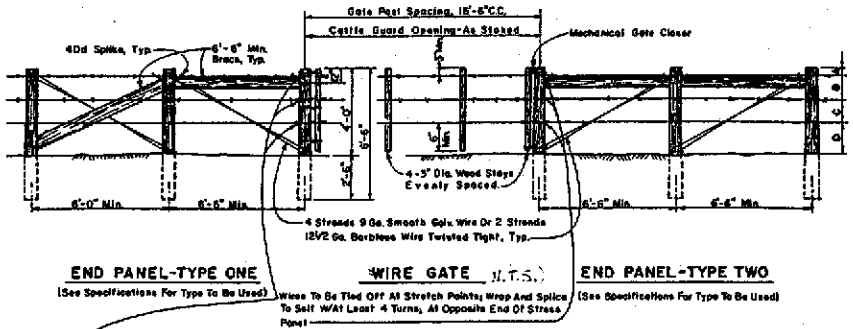


CORNER PANEL
N.T.S.



NOTE: POST SPACING MAY VARY PER BLM REQT'S

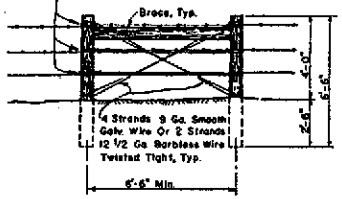
PLAN
HABITAT ACCESS GATE
N.T.S.



END PANEL-TYPE ONE
(See Specifications For Type To Be Used)

WIRE GATE N.T.S.

END PANEL-TYPE TWO
(See Specifications For Type To Be Used)

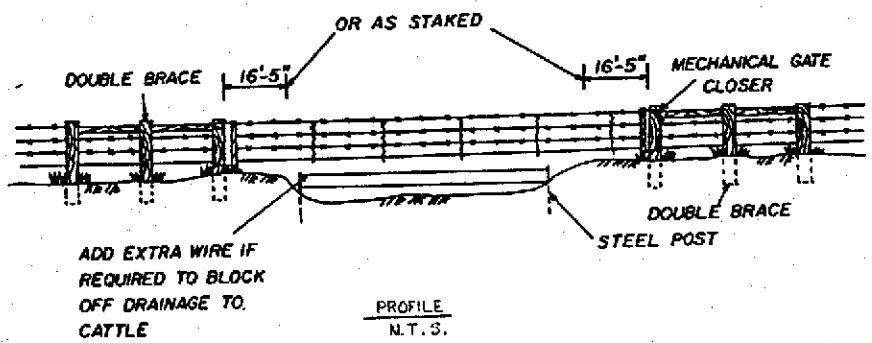


STRESS PANEL
N.T.S.

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 31 DAY OF January 1985.

Ted S Sorenson

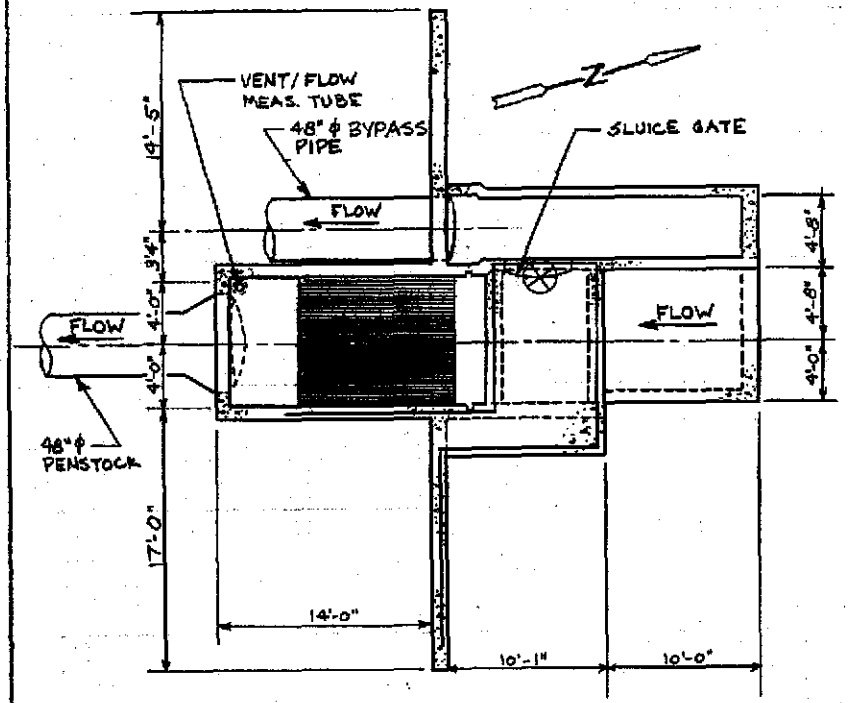
TED S. SORENSON



PROFILE
N.T.S.



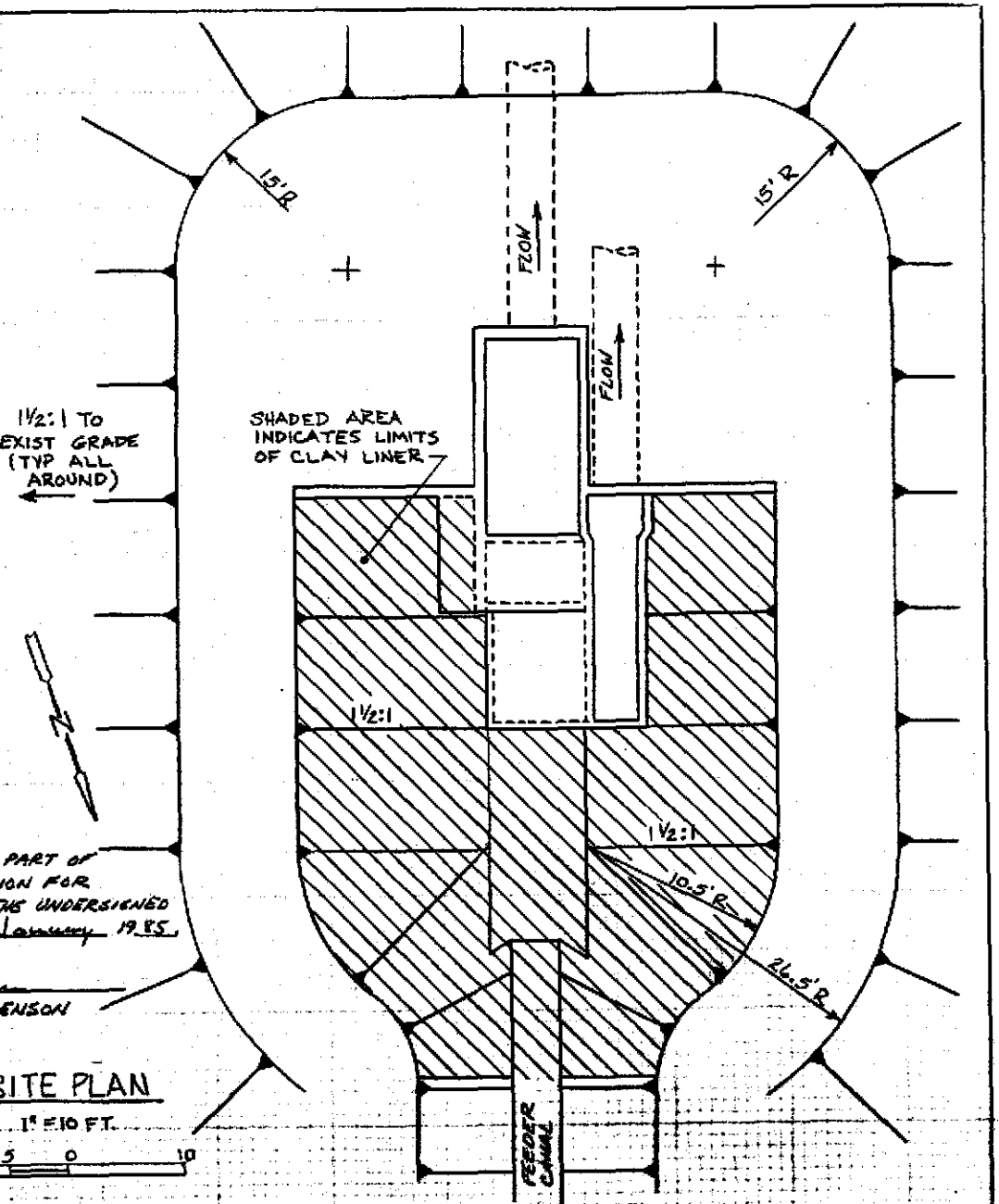
BIRCH POWER
HYDROELECTRIC FACILITY
EXHIBIT F-5
FENCING DETAILS



INLET STRUCTURE PLAN

1/8" = 1'-0"

8 4 0 12



SITE PLAN

1" = 10 FT.

10 5 0 10

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 31 DAY OF January 19 85.

Ted S Sorenson

TED S SORENSON

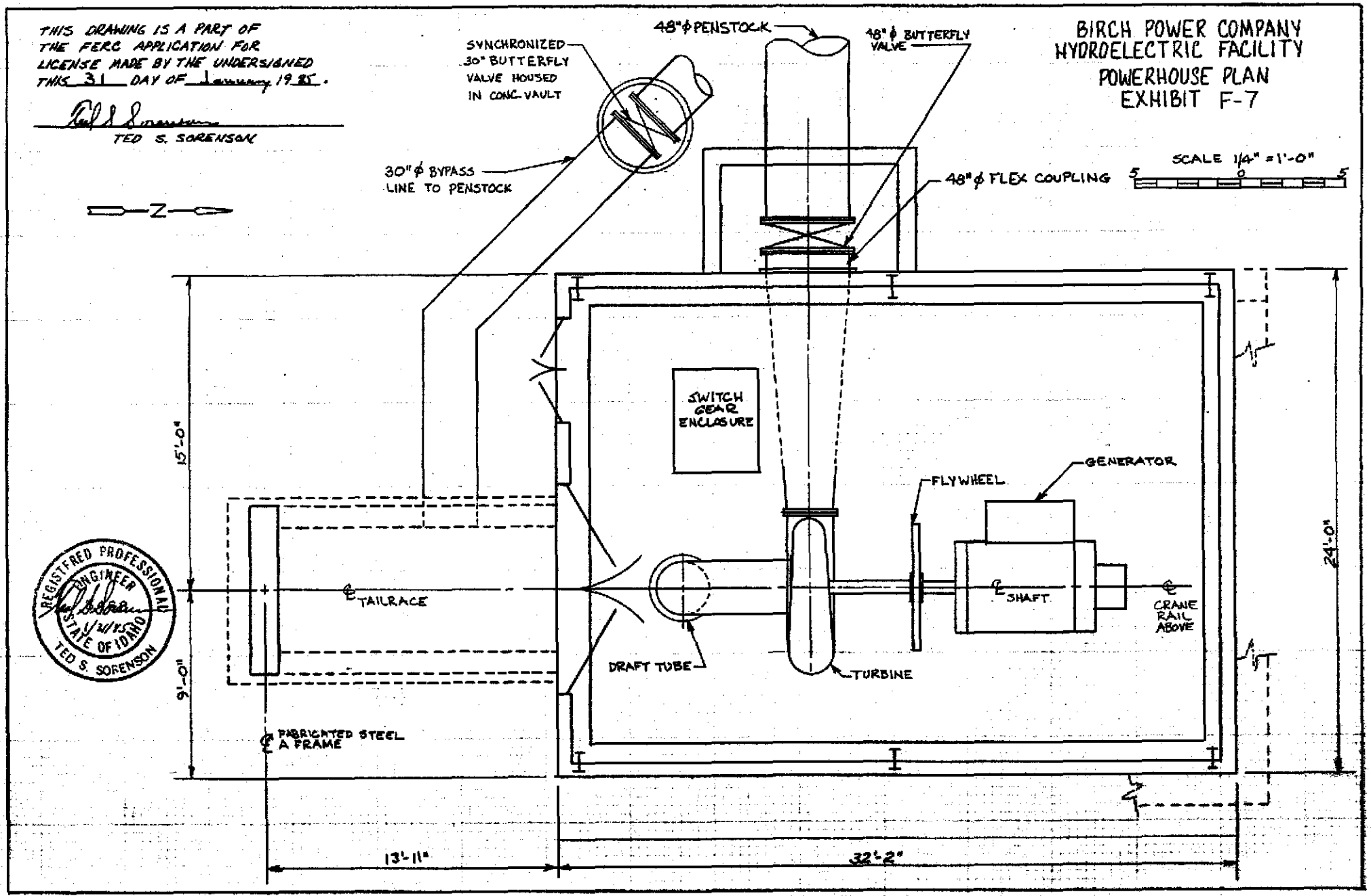
REGISTERED PROFESSIONAL ENGINEER
1/31/85
STATE OF IDAHO
TED S. SORENSON

BIRCH POWER COMPANY
HYDROELECTRIC FACILITY
INLET STRUCTURE
EXHIBIT F-6

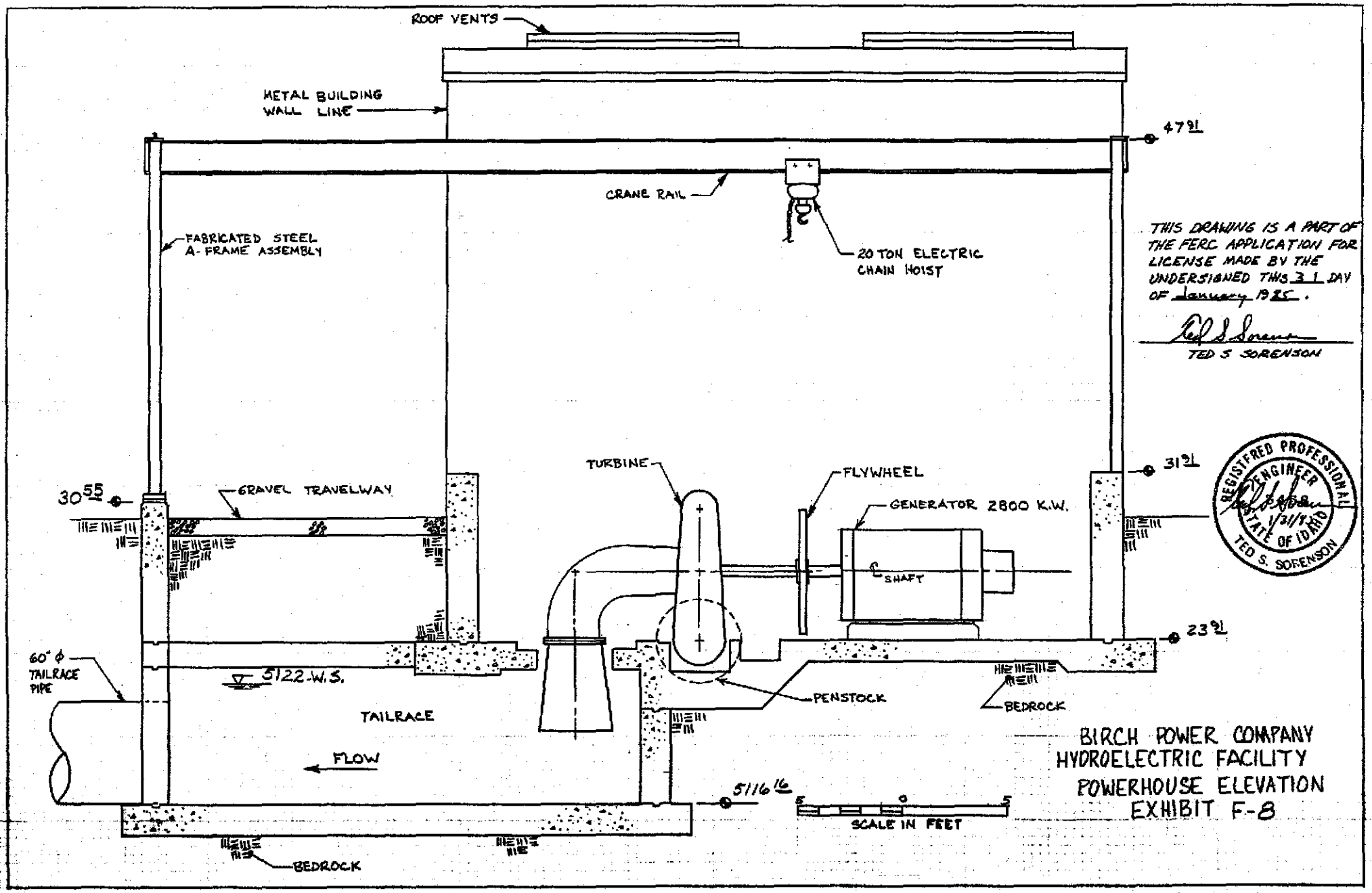
THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 31 DAY OF January 19 85.

TED S. SORENSON

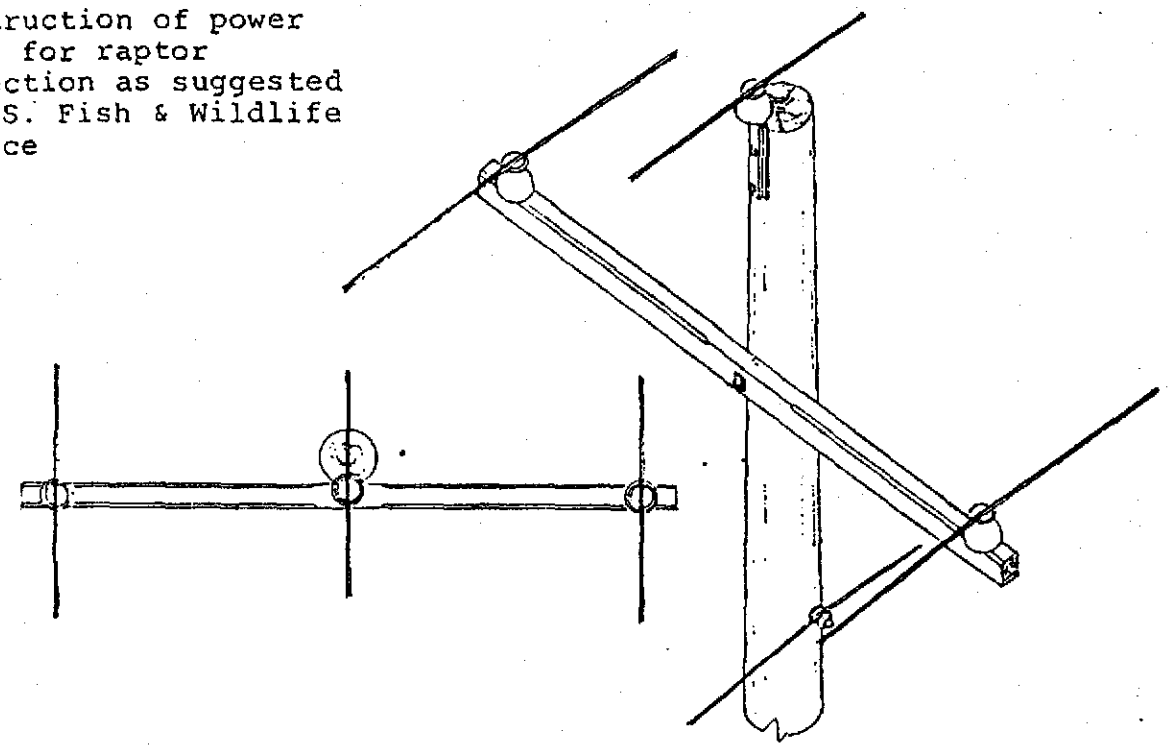
BIRCH POWER COMPANY
HYDROELECTRIC FACILITY
POWERHOUSE PLAN
EXHIBIT F-7



REGISTERED PROFESSIONAL ENGINEER STATE OF IDAHO TED S. SORENSON

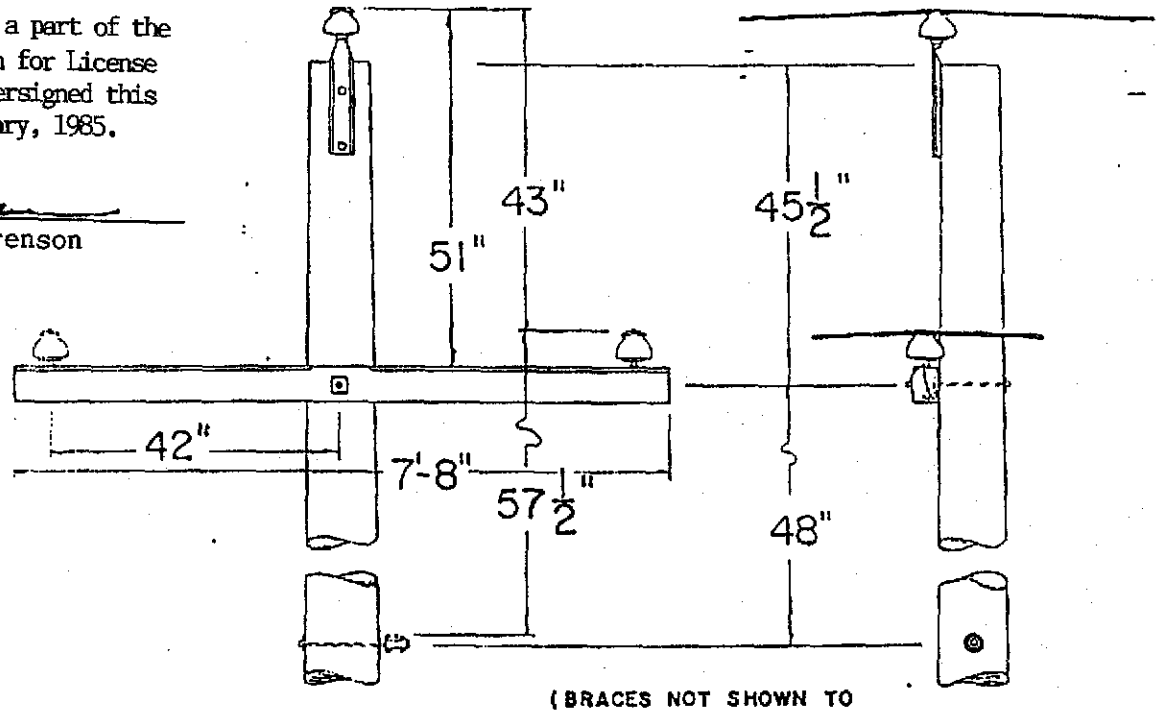

ROOF VENTS
METAL BUILDING WALL LINE
47 91
CRANE RAIL
FABRICATED STEEL A-FRAME ASSEMBLY
20 TON ELECTRIC CHAIN HOIST
THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 31 DAY OF January 19 85.
TED S SORENSON
REGISTERED PROFESSIONAL ENGINEER
STATE OF IDAHO
TED S. SORENSON
TURBINE
FLYWHEEL
GENERATOR 2800 K.W.
31 91
30 55
GRAVEL TRAVELWAY
SHAFT
23 91
60" ϕ TAILRACE PIPE
5122 W.S.
TAILRACE
FLOW
PENSTOCK
BEDROCK
5116 16
SCALE IN FEET
BEDROCK
BIRCH POWER COMPANY
HYDROELECTRIC FACILITY
POWERHOUSE ELEVATION
EXHIBIT F-8

Construction of power poles for raptor protection as suggested by U.S. Fish & Wildlife Service



This drawing is a part of the FERC Application for License made by the undersigned this 31 day of January, 1985.

Ted S. Sorenson



(BRACES NOT SHOWN TO IMPROVE CLARITY OF DRAWING.)

REFERENCE:

IDAHO POWER COMPANY
APPROVED FOR CORRECTIONS ON
PREFERRED POLES IN EXISTING LINES
BY: MORLAN W. NELSON
BIRDS-OF-PREY CONSULTANT

EXHIBIT F-9

RAPTORS SAFE TRANSMISSION LINE

EXHIBIT G

PROJECT LANDS & BOUNDARIES

G-1A PROJECT LANDS & BOUNDARIES

G-1B PROJECT LANDS & BOUNDARIES

G-2A PLAN & PROFILE

G-2B PLAN & PROFILE

G-3 FISHING HABITAT, RIPARIAN HABITAT & STOCK/GAME WATERING LAYOUT

*NOTE: LARGE DRAWINGS CAN BE FOUND IN BACK POCKET

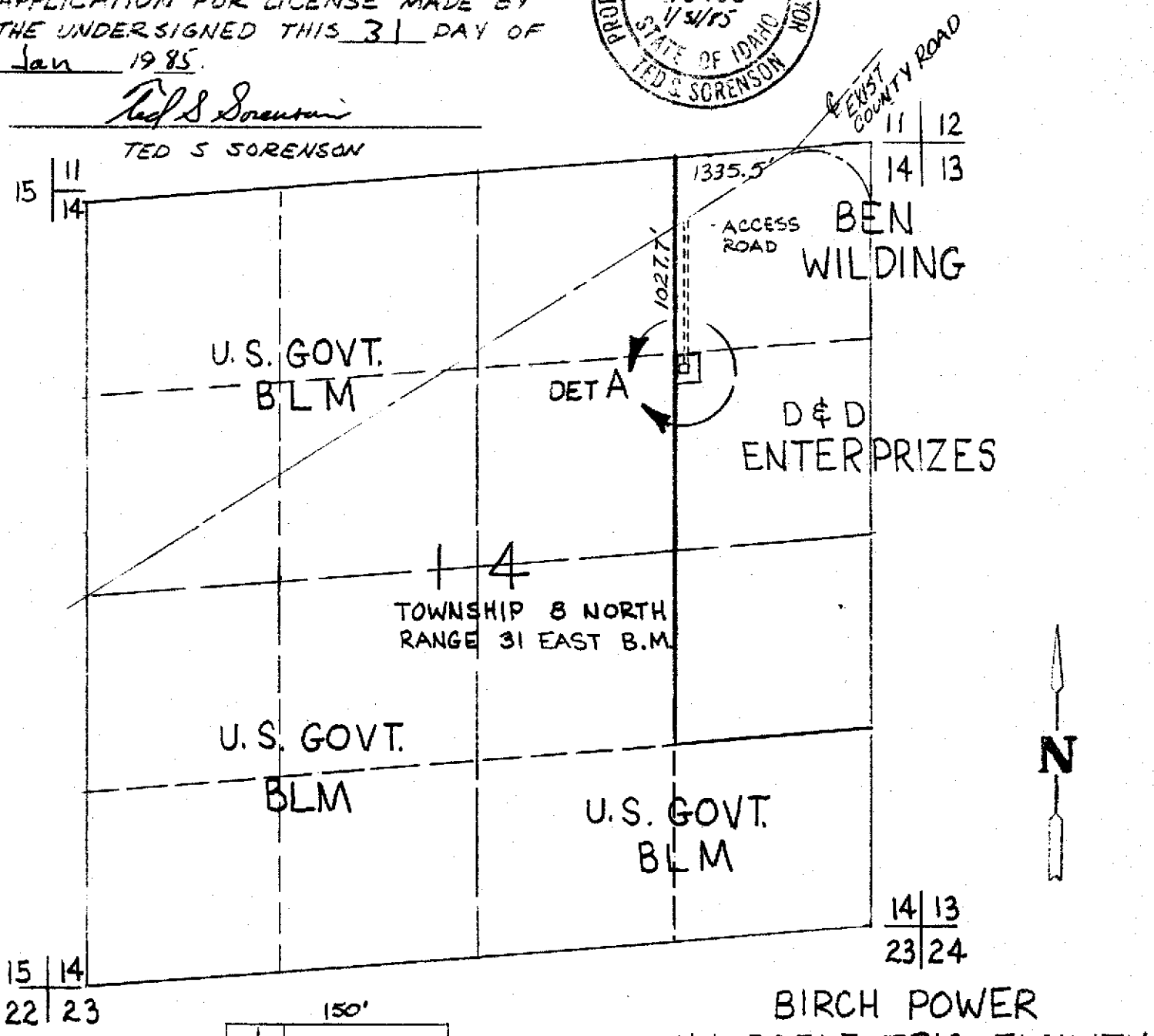
EXHIBIT G

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 31 DAY OF Jan 1985.

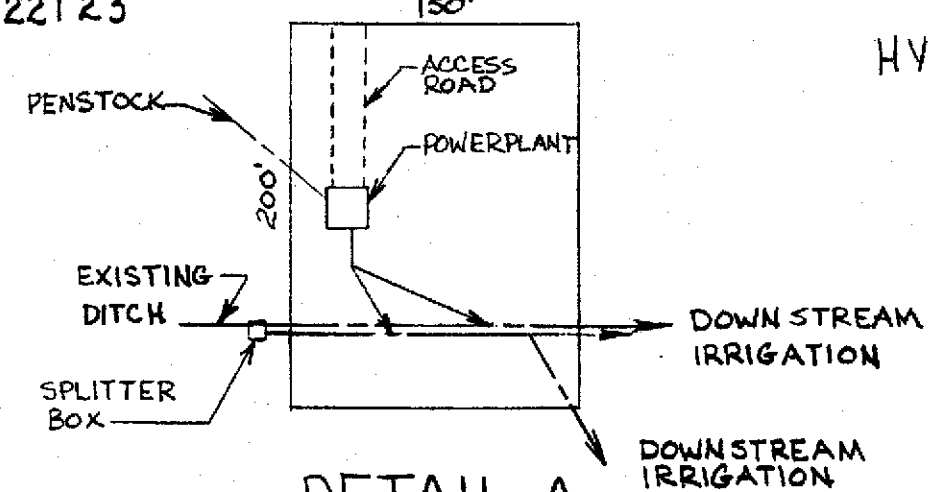
Ted S Sorenson

TED S SORENSON

PROFESSIONAL ENGINEER • LAND SURVEYOR REGISTERED #5430 1/31/85 STATE OF IDAHO TED S. SORENSON



BIRCH POWER HYDROELECTRIC FACILITY EXHIBIT G-1B PROJECT LANDS & BOUNDARIES



DETAIL A

1" = 100'

1000 500 0 1000

SCALE IN FEET

(1" = 1000')

CERTIFICATION OF MAILING

CERTIFICATION OF MAILING

I hereby certify that on the 1 day of FEB, 1985, I sent, by Certified-Registered mail, a copy of the foregoing Application for Minor/Major License for the Birch Creek Hydropower Project, properly addressed with postage prepaid, to the following parties:

Mr. Kenneth F. Plumb, Secretary
Office of Electric Power Regulation
FEDERAL ENERGY REGULATORY COMMISSION
825 N. Capital Street, NE
M.S. 208 R.B.
Washington, D.C. 20426

Mr. Jack Quarles
FEDERAL ENERGY REGULATORY COMMISSION
819 Taylor St. 9A05
Ft. Worth, TX 76102

Mr. Jim Fellows
U.S. ARMY CORPS OF ENGINEERS
Building 602
City/County Airport
Walla Walla, WA 99362

Mr. Jerry Conley, Director
Attn: Virgil Moore
IDAHO DEPARTMENT OF FISH & GAME
P.O. Box 25
Boise, ID 83707

Mr. Brent Jensen, Area Manager
BUREAU OF LAND MANAGEMENT
940 Lincoln Road
Idaho Falls, ID 83401

Mr. Tom Reinecker
Regional Supervisor
IDAHO DEPARTMENT OF FISH & GAME
1515 Lincoln Road
Idaho Falls, ID 83401

Mr. John P. Wolflin, Field Supervisor
FISH & WILDLIFE SERVICE (U.S.)
Ecological Services
4620 Overland Road, Rm 209
Boise, ID 83705

Mr. Thomas J. Green
State Archaeologist
IDAHO STATE HISTORICAL SOCIETY
610 North Julia Davis Drive
Boise, Idaho 83702

Mr. Bob Fleenor
IDAHO DEPARTMENT OF WATER RESOURCES
Statehouse
Boise, ID 83720

Mr. Mark Torf
IDAHO DEPARTMENT OF HEALTH & WELFARE
150 No. Third
Pocatello, ID 83201

Professor Jack Griffith
Fishery Biologist
Idaho State University
Pocatello, ID 83201

Ted S. Sorenson, P.E.
Birch Power Company

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON d/b/a SORENSON ENGINEERING and IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-07252 (formerly No. 31-07646) IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.	**AMENDED PREHEARING ORDER**

The parties, having stipulated to a delay in the schedule applicable to these proceedings,

IT IS HEREBY ORDERED that the schedule established in the Prehearing Order is VACATED and the following amended schedule shall apply to these proceedings. Documents to be filed with the Department and served on the parties must be filed and served in accordance with the rules of the Department on or before on the day listed.

February 27, 1998	-	Parties shall exchange witness lists and file them with IDWR.
April 10, 1998	-	Parties shall file any dispositive motions with briefs.
April 28, 1998	-	Parties shall file Response Briefs, if any.
May 4, 1998	-	1:30 - 2:30 Telephonic hearing on all motions. Parties shall call **(805)240-9673** and use participants' access code **696366B** at least five (5) minutes in advance of the hearing to be placed on the call.

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At the conclusion of the hearing on May 4, 1998, a schedule will be developed with the parties for the remainder of the litigation in this matter.

DATED this 15th day of April, 1998.

Peter R. Anderson

PETER R. ANDERSON
Hearing Officer

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 15th day of April, 1998, I faxed and mailed a true and correct copy of the foregoing **AMENDED PREHEARING ORDER** on the following persons listed below by using the listed fax number and by U.S. mail, postage prepaid and addressed as follows:

Norman C. Young
Idaho Dept. of Water Resources
1301 N. Orchard St.
Boise, ID 83706

Ronald D. Carlson
Eastern Regional Manager
Idaho Dept. of Water Resources
900 N. Skyline Dr.
Idaho Falls, ID 83402
Fax: (208)525-7177

Kent W. Foster, Esq.
HOLDEN KIDWELL HAHN
& CRAPO PLLC
P.O. Box 50130
Idaho Falls, ID 83405
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Blair J. Grover, Esq.
GROVER & ARCHIBALD
P.O. Box 36
Rigby, ID 83442
Fax: (208)745-6655

George Petersen, Esq.
PETERSEN MOSS OLSEN
MEACHAM & CARR
485 "E" Street
Idaho Falls, ID 83402
Fax: (208)524-3391

Breck H. Barton, Esq.
BRECK BARTON & ASSOC., PA
P.O. Box 100
Rexburg, ID 83440
Fax: (208)356-4882

Deborah Drew-Ellis

Deborah Drew-Ellis
Legal Secretary

C:\DATA\WPDOCS\BIRCH\PREHEAR3.ORD

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JAN 0 8 2001

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON d/b/a SORENSON ENGINEERING and IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-07252 (formerly No. 31-07646) IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.	**PREHEARING ORDER**

A prehearing conference regarding the above-captioned matters was held on September 10, 1997, in Idaho Falls, Idaho. All parties were present and represented by counsel. Following discussion of these matters and in order to prepare and schedule the above-captioned contested matters for hearing, the Hearing Officer issues this prehearing Order pursuant to IDAPA 37.01.01.512.

1. The Hearing Officer finds: that Application for Amendment of Water Right Permits Nos. 32-07128 and 32-07136 and the Application for Permit No. 32-07252 present issues that are related in that the Applications relate to appropriation of water allegedly saved by the development of the Applicant's hydropower facility, and that the rights of the parties to these proceedings will not be prejudiced by this consolidation. Therefore,

IT IS HEREBY ORDERED, pursuant to IDAPA 37.01.01.556 that proceedings on Application for Amendment of Water Right Permits Nos. 32-07128 and 32-07136 and the Application for Permit No. 32-07252 shall be consolidated.

2. IT IS HEREBY ORDERED that the following schedule shall apply to proceedings on the consolidated matters. Documents to be filed with the Department and served on the parties must be filed and served in accordance with the rules of the Department on or before on the day listed.

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February 27, 1998	-	Parties shall exchange witness lists and file them with IDWR.
March 20, 1998	-	Parties shall file any dispositive motions with briefs.
April 3, 1998	-	Parties shall file Response Briefs, if any.
April 16, 1998	-	9:00 - 10:30 Hearing on all motions (if any). (Notice of the location to be issued at a later date.)
April 30, 1998	-	Parties shall exchange prehearing briefs, if any, and exhibit lists and file them with IDWR.
May 4-6, 1998	-	Hearing on all remaining issues (Notice of the location and time to be issued at a later date.).

3. IT IS HEREBY ORDERED that the following procedures shall govern the May 4-6, 1998, hearing on the consolidated matters:

a. Having the ultimate burden of proof, Applicant will proceed first when giving opening statement and with evidence presentation.

b. Protestants will present their opening statements and evidence following the Applicant.

c. Applicant may present rebuttal, if necessary.

d. Opening remarks should briefly explain each party's intended presentation.

e. Written closing will be submitted pursuant to schedule to be developed after hearing.

DATED this 10th day of February, 1998.

Peter R. Anderson

PETER R. ANDERSON
Hearing Officer

MICROFILMED

JAN 0 8 2001

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 10th day of February, 1998, I mailed a true and correct copy of the foregoing **PREHEARING ORDER** on the following persons listed below by U.S. mail, postage prepaid and addressed as follows:

Norman C. Young
Idaho Dept. of Water Resources
1301 N. Orchard St.
Boise, ID 83706

Ronald D. Carlson
Eastern Regional Manager
Idaho Dept. of Water Resources
900 N. Skyline Dr.
Idaho Falls, ID 83402

Kent W. Foster, Esq.
HOLDEN KIDWELL HAHN
& CRAPO PLLC
P.O. Box 50130
Idaho Falls, ID 83405

Blair J. Grover, Esq.
GROVER & ARCHIBALD
P.O. Box 36
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George Petersen, Esq.
PETERSEN MOSS OLSEN
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485 "E" Street
Idaho Falls, ID 83402

Breck H. Barton, Esq.
BRECK BARTON & ASSOC., PA
P.O. Box 100
Rexburg, ID 83440

Deborah Drew-Ellis
Legal Secretary

MICROFILMED
JAN 08 2001

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF THE AMENDED APPLICATION FOR TRANSFER NO. 3553 OF WATER RIGHTS NOS. 32-00090, 32-00093 32-00068, 32-00061C, 32-00091, 32-00101, 32-00102, 32-00073, 32-00085, 32-00077 32-00086, 32-00078, 32-00087, and 32-00079 IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.,	)	**ORDER FOR MEDIATION**
IN THE MATTER OF APPLICATION FOR EXTENSION OF TIME TO AVOID FORFEITURE OF WATER RIGHT NO. 32-00101 IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.,	)	
IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON d/b/a SORENSON ENGINEERING,	)	
IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-07252 IN THE NAME OF BIRCH CREEK RANCHES, L.L.C. (FORMERLY NO. 31-07646),	)	
and	)	
IN THE MATTER OF APPLICATION FOR DELIVERY OF CERTAIN WATER RIGHTS AT THEIR CURRENT ASSIGNED POINT OF DIVERSION, TOGETHER WITH AN ORDER DIRECTING WATERMASTER FOR DELIVERY OF SAME; AND/OR IN THE ALTERNATIVE TO AN ALTERNATE	)	

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JAN 0 8 2001

POINT OF DIVERSION SUBJECT TO CERTAIN TERMS AND CONDITIONS TO BE AGREED TO BY BIRCH CREEK RANCHES, L.L.C.; AND FURTHER APPLICANTS' CLAIM TO ALLEGED SAVED WATERS CLAIMED BY BIRCH CREEK RANCHES, L.L.C.L, ON THE GROUNDS AND FOR THE REASONS THAT APPLICANTS HAVE USED SAID CLAIMED WATER RIGHTS FOR A BENEFICIAL PURPOSE CONTINUOUSLY FOR AND IN EXCESS OF THE PAST FIVE (5) YEARS; SAID WATER RIGHTS THE SUBJECT OF THE APPLICATION PERTAIN TO WATER RIGHT NOS. 32-00060A, 32-00059A, 32-00065, 32-00080A, 32-00070A, 32-00061D, 32-00063, 32-00064, 32-00066A&B, 32-00058 IN THE NAME OF D&D ENTERPRISES, INC., WATER RIGHTS NOS. 32-00060B, 32-00059B, 32-00080B, 32-00070B, 32-00062, IN THE NAME OF LAVAR NEWMAN.

FINDINGS

The Director of the Idaho Department of Water Resources (IDWR) finds as follows:

1. There are currently five applications pending before IDWR relating to rights to the use of water in Birch Creek, located in Clark and Lemhi Counties. Those applications are as follows:

a. Amended Application for Transfer No. 3553 of Water Right Nos. 32-00090, 32-00093, 32-00068, 32-00061C, 32-00091, 32-00101, 32-00102, 32-00073 32-00085 32-00077, 32-00086, 32-00078, 32-00087, and 32-00079 in the name of Birch Creek Ranches, L.L.C.;

b. Application for Extension of Time to Avoid Forfeiture of Water Right No. 32-00101;

c. Application for Amendment of Water Right Permits Nos. 32-07128 and 32-07136 in the name of Ted Sorenson d/b/a Sorenson Engineering;

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d. Application for Permit No. 32-07252 in the name of Birch Creek Ranches L.L.C.;

e. Application for Delivery of Certain Water Rights at their Current Assigned Point of Diversion, together with an Order Directing Watermaster for Delivery of Same.

2. The Application described in sub-paragraphs 1.a-d have all been protested and are in the contested hearing process before IDWR.

3. The Application described in sub-paragraph 1.e has not yet been advertised nor protests received. The Applicant for the approvals requested in sub-paragraph 1.e is a protestant of the Applications described in sub-paragraphs 1.a-d.

4. Birch Creek is a small stream that flows generally north to south. At the southern end of the stream all waters of Birch Creek generally have been diverted into a hydropower canal called the New Reno Ditch that takes the water approximately nine miles to the east, where it flows through a hydroelectric generator. Below the hydroelectric generator the water is put to irrigation use, or diverted back to the west where it sinks into the ground.

5. The earliest priority use of water on Birch Creek occurs above the diversion into the New Reno Ditch. The Applications described in paragraph 1 either attempt to transfer all other uses of Birch Creek water to lands below the hydroelectic plant or in some fashion attempt to affect the distribution of the water of Birch Creek at the bottom end of the stream.

6. Resolving the dispute over the Applications described in paragraph 1 will be expensive to the taxpayers in terms of IDWR funds and time. The contested case process likely will not fully resolve the underlying dispute between the parties to these Applications. Appeals of any of IDWR's decisions will engender further costs for the parties and IDWR.

7. It is not in the best interest of the parties, the State, IDWR or the taxpayers that multiple hearings be conducted by IDWR when the dispute centers solely around the use and distribution of the water that flows to the southern end of Birch Creek. A negotiated solution to this conflict would be the preferred method of resolving the dispute.

8. The parties to the matters described in paragraphs 1.a-b have agreed to participate in mediation before a mediator appointed by IDWR.

ORDER

In light of the foregoing findings the Director of IDWR hereby ORDERS pursuant to IDAPA 37.01.01.101 that:

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1. The parties to the matters described in paragraph 1 of the findings shall participate in mediation conducted by a mediator appointed by IDWR, at the time and place set by the mediator.

2. Terry Uhling is appointed mediator for IDWR. Mr. Uhling shall be reimbursed for his travel expenses for such mediation at the rates established for IDWR employees.

3. The mediation of this matter shall be completed no later than December 17, 1997. The mediator will report to the Director when mediation is complete, whether successful or not.

4. The matters described in paragraph 1 of the findings shall be stayed until the mediation is completed.

5. The parties shall comply with the mediator's instructions regarding submission of position papers, hiring and locations for the mediation.

DATED this 10th day of November, 1997.

KARL J. DREHER
Director

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JAN 08 2001

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 12th day of November, 1997, I mailed a true and correct copy of the foregoing **ORDER FOR MEDIATION** on the following persons listed below by U.S. mail, postage prepaid and addressed as follows:

Norman C. Young
Idaho Department of Water Resources
1301 N. Orchard St.
Boise, Idaho 83706

Ronald D. Carlson
Idaho Dept. of Water Resources
Eastern Regional Manager
900 N. Skyline Dr.
Idaho Falls, ID 83402

Kent W. Foster, Esq.
HOLDEN KIDWELL HAHN & CRAPO PLLC
P.O. Box 50130
Idaho Falls, ID 83405

Blair J. Grover, Esq.
GROVER & ARCHIBALD
P.O. Box 36
Rigby, ID 83442

George C. Petersen, Jr., Esq.
PETERSEN MOSS OLSEN MEACHAM & CARR
485 "E" Street
Idaho Falls, ID 83402

Breck H. Barton, Esq.
BRECK BARTON & ASSOC., PA
P.O. Box 100
Rexburg, ID 83440

Jerry R. Rigby, Esq.
RIGBY THATCHER ANDRUS RIGBY KAM & MOELLER
P.O. Box 250
Rexburg, ID 83440-0250

Andy Dobson
Independent Canal Co.
Terreton, ID 83450

Garth Soderquist
Owsley Canal Co.
Terreton, ID 83450

Deborah Drew-Ellis

DEBORAH DREW-ELLIS
Legal Secretary

MICROFILMED
JAN 08 2001

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON d/b/a SORENSON ENGINEERING,	**NOTICE OF PREHEARING and CONFERENCE**
IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-07252 (formerly No. 31-07646) IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.	

The Department of Water Resources has scheduled this matter for prehearing conference as follows:

Date:	Wednesday, September 10, 1997
Location:	DEQ Small Conference Rm. 900 N. Skyline Drive, Idaho Falls, ID Call (208)525-7161 for directions.
Time:	10:45 a.m.

This prehearing conference will be held for the purposes set forth in IDAPA 37.01.01.510 (Rule 510) and will be held formally according to IDAPA 37.01.01.512 (Rule 512). The Department's authority to hold hearings in this matter is based in I.C. § 42-211.

The prehearing conference will be conducted in a facility meeting the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations in order to attend, participate in or understand the hearing, please advise the Department within ten (10) days prior to the prehearing conference.

MICROFILMED

JAN 0 8 2001

DATED this 31st day of July, 1997.

Peter R. Anderson

PETER R. ANDERSON
Hearing Officer

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 31st day of July, 1997, I mailed a true and correct copy of the foregoing **NOTICE OF PREHEARING CONFERENCE** on the following persons listed below by U.S. mail, postage prepaid and addressed as follows:

Norman C. Young
Idaho Dept. of Water Resources
1301 N. Orchard St.
Boise, ID 83706

Kent W. Foster, Esq.
HOLDEN KIDWELL HAHN
& CRAPO PLLC
P.O. Box 50130
Idaho Falls, ID 83405

George Petersen, Esq.
PETERSEN MOSS OLSEN
MEACHAM & CARR
485 "E" Street
Idaho Falls, ID 83402

Breck H. Barton, Esq.
BRECK BARTON & ASSOC., PA
P.O. Box 100
Rexburg, ID 83440

Ronald D. Carlson
Eastern Regional Manager
Idaho Dept. of Water Resources
900 N. Skyline Dr.
Idaho Falls, ID 83402

Blair J. Grover, Esq.
GROVER & ARCHIBALD
P.O. Box 36
Rigby, ID 83442

Gary D. Slette, Esq.
ROSHOLT ROBERTSON &
TUCKER CHRTD
142 3rd Ave, North
P.O. Box 1906
Twin Falls, ID 83303-1906

Deborah Drew-Ellis

DEBORAH DREW-ELLIS
Legal Secretary

MICROFILMED
JAN 0 8 2001

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON d/b/a SORENSON ENGINEERING	**NOTICE OF PREHEARING CONFERENCE**

Pursuant to the agreement of the parties on May 21, 1997, the Department of Water Resources has scheduled the this matter for prehearing conference as follows:

Date:	Tuesday, July 8, 1997
Location:	DEQ Conference Rm. 900 N. Skyline Drive, Idaho Falls, ID Call (208)525-7161 for directions.
Time:	9:00 a.m.

This prehearing conference will be held for the purposes set forth in IDAPA 37.01.01.510 (Rule 510) and will be held formally according to IDAPA 37.01.01.512 (Rule 512). The Department's authority to hold hearings in this matter is based in I.C. § 42-211.

The prehearing conference will be conducted in a facility meeting the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations in order to attend, participate in or understand the hearing, please advise the Department within ten (10) days prior to the prehearing conference.

DATED this 25th day of June, 1997.

Peter R. Anderson

PETER R. ANDERSON
Hearing Officer

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JAN 08 2001

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 25th day of July, 1997, I mailed a true and correct copy of the foregoing **NOTICE OF PREHEARING CONFERENCE** on the following persons listed below by U.S. mail, postage prepaid and addressed as follows:

Norman C. Young
Idaho Dept. of Water Resources
1301 N. Orchard Street
Boise, ID 83706

Ronald D. Carlson
Eastern Regional Manager
Idaho Dept. of Water Resources
900 N. Skyline Dr.
Idaho Falls, ID 83402

Kent W. Foster, Esq.
HOLDEN KIDWELL HAHN & CRAPO PLLC
P.O. Box 50130
Idaho Falls, ID 83405

Blair J. Grover, Esq.
GROVER & ARCHIBALD
P.O. Box 36
Rigby, ID 83442

George C. Petersen, Jr., Esq.
PETERSEN MOSS OLSEN
MEACHAM & CARR
485 "E" Street
Idaho Falls, ID 83402

Breck H. Barton, Esq.
BRECK BARTON & ASSOC., PA
P.O. Box 100
Rexburg, ID 83440

Deborah Drew-Ellis
Deborah Drew-Ellis
Legal Secretary

MICROFILMED
JAN 0 8 2001

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON d/b/a SORENSON ENGINEERING	**ORDER GRANTING INTERVENTION TO LAVAR AND LOUISE NEWMAN**

The Department of Water Resources (Department) received the *Motion of Lavar Newman and Louise Newman, His Wife, To Intervene* on May 16, 1997, in the above-entitled matter. The Department received no objection to the motion to intervene and it appears that the Newmans have a direct and substantial interest in the proceeding as the owners of property previously owned by Elda Wilding. Elda Wilding filed a protest to the Applications at issue in this matter on August 31, 1990, based in part upon the alleged impact of the requested amendments upon the property currently owned by the Newmans.

THEREFORE, the Department grants intervention to Lavar and Louise Newman. The Newmans shall proceed under the *Protest of Elda H. Wilding*, attached to this Order, unless they file a formal protest on their own behalf pursuant to IDAPA 37.01.01.250 with the Department on or before June 30, 1997.

DATED this 19th day of June, 1997.

Peter R. Anderson

PETER R. ANDERSON
Hearing Officer

MICROFILMED

JAN 0 8 2001

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 19th day of June, 1997, I mailed a true and correct copy of the foregoing **ORDER GRANTING INTERVENTION TO LAVAR AND LOUISE NEWMAN** on the following persons listed below by U.S. mail, postage prepaid and addressed as follows:

Norman C. Young
Idaho Dept. of Water Resources
1301 N. Orchard St.
Boise, ID 83706

Ronald D. Carlson
Eastern Regional Manager
Idaho Dept. of Water Resources
900 N. Skyline Dr.
Idaho Falls, ID 83402

Kent W. Foster, Esq.
HOLDEN KIDWELL HAHN & CRAPO PLLC
P.O. Box 50130
Idaho Falls, ID 83405

Blair J. Grover, Esq.
GROVER & ARCHIBALD
P.O. Box 36
Rigby, ID 83442

George Petersen, Esq.
PETERSEN MOSS OLSEN
MEACHAM & CARR
485 "E" Street
Idaho Falls, ID 83402

Rita I. Fleck
Administrative Secretary

MICROFILMED
JAN 0 8 2001

Vault
NCY

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON d/b/a SORENSON ENGINEERING	**ORDER DISMISSING PROTEST FILED BY ELDA WILDING**

The Department of Water Resources received the attached letter from Jerry Rigby on behalf of Elda Wilding on April 30, 1997. The letter indicates that Elda Wilding no longer owns the property affected by the above-captioned application and that she no longer wishes to receive notices of proceedings in this matter. The Department will treat this letter as a request to dismiss the protest of Ms. Wilding.

ORDER

IT IS ORDERED that the Protest of Elda Wilding, dated August 30, 1990, is dismissed.

DATED this 23rd day of May, 1997.

Peter R. Anderson

PETER R. ANDERSON
Hearing Officer

MICROFILMED
JAN 0 8 2001

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 23 day of May, 1997, I mailed a true and correct copy of the foregoing **ORDER DISMISSING PROTEST FILED BY ELDA WILDING** on the following persons listed below by U.S. mail, postage prepaid and addressed as follows:

Norman C. Young
Idaho Dept. of Water Resources
1301 N. Orchard Street
Boise, ID 83706

Ronald D. Carlson
Eastern Regional Manager
Idaho Dept. of Water Resources
900 N. Skyline Dr.
Idaho Falls, ID 83402

Kent W. Foster, Esq.
HOLDEN KIDWELL HAHN & CRAPO PLLC
P.O. Box 50130
Idaho Falls, ID 83405

Blair J. Grover, Esq.
GROVER & ARCHIBALD
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Rigby, ID 83442

George Petersen, Esq.
PETERSEN MOSS OLSEN
MEACHAM & CARR
485 "E" Street
Idaho Falls, ID 83402

Breck H. Barton, Esq.
BRECK BARTON & ASSOC., PA
P.O. Box 100
Rexburg, ID 83440

Jerry R. Rigby, Esq.
RIGBY THATCHER ANDRUS RIGBY
KAM & MOELLER, CHRTD.
P.O. Box 250
Rexburg, ID 83440-0250

Deborah Drew-Ellis
Legal Secretary

MICROFILMED
JAN 0 8 2001

RECEIVED
MAY 5 - 1997
Department of Water Resources

Law Offices

RIGBY, THATCHER, ANDRUS
RIGBY, KAM & MOELLER, Chartered

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Idaho Falls:(208) 529-5531
Fax: (208) 356-0768
E-Mail: Rexlaw@srv.net

COPY

RECEIVED
APR 30 1997
Department of Water Resources
Eastern District Office

April 29, 1997

Peter R. Anderson
Hearing Officer
900 N. Skyline Drive
Idaho Falls, ID 83402

Re: **Notice of Prehearing Conference**
Regarding Amendment of Water Rights Permit No. 32-07128 and 32-07136/Sorenson

Dear Mr. Anderson:

Pursuant to our telephone conversation, this letter is to inform you that Cleo and Sybil Wilding, who owned the property and water rights affected by the above described application for amendment have since sold their interest including all water rights to LaVar Newman and Louise Newman of 2941 North 800 East, Monteview, Idaho 83435. Therefore, all future notices of the said application for amendment should be addressed to Mr. Newman. I am by this letter copying Mr. and Mrs. Newman with the Notice of Prehearing Conference sent by your office to me.

Sincerely yours,

Jerry R. Rigby

JRR:rc

Enclosure

cc: Mr. and Mrs. Newman

MICROFILMED
JAN 0 8 2001

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON d/b/a SORENSON ENGINEERING	))))))	**ORDER APPOINTING HEARING OFFICER**

On February 21, 1997, the applicant Ted S. Sorenson d/b/a Sorenson Engineering filed a motion pursuant to IDAPA 37.01.01.412 (Rule 412) for a blanket disqualification of all employees of the Idaho Department of Water Resources (IDWR) from acting as hearing officer in this matter.

Section 67-5252, Idaho Code, and Rule 412 of IDWR's Rules of Procedure provide that a hearing officer's status as an employee of the agency is cause for disqualification, and that any party may assert a blanket disqualification for cause of all employees of the agency hearing the contested case, other than the agency head, prior to a hearing officer being appointed by the director.

ORDER

IT IS THEREFORE, HEREBY ORDERED that the applicant's motion for blanket disqualification of IDWR's employees to serve as hearing officer is granted, and that **Peter R. Anderson**, Idaho Deputy Attorney General, Natural Resources Division, is appointed to serve as the hearing officer in this contested case proceeding, pursuant to IDAPA 37.01.01.410 with the full scope of authority provided for under IDAPA 37.01.01.413, and is hereby authorized to hear this matter on behalf of the Idaho Department of Water Resources in accordance with the provisions of chapter 52, title 67, Idaho Code, and IDWR's Rules of Procedure.

IT IS FURTHER ORDERED that all motions that may be pending in this matter, and the setting of all prehearing deadlines and a hearing date shall be addressed by the newly appointed hearing officer.

DATED this 7th day of March, 1997.

KARL J. DREHER, Director

MICROFILMED
JAN 08 2001

CERTIFICATE OF MAILING

I do hereby certify that on this 7th day of March 1997, I mailed a true and correct copy, postage prepaid, of the foregoing **ORDER APPOINTING HEARING OFFICER** to the following:

Peter R. Anderson, Esq.
Deputy Attorney General
1301 N. Orchard St.
Boise, Idaho 83720-0098

Kent W. Foster, Esq.
HOLDEN,KIDWELL,HAHN & CRAPO, P.L.L.C.
P.O. Box 50130
Idaho Falls, Idaho 83405

Blair J. Grover, Esq.
GROVER & ARCHIBALD
P.O. Box 36
Rigby, Idaho 83442

George Petersen, Esq.
PETERSEN, MOSS, OLSEN,
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485 "E" Street
Idaho Falls, Idaho 83402

Breck H. Barton, Esq.
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Deborah Drew-Ellis

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Eastern District Office

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Rexburg, Idaho 83440
Telephone: 208 356-3633

Attorneys for Elda H. Wilding

BEFORE THE DEPARTMENT WATER RESOURCES
OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION OF TED S. SORENSON, dba SORENSON ENGINEERING or BIRCH POWER TO AMEND HYDROPOWER PERMIT NOS. 32-7128 and 32-7136.	PROTEST OF ELDA H. WILDING

Elda H. Wilding, c/o Jerry R. Rigby, of Rigby, Thatcher, Andrus, Rigby & Kam, Chartered, 25 North Second East, Rexburg, Idaho 83440, hereby enters her protest against approval of the application of Ted S. Sorenson, dba/Sorenson Engineering or Birth Power (hereinafter "Sorenson") to amend Hydropower Permit Nos. 32-7128 and 32-7136 on the following grounds:

1. Elda H. Wilding is a substantial user of the waters of Birch Creek, said use thereof and the properties of Elda H. Wilding being situated downstream from the site of the proposed diversion and construction referred to in Sorenson's application. From a preliminary review of Sorenson's application, it appears that the proposed diversion and

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construction would be detrimental to, and not in the best interests of, other water users of Birch Creek.

2. Sorenson's application fails to provide adequate plans on which a valid decision can be made regarding the possible detrimental effects of the proposed diversion and construction. Additionally, Sorenson has failed to provide adequate information to show whether sufficient financial resources will be available to complete and maintain the work proposed in Sorenson's application; Elda H. Wilding questions Sorenson's financial ability to maintain the changes proposed in the application and to restore Birch Creek to its present condition and flow should Sorenson make changes to the condition or flow of Birch Creek.

3. Sorenson's application presents inadequate proof of the feasibility of Sorenson's plan. Specifically, Sorenson's application lacks proof of feasibility that the ponds, drip irrigation system and other proposals can be established and maintained with the water flows proposed.

4. Sorenson's application contains no definitive statement of construction cost information which would allow a reasoned evaluation of the feasibility of the proposed project.

5. Sorenson's application contains no definitive statement of maintenance costs and other maintenance information which would allow a reasoned evaluation of the feasibility of the maintenance of the proposed project.

6. Sorenson's application contains no proof of any

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firm commitment of sufficient financial resources with which to complete the work proposed.

7. Assuming, arguendo, that the proposed project could be constructed and maintained as outlined in Sorenson's application, the application is deficient because it does not make provision for the beneficial use of the increased stream flow below the Birch Creek hydroproject. If Sorenson's application is approved, it should be conditioned on the application of the increased stream flow to fill the decreed, but unsatisfied, water rights of the downstream water users of Birch Creek, specifically, Elda H. Wilding.

8. Assuming, arguendo, that the proposed project could be constructed and maintained as outlined in Sorenson's application, Sorenson's application is deficient because it does not provide any proposal to establish guidelines or duties under which the watermaster would administer the increased stream flow below the Birch Creek hydroproject.

9. Sorenson's application is deficient because it fails to define accurately the flow to be eliminated. Sorenson's application apparently proposed elimination of a maintenance flow of the lesser of 5 cfs or 11 percent of the flow of Birch Creek, but it does not establish the point of measuring the flow of Birch Creek. The flow in Birch Creek varies widely.

10. Sorenson's application is deficient because it fails to compare the amount of water presently used for

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maintenance flows with the amount which would be required under Sorenson's proposal.

Elda H. Wilding hereby respectfully requests the right to amend this protest following receipt of reports and recommendations from his water engineer or following the receipt of additional information from Sorenson or other interested parties.

DATED This 30th day of August, 1990.

Jerry R. Rigby
of RIGBY, THATCHER, ANDRUS,
RIGBY & KAM, Chartered

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Form 211
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STATE OF IDAHO

Department of Water Resources

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APPLICATION FOR AMENDMENT OF A PERMIT

MAY - 5 1990

To change the point of diversion and/or the place of use.

Department of Water Resources
Eastern District Office

Comes now Ted S. Sorenson d/b/a Sorenson Engineering Phone 522-8069

of (address) 2988 Tipperary Lane, Idaho Falls, Idaho 83401 , and represents to the

Director of the Idaho Department of Water Resources:

That he is the owner and holder of Permit to Appropriate the Public Waters of the State of Idaho No s. 32-7136 32-7128 , and requests that the permits be changed as follows: See attached description of requested change and supporting documents. No other changes.

1. Point of diversion: _____ ¼ _____ ¼, Section _____, Township _____, Range _____, B.M.,

County of _____. Other points of diversion: _____

_____

_____

2. Period and nature of use: (irrigation, domestic, stockwatering, industrial, etc.)

Amount _____ (cfs or acre feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

Amount _____ (cfs or acre feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

Amount _____ (cfs or acre feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

Amount _____ (cfs or acre feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

3. Place of use or land to be irrigated:

TWP	RGE	SEC	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	

Total number of acres to be irrigated = _____

4. a. Who owns the property at the point of diversion? _____

b. Who owns the land to be irrigated or the place of use? _____

c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing: _____

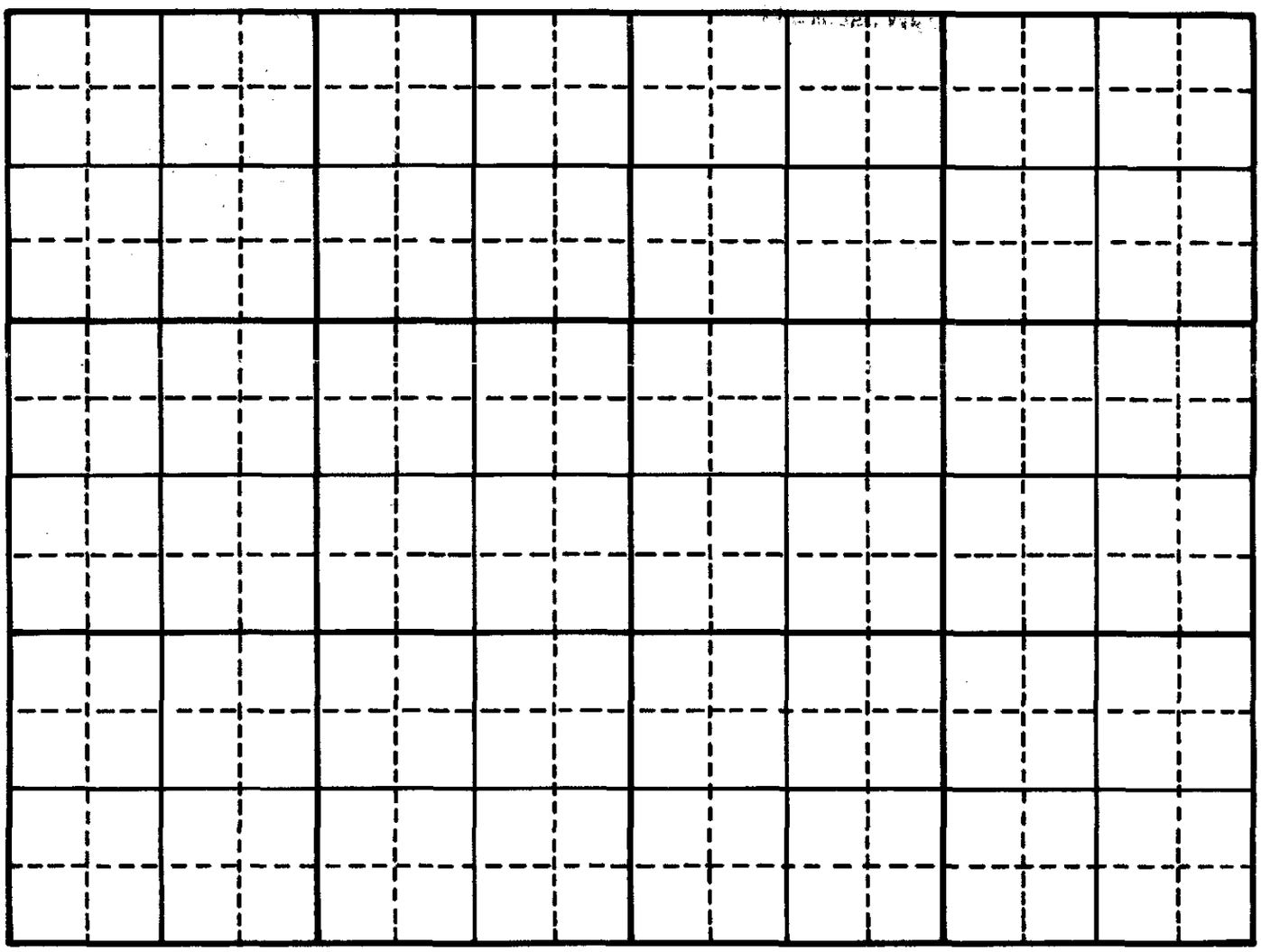
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Complete the following map by showing land and point of diversion as proposed by this amendment. Show 40-acre subdivisions, townships, ranges and ditches.



Scale: 2 inches equal 1 mile.

That no one will be injured by such change, and that such change will be made at permit holder's own risk.

Signed at _____, this _____ day of _____, 19 ____.

Ted Stiven
(Signature)

FOR DEPARTMENT USE ONLY

Preliminary check by _____ Fee = $20.00 C016616 Receipted by Julie Date 5-1-90

Publication prepared by RB Date 8-29-90 Published in statewide

Publication dates "

ACTION OF THE DEPARTMENT OF WATER RESOURCES

I, _____, of the Department of Water Resources hereby

_____

_____

_____

Witness my hand this _____ day of _____, 19 ____.

_____

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DESCRIPTION OF REQUESTED CHANGE

Permittee requests removal of the condition of approval of Permits Nos. 32-7128 and 32-7136 requiring a bypass of 5 cfs or 11% of the stream flow. The enclosed letter from Idaho Department of Fish and Game and the letter with attached environmental assessment and decision from the United States Bureau of Land Management explain the agreement which has been reached between Mr. Sorenson and such agencies and describe the proposed alternative minimum stream flow mitigation plan as well.

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RECEIPT
For Monies Paid
to the
IDAHO DEPARTMENT OF WATER RESOURCES

Receipt No: C016616

Date: 05/01/90
Time: 12:12:08

Received From: SORENSON ENGINEERING

Type of Payment	Program Acct Class	Amount
APPLICATION FOR AMENDMENT	0610199 1238 6390	$20.00
	Total	$20.00

CHECK 664

WR/NO: 327-128 377-136

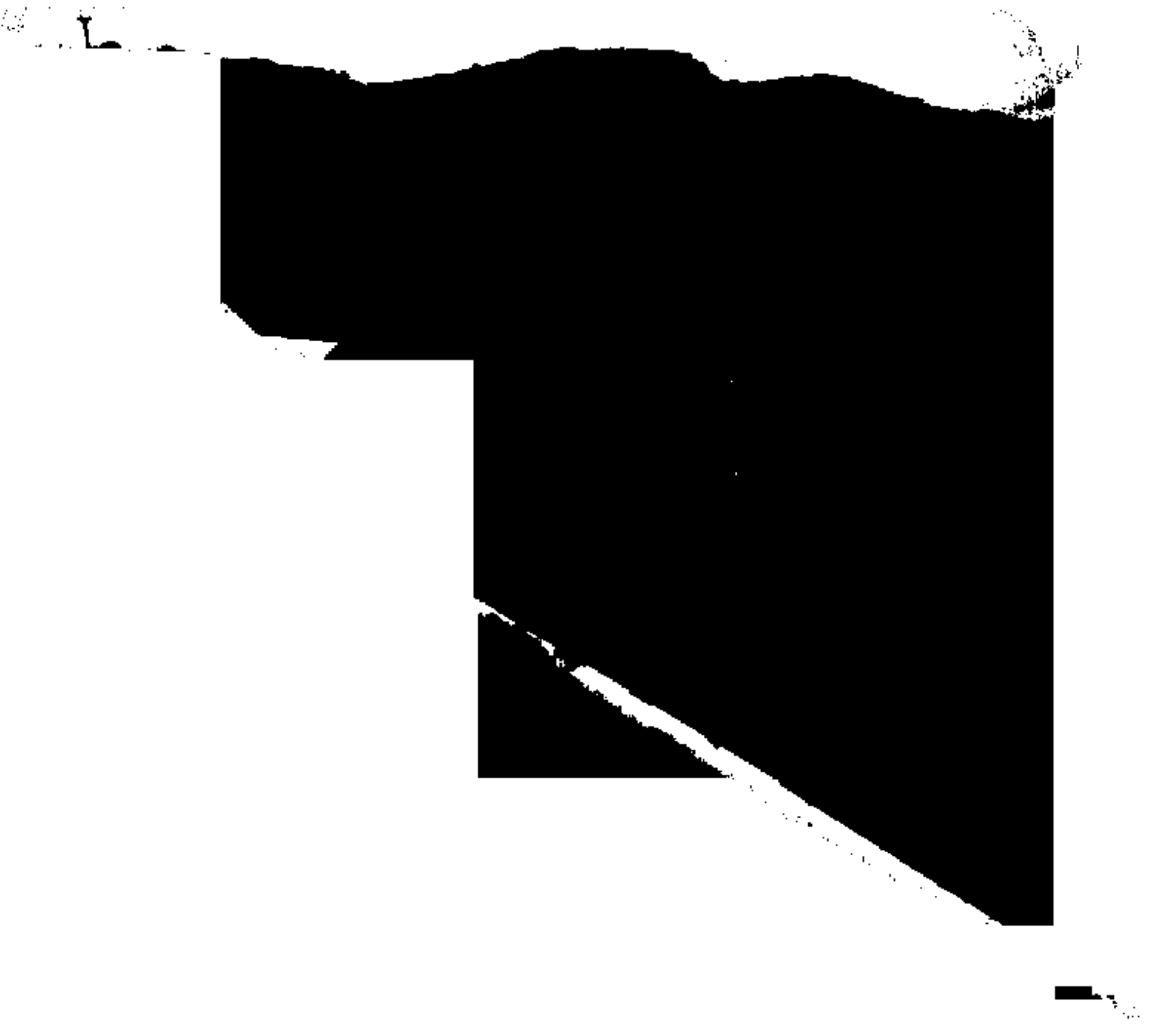
Idaho Department of Water Resources

Region: STATE Signature: J. Yarbrough

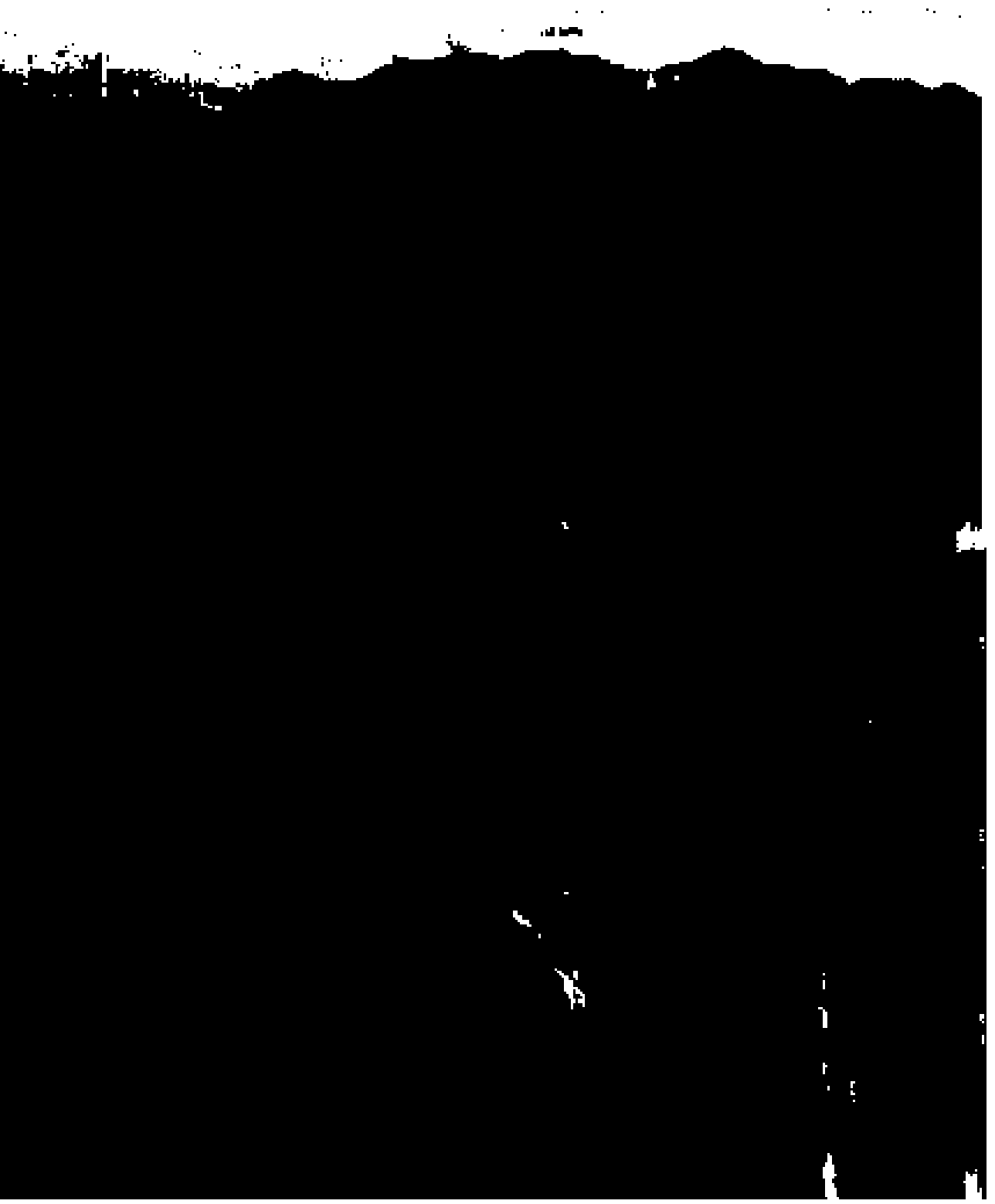
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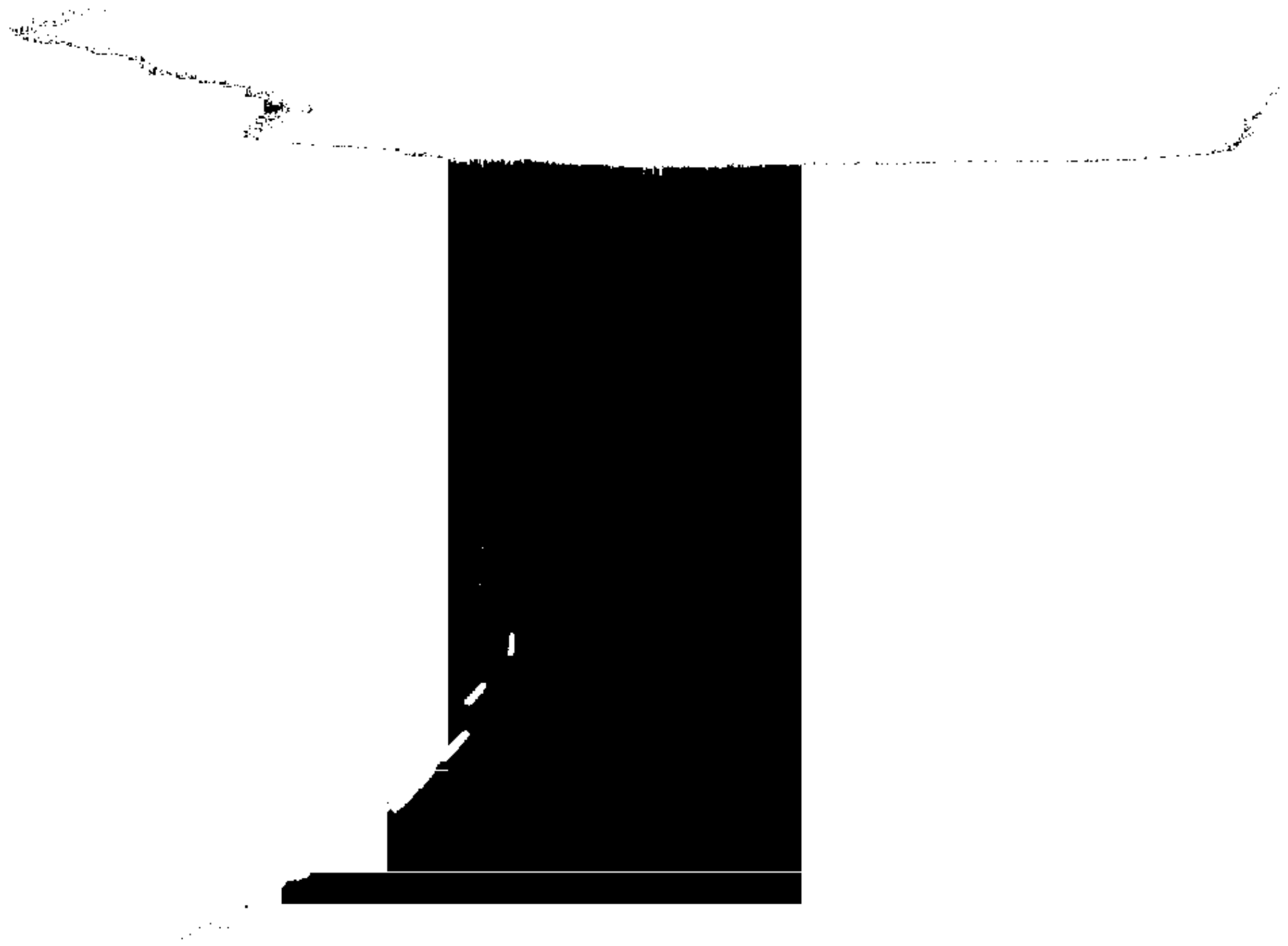
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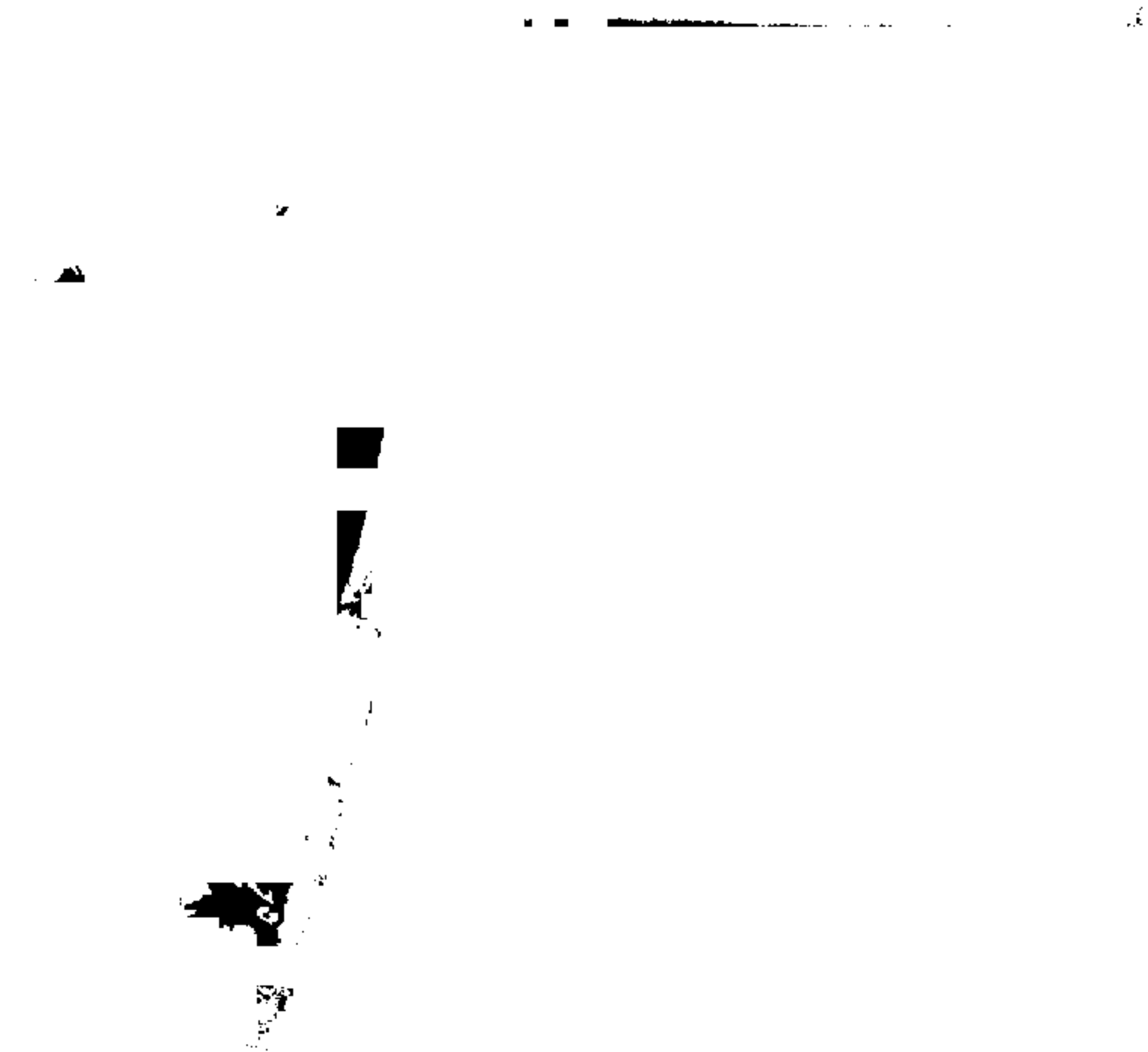




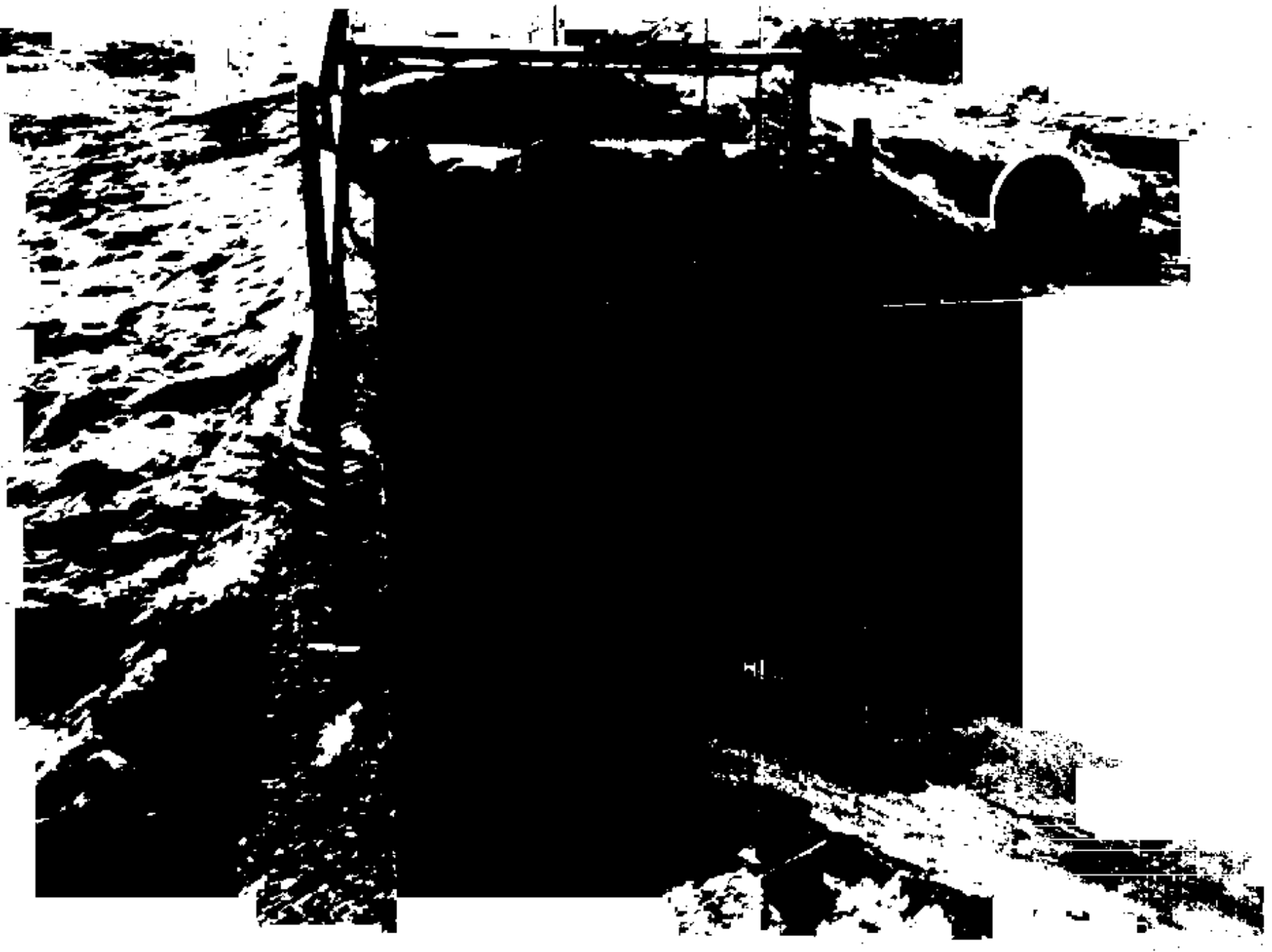








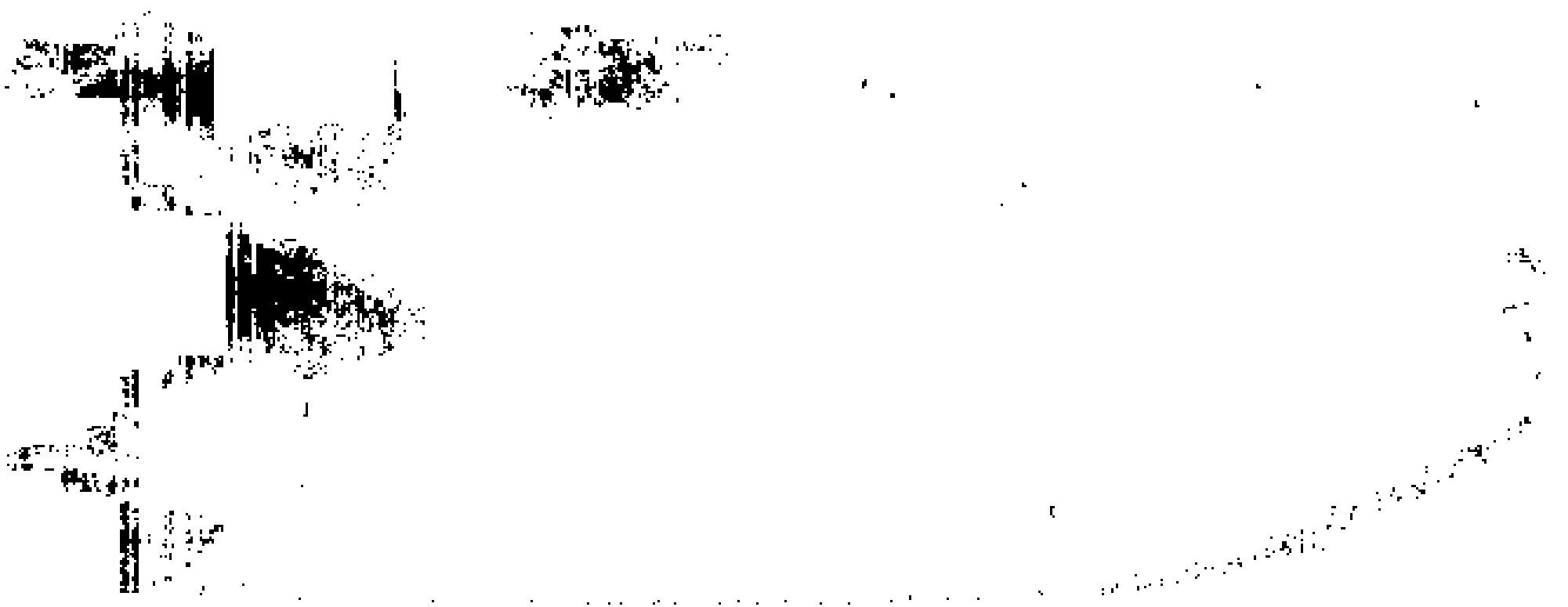


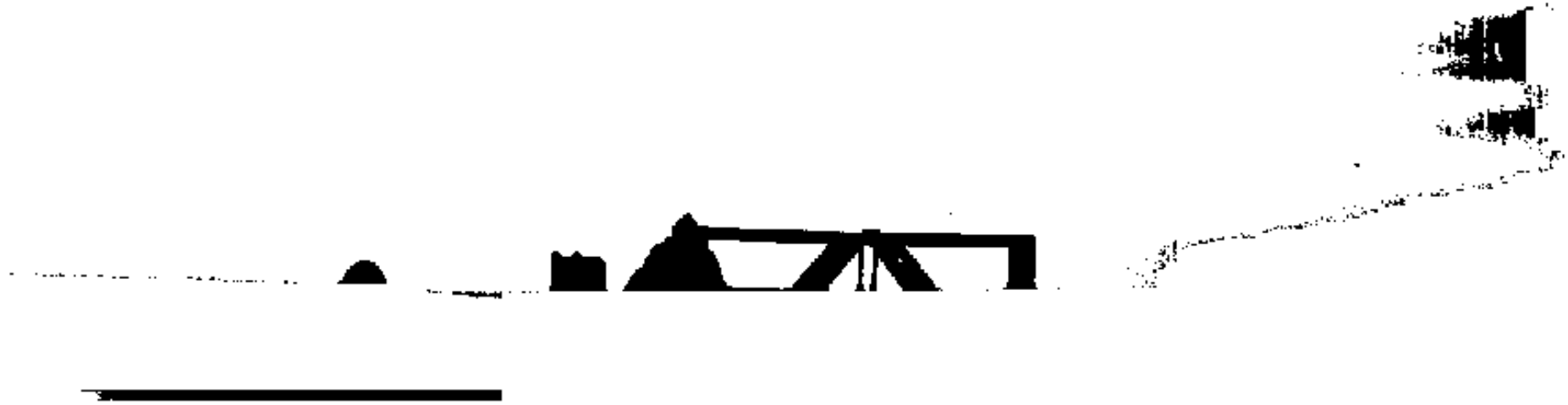














File 32-7128

Continued to
folder #3.

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Department of Water Resources
Eastern Region

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR AMENDMENT TO PERMITS 32-07128 and 32-07136 ISSUED IN FAVOR OF BIRCH CREEK RANCHES AND/OR TED SORENSON,	)))))	MOTION FOR SUMMARY JUDGMENT

COMES NOW the protestant, LaVar Newman, and hereby moves the court for a partial Summary Judgment on the following issues:

1. Idaho Code § 42-222 does not permit an increase in the number of acres irrigated in a transfer application.

2. Transfers in point of diversion and/or place of use require the transferee to bear a pro rata, as contrasted to an incremental share, of the transmission losses.

This Motion is based on the records and files herein, the transcript of the testimony at the prior hearing conducted April 17, 1990, and the Memorandum in Support hereof. This Motion is filed pursuant to IDAPA 37.01.01 (Rule 565), IRCP 56, and the pre-hearing Order dated July 17, 1997.

As set forth in said pre-hearing Order, it is expected the Motion will be argued on September 10, 1997.

DATED this 12 day of August, 1997.

GROVER & ARCHIBALD

BLAIR GROVER

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I am a duly licensed attorney in the State of Idaho, with my office in Rigby, Idaho; that I served a copy of the foregoing document or pleading upon the following person(s) at the addresses below their names either by hand delivering, by facsimile transmission (Fax), or by mailing said document in the United States mail with the correct postage thereon, a true and correct copy thereof this 12 day of August, 1997.

Served:		
	Kent W. Foster, Esq. P.O. Box 50130 Idaho Falls, ID 83405	[X] Mail [ ] Hand Delivery [ ] Facsimile
	George Petersen, Esq. 485 "E" Street Idaho Falls, ID 83402	[X] Mail [ ] Hand Delivery [ ] Facsimile
	Idaho Department of Water Resources 900 N Skyline Dr. Idaho Falls, ID 83402	[X] Mail [ ] Hand Delivery [ ] Facsimile
	Breck Barton, Esq. BARTON & ASSOCIATES P.O. Box 100 Rexburg, ID 83440	[X] Mail [ ] Hand Delivery [ ] Facsimile
	Peter R. Anderson Hearing Officer 1301 North Orchard Boise, ID 83706-2237	[X] Mail [ ] Hand Delivery [ ] Facsimile

BLAIR GROVER

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Blair Grover
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Rigby, Idaho 83442
(208) 745-6653

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR AMENDMENT TO PERMITS 32-07128 and 32-07136 ISSUED IN FAVOR OF BIRCH CREEK RANCHES AND/OR TED SORENSON,	MEMORANDUM OF PROTESTANT LAVAR NEWMAN IN SUPPORT OF SUMMARY JUDGMENT

FACTUAL BACKGROUND

On April 19, 1989 Birch Creek Ranches, Inc. (now apparently Birch Creek Ranches L.L.C.) (Birch Creek) filed its application for transfer of nine water rights decreed for irrigation on land above Blue Dome. The applications sought to transfer the points of diversion downstream four to six miles and place of use downstream some eight miles, well below the power generating facility. The applications were protested.

On April 17 and 18, 1990 the Idaho Department of Water Resources (IDWR) conducted a hearing on the applications but a decision was delayed while the parties negotiated. In 1991 the parties placed a liner in a portion of Birch Creek and in 1992 requested additional delay to evaluate the effects of the liner.

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Commencing in 1990, and pending decision, Birch Creek transferred the water (the amount yet to be determined) downstream through its power plant and onto lands it leased from the protestant, D & D Enterprises, Inc. In the spring of 1994, D & D terminated the lease arrangement so Birch Creek had no place of use for the water making that part of the application, at least, moot. Birch Creek therefore notified IDWR there was little point in proceeding.

The amended application seeks to transfer 23.6 cfs, but that total is confusing. There is 18.2 cfs[1] transferred from the Simmons property[2] and the 2.9 cfs from the Woody property. The Simmons right was decreed to 960 acres and the Woody right to 160 acres. Protestants believe, however, the evidence will show significantly less acreage was irrigated by the Simmons right, and virtually none by the Woody right.

LAW

I. AN ENLARGEMENT OF USE IS NOT PERMITTED IN A TRANSFER APPLICATION.

Idaho Code § 42-222 permits the department to approve an application for change in place of use or point of diversion provided:

> ". . . the change does not constitute an enlargement in the use of the original right. . . . The transfer of the right to the use of stored water for irrigation purposes shall not constitute an enlargement of use of the original right even though more acres may be irrigated, if no other water rights are injured thereby. . ."

---

[1] The 18.2 cfs includes .1 cfs of the Judy right. It is understood, however, the Judy right is a non-consumptive use and not an irrigation right.

[2] The Simmons property was owned for many years by Marshall Bare who sold it to Simmons in 1976. Following acquisition, Simmons installed pumps and significantly enlarged the acreage historically irrigated after 1976. The timing and amount of enlargement will likely be disputed so no numbers are being asserted in this Motion for Summary Judgment.

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An increase in the number of acres irrigated with decreed water is an enlargement of use not allowed in a transfer. The legislative declaration that an increase in acreage of stored water is not an enlargement of use is in effect a declaration that an increase in acreage of decreed water is an enlargement of use. It is the rule of statutory construction, expresio unis est exclusio alterius discussed in Local 1494, etc. vs. City of Coeur d'Alene, 630, 586 P.2d 1346 (1978). The case involved a strike by Coeur d'Alene firemen following expiration of their contract with the City of Coeur d'Alene. Idaho Code § 44-1811 provided "upon consummation and during the term of the written contract or agreement, no firefighter shall strike or recognize the picket line of any labor organization while in performance of his official duties." The firefighters argued since the statute prohibited strikes during the term of the contract, it specifically did not prohibit a strike following said term. The Supreme Court agreed and evaluated as follows:

> "Literally, of course, the statute expressly prohibits strikes 'upon consummation and during the term of the written contract or agreement.' Regarding the period after expiration of the contract or agreement, the statute is silent. In such circumstances, this jurisdiction has generally subscribed to the rule of statutory construction which states, *expresio unius est exclusio alterius:*
>
> > Furthermore, 'It is a universally recognized rule of the construction that, where a constitution or statute specifies certain things, the designation of such things excludes all others.' *Peck v. State,* 63 Idaho 375, 120 P.2d 820, 822; *Drainage Dist. No. 2 v. Ada County,* 38 Idaho 778, 786, 226 P. 290; *People v. Goldman,* 1 Idaho 714.
>
> *Poston v. Goldman,* 64 Idaho 322, 330-331, 132 P.2d 142, 146 (1942). In the present case, application of that rule leads to the conclusion that by expressly prohibiting strikes by firefighters during the term of a contract, the legislature either impliedly recognized their right to strike after expiration of the contract or, at a minimum, opened the door to such contractual agreement as the parties might reach in that regard." At pp. 639, 640.

Idaho Code § 45-222 is even more compelling. It would have been a simple matter for the legislature to have provided that an increase in acreage of either storage or decreed water is not an

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enlargement. The fact it mentioned only storage water cogently suggests increases in acreage arising in a transfer of decreed water is not allowed.

As the Hearing Officer knows, in 1985 in connection with the Snake River Basin Adjudication (SRBA) the legislature adopted I.C. § 42-1416, commonly referred to as the presumption statute designed to permit expansions (enlargements) of irrigated acres in violation of the mandatory permit requirements of Idaho Code § 42-201. On February 4, 1994 the SRBA Court declared the presumption statute unconstitutional. Rather than engage in a protracted legal battle, water users persuaded the legislature to repeal § 42-1416 and enact §§ 42-1425, 42-1426, and 42-1427 referred to as the amnesty statutes. Both §§ 1425 and 1426 speak of "enlargements" of use without defining what that means. In *Fremont-Madison Irrigation District and Mitigation Group, et al v. Idaho Ground Water Appropriators, Inc. and the State of Idaho*, Docket No. 22354 and 22355 filed October 2, 1996, the Supreme Court held:

> "The term 'enlargement' has been used to refer to any increase in the beneficial use to which an existing water right has been applied, through water conservation and other means. See I.C. § 42-1426(1)(a). An enlargement may include such events as an increase in the number of acres irrigated, and increase in the rate of diversion or duration of diversion." At p.7.

The scheme of § 1426 is to allow such enlargements provided they do not injure other water rights but with a priority as of the date of the enlargement. The point, however, of mentioning the amnesty statutes in this memorandum is simply to note that in a water law context, an increase in acreage is considered an enlargement.[3]

---

[3] IDWR has requested comment on enlargements from increased acreage and, among other things, has determined enlargements will only be identified for increases in irrigated acreage greater than 5% in a 40 acre tract. See Memorandum from Dave Tuthill, Adjudication Bureau Staff, dated January 21, 1997.

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In short, no matter how much water the applicant has, it cannot be transferred to more acreage than that on which it has historically been used. Moreover, any enlargement of the historical irrigated acreage by Simmons after 1976 (if valid), can only be given a priority date as of the date of that enlargement.

II. BIRCH CREEK RANCHES MUST BEAR A PRO RATA SHARE OF THE LOSSES INCURRED TO THE NEW POINT OF DIVERSION.

The applicant has taken the position that if it leaves 18.6 cfs in the creek (does not divert at the Simmons diversion) and runs it four to six miles down the creek to the new diversion, there is only a loss of 1.6 cfs(Tr. p. 127), 8.6% when the flow is 61.6 cfs at Blue Dome (43 cfs + 18.6 = 61.6). It therefore argues its transmission loss is only that amount.

It acknowledges the losses in that reach of the creek are substantially higher, approximately 40% for protestants 43 cfs. However, it claims it is entitled to ride on top of the existing rights down the creek, and is not required to share in the greater losses of the protestants. It thus becomes an issue of riding on top (incremental) versus a pro rata loss.[4]

Fundamental to Idaho water law is the first in time first in right.[5] Numerous cases have upheld that principal. That priority is also enshrined in Article 15, Section 5 of the Idaho Constitution. Incremental losses can destroy the priority system. For example, assume User A has 10 cfs with an 1890 priority, Water User B has 10 cfs with an 1891 priority, and Water User C has

---

[4] Idaho Code § 42-105 speaks of comingled waters. To the extent it has application in this case, it requires "due allowance shall be made for loss by evaporation and seepage." "Due allowance" is not defined so the issue discussed herein remains unresolved and the arguments apply equally to due allowance.

[5] Idaho Code § 42-106 declares "as between appropriators, the first in time is first in right."

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20 cfs with a 1900 priority. If transmission losses are 50% and C gets to ride on top, A and B with the earlier priorities will have no water while C with the later priority will take all of the water. One can manipulate and argue the percentages, but the principal remains the same, i.e. later priorities receive all or a much greater portion of their water than earlier priorities. Thus, incremental losses stands the priority system on its head and effectively nullifies it.

The reason that happens is because the water of A and B is used to saturate the bottom and banks so that when C adds his water, a significantly smaller percentage is lost. It is, however, basically unfair to impose the large losses on A and B because they were there first, and give C the benefit of their losses. Clearly, had C initially diverted with A and B, C would have shared pro rata in the losses. It is only because C is a late comer that there is any argument about riding on top. Consequently, if C gets to ride on top, he is rewarded for his late arrival.

If that is the law, users on streams throughout the state will be evaluating their positions and all who came later into the stream can claim they are riding on top and not required to share pro rata in the transmission losses.

This hypothetical is very real in this case. The evidence will establish protestants D & D have 8 cfs and protestant Newman has 4.8 cfs with priorities ahead of Birch Creek. Birch Creek then comes in with a priority of 3.2 cfs. That is a total of 16 cfs. If the flows ever drop below that, under Birch Creeks proposal, the earlier priorities of Newman and D & D will be severely reduced while Birch Creek rides on top with little reduction. Again, numbers and priorities can be added but the principal remains that riding on top will reduce earlier priorities while rewarding later ones.

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Finally, carried to its logical extreme, if the earliest priorities must bear the transmission losses, if the flows get low enough, Newman can take the same position as Birch Creek and claim he gets to ride on top of D & D. That is an absurd situation where the earliest priority takes the big loss while the later users ride on top and take much smaller losses.[6]

Incremental losses have statewide implications. Can the Snake River Valley Irrigation District, which diverts below Idaho Falls, purchase water rights from Rainey Creek or Palisade Creek which are diverted 60 miles upstream in Swan Valley, ride on top of the numerous diverters upstream from the Snake River Valley, and divert the Palisade and Rainey Creek water below Idaho Falls with virtually no loss? Can the Twin Falls Canal Company acquire water rights from users in the Blackfoot River who divert above Blackfoot, ride on top of the North Side, Twin Falls, Minidoka and Burley Irrigations Districts and divert with minimal losses at Milner? Can users at Payette purchase water rights from users at Horseshoe Bend and transfer the same down the Payette River 40 miles riding on top of the other users at Payette? In every situation the rights of earlier users saturate the bottom and banks of the streams so that late comers can take advantage of that and ride on top. The answer has to be a resounding no. If one wishes to transfer downstream, he must share pro rata in whatever losses are incurred and does not get the advantage and benefit of an incremental loss because he is a late comer.

Aside from destroying the priority system and being basically unfair, riding on top creates horrendous expenses. Everyone, including the state, must hire engineers and hydrologists, install

---

[6] That is true because ordinarily the earliest priorities were the first to make a diversion and application to beneficial use of the water. Everyone else came later. If each subsequent user gets to ride on top of the earlier user, each will have a proportionately smaller share of transmission losses exactly as argued by Birch Creek.

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weirs and measuring devices, and evaluate years of flow records to determine incremental loss. Undoubtedly, the experts will disagree (as will happen in this case) and those with the most financial resources will likely produce the more convincing data whether it is accurate or not. IDWR and/or the courts may be years sorting out the various claims.

Finally, incremental losses present an administrative nightmare. They will surely vary during an irrigation season and from season to season. That is, transmission losses are presumably greater early in the season before the ground is saturated by higher flows. Consequently, the percentage of incremental loss will be different than later in the season when less of the earlier rights are lost in transmission. Moreover, an extremely wet, cool season will have fewer losses than during a drought with long, hot days. Assuming there is sufficient data to determine all of that, administering various percentages to differing priorities throughout the year is impractical. In this case, if D & D must sustain the largest loss because it has the earliest application and priorities, then Newman some different percentage of loss because his priorities are next and he gets to ride on top of D & D with some differing percentage of loss and then Birch Creek is last and gets to ride on top of both with differing percentage will mean investment in computerized, high-tech measuring devices whose cost is totally unrealistic. Consequently, the parties will try and get by and sooner or later one will become dissatisfied and will file either demands with IDWR or commence litigation in the courts or both.

Pro rata losses is the law, it is fair, it is relatively simple and straight forward, and the water rights can be administered and delivered. Incremental losses is contrary to the law, abolishes the

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priority system long established in the state, creates horrendous expenses for all involved, and results in a system incapable of practical administration.

Obviously, this is a significant issue to all parties. The decision will have enormous impact on the hearing: If the motion is granted, the length of the hearing will be greatly reduced because much of the expert testimony and water data with regard to the percentage of incremental loss becomes irrelevant. It simply does not matter what the incremental losses are on a given day or in a given season. If the motion is denied, and the examiner holds incremental loss is the law in Idaho, this will be a lengthy hearing while the experts present their views about what those losses are, and will likely be the first of many throughout the state.

DATED this 12 day of August, 1997.

GROVER & ARCHIBALD

BLAIR GROVER

MICROFILMED

JAN 0 8 2001

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I am a duly licensed attorney in the State of Idaho, with my office in Rigby, Idaho; that I served a copy of the foregoing document or pleading upon the following person(s) at the addresses below their names either by hand delivering, by facsimile transmission (Fax), or by mailing said document in the United States mail with the correct postage thereon, a true and correct copy thereof this 12 day of August, 1997.

Served:		
	Kent W. Foster, Esq. P.O. Box 50130 Idaho Falls, ID 83405	[X] Mail [ ] Hand Delivery [ ] Facsimile
	George Petersen, Esq. 485 "E" Street Idaho Falls, ID 83402	[X] Mail [ ] Hand Delivery [ ] Facsimile
	Idaho Department of Water Resources 900 N Skyline Dr. Idaho Falls, ID 83402	[X] Mail [ ] Hand Delivery [ ] Facsimile
	Breck Barton BARTON & ASSOCIATES P.O. Box 100 Rexburg, ID 83440	[xx] Mail [ ] Hand [ ] Facsimile
	Peter R. Anderson Hearing Officer 1301 North Orchard Boise, ID 83706-2237	[X] Mail [ ] Hand Delivery [ ] Facsimile

BLAIR GROVER

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JAN 0 8 2001

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR AMENDMENT TO PERMITS 32-07128 and 32-07136 ISSUED IN FAVOR OF BIRCH CREEK RANCHES AND/OR TED SORENSON,	)))))	MOTION FOR SUMMARY JUDGMENT

COMES NOW the protestant, LaVar Newman, and hereby moves the court for a partial Summary Judgment on the following issues:

1. Idaho Code § 42-222 does not permit an increase in the number of acres irrigated in a transfer application.

2. Transfers in point of diversion and/or place of use require the transferee to bear a pro rata, as contrasted to an incremental share, of the transmission losses.

This Motion is based on the records and files herein, the transcript of the testimony at the prior hearing conducted April 17, 1990, and the Memorandum in Support hereof. This Motion is filed pursuant to IDAPA 37.01.01 (Rule 565), IRCP 56, and the pre-hearing Order dated July 17, 1997.

As set forth in said pre-hearing Order, it is expected the Motion will be argued on September 10, 1997.

DATED this 12 day of August, 1997.

GROVER & ARCHIBALD

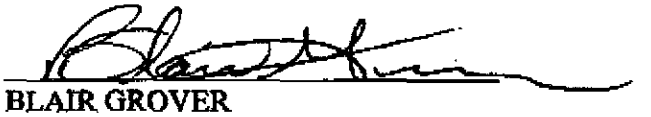
BLAIR GROVER

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JAN 08 2001

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I am a duly licensed attorney in the State of Idaho, with my office in Rigby, Idaho; that I served a copy of the foregoing document or pleading upon the following person(s) at the addresses below their names either by hand delivering, by facsimile transmission (Fax), or by mailing said document in the United States mail with the correct postage thereon, a true and correct copy thereof this 12 day of August, 1997.

Served:		
	Kent W. Foster, Esq. P.O. Box 50130 Idaho Falls, ID 83405	[X] Mail [ ] Hand Delivery [ ] Facsimile
	George Petersen, Esq. 485 "E" Street Idaho Falls, ID 83402	[X] Mail [ ] Hand Delivery [ ] Facsimile
	Idaho Department of Water Resources 900 N Skyline Dr. Idaho Falls, ID 83402	[X] Mail [ ] Hand Delivery [ ] Facsimile
	Breck Barton, Esq. BARTON & ASSOCIATES P.O. Box 100 Rexburg, ID 83440	[X] Mail [ ] Hand Delivery [ ] Facsimile
	Peter R. Anderson Hearing Officer 1301 North Orchard Boise, ID 83706-2237	[X] Mail [ ] Hand Delivery [ ] Facsimile



BLAIR GROVER

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Blair Grover
GROVER & ARCHIBALD
215 Farnsworth Way
P.O. Box 36
Rigby, Idaho 83442
(208) 745-6653

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR AMENDMENT TO PERMITS 32-07128 and 32-07136 ISSUED IN FAVOR OF BIRCH CREEK RANCHES AND/OR TED SORENSON,	MEMORANDUM OF PROTESTANT LAVAR NEWMAN IN SUPPORT OF SUMMARY JUDGMENT

FACTUAL BACKGROUND

On April 19, 1989 Birch Creek Ranches, Inc. (now apparently Birch Creek Ranches L.L.C.) (Birch Creek) filed its application for transfer of nine water rights decreed for irrigation on land above Blue Dome. The applications sought to transfer the points of diversion downstream four to six miles and place of use downstream some eight miles, well below the power generating facility. The applications were protested.

On April 17 and 18, 1990 the Idaho Department of Water Resources (IDWR) conducted a hearing on the applications but a decision was delayed while the parties negotiated. In 1991 the parties placed a liner in a portion of Birch Creek and in 1992 requested additional delay to evaluate the effects of the liner.

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Commencing in 1990, and pending decision, Birch Creek transferred the water (the amount yet to be determined) downstream through its power plant and onto lands it leased from the protestant, D & D Enterprises, Inc. In the spring of 1994, D & D terminated the lease arrangement so Birch Creek had no place of use for the water making that part of the application, at least, moot. Birch Creek therefore notified IDWR there was little point in proceeding.

The amended application seeks to transfer 23.6 cfs, but that total is confusing. There is 18.2 cfs[1] transferred from the Simmons property[2] and the 2.9 cfs from the Woody property. The Simmons right was decreed to 960 acres and the Woody right to 160 acres. Protestants believe, however, the evidence will show significantly less acreage was irrigated by the Simmons right, and virtually none by the Woody right.

LAW

I. AN ENLARGEMENT OF USE IS NOT PERMITTED IN A TRANSFER APPLICATION.

Idaho Code § 42-222 permits the department to approve an application for change in place of use or point of diversion provided:

> ". . . the change does not constitute an enlargement in the use of the original right. . . . The transfer of the right to the use of stored water for irrigation purposes shall not constitute an enlargement of use of the original right even though more acres may be irrigated, if no other water rights are injured thereby. . ."

---

[1] The 18.2 cfs includes .1 cfs of the Judy right. It is understood, however, the Judy right is a non-consumptive use and not an irrigation right.

[2] The Simmons property was owned for many years by Marshall Bare who sold it to Simmons in 1976. Following acquisition, Simmons installed pumps and significantly enlarged the acreage historically irrigated after 1976. The timing and amount of enlargement will likely be disputed so no numbers are being asserted in this Motion for Summary Judgment.

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An increase in the number of acres irrigated with decreed water is an enlargement of use not allowed in a transfer. The legislative declaration that an increase in acreage of stored water is not an enlargement of use is in effect a declaration that an increase in acreage of decreed water is an enlargement of use. It is the rule of statutory construction, expresio unis est exclusio alterius discussed in Local 1494, etc. vs. City of Coeur d'Alene, 630, 586 P.2d 1346 (1978). The case involved a strike by Coeur d'Alene firemen following expiration of their contract with the City of Coeur d'Alene. Idaho Code § 44-1811 provided "upon consummation and during the term of the written contract or agreement, no firefighter shall strike or recognize the picket line of any labor organization while in performance of his official duties." The firefighters argued since the statute prohibited strikes during the term of the contract, it specifically did not prohibit a strike following said term. The Supreme Court agreed and evaluated as follows:

> "Literally, of course, the statute expressly prohibits strikes 'upon consummation and during the term of the written contract or agreement.' Regarding the period after expiration of the contract or agreement, the statute is silent. In such circumstances, this jurisdiction has generally subscribed to the rule of statutory construction which states, *expresio unius est exclusio alterius:*
>
> > Furthermore, 'It is a universally recognized rule of the construction that, where a constitution or statute specifies certain things, the designation of such things excludes all others.' *Peck v. State,* 63 Idaho 375, 120 P.2d 820, 822; *Drainage Dist. No. 2 v. Ada County,* 38 Idaho 778, 786, 226 P. 290; *People v. Goldman,* 1 Idaho 714.
>
> *Poston v. Goldman,* 64 Idaho 322, 330-331, 132 P.2d 142, 146 (1942). In the present case, application of that rule leads to the conclusion that by expressly prohibiting strikes by firefighters during the term of a contract, the legislature either impliedly recognized their right to strike after expiration of the contract or, at a minimum, opened the door to such contractual agreement as the parties might reach in that regard." At pp. 639, 640.

Idaho Code § 45-222 is even more compelling. It would have been a simple matter for the legislature to have provided that an increase in acreage of either storage or decreed water is not an

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enlargement. The fact it mentioned only storage water cogently suggests increases in acreage arising in a transfer of decreed water is not allowed.

As the Hearing Officer knows, in 1985 in connection with the Snake River Basin Adjudication (SRBA) the legislature adopted I.C. § 42-1416, commonly referred to as the presumption statute designed to permit expansions (enlargements) of irrigated acres in violation of the mandatory permit requirements of Idaho Code § 42-201. On February 4, 1994 the SRBA Court declared the presumption statute unconstitutional. Rather than engage in a protracted legal battle, water users persuaded the legislature to repeal § 42-1416 and enact §§ 42-1425, 42-1426, and 42-1427 referred to as the amnesty statutes. Both §§ 1425 and 1426 speak of "enlargements" of use without defining what that means. In *Fremont-Madison Irrigation District and Mitigation Group, et al v. Idaho Ground Water Appropriators, Inc. and the State of Idaho*, Docket No. 22354 and 22355 filed October 2, 1996, the Supreme Court held:

> "The term 'enlargement' has been used to refer to any increase in the beneficial use to which an existing water right has been applied, through water conservation and other means. See I.C. § 42-1426(1)(a). An enlargement may include such events as an increase in the number of acres irrigated, and increase in the rate of diversion or duration of diversion." At p.7.

The scheme of § 1426 is to allow such enlargements provided they do not injure other water rights but with a priority as of the date of the enlargement. The point, however, of mentioning the amnesty statutes in this memorandum is simply to note that in a water law context, an increase in acreage is considered an enlargement.[3]

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[3] IDWR has requested comment on enlargements from increased acreage and, among other things, has determined enlargements will only be identified for increases in irrigated acreage greater than 5% in a 40 acre tract. See Memorandum from Dave Tuthill, Adjudication Bureau Staff, dated January 21, 1997.

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In short, no matter how much water the applicant has, it cannot be transferred to more acreage than that on which it has historically been used. Moreover, any enlargement of the historical irrigated acreage by Simmons after 1976 (if valid), can only be given a priority date as of the date of that enlargement.

II. BIRCH CREEK RANCHES MUST BEAR A PRO RATA SHARE OF THE LOSSES INCURRED TO THE NEW POINT OF DIVERSION.

The applicant has taken the position that if it leaves 18.6 cfs in the creek (does not divert at the Simmons diversion) and runs it four to six miles down the creek to the new diversion, there is only a loss of 1.6 cfs(Tr. p. 127), 8.6% when the flow is 61.6 cfs at Blue Dome (43 cfs + 18.6 = 61.6). It therefore argues its transmission loss is only that amount.

It acknowledges the losses in that reach of the creek are substantially higher, approximately 40% for protestants 43 cfs. However, it claims it is entitled to ride on top of the existing rights down the creek, and is not required to share in the greater losses of the protestants. It thus becomes an issue of riding on top (incremental) versus a pro rata loss.[4]

Fundamental to Idaho water law is the first in time first in right.[5] Numerous cases have upheld that principal. That priority is also enshrined in Article 15, Section 5 of the Idaho Constitution. Incremental losses can destroy the priority system. For example, assume User A has 10 cfs with an 1890 priority, Water User B has 10 cfs with an 1891 priority, and Water User C has

---

[4] Idaho Code § 42-105 speaks of comingled waters. To the extent it has application in this case, it requires "due allowance shall be made for loss by evaporation and seepage." "Due allowance" is not defined so the issue discussed herein remains unresolved and the arguments apply equally to due allowance.

[5] Idaho Code § 42-106 declares "as between appropriators, the first in time is first in right."

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20 cfs with a 1900 priority. If transmission losses are 50% and C gets to ride on top, A and B with the earlier priorities will have no water while C with the later priority will take all of the water. One can manipulate and argue the percentages, but the principal remains the same, i.e. later priorities receive all or a much greater portion of their water than earlier priorities. Thus, incremental losses stands the priority system on its head and effectively nullifies it.

The reason that happens is because the water of A and B is used to saturate the bottom and banks so that when C adds his water, a significantly smaller percentage is lost. It is, however, basically unfair to impose the large losses on A and B because they were there first, and give C the benefit of their losses. Clearly, had C initially diverted with A and B, C would have shared pro rata in the losses. It is only because C is a late comer that there is any argument about riding on top. Consequently, if C gets to ride on top, he is rewarded for his late arrival.

If that is the law, users on streams throughout the state will be evaluating their positions and all who came later into the stream can claim they are riding on top and not required to share pro rata in the transmission losses.

This hypothetical is very real in this case. The evidence will establish protestants D & D have 8 cfs and protestant Newman has 4.8 cfs with priorities ahead of Birch Creek. Birch Creek then comes in with a priority of 3.2 cfs. That is a total of 16 cfs. If the flows ever drop below that, under Birch Creeks proposal, the earlier priorities of Newman and D & D will be severely reduced while Birch Creek rides on top with little reduction. Again, numbers and priorities can be added but the principal remains that riding on top will reduce earlier priorities while rewarding later ones.

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Finally, carried to its logical extreme, if the earliest priorities must bear the transmission losses, if the flows get low enough, Newman can take the same position as Birch Creek and claim he gets to ride on top of D & D. That is an absurd situation where the earliest priority takes the big loss while the later users ride on top and take much smaller losses.[6]

Incremental losses have statewide implications. Can the Snake River Valley Irrigation District, which diverts below Idaho Falls, purchase water rights from Rainey Creek or Palisade Creek which are diverted 60 miles upstream in Swan Valley, ride on top of the numerous diverters upstream from the Snake River Valley, and divert the Palisade and Rainey Creek water below Idaho Falls with virtually no loss? Can the Twin Falls Canal Company acquire water rights from users in the Blackfoot River who divert above Blackfoot, ride on top of the North Side, Twin Falls, Minidoka and Burley Irrigations Districts and divert with minimal losses at Milner? Can users at Payette purchase water rights from users at Horseshoe Bend and transfer the same down the Payette River 40 miles riding on top of the other users at Payette? In every situation the rights of earlier users saturate the bottom and banks of the streams so that late comers can take advantage of that and ride on top. The answer has to be a resounding no. If one wishes to transfer downstream, he must share pro rata in whatever losses are incurred and does not get the advantage and benefit of an incremental loss because he is a late comer.

Aside from destroying the priority system and being basically unfair, riding on top creates horrendous expenses. Everyone, including the state, must hire engineers and hydrologists, install

---

[6] That is true because ordinarily the earliest priorities were the first to make a diversion and application to beneficial use of the water. Everyone else came later. If each subsequent user gets to ride on top of the earlier user, each will have a proportionately smaller share of transmission losses exactly as argued by Birch Creek.

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weirs and measuring devices, and evaluate years of flow records to determine incremental loss. Undoubtedly, the experts will disagree (as will happen in this case) and those with the most financial resources will likely produce the more convincing data whether it is accurate or not. IDWR and/or the courts may be years sorting out the various claims.

Finally, incremental losses present an administrative nightmare. They will surely vary during an irrigation season and from season to season. That is, transmission losses are presumably greater early in the season before the ground is saturated by higher flows. Consequently, the percentage of incremental loss will be different than later in the season when less of the earlier rights are lost in transmission. Moreover, an extremely wet, cool season will have fewer losses than during a drought with long, hot days. Assuming there is sufficient data to determine all of that, administering various percentages to differing priorities throughout the year is impractical. In this case, if D & D must sustain the largest loss because it has the earliest application and priorities, then Newman some different percentage of loss because his priorities are next and he gets to ride on top of D & D with some differing percentage of loss and then Birch Creek is last and gets to ride on top of both with differing percentage will mean investment in computerized, high-tech measuring devices whose cost is totally unrealistic. Consequently, the parties will try and get by and sooner or later one will become dissatisfied and will file either demands with IDWR or commence litigation in the courts or both.

Pro rata losses is the law, it is fair, it is relatively simple and straight forward, and the water rights can be administered and delivered. Incremental losses is contrary to the law, abolishes the

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priority system long established in the state, creates horrendous expenses for all involved, and results in a system incapable of practical administration.

Obviously, this is a significant issue to all parties. The decision will have enormous impact on the hearing: If the motion is granted, the length of the hearing will be greatly reduced because much of the expert testimony and water data with regard to the percentage of incremental loss becomes irrelevant. It simply does not matter what the incremental losses are on a given day or in a given season. If the motion is denied, and the examiner holds incremental loss is the law in Idaho, this will be a lengthy hearing while the experts present their views about what those losses are, and will likely be the first of many throughout the state.

DATED this 12 day of August, 1997.

GROVER & ARCHIBALD



BLAIR GROVER

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JAN 08 2001

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I am a duly licensed attorney in the State of Idaho, with my office in Rigby, Idaho; that I served a copy of the foregoing document or pleading upon the following person(s) at the addresses below their names either by hand delivering, by facsimile transmission (Fax), or by mailing said document in the United States mail with the correct postage thereon, a true and correct copy thereof this 12 day of August, 1997.

Served:		
	Kent W. Foster, Esq. P.O. Box 50130 Idaho Falls, ID 83405	[X] Mail [ ] Hand Delivery [ ] Facsimile
	George Petersen, Esq. 485 "E" Street Idaho Falls, ID 83402	[X] Mail [ ] Hand Delivery [ ] Facsimile
	Idaho Department of Water Resources 900 N Skyline Dr. Idaho Falls, ID 83402	[X] Mail [ ] Hand Delivery [ ] Facsimile
	Breck Barton BARTON & ASSOCIATES P.O. Box 100 Rexburg, ID 83440	[xx] Mail [ ] Hand [ ] Facsimile
	Peter R. Anderson Hearing Officer 1301 North Orchard Boise, ID 83706-2237	[X] Mail [ ] Hand Delivery [ ] Facsimile

BLAIR GROVER

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Department of Water Resources
Eastern Region

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON d/b/a SORENSON ENGINEERING	)))))	**ORDER GRANTING INTERVENTION TO LAVAR AND LOUISE NEWMAN**

The Department of Water Resources (Department) received the *Motion of Lavar Newman and Louise Newman, His Wife, To Intervene* on May 16, 1997, in the above-entitled matter. The Department received no objection to the motion to intervene and it appears that the Newmans have a direct and substantial interest in the proceeding as the owners of property previously owned by Elda Wilding. Elda Wilding filed a protest to the Applications at issue in this matter on August 31, 1990, based in part upon the alleged impact of the requested amendments upon the property currently owned by the Newmans.

THEREFORE, the Department grants intervention to Lavar and Louise Newman. The Newmans shall proceed under the *Protest of Elda H. Wilding*, attached to this Order, unless they file a formal protest on their own behalf pursuant to IDAPA 37.01.01.250 with the Department on or before June 30, 1997.

DATED this 19th day of June, 1997.

Peter R. Anderson

PETER R. ANDERSON
Hearing Officer

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JAN 0 8 2001

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 19th day of June, 1997, I mailed a true and correct copy of the foregoing **ORDER GRANTING INTERVENTION TO LAVAR AND LOUISE NEWMAN** on the following persons listed below by U.S. mail, postage prepaid and addressed as follows:

Norman C. Young
Idaho Dept. of Water Resources
1301 N. Orchard St.
Boise, ID 83706

Ronald D. Carlson
Eastern Regional Manager
Idaho Dept. of Water Resources
900 N. Skyline Dr.
Idaho Falls, ID 83402

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Idaho Falls, ID 83405

Blair J. Grover, Esq.
GROVER & ARCHIBALD
P.O. Box 36
Rigby, ID 83442

George Petersen, Esq.
PETERSEN MOSS OLSEN
MEACHAM & CARR
485 "E" Street
Idaho Falls, ID 83402

Rita I. Fleck
Administrative Secretary

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Department of Water Resources
Eastern District Office

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RIGBY & KAM, Chartered
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Rexburg, Idaho 83440
Telephone: 208 356-3633

Attorneys for Elda H. Wilding

BEFORE THE DEPARTMENT WATER RESOURCES
OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION OF TED S. SORENSON, dba SORENSON ENGINEERING or BIRCH POWER TO AMEND HYDROPOWER PERMIT NOS. 32-7128 and 32-7136.	PROTEST OF ELDA H. WILDING

Elda H. Wilding, c/o Jerry R. Rigby, of Rigby, Thatcher, Andrus, Rigby & Kam, Chartered, 25 North Second East, Rexburg, Idaho 83440, hereby enters her protest against approval of the application of Ted S. Sorenson, dba/Sorenson Engineering or Birth Power (hereinafter "Sorenson") to amend Hydropower Permit Nos. 32-7128 and 32-7136 on the following grounds:

1. Elda H. Wilding is a substantial user of the waters of Birch Creek, said use thereof and the properties of Elda H. Wilding being situated downstream from the site of the proposed diversion and construction referred to in Sorenson's application. From a preliminary review of Sorenson's application, it appears that the proposed diversion and

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construction would be detrimental to, and not in the best interests of, other water users of Birch Creek.

2. Sorenson's application fails to provide adequate plans on which a valid decision can be made regarding the possible detrimental effects of the proposed diversion and construction. Additionally, Sorenson has failed to provide adequate information to show whether sufficient financial resources will be available to complete and maintain the work proposed in Sorenson's application; Elda H. Wilding questions Sorenson's financial ability to maintain the changes proposed in the application and to restore Birch Creek to its present condition and flow should Sorenson make changes to the condition or flow of Birch Creek.

3. Sorenson's application presents inadequate proof of the feasibility of Sorenson's plan. Specifically, Sorenson's application lacks proof of feasibility that the ponds, drip irrigation system and other proposals can be established and maintained with the water flows proposed.

4. Sorenson's application contains no definitive statement of construction cost information which would allow a reasoned evaluation of the feasibility of the proposed project.

5. Sorenson's application contains no definitive statement of maintenance costs and other maintenance information which would allow a reasoned evaluation of the feasibility of the maintenance of the proposed project.

6. Sorenson's application contains no proof of any

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firm commitment of sufficient financial resources with which to complete the work proposed.

7. Assuming, arguendo, that the proposed project could be constructed and maintained as outlined in Sorenson's application, the application is deficient because it does not make provision for the beneficial use of the increased stream flow below the Birch Creek hydroproject. If Sorenson's application is approved, it should be conditioned on the application of the increased stream flow to fill the decreed, but unsatisfied, water rights of the downstream water users of Birch Creek, specifically, Elda H. Wilding.

8. Assuming, arguendo, that the proposed project could be constructed and maintained as outlined in Sorenson's application, Sorenson's application is deficient because it does not provide any proposal to establish guidelines or duties under which the watermaster would administer the increased stream flow below the Birch Creek hydroproject.

9. Sorenson's application is deficient because it fails to define accurately the flow to be eliminated. Sorenson's application apparently proposed elimination of a maintenance flow of the lesser of 5 cfs or 11 percent of the flow of Birch Creek, but it does not establish the point of measuring the flow of Birch Creek. The flow in Birch Creek varies widely.

10. Sorenson's application is deficient because it fails to compare the amount of water presently used for

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maintenance flows with the amount which would be required under Sorenson's proposal.

Elda H. Wilding hereby respectfully requests the right to amend this protest following receipt of reports and recommendations from his water engineer or following the receipt of additional information from Sorenson or other interested parties.

DATED This 30th day of August, 1990.

Jerry R. Rigby
of RIGBY, THATCHER, ANDRUS,
RIGBY & KAM, Chartered

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BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON d/b/a SORENSON ENGINEERING	**ORDER DISMISSING PROTEST FILED BY ELDA WILDING**

The Department of Water Resources received the attached letter from Jerry Rigby on behalf of Elda Wilding on April 30, 1997. The letter indicates that Elda Wilding no longer owns the property affected by the above-captioned application and that she no longer wishes to receive notices of proceedings in this matter. The Department will treat this letter as a request to dismiss the protest of Ms. Wilding.

ORDER

IT IS ORDERED that the Protest of Elda Wilding, dated August 30, 1990, is dismissed.

DATED this 23rd day of May, 1997.

Peter R. Anderson

PETER R. ANDERSON
Hearing Officer

RECEIVED
MAY 2 9 1997
Department of Water Resources
Eastern Region

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JAN 0 8 2001

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 23 day of May, 1997, I mailed a true and correct copy of the foregoing **ORDER DISMISSING PROTEST FILED BY ELDA WILDING** on the following persons listed below by U.S. mail, postage prepaid and addressed as follows:

Norman C. Young
Idaho Dept. of Water Resources
1301 N. Orchard Street
Boise, ID 83706

Ronald D. Carlson
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Idaho Dept. of Water Resources
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Idaho Falls, ID 83402

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Idaho Falls, ID 83405

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RIGBY THATCHER ANDRUS RIGBY
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Rexburg, ID 83440-0250

Deborah Drew-Ellis
Legal Secretary

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MAY 5 - 1997
Department of Water Resources

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COPY

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APR 30 1997
Department of Water Resources
Eastern District Office

April 29, 1997

Peter R. Anderson
Hearing Officer
900 N. Skyline Drive
Idaho Falls, ID 83402

Re: **Notice of Prehearing Conference**
Regarding Amendment of Water Rights Permit No. 32-07128 and 32-07136/Sorenson

Dear Mr. Anderson:

Pursuant to our telephone conversation, this letter is to inform you that Cleo and Sybil Wilding, who owned the property and water rights affected by the above described application for amendment have since sold their interest including all water rights to LaVar Newman and Louise Newman of 2941 North 800 East, Monteview, Idaho 83435. Therefore, all future notices of the said application for amendment should be addressed to Mr. Newman. I am by this letter copying Mr. and Mrs. Newman with the Notice of Prehearing Conference sent by your office to me.

Sincerely yours,

Jerry R. Rigby

JRR:rc

Enclosure

cc: Mr. and Mrs. Newman

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JAN 0 8 2001

Receipt #E023228

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

RECEIVED
MAY 15 1997
Department of Water Resources
Eastern Region

IN THE MATTER OF APPLICATION FOR AMENDMENT TO PERMITS 32-07128 and 32-07136 ISSUED IN FAVOR OF BIRCH CREEK RANCHES AND/OR TED SORENSON,	MOTION OF LAVAR NEWMAN AND LOUISE NEWMAN, HIS WIFE, TO INTERVENE

COMES NOW Lavar Newman and Louise Newman (Newman), his wife, and hereby move for intervention in the above entitled matter and state as follows:

1. Application Nos. 32-07128, and 32-07136 were filed in 1982 and 1984 respectfully. Ben an Elda Wilding (Wilding) were Protestants and/or Interveners in those applications. Following hearing, IDWR duly approved both applications which were subsequently upheld by the District Court in June, 1986.

2. On or about May 1, 1990, Birch Creek Ranches and/or Ted Sorenson filed applications to amend Permit Nos. 32-07128 and 32-07136. Ben Wilding had apparently died in the interim, but a protest was filed by Elda Wilding.

3. Thereafter, Newman acquired the Wilding property and have the same concerns and objections to the Applications for Amendment as did Wilding, and as successors in interest to Wilding should be permitted to raise said concerns and objections.

4. Birch Creek Ranches and/or Sorenson have since filed Application No. 3553 seeking transfer of certain water rights, and thereafter in April of 1996, filed an Amended Application for said transfer which was duly protested by Newman. In February, 1997, Birch Creek Ranches filed Application No. 31-07646 which was timely protested by Newman.

5. All of the Applications and/or Amended Applications involve some of the same decrees, some similar and/or identical facts, and some similar and/or identical legal issues. Intervention will not significantly change or increase the facts or issues to be resolved in this matter.

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6. As successors in interest to Wilding, IDWR should grant this Motion to Intervene.

DATED this 14 day of May, 1997.

BLAIR GROVER
Counsel for Lavar Newman
P.O. Box 36
Rigby, ID 83442
(208) 745-6653

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I am a duly licensed attorney in the State of Idaho, with my office in Rigby, Idaho; that I served a copy of the foregoing document or pleading upon the following person(s) at the addresses below their names either by hand delivering, by facsimile transmission (Fax), or by mailing said document in the United States mail with the correct postage thereon, a true and correct copy thereof this 14 day of May, 1997.

Served:		
	Kent W. Foster, Esq. P.O. Box 50130 Idaho Falls, ID 83405	[X] Mail [ ] Hand Delivery [ ] Facsimile
	George Petersen, Esq. 485 "E" Street Idaho Falls, ID 83402	[X] Mail [ ] Hand Delivery [ ] Facsimile
	Idaho Department of Water Resources 900 N Skyline Dr. Idaho Falls, ID 83402	[X] Mail [ ] Hand Delivery [ ] Facsimile

BLAIR GROVER

MICROFILMED

JAN 0 8 2001

RECEIPT
For Monies Paid
to the
Idaho Department of Water Resources

Receipt No: E023229

Date: 5/15/1997
Time: 14:35:42

Received
From: GROVER, BLAIR

Type of Payment		Program Acct	Amount
PETITION TO INTERVENE- 32-07128,7136	63103	229 21 1155	25.00

CHECK 17978 Total $ 25.00

Region: EASTERN Signature:

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JAN 0 8 2001

STATE OF IDAHO
OFFICE OF THE ATTORNEY GENERAL
ALAN G. LANCE

May 8, 1997

LaVar Newman
Louise Newman
2941 North 800 East
Monteview, Idaho 83435

Re: Amendment of Water Rights Permit No. 32-07128 and 32-07136 in the name of Ted Sorenson

Dear Mr. and Mrs. Newman:

According to Mr. Jerry Rigby's letter dated April 29, 1997, you have purchased the property and water rights of Cleo and Sybil Wilding in the Birch Creek area. Elda Wilding filed a protest with the Department of Water Resources regarding the applications of Ted Sorenson to amend the water right permits listed above on August 31, 1990.

Mr. Rigby, Elda Wilding's attorney, has indicated that with the sale of the property Elda Wilding no longer wishes to pursue her protest. Therefore, I intend to issue an order dismissing her from this matter.

If you feel that you need to pursue a protest to Mr. Sorenson's application in order to protect your interest in the former Wilding property you must intervene pursuant to the rules of the Department of Water Resources. IDAPA 37.01.01.350. This letter is notice to you that I will give you until May 21, 1997, to intervene in this proceeding. Because your interest parallels that of Elda Wilding's, I expect to allow you to intervene, absent a strong showing to the contrary on behalf of Mr. Sorenson. Whether you choose to file a motion to intervene or not is entirely your decision.

If you decide to intervene you must attend the informal Prehearing Conference set for Wednesday, May 21, 1997, in Idaho Falls. I have attached notice of this conference. Should you choose not to attend I will assume that you are not interested in pursuing this matter.

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JAN 0 8 2001

Natural Resources Division - Water Resources Unit
1301 North Orchard St., Boise, Idaho 83706-2237
Telephone: (208) 327-7920; Legal FAX: (208) 327-7866
Adjudication FAX: (208) 327-5400

Please feel free to contact Jerry Rigby or me if you have any questions. You may reach me at the Department of Water Resources, 1301 N. Orchard St., Boise, Idaho 83706, phone (208)327-7900, fax (208)327-7866.

Sincerely,

Peter R. Anderson
Deputy Attorney General

PRA/dde
Encl.
cc: Kent Foster, Blair J. Grover, George Petersen, Breck H. Barton, Jerry R. Rigby, Ronald D. Carlson & Norman C. Young

MICROFILMED
JAN 0 8 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

MEMORANDUM

To: Governor Philip E. Batt

From: Karl J. Dreher

Date: May 2, 1997

cc: Service list for No. 32-00061C et al
Service list for Nos. 32-07128 & 32-07136
Representative JoAn Wood
Ron Carlson
Don Shenton

Subject: Pending Water Rights Issues Involving Birch Creek Ranches & Sorenson Engineering
Constituent Affairs Tracking Memorandum No. 19505

As you requested, I have reviewed the concerns expressed in a letter dated February 18, 1997 which you received from Mr. Ted S. Sorenson of Birch Creek Ranches and Sorenson Engineering. Mr. Sorenson believes that the Department of Water Resources (the "Department") is biased against him and has asked that a hearing officer from outside the Department be appointed to hear the water right matters pending before the Department. The concerns of Mr. Sorenson involve applications he filed with the Department to amend two water right permits for hydropower purposes and to transfer numerous irrigation water rights involving water diverted from Birch Creek. I received a formal petition from Mr. Sorenson's attorney requesting that an outside hearing officer be appointed for these protested applications, and I made the requested appointment on March 7, 1997.

Since protests have been filed against these applications, and I will have to make determinations regarding these applications following hearing, I am obligated to refrain from discussing the merits of Mr. Sorenson's allegations. However, the following background information may be useful to you in understanding the nature of the disputes involved.

The water rights generally referred to by Mr. Sorenson include decreed water right nos. 32-00061C, 32-00068, 32-00069, 32-00073, 32-00077, 32-00078, 32-00079, 32-00085, 32-00086, 32-00087, 32-00089, 32-00090, 32-00091, 32-00092, 32-00093, 32-00101, and 32-00102, together with protested applications for water right permits numbered 32-07128 and 32-07136. The Department's involvement with Mr. Sorenson regarding these water rights has been extensive as summarized by the following chronology of events:

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- September 8, 1982 - Birch Power Company ("Sorenson") filed application for permit number 32-07128 proposing the diversion of 45 cfs of water from Birch Creek to be used for hydropower purposes. The application was protested by several entities.

- January 3, 1984 - Sorenson filed a second application (permit number 32-07136) proposing the diversion of an additional 30 cfs of water from Birch Creek for hydropower purposes. This application also was protested by several entities.

- April 5, 1984 - The Department conducted a hearing on both applications.

- March 26, 1985 - The Department approved both applications with conditions and limitations, including a requirement for a bypass flow of 5 cfs to remain in Birch Creek below the diversion into Sorenson's power canal.

- June 26, 1986 - After the Department's decision approving both applications was appealed to district court by one of the protestants, the district court upheld the Department's decision.

- April 19, 1989 - Birch Creek Ranches (also "Sorenson") filed application for transfer number 3553 involving nine water rights which were used for the irrigation of land above Blue Dome. The applications sought to change the place of use to lands downstream from Sorenson's power plant and were protested by several entities.

- September 18, 1989 - Sorenson submitted proof of beneficial use of water for permits numbered 32-07128 and 32-07136. Shortly thereafter, the Department initiated the process for issuing licenses for the permits.

- April 17 & 18, 1990 - The Department conducted a hearing on the protested application for transfer number 3553 but at the request of the parties, the final decision was delayed. This delay allowed Sorenson and one of the protestants to enter into a settlement agreement. The settlement agreement resulted in Sorenson amending application for transfer number 3553 on February 12, 1991, and in the filing of a separate application for transfer by the protestant.

- May 1, 1990 - Sorenson filed applications for amendment seeking to have the 5 cfs bypass flow requirement for approved permits numbered 32-07128 and 32-07136 eliminated. The applications for amendment were protested.

- May 17, 1990 - With the consent of the protestants, the Department granted Sorenson interim approval to use the irrigation water rights (involved in application for transfer number 3553) below Sorenson's power plant as requested in the protested application for transfer.

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JAN 0 8 2001

- November 6, 1991 - The Department advised Sorenson that it could not issue licenses for water rights numbered 32-07128 and 32-07136 until the protested amendments were resolved.

- July 10, 1992 - At the request of Sorenson and the protestants, the Department delayed the hearing on the applications for amendment to water rights numbered 32-07128 and 32-07136 and on the application for transfer number 3553 until more was known about the failure of a liner placed by Sorenson and others in the channel of Birch Creek.

- Spring of 1994 - Sorenson lost access to the place of use downstream of his power plant for which application for transfer number 3553 had been filed and interim approval had been granted. The need for a hearing on the application for transfer was therefore moot.

- July 5, 1995 - Sorenson's attorney advised the Department that until Sorenson was able to acquire a place of use downstream from his power plant that "it will accomplish little to try to process most, if not all of the pending applications."

- September 25, 1995 - The Department advised Sorenson through his attorney as follows regarding the processing of the protested applications -

  i. Sorenson would need to withdraw or amend application for transfer number 3553 in connection with proposed changes to the place of use for his irrigation water rights.

  ii. The Department would continue to hold the applications to amend water right permits numbered 32-07128 and 32-07136 at Sorenson's request to allow all the protested matters to be combined into one hearing.

- April 2, 1996 - Sorenson filed an amended application for transfer number 3553 claiming to have acquired another downstream place of use for the irrigation water rights. Notice of the amendment was published and renewed protests were filed with the Department in January 1997.

- February 21, 1997 - Sorenson's attorney filed a motion for blanket disqualification of all employees of the Department from acting as hearing officer for the protested applications. IDAPA Rule 37.01.01412 (Procedure Rule 412) requires the automatic disqualification of all employees of the Department, except its director, upon timely request of any party.

- March 7, 1997 - The Department designated Mr. Peter Anderson as the hearing officer. Mr. Anderson is a Deputy Attorney General and is not an employee of the Department. A hearing on the protested applications is being scheduled.

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In closing, I want to respond to the reasons why Mr. Sorenson believes the Department has been biased and has discriminated against him. As noted above, the Department can not issue licenses in connection with Mr. Sorenson's power plants until the applications for amending the permits, which were filed by Mr. Sorenson, have been resolved. Given the history summarized on the previous pages of this memorandum, I do not believe Mr. Sorenson should conclude "No action has been taken" or the permit amendments "have yet to be processed." Furthermore, the delays in scheduling hearings were the result of Mr. Sorenson's request for time to seek resolution of the protests and to allow the protested applications for transfer to be combined into the same hearing as the protested applications for amendment of the permits.

Regarding the question of bed loss, the Department has not made a decision on the question of bed loss. The watermaster for Water District 01, Mr. Ron Carlson, does not have the authority to make a final determination of this issue. Rather, this will be an element of the decision that will be issued by the Department following hearing. By letter from Mr. Carlson to the watermaster, dated June 13, 1995, the Department did authorize the "test to actually determine what the bedloss [sic] would be" as requested by Mr. Sorenson provided that other water rights would not be injured by the test or with agreement by those whose water rights would be affected.

On February 24, 1997, Mr. Sorenson submitted an application to the Department for a permit seeking to appropriate 17 cfs of "saved" or "salvaged" water in Birch Creek in exchange for ceasing ground water diversions from certain irrigation wells. The Department advertised this application on April 3 and again on April 10, 1997. Like Mr. Sorenson's other applications, protests against this latest application have been filed with the Department by several entities.

In the meantime, I have been contacted by Representative JoAn Wood who requested that I meet with some of her constituents who are concerned about Mr. Sorenson's actions. If her constituents are protestants in the administrative hearing process or intend to discuss substantive issues regarding Mr. Sorenson's pending applications, it would be inappropriate for me to meet with them regarding Mr. Sorenson's actions until after the Department's administrative process is complete and the Department has issued its final decisions.

I believe the Department of Water Resources has cooperated with Mr. Sorenson in processing his various water rights transactions and allowing him time to seek negotiated solutions to the objections raised by those who believe their water rights would be injured. Mr. Sorenson correctly points to the lengthy period of time it has taken to resolve these matters. However, Mr. Sorenson has changed his proposals several times which has compounded the time requirements. These changes have not been proposed because of any request or interference from the Department. It does appear that all of Mr. Sorenson's applications are ready for further administrative action, and this action will be promptly taken.

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JAN 0 8 2001

RECEIVED
MAY 5 - 1997
Department of Water Resources

Law Offices

RIGBY, THATCHER, ANDRUS
RIGBY, KAM & MOELLER, Chartered

Ray W. Rigby
Gordon S. Thatcher
G. Rich Andrus
Jerry R. Rigby
Michael S. Kam
Gregory W. Moeller

P.O. Box 250
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Rexburg, ID 83440

Telephone:
Rexburg: (208) 356-3633
Idaho Falls:(208) 529-5531
Fax: (208) 356-0768
E-Mail: Rexlaw@srv.net

RECEIVED
APR 30 1997
Department of Water Resources
Eastern District Office

April 29, 1997

Peter R. Anderson
Hearing Officer
900 N. Skyline Drive
Idaho Falls, ID 83402

Re: **Notice of Prehearing Conference**
Regarding Amendment of Water Rights Permit No. 32-07128 and 32-07136/Sorenson

Dear Mr. Anderson:

Pursuant to our telephone conversation, this letter is to inform you that Cleo and Sybil Wilding, who owned the property and water rights affected by the above described application for amendment have since sold their interest including all water rights to LaVar Newman and Louise Newman of 2941 North 800 East, Monteview, Idaho 83435. Therefore, all future notices of the said application for amendment should be addressed to Mr. Newman. I am by this letter copying Mr. and Mrs. Newman with the Notice of Prehearing Conference sent by your office to me.

Sincerely yours,

Jerry R. Rigby

JRR:rc

Enclosure

cc: Mr. and Mrs. Newman

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JAN 0 3 2001

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MAR 17 1997
Department of Water Resources

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MAR 1 1 1997
Department of Water Resources
Eastern Region

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR AMENDMENT OF PERMITS NOS. 32-07128 and 32-07136 IN THE NAME OF TED S. SORENSON d/b/a SORENSON ENGINEERING.	OBJECTION TO PETITION FOR BLANKET DISQUALIFICATION OF IDWR EMPLOYEES

COMES NOW Lavar Newman, by and through his undersigned attorney of record, Blair Grover, and objects to the blanket disqualification of IDWR employees for among others the following reasons:

1. Although the petition alleges bias and prejudice on behalf of all IDWR employees, it is unlikely petitioner has talked to all of said employees. Since no affidavit accompanies the motion, it is impossible to determine what has been said, or who said it. Without specific references, it is not possible to know:

A. Who has made statements that would indicate bias and prejudice; and

B. Evaluate the alleged statements to determine if in fact they indicate bias and/or prejudice.

2. It is not bias and prejudice for IDWR to have and follow a legal position so long as there is a reasonable basis for it. Indeed, the courts defer to agency interpretation of statutory provisions.[1]

Administrative agencies interpret the statutory provisions and common law which create and control them. Otherwise, there is no reason for their existence. That is true, even where the issue is a close one, or even though it may ultimately be determined the agency is wrong.

If the statements made by IDWR employees reflect the legal position of IDWR, and if that

[1] ". . .This court has long followed the rule that construction given to a statute by the executive and administrative officers of the state is entitled to great weight and will be followed by the courts unless there are cogent reasons for holding otherwise." *J.R. Simplot v. Idaho State Tax Commission*, 120 Idaho 849 854, 820 P.2d 1206 (1991).

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JAN 0 8 2001

position is supported by statutory or common law, there is no bias or prejudice justifying disqualification.

I.R.C.P. 40(d)(2)(4) provides for a disqualification of a judge who is "Biased or prejudiced for or against any party or case in the action." In *Desfosses v. Desfosses*, 120 Idaho 27 (App.1991), the Court of Appeals quoting *United States v. Grinnell Corp.*, 384 U.S. 563, 86 S.Ct. 1698, 16 L.Ed.2d 778 (1966) observed:

> "The alleged bias and prejudice to be disqualifying must stem from an extrajudicial source and result in an opinion on the merits on some basis other than what the judge learned from his participation in the case."p.29

The court also held:

> ". . . A disqualifying prejudice cannot be deduced from adverse rulings by a judge, whether they are right or wrong. . . 'Suspicion, surmise, speculation, rationalization, conjecture, innuendo, and statements of mere conclusions. . .may not be substituted for a statement of the facts.'" p.30

The bias and prejudice for judicial disqualification, although perhaps not controlling, is instructive. Bias and prejudice must come from some basis other than what is learned in the proceeding, and must arise from something other than an adverse position, even though it may be wrong.

In this case, the affidavit does not furnish nearly enough information upon which a disqualification can be granted. Without significantly more, the motion should be denied.

DATED this 10 day of March, 1997.

BLAIR GROVER
Counsel for Lavar Newman
P.O. Box 36
Rigby, ID 83442
(208) 745-6653

MICROFILMED
JAN 0 8 2001

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I am a duly licensed attorney in the State of Idaho, with my office in Rigby, Idaho; that I served a copy of the foregoing document or pleading upon the following person(s) at the addresses below their names either by hand delivering, by facsimile transmission (Fax), or by mailing said document in the United States mail with the correct postage thereon, a true and correct copy thereof this 10 day of March, 1997.

Served:		
	Kent W. Foster, Esq. P.O. Box 50130 Idaho Falls, ID 83405	[X] Mail [ ] Hand Delivery [ ] Facsimile
	George Petersen, Esq. 485 "E" Street Idaho Falls, ID 83402	[X] Mail [ ] Hand Delivery [ ] Facsimile
	Idaho Department of Water Resources 900 N Skyline Dr. Idaho Falls, ID 83402	[X] Mail [ ] Hand Delivery [ ] Facsimile

BLAIR GROVER

MICROFILMED
JAN 0 8 2001

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR AMENDMENT OF PERMITS NOS. 32-07128 and 32-07136 IN THE NAME OF TED S. SORENSON d/b/a SORENSON ENGINEERING.	))))))	OBJECTION TO PETITION FOR BLANKET DISQUALIFICATION OF IDWR EMPLOYEES

COMES NOW D&D Enterprises, Inc., by and through its counsel of record and in response to Ted S. Sorenson d/b/a Sorenson Engineering's ("Sorenson"), Petition for Blanket Disqualification of IDWR Employees, including that certain unnamed and unappointed hearing officer to be assigned to preside at the trial of the above entitled action, opposes Sorenson's request for a blanket disqualification, on the grounds and for the following reasons:

1. A general statement and/or allegation that all employees of Idaho Department of Water Resources ("IDWR") are bias and prejudice, not supported by appropriate and necessary facts and evidence supporting said general and blanket allegations, is not sufficient nor credible and does not legally constitute bona fide evidence justifying Sorenson's request for a blanket disqualification of all employees of IDWR and that certain unnamed and unappointed hearing officer referenced above.

2. The experience of our client D&D Enterprises, Inc., together with its responding counsel of record, has been just the opposite of the alleged experience of petitioner and its counsel in dealing with the employees of IDWR, in that at all times, our client and counsel have

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been treated in a very professional and courteous manner, at no time in the past have said employees discussed pending cases and/or attempted to pre-guess and/or predict the outcome for a pending case and in particular, the Sorenson's application and its various amendments thereto, the subject of the above entitled action. Further, counsel and his client, have in the past found IDWR's hearing officers assigned to hear its water cases to be very professional, judicial at all times, honest, and not willing to discuss and/or offer an opinion as to the outcome of any pending matters scheduled for a hearing or in the process of a hearing and/or otherwise. In addition, D&D Enterprises, Inc., and counsel's experience and observation of the employees of IDWR, have been to the effect that said employees are courteous, cooperative, very protective of confidential matters involving water users, and not willing to discuss pending cases of other water users, yet willing to go the extra mile, with each of its water users and litigants, by assisting and making facts and information, upon request, available to said water user. In addition, as to an assigned hearing officer, said officers have in the past always been very fair and at all times willing to go out of their way to allow in all credible and allowable facts and evidence, and after both parties have rested, to take the appropriate and necessary time to sort out the facts to support the law as understood by said officer, and thereafter to reduce same to an appropriate written opinion.

For the reasons as heretofore detailed, our client requests and prays that the blanket disqualification directed to all employees of IDWR and the unnamed and unassigned hearing officer to preside at the trial of the above entitled matter, be denied on the grounds that said request is inappropriate, not supported by credible evidence, not proper in its present form, in that a general statement of disqualification, without appropriate and necessary supporting

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JAN 0 8 2001

evidence to back same, is demeaning and very unprofessional as to the past and present employees of IDWR and its pool of hearing examiners.

DATED this 3rd day of March, 1997.

PETERSEN, MOSS, OLSEN
CARR, ESKELSON & HALL

By: _____
George C. Petersen, Jr.
Counsel for D&D Enterprises, Inc.
485 "E" Street
Idaho Falls, Idaho 83402
(208) 523-4650

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JAN 0 8 2001

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I am a duly licensed attorney in the State of Idaho, with my office in Idaho Falls, Idaho, and that on the 3rd day of March, 1997, I served a true and correct copy of the foregoing document on the persons listed below by first class mail, with the correct postage thereon, or by causing the same to be delivered as defined by Rule 5(b), I.R.C.P.

Persons Served:	Method of Service:
IDAHO DEPARTMENT OF WATER RESOURCES 900 N. SKYLINE DRIVE IDAHO FALLS, ID 83402	[✓] Mail [ ] Hand [ ] Fax
KENT W. FOSTER, ESQ. HOLDEN, KIDWELL, HAHN & CRAPO PO BOX 50130 IDAHO FALLS, ID 83405	[✓] Mail [ ] Hand [ ] Fax
BLAIR J. GROVER, ESQ. GROVER & ARCHIBALD PO BOX 36 RIGBY, ID 83442	[✓] Mail [ ] Hand [ ] Fax

George C. Petersen, Jr.

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JAN 0 8 2001

RECEIVED
FEB 27 1997
Department of Water Resources

RECEIVED
FEB 21 1997
Department of Water Resources
Eastern District Office

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR AMENDMENT OF PERMITS NOS. 32-07128 and 32-07136 IN THE NAME OF TED S. SORENSON d/b/a SORENSON ENGINEERING.	)	PETITION FOR BLANKET DISQUALIFICATION OF IDWR EMPLOYEES

Comes now the applicant, Birch Creek Ranches, L.L.C., and hereby asserts a blanket disqualification for cause of all employees of IDWR under IDAPA 37.01.01, Rule 412, of the Rules of Procedure of the Department of Water Resources, and requests appointment of an independent hearing officer for the purposes of hearing and deciding the above entitled contested matter. To applicant's knowledge no hearing officer has yet been assigned to hear the protests to applicant's pending application for amendment of the permits.

Respectfully submitted this 20 day of February, 1997.

Kent W. Foster, Esq.
Holden, Kidwell, Hahn & Crapo, P.L.L.C.

MICROFILMED
JAN 08 2001

CERTIFICATE OF SERVICE

I hereby certify that I am a duly licensed attorney in the State of Idaho, resident of and with my office in Idaho Falls, Idaho; that I served a copy of the following described pleading or document on the attorneys listed below by hand delivering, by mailing or by facsimile, with the correct postage thereon, a true and correct copy thereof.

DOCUMENT SERVED: PETITION FOR BLANKET DISQUALIFICATIONS OF IDWR EMPLOYEES

ATTORNEYS SERVED:

IDAHO DEPARTMENT
OF WATER RESOURCES
900 N. Skyline Drive
Idaho Falls, ID 83402 *[First Class Mail]*

Blair J. Grover, Esq.
GROVER & ARCHIBALD
P.O. Box 36
Rigby, ID 83442 *[First Class Mail]*

George Petersen, Esq.
PETERSEN, MOSS, OLSEN,
MEACHAM & CARR
485 "E" Street
Idaho Falls, Idaho 83402 *[First Class Mail]*

Kent W. Foster — Dated: 2/20/97

Kent W. Foster, Esq.
HOLDEN, KIDWELL, HAHN & CRAPO, P.L.L.C.

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MICROFILMED
JAN 0 6 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

November 6, 1991

Ted Sorensen
Sorensen Engineering
2988 Tipperary Ln.
Idaho Falls, ID 83401

RE: Permits to Appropriate Water Nos. 32-7128 and 32-7136

Dear Mr. Sorensen:

This letter acknowledges receipt of your correspondence inquiring about the status of the above referenced permits. My review of the file shows that you filed an application to amend the permits, which was protested by Mac and Betty Wagoner and D & D Enterprises, Inc., and Elda H. Wilding. Licenses for these permits cannot be issued until the protests are resolved.

I suggest that a hearing for these amendments be held in conjunction with the applications to transfer which are now pending and for which a hearing has been tentatively set.

Sincerely,

Gary Spackman

GARY SPACKMAN, Manager
Water Right Permits Section

GS:js

cc: Eastern Region
Kent Foster
Don Shenton

RECEIVED
NOV 12 1991
Department of Water Resources
Eastern District Office

MICROFILMED
JAN 08 2001

[redacted] JUL 16 1991 [redacted]

WITHDRAWAL OF PROTEST

WOODIE LAND & LIVESTOCK, INC., hereby withdraws its protest, dated August 30, 1990, to the applications for amendment of Permits Nos. 32-7128 and 32-7136.

DATED this 7th day of ~~May~~ July, 1991.

WOODIE LAND & LIVESTOCK, INC.

By: George Woodie
GEORGE WOODIE, President

#6936.00
8687i/srr

Carol J Weston
Notary residing in Howe, Idaho.
Commission expires 1-4-96,

MICROFILMED
JAN 08 2001

JUL 16 1991

WITHDRAWAL OF PROTEST

WOODIE LAND & LIVESTOCK, INC., hereby withdraws its protest, dated August 30, 1990, to the applications for amendment of Permits Nos. 32-7128 and 32-7136.

DATED this 7th day of ~~May~~ July, 1991.

WOODIE LAND & LIVESTOCK, INC.

By: George Woodie
GEORGE WOODIE, President

#6936.00
8687i/srr

Carol J Weston
Notary residing in Homedale Idaho.
Commission expires 1-4-96,

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 2

To PHIL RASSIER	From H.W. JONES
Co. IDWR - Boise	Co. Eastern
Dept.	Phone #
Fax #	Fax #

MICROFILMED
JAN 08 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
150 Shoup Ave., Suite 15, Idaho Falls, Idaho 83402 - (208) 525-7161

EASTERN REGION

CECIL D. ANDRUS
GOVERNOR
R. KEITH HIGGINSON
DIRECTOR

July 31, 1991

RE: Application for Amendment No. 32-7128/327136
TED SORSENSON DBA SORSENSON ENGINEERING

Mr. Kent W. Foster
Attorney at Law
PO Box 50130
Idaho Falls, ID 83405

Dear Mr. Foster:

This letter acknowledges receipt of the withdrawal of protest, in behalf of Woodie Land & Livestock, against the above referenced applications.

If you have any questions, please feel free to contact this office.

Very truly yours,

HAROLD W. JONES
Water Rights Supervisor

HWJ:CW

pc: Woodie Land & Livestock

MICROFILMED
JAN 0 8 2001

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON d/b/a SORENSON ENGINEERING	**NOTICE OF PREHEARING CONFERENCE**

The Department of Water Resources has scheduled the this matter for prehearing conference as follows:

Date:	Wednesday, May 21, 1997
Location:	DEQ Conference Rm. 900 N. Skyline Drive, Idaho Falls, ID Call (208)525-7161 for directions.
Time:	9:00 a.m.

This prehearing conference will be held for the purposes set forth in IDAPA 37.01.01.510 (Rule 510) and will be held informally according to IDAPA 37.01.01.512 (Rule 512). The Department's authority to hold hearings in this matter is based in I.C. § 42-211.

The prehearing conference will be conducted in a facility meeting the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations in order to attend, participate in or understand the hearing, please advise the Department within ten (10) days prior to the prehearing conference.

DATED this 24th day of April, 1997.

PETER R. ANDERSON
Hearing Officer

MICROFILMED
JAN 0 8 2001

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 24th day of April, 1997, I mailed a true and correct copy of the foregoing **NOTICE OF PREHEARING CONFERENCE** on the following persons listed below by U.S. mail, postage prepaid and addressed as follows:

Norman C. Young
Idaho Dept. of Water Resources
1301 N. Orchard Street
Boise, ID 83706

Ronald D. Carlson
Eastern Regional Manager
Idaho Dept. of Water Resources
900 N. Skyline Dr.
Idaho Falls, ID 83402

Kent W. Foster, Esq.
HOLDEN KIDWELL HAHN & CRAPO PLLC
P.O. Box 50130
Idaho Falls, ID 83405

Blair J. Grover, Esq.
GROVER & ARCHIBALD
P.O. Box 36
Rigby, ID 83442

George Petersen, Esq.
PETERSEN MOSS OLSEN
MEACHAM & CARR
485 "E" Street
Idaho Falls, ID 83402

Breck H. Barton, Esq.
BRECK BARTON & ASSOC., PA
P.O. Box 100
Rexburg, ID 83440

Jerry R. Rigby, Esq.
RIGBY THATCHER ANDRUS RIGBY
KAM & MOELLER, CHRTD.
P.O. Box 250
Rexburg, ID 83440-0250

Deborah Drew-Ellis
Legal Secretary

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JAN 0 8 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

September 29, 1995

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

Kent Foster
Holden, Kidwell, Hahn & Crapo
P. O. Box 50130
Idaho Falls, Idaho 83405

Re: Birch Creek Ranches
(Application for Transfer of Nos. 31-00067/90 and
Applications for Amendment of Permit Nos. 32-07128/07136)

Dear Kent:

Your letter of July 5, 1995, asks for my thoughts on the status and processing procedure on several applications seeking to change the use of water rights held by Birch Creek Ranches and Ted Sorenson d/b/a Sorenson Engineering. Subsequent to your letter, Mr. Sorenson discussed with me his intentions with regard to the processing of the applications. The purpose of this letter is to document my understanding that Mr. Sorenson will be filing revised applications to change the point of diversion and place of use of irrigation rights he holds from Birch Creek with pending applications either being amended or withdrawn. In addition, he has asked that IDWR continue to hold the application to amend the hydropower rights relative to the required bypass flow to allow the applications to be considered in a single hearing.

Delaying the processing of the pending applications is acceptable, however, relinquishment of any applications that are no longer relevant is desirable. IDWR will continue to withhold processing of the application of amendment of the hydropower right for up to six months, but it is necessary that this matter be addressed. Licensing of the hydropower permits should follow action on the pending amendment.

Sincerely,

NORMAN C. YOUNG
Administrator

c: Ted Sorenson
Breck Barton
Alva Harris
George Peterson
Mac & Betty Wagoner
Don Shenton
Blair Grover

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JAN 0 8 2001

Law Offices

HOLDEN, KIDWELL, HAHN & CRAPO, P.L.L.C.

FRED J. HAHN
KENT W. FOSTER
ROBERT E. FARNAM
WILLIAM D. FALER
STEPHEN E. MARTIN
CHARLES A. HOMER
GARY L. MEIKLE
GAYLE A. SORENSON, P.A.
DONALD L. HARRIS, P.A.
DALE W. STORER
MARIE T. TYLER
JOHN G. SIMMONS
ROBERT M. FOLLETT
FREDERICK J. HAHN, III

WEST ONE BANK BLDG.
330 SHOUP AVENUE, THIRD FLOOR
P.O. BOX 50130
IDAHO FALLS, IDAHO 83405

TELEPHONE (208) 523-0620
TELEFAX (208) 523-9518

RECEIVED
JUL 10 1995
Department of Water Resources

Arthur W. Holden
(1877-1967)
Robert B. Holden
(1911-1971)
Terry L. Crapo
(1939-1982)
William S. Holden
(1907-1988)

July 5, 1995

Mr. Norm Young
IDAHO DEPARTMENT OF
WATER RESOURCES
1301 North Orchard Street
Statehouse Mail
Boise, Idaho 83720

Re: Birch Creek Ranches and Ted Sorenson d/b/a Sorenson Engineering Pending Applications

Dear Norm:

We are writing to you about several pending matters of Birch Creek Ranches, Inc. and Ted Sorenson d/b/a Sorenson Engineering, because of some procedural concerns we have and because we are receiving pressure to do something. From our records it appears there are a number of pending applications or amendments. We have referenced each in the list below and have tried to explain some of our concerns.

1. Application for Permit No. 33-7128, for 45cfs of the flow of Birch Creek was originally filed on September 8, 1982, by Birch Power Company. Application for Permit No. 32-7136, for 30cfs of the flow of Birch Creek, was filed by the same entity on January 3, 1984. The two applications were protested and consolidated for hearing. A combined hearing was held April 5, 1984. The final decision on the protests to the two applications is reflected in an "Order Adopting Modified Memorandum Decision and Order" signed by the director, A. Kenneth Dunn, on March 26, 1985, and the "Modified Memorandum Decision and Order" thereby adopted by the director's order, which bears the signature of Bobby Fleenor, and is dated March 27, 1985. That final decision was appealed to the District Court which entered its "Memorandum Decision" in Bonneville County Case No. 33072, affirming the decision of the director, on June 26, 1986. The two permits were assigned by Birch Power Company to Ted S. Sorenson, d/b/a Sorenson Engineering, on August 21, 1986. The use of the water for power generation is, of course, a nonconsumptive use. The matter that became the main issue in the protest hearing, and which was resolved in the Department's

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final decision, was the contemplated savings of water which would result from the construction of the power plant. The point of diversion for the old Reno Ditch was to be moved upstream and some 3,000 feet of the natural channel of Birch Creek, as well as some five miles of the upstream portion of the Reno Ditch, were to be dewatered and replaced with a shorter, lined canal and a pipeline to the power plant, which would then discharge water into the Reno Ditch at the downstream location. The department found that the water to be saved by the construction of the project (the elimination of 3,000 feet of Birch Creek Channel and five miles of Reno Ditch) would be 22% of the total flow of Birch Creek at the new diversion, and that such savings belonged to the applicant. Further, the savings was apparently estimated to be, on the average, about 9.0 to 10.0cfs. The department then assigned one-half of the savings, 11% of the flow of Birch Creek or 5.0cfs, whichever is greater, to be allowed to flow past the new diversion works in Birch Creek to mitigate the riparian, fish and wildlife values in the public interest, and to provide stock watering. The second half of the savings, or 11%, was assigned to reduce contemplated seepage losses through the new feeder canal or power channel. Later, also in August of 1986, the permits were amended to change the location of the power plant from the NE¼ of the NE¼ of S.17, T.8N., R.31E. to the NE¼ of the NE¼ of S.14, T.8N., R.31E., a distance of an additional three miles. We assume the elimination of the extra three miles of the Reno Ditch has resulted in an even greater savings than 22%. If the elimination of 3,000 feet of Birch Creek channel and five miles of the Reno Ditch results in 22% savings, would the elimination of 3,000 feet of Birch Creek channel and eight miles of Reno Ditch result in something like 33 to 34% savings? Proof of beneficial use was submitted for both permits about February 11, 1989, but no license has yet been issued.

2. On April 19, 1989, Birch Creek Ranches, Inc., filed an application to transfer nine Simmons water rights, totaling 18.6cfs, from the Simmons lands on Birch Creek above Blue Dome to D&D lands below the power plant and the Reno Ranch. A hearing was held on the protests on April 17 and 18, 1990. A draft provisional or interim order for delivery of water rights was prepared shortly after the hearing and circulated for comments. We provided comments, but have never received or been provided with a final version of such order. Before any decision on the merits of the protests was issued, Birch Creek Ranches entered into negotiations with two of the protestants, Mac Wagoner and George Woodie, which resulted in the next round of filings in January and February of 1991.

3. Before the 1991 filings, and during the time period when preparation for and conducting of the April, 1990, hearing occurred, matters regarding the conditions of permits Nos. 32-7182 and 32-7136 relating to the saved water had progressed to a point which

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resulted in the filing of another application to amend the two permits. Within a short time after construction of the project, it had become apparent that the 11% or 5.0cfs bypass flow did not accomplish the objectives of Idaho Department of Fish &Game and the Bureau of Land Management for riparian habitat. After a study, Mr. Sorenson had made a proposal to substitute a system of plastic pipe and lined ponds. After approval by Idaho Fish & Game and the BLM, the proposal was implemented, and by March of 1990, Mr. Sorenson had received written acceptance of the new system which requires less than .1cfs to provide the amenities, instead of the 5.0cfs bypass flow. When Mr. Sorenson contacted you about this circumstance, you advised him by letter of March 20, 1990, that the Department of Water Resources could not waive the bypass flow condition without processing an application to amend the permits. Pursuant thereto, Ted S. Sorenson, d/b/a Sorenson Engineering, filed an application about April 30, 1990, to amend the two permits by eliminating the 5.0cfs bypass flow requirement. After publication of notice, the application was protested. In November of 1991, Gary Spackman, who had been assigned as hearing officer on the 1991 application for transfer and amended applications for transfer of Wagoners and Birch Creek Ranches, Inc., sent a letter suggesting that the hearing on the protests to the application to amend the permits be held in conjunction with the hearing on the protests to the proposed transfers.

4. In early 1991, after a tentative agreement was entered into by Birch Creek Ranches with Mac and Betty Wagoner, and after Birch Creek Ranches had purchased the George Woodie water right on Birch Creek, Wagoners filed, about January 21, a new application for transfer of eight of their rights, totaling 6.0cfs, from their lands to the D&D lands. Pursuant to the agreement, Birch Creek Ranches then filed two amended applications for transfer, one to transfer 4.0cfs (Right No. 0067 and one-half of Right No. 0090) from the Simmons land to Wagoner land, and another to transfer the balance of nine of the Simmons rights, totaling 14.6cfs, and the Woodie right for 2.9cfs, to the D&D lands. Again there were protests, and before a hearing was held, Birch Creek Ranches and the major protestants, D&D and Newman, agreed to cooperate in a stream lining project to salvage more water. Before completion of the lining project, BLM and Idaho Fish & Game placed certain conditions on placement of the lining material which resulted in a problem with the lining effort. In fact, instead of increased flows in the lined segment, losses increased. The processing of the pending applications was put on hold and numerous attempts were made to work out a plan acceptable to all involved state and federal agencies to rectify the problem. All such attempts have, to date, been unsuccessful. By about 1993, it appeared that the increased losses in the lined reach had diminished approximately to normal. Now, it appears that the lining may, in fact, be reducing losses in that reach. By the Spring of 1994, it appeared we could recommence processing of the applications, but then D&D refused to

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renew its lease of water rights from Birch Creek Ranches, and withdrew its lands as the prospective place of use. Then Wagoners unilaterally filed an amended application to transfer the eight water rights it had sold to Birch Creek Ranches, totaling 6.0cfs, upstream to Simmons lands, rather than downstream to D&D lands. While Birch Creek Ranches has worked out a tentative accommodation agreement with Wagoners, and has been laboring diligently to locate an alternative downstream place of use for the water rights, not enough has yet been completed to be able to redo the applications. We keep receiving requests from the Eastern Region Office of IDWR to withdraw and relinquish the applications.

5. Since completion of the power plant project, records of diversions from Birch Creek into the feeder canal for the power plant, as well as of discharges from the power plant into the Reno Ditch, disclose that since the bypass flows at the new point of diversion were terminated, the amounts diverted are essentially equal to the amounts discharged at the power plant, indicating that transmission losses through the power channel and pipeline are virtually nil. Whether the savings of water resulting from substitution of the lined power channel and pipeline, over historical losses in 3,000 feet of Birch Creek and more than eight miles of the old Reno Ditch, is 22% or as much as 34%, the fact is that virtually every drop of water diverted from Birch Creek at the new point of diversion is discharged into the Reno Ditch at the power plant location. Today, the diversion at the new point of diversion is about 50.0cfs. 50.0cfs is also being discharged from the power plant into the Reno Ditch. At that location, there is between 11.0 and 17.0cfs more water present in the Reno Ditch than there ever would have been absent the power project and the consequent savings. In November of 1993, we completed and presented for filing, an application to transfer the saved water right to D&D lands for irrigation purposes. The department never accepted it for filing. Eventually you and I had one or more discussions about the department's apparent reluctance to deal with the saved water. My understanding of your expressions of departmental concerns is primarily that the uses, to which the saved or salvaged water created by the power project were assigned by the permits, had a strong public interest element. We then suggested that since those particular public interests were being otherwise fully served, we would be willing to utilize the saved or salvaged waters to replace any transmission losses in the portion of Birch Creek from the old points of diversion of the Simmons, Woodie and Wagoner rights, down to the new Reno diversion, which might be attributable to such rights because of the proposed change in point of diversion. We suggested this concept had something of a public interest benefit in it because it would result in keeping higher flows in Birch Creek during the irrigation season (as a result of the transfer downstream from the points of diversion for the Simmons, Woodie and Wagoner rights), which would be a benefit to the public in general, and that there could also be a benefit to every water user in particular

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by insuring that more than enough water is assigned to potential transmission losses. The downstream users, D&D and Newman, would benefit the most because of the augmented flows, some of which would accrue to them and increase the amount of actual water available under their existing rights. We interpreted your response to be positive, so we withdrew the November application and presented another application about May 17, 1994. To our knowledge, it has never been accepted for filing.

Until such time as our client is able to acquire a potential place of use downstream from the power plant, it will accomplish little to try to process most, if not all of the pending applications. As we try to analyze the ramifications of withdrawing any or all applications at this time, our major concern is whether IDWR perceives some negative consequence of doing so. If you would be so kind, we would very much appreciate your thoughts and comments before we take further action.

Very truly yours,

Kent W. Foster

pc. Ted Sorenson
G:\WPDATA\KWF\6936\IDWR0622.LTR:sjw

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JAN 0 8 2001

CERTIFICATE OF MAILING

I hereby certify that on the 13th day of July, 1992, I mailed a true and correct copy of the attached letter, to the following individuals:

Breck Barton
P.O. Box 100
Rexburg, ID 83440

Alva Harris
171 S. Emerson
Shelley, ID 83274

George Peterson
485 "E" Street
Idaho Falls, ID 83402

Kent Foster
P.O. Box 50130
Idaho Falls, ID 83405

Mac and Betty Wagoner
P.O. Box 296
Dubois, ID 83423

Don Shenton
Dubois, ID 83423

Blair Grover
P.O. Box 36
Rigby, ID 83442-0036

IDWR - Eastern Region

JENNIFER SEIFERT, Secretary
Department of Water Resources

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JAN 03 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

July 10, 1992

RE: Transfers filed by Birch Creek Ranches and Mac and Betty Wagoner; Application for Amendment by Birch Creek Ranches - Nos. 32-00061, 32-00067, 32-00068, 32-00069, 32-00089, 32-00090, 32-00091, 32-00092, 32-00093, 32-00102

Dear Interested Party:

I spoke to George Peterson, who represents D & D Enterprises in the above disputed matters. Mr. Peterson stated that he had visited with Blair Grover, attorney for Newman, and Kent Foster, attorney for Sorenson. He stated that because of the uncertainty about the existing condition of Birch Creek because of the liner failure, some additional delay in the hearing would be helpful.

I told Mr. Peterson that I am willing to delay the hearing until there is some physical certainty about the delivery of water in Birch Creek. I do not intend to let these applications go unaddressed for years in the files of the Department, however.

I will defer setting the hearing for an additional six (6) months. On or about January 1, 1993, I will again call it up for review. If there is any change in the status prior to that time, I would appreciate being informed.

Sincerely,

Gary Spackman

GARY SPACKMAN, Manager
Water Right Permits Section

GS:js

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JAN 0 8 2001

CERTIFICATE OF MAILING

I hereby certify that on the 25th day of June, 1992, I mailed a true and correct copy of the attached letter, postage prepaid, to the following individuals:

Breck Barton
P.O. Box 100
Rexburg, ID 83440

Alva Harris
171 S. Emerson
Shelley, ID 83274

George Peterson
485 "E" Street
Idaho Falls, ID 83402

Kent Foster
Attorney at Law
P.O. Box 50130
Idaho Falls, ID 83405

Mac and Betty Wagoner
P.O. Box 296
Dubois, ID 83423

Don Shenton
Dubois, ID 83423

Blair Grover
P.O. Box 36
Rigby, ID 83442-0036

JENNIFER SEIFERT, Secretary
Department of Water Resources

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JAN 0 8 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

June 25, 1992

<address>

RE: Transfers filed by Birch Creek Ranches and Mac and Betty & Wagoner; Application for Amendment by Birch Creek Ranches

Dear <sal>:

Parties to the above protested applications for transfer and amendment have been negotiating a possible settlement of the applications for transfer and application for amendment. I have not heard of any agreement. I recall seeing a letter, signed by Breck Barton, which set a deadline for completion of certain activity, although I cannot find it in my files.

This letter is an inquiry about the status of the negotiations, and the desires of the parties regarding a hearing. I do not want this matter to languish in the files of the Department forever without resolution.

I will set this matter for hearing at the end of thirty (30) days. If you are unavailable during certain time periods, I suggest you contact me prior to the end of the thirty days. If the protests are resolvable in some other way, I would appreciate being informed.

Respectfully,

Gary Spackman

GARY SPACKMAN, Manager
Water Right Permits Section

GS:js

cc: Eastern Region

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JAN 0 8 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

November 6, 1991

Ted Sorensen
Sorensen Engineering
2988 Tipperary Ln.
Idaho Falls, ID 83401

RE: Permits to Appropriate Water Nos. 32-7128 and 32-7136

Dear Mr. Sorensen:

This letter acknowledges receipt of your correspondence inquiring about the status of the above referenced permits. My review of the file shows that you filed an application to amend the permits, which was protested by Mac and Betty Wagoner and D & D Enterprises, Inc., and Elda H. Wilding. Licenses for these permits cannot be issued until the protests are resolved.

I suggest that a hearing for these amendments be held in conjunction with the applications to transfer which are now pending and for which a hearing has been tentatively set.

Sincerely,

GARY SPACKMAN, Manager
Water Right Permits Section

GS:js

cc: Eastern Region
Kent Foster
Don Shenton

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JAN 0 8 2001

SORENSON ENGINEERING
CONSULTING ENGINEERS
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401
208-522-8069

RECEIVED
SEP 19 1991
Department of Water Resources

September 16, 1991

Mr. Norm Young, P.E.
Idaho Dept. of Water Resources
1301 N Orchard
Statehouse Mail
Boise, ID 83720

RE: BIRCH CREEK COMPANY WATER RIGHTS
Permit Nos. 327128 and 327136
→ Protested → Protested

Dear Mr. Young:

Approximately two years ago, I filed the necessary forms for a final Proof of Beneficial Use so that a final license of water right could be issued for the above-referenced rights.

By the attached letter dated February 20, 1990, I requested the final permit be issued. I have not heard anything from your office concerning this issuance. I would appreciate your looking into this matter.

I request that either the deficiencies in either the Proof of Beneficial Use forms be made known to me or the final permit be issued.

Very truly yours,

Ted S. Sorenson, P.E.
Owner

TSS/kaf

enclosure

cc: Mr. Kent Foster (w/enclosure)

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JAN 0 8 2001

SORENSON ENGINEERING
CONSULTING ENGINEERS
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401
208-522-8069

February 20, 1990

Gary Spackman, Manager
Water Rights Permit Section
State of Idaho Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720

RE: BIRCH POWER COMPANY WATER RIGHT PERMITS #327128 AND #327136

Dear Mr. Spackman:

This letter is written to request the status of the issuance of the final license for these two permits. It is my understanding that the proof of beneficial use forms have been filed with you in a satisfactory manner by Cecil Thomas.

Your prompt concurrence in issuing the final permit is sincerely appreciated.

Very truly yours,

Ted S. Sorenson, P.E.
Project Engineer

TSS:mbk

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JAN 0 8 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
150 Shoup Ave., Suite 15, Idaho Falls, Idaho 83402 - (208) 525-7161

EASTERN REGION

CECIL D. ANDRUS
GOVERNOR
R. KEITH HIGGINSON
DIRECTOR

July 31, 1991

RE: Application for Amendment No. 32-7128/327136
TED SORSENSON DBA SORSENSON ENGINEERING

Mr. Kent W. Foster
Attorney at Law
PO Box 50130
Idaho Falls, ID 83405

Dear Mr. Foster:

This letter acknowledges receipt of the withdrawal of protest, in behalf of Woodie Land & Livestock, against the above referenced applications.

If you have any questions, please feel free to contact this office.

Very truly yours,

HAROLD W. JONES
Water Rights Supervisor

HWJ:CW

pc: Woodie Land & Livestock

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JAN 0 8 2001

RECEIVED
JUL 29 1991
Department of Water Resources

32-7128

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Birch Power Company and
Sorenson Engineering

Project No. 7194-013
Idaho

ORDER GRANTING EXTENSION OF TIME

(Issued July 24, 1991)

The licensee for the Birch Creek Hydroelectric Project has requested an extension of the September 30, 1991, deadline to file as-built exhibits for articles 304, 402, 408, and 409 of the license. The reasons advanced by the licensee in support of the requested extension of time are reasonable and justify the extension.

The Director orders:

(A) The deadline to submit as-builts for the following articles is extended to December 3, 1991:

Article	Item
304	Exhibits A, F, and G
402	Automatic shut-off device at the pipeline intake structure
408	Bypass headworks and fish screening facilities
409	Fisherman access points along the project feeder ditch and the impoundment

(B) This order constitutes final agency action. Request for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. § 385.713.

J. Mark Robinson
Director, Division of Project
Compliance and Administration

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JAN 08 2001

55 E.

32-7128

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Birch Power Company and
Sorenson Engineering

Project No. 7194-011
Idaho

ORDER AMENDING LICENSE AND REVISING ANNUAL CHARGES

(Issued June 13, 1991)

On September 19, 1990, the licensees, Birch Power Company and Sorenson Engineering filed a request for an amendment of license for the Birch Creek Project, FERC No. 7194.

The proposed change would reduce the project's total installed capacity from the authorized 2,850-kW to the actual generator nameplate rating of 2,700-kW. The reduced installed capacity is due to the use of an impulse turbine over a Frances turbine.

Operation of the project as amended would not result in any additional adverse environmental impacts other than those identified during processing of the original application. Adherence to the conditions made a part of the original license would insure that the operation of the project would not result in significant impacts to the quality of the human environment.

The Director orders:

(A) The license for the Birch Creek Project, FERC No. 7194, is amended as provided in this order, effective the first day of the month in which this order is issued.

(B) Ordering paragraph (B)(2)(h) is revised to read as follows:

...(h) a powerhouse containing a single generating unit rated at 2,700-kW; (i)...

(C) Article 202(a) is revised to read as follows:

Article 202. The licensee shall pay the United States the following annual charge, effective the first day of the month in which this amendment of license is issued:

a. For the purpose of reimbursing the United States for the cost of administration of Part I of the Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 3,600 horsepower.

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JAN 0 8 2001

PRO

(D) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. §385.713.

J. Mark Robinson
Director, Division of Project
Compliance and Administration

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JUN 18 1991
Department of Water Resources

Form 211
2/80

RECEIVED
Ident. No.
MAY 01 1990

STATE OF IDAHO

Department of Water Resources

RECEIVED

APPLICATION FOR AMENDMENT OF A PERMIT

MAY - 5 1990

To change the point of diversion and/or the place of use.

Department of Water Resources
Eastern District Office

Comes now Ted S. Sorenson d/b/a Sorenson Engineering Phone 522-8069

of (address) 2988 Tipperary Lane, Idaho Falls, Idaho 83401, and represents to the

Director of the Idaho Department of Water Resources:

That he is the owner and holder of Permit to Appropriate the Public Waters of the State of Idaho No s. 32-7128, 32-7136, and requests that the permits be changed as follows: See attached description of requested change and supporting documents. No other changes.

1. Point of diversion: _____ ¼ _____ ¼, Section _____, Township _____, Range _____, B.M.,

County of _____. Other points of diversion: _____

_____

_____

2. Period and nature of use: (irrigation, domestic, stockwatering, industrial, etc.)

Amount _____ (cfs or acre feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

Amount _____ (cfs or acre feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

Amount _____ (cfs or acre feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

3. Place of use or land to be irrigated:

TWP	RGE	SEC	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	

Total number of acres to be irrigated = _____

4. a. Who owns the property at the point of diversion? _____

b. Who owns the land to be irrigated or the place of use? _____

c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing: _____

_____

_____

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JAN 0 8 2001

Complete the following map by showing land and point of diversion as proposed by this amendment.

Show 40-acre subdivisions, townships, ranges and ditches.

Scale: 2 inches equal 1 mile.

That no one will be injured by such change, and that such change will be made at permit holder's own risk.

Signed at ____________________, this _____ day of ____________________, 19 ____.

[signature]
(Signature)

FOR DEPARTMENT USE ONLY

Preliminary check by ________ Fee = $20.00 CO16616 Receipted by Julie Date 5-1-90

Publication prepared by RB Date 8-2,9-90 Published in Statewide

Publication dates "

ACTION OF THE DEPARTMENT OF WATER RESOURCES

I, ______________________________, of the Department of Water Resources hereby

____

____

____

Witness my hand this _____ day of ____________________, 19 ____.

____

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JAN 0 8 2001

DESCRIPTION OF REQUESTED CHANGE

Permittee requests removal of the condition of approval of Permits Nos. 32-7128 and 32-7136 requiring a bypass of 5 cfs or 11% of the stream flow. The enclosed letter from Idaho Department of Fish and Game and the letter with attached environmental assessment and decision from the United States Bureau of Land Management explain the agreement which has been reached between Mr. Sorenson and such agencies and describe the proposed alternative minimum stream flow mitigation plan as well.

#6936.00
8176h/srr

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JAN 08 2001

September 5, 1990

Mr. Ted S. Sorensen
Sorensen Engineering
2988 Tipperary Lane
Idaho Falls, ID 83401

Dear Mr. Sorensen:

Enclosed are copies of protests filed against the application for amendment of permit No. 32-07128/32-7136. The Department suggests you contact the protestants directly in an effort to determine the nature of the protest and to attempt to resolve the protests.

Unless this office is advised that either the matter has been resolved or there exists extenuating circumstances requiring additional time, our objective is to schedule a conference and/or hearing to consider the protests within 60 days. At a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying the application for permit (Sec. 42-203, Idaho Code):

1. Will the amendment reduce the quantity of water under existing water rights?

2. Is the proposed water supply insufficient for the purpose intended?

3. Is the application made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

6. That it is contrary to conservation of water resources within the State of Idaho.

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JAN 0 8 2001

The applicant must be prepared to present evidence and/or testimony addressing each of the five items. Although representation by legal counsel is not mandatory at a proceeding before the Department, you may retain an attorney in your behalf.

If this office can be of further assistance, please contact us.

Very truly yours,

HAROLD W. JONES
Water Rights Supervisor

HWJ:CW

Enclosure

cc: IDWR - State Office

MICROFILMED

JAN 0 8 2001

September 5, 1990

RE: Application for Amendment No. 32-7128/32-7136
SORENSEN ENGINEERING

Mr. George Woodie, President
Woodie Land & Livestock
HC 65, Box 1018
Howe, ID 83244

Dear Mr. Woodie:

Your protest against approval of the above referenced application for amendment has been received and a copy has been sent to the applicant. The Department suggests you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

Unless this office is advised that either the matter has been resolved or there exists extenuating circumstances requiring additional time, our objective is to schedule a conference and/or hearing to consider the protests within 60 days. At such a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying the application for amendment (Sec. 42-203, Idaho Code):

1. Will the proposed amendment reduce the quantity of water under existing water rights?

2. Is the proposed water supply insufficient for the purpose intended?

3. Is the amendment made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

6. That it is contrary to conservation of water resources within the State of Idaho.

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JAN 0 8 2001

The protestant must be prepared to present proof of allegations involving one or more of the five items.

If this office can be of further assistance, please contact us.

Very truly yours,

HAROLD W. JONES
Water Rights Supervisor

HWJ:CW

Enclosure

cc: IDWR - State Office

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JAN 0 8 2001

RECEIVED

AUG 31 1990

Department of Water Resources
Eastern District Office

Howe, Idaho
8/ 30/ 90

Director
Keith Higginson
Department of Water Resources

Woodie Land and Livestock

Protest Amendments

No. 32-7128

No. 32-7136

Request to remove requirement to by pass 5 cfs or 11% of the flow of Birch Creek down the old Birch Creek channel.

Reason;

Consideration of stock water.

George K Woodie

President

Woodie Land and Livestock

Hc 65 Box 1018
Howe, Idaho
83244

R. Keith Higginson, *Director*
Published: August 16, 23, 1990

NOTICE OF PROPOSED AMENDING OF WATER PERMIT

NOTICE IS HEREBY GIVEN that TED S. SORENSON d/b/a SORENSON ENGINEERING or BIRCH POWER has applied to the Department of Water Resources to amend hydropower permits as follows:

NO. 32-7128
AMOUNT: 45 CFS
PURPOSE: POWER PRODUCTION
SOURCE: BIRCH CREEK tributary of BIRCH CREEK SINKS TO GROUND-WATER AQUIFER.
POINT OF DIVERSION: NENW SEC 3 T 8N R 30E, CLARK COUNTY
The water is used for power generation within the NENE SEC 14 T8N R 31E, B.M.

NO. 32-7136
AMOUNT: 30 CFS
PURPOSE: POWER PRODUCTION
SOURCE: BIRCH CREEK tributary of BIRCH CREEK SINKS TO GROUND-WATER AQUIFER.
POINT OF DIVERSION: NENW SEC 3 T 8N 30E, CLARK COUNTY
The water is used for power generation within the NENE SEC 14 T8N R 31E, B.M.

This amendment is requested to remove a requirement to bypass 5 cfs or 11% of the flow of Birch Creek down the old Birch Creek Channel.

Any protest to the proposed amending of the permits must be filed with the Idaho Department of Water Resources, 150 Shoup Ave., Idaho Falls, ID 83401, on or before SEPTEMBER 3, 1990.

Published: August 16, 23, 1990

MICROFILMED

JAN 08 2001

September 5, 1990

RE: Application for Amendment No. 32-7128/32-7136
SORENSEN ENGINEERING

Mr. Jerry R. Rigby
Attorney at Law
P.O. Box 250
Rexburg, ID 83440

Dear Mr. Rigby:

Your protest, in behalf or Elda H. Wilding, against approval of the above referenced application for amendment has been received and a copy has been sent to the applicant. The Department suggests you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

Unless this office is advised that either the matter has been resolved or there exists extenuating circumstances requiring additional time, our objective is to schedule a conference and/or hearing to consider the protests within 60 days. At such a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying the application for amendment (Sec. 42-203, Idaho Code):

1. Will the proposed amendment reduce the quantity of water under existing water rights?

2. Is the proposed water supply insufficient for the purpose intended?

3. Is the amendment made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

6. That it is contrary to conservation of water resources within the State of Idaho.

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JAN 0 8 2001

The protestant must be prepared to present proof of allegations involving one or more of the five items.

If this office can be of further assistance, please contact us.

Very truly yours,

HAROLD W. JONES
Water Rights Supervisor

HWJ:CW

Enclosure

cc: IDWR - State Office

MICROFILMED

JAN 0 8 2001

LAW OFFICES

RIGBY, THATCHER, ANDRUS,

RIGBY & KAM, *Chartered*

25 NORTH SECOND EAST - P.O. BOX 250 - REXBURG, IDAHO 83440
RAY W. RIGBY - GORDON S. THATCHER - G. RICH ANDRUS
JERRY R. RIGBY - MICHAEL S. KAM
TELEPHONE (208) 356-3633 - TELEPHONE (208) 529-5531 I.F.
FAX (208) 356-0768

August 30, 1990

Dept. of Water Resources
150 Shoup Avenue
Idaho Falls, ID 83401

Enclosed please find Protest of Elda H. Wilding. Please file the same.

Sincerely,

Jerry R. Rigby

JRR:aw
Enclosures

RECEIVED
AUG 31 1990
Department of Water Resources
Eastern District Office

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JAN 08 2001

RECEIVED
AUG 3 1 1990
Department of Water Resources
Eastern District Office

Jerry R. Rigby
of RIGBY, THATCHER, ANDRUS,
RIGBY & KAM, Chartered
Attorneys at Law
25 North Second East
Rexburg, Idaho 83440
Telephone: 208 356-3633

Attorneys for Elda H. Wilding

BEFORE THE DEPARTMENT WATER RESOURCES
OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION OF TED S. SORENSON, dba SORENSON ENGINEERING or BIRCH POWER TO AMEND HYDROPOWER PERMIT NOS. 32-7128 and 32-7136.	PROTEST OF ELDA H. WILDING

Elda H. Wilding, c/o Jerry R. Rigby, of Rigby, Thatcher, Andrus, Rigby & Kam, Chartered, 25 North Second East, Rexburg, Idaho 83440, hereby enters her protest against approval of the application of Ted S. Sorenson, dba/Sorenson Engineering or Birth Power (hereinafter "Sorenson") to amend Hydropower Permit Nos. 32-7128 and 32-7136 on the following grounds:

1. Elda H. Wilding is a substantial user of the waters of Birch Creek, said use thereof and the properties of Elda H. Wilding being situated downstream from the site of the proposed diversion and construction referred to in Sorenson's application. From a preliminary review of Sorenson's application, it appears that the proposed diversion and

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JAN 0 8 2001

construction would be detrimental to, and not in the best interests of, other water users of Birch Creek.

2. Sorenson's application fails to provide adequate plans on which a valid decision can be made regarding the possible detrimental effects of the proposed diversion and construction. Additionally, Sorenson has failed to provide adequate information to show whether sufficient financial resources will be available to complete and maintain the work proposed in Sorenson's application; Elda H. Wilding questions Sorenson's financial ability to maintain the changes proposed in the application and to restore Birch Creek to its present condition and flow should Sorenson make changes to the condition or flow of Birch Creek.

3. Sorenson's application presents inadequate proof of the feasibility of Sorenson's plan. Specifically, Sorenson's application lacks proof of feasibility that the ponds, drip irrigation system and other proposals can be established and maintained with the water flows proposed.

4. Sorenson's application contains no definitive statement of construction cost information which would allow a reasoned evaluation of the feasibility of the proposed project.

5. Sorenson's application contains no definitive statement of maintenance costs and other maintenance information which would allow a reasoned evaluation of the feasibility of the maintenance of the proposed project.

6. Sorenson's application contains no proof of any

MICROFILMED

5099B 2001

firm commitment of sufficient financial resources with which to complete the work proposed.

7. Assuming, arguendo, that the proposed project could be constructed and maintained as outlined in Sorenson's application, the application is deficient because it does not make provision for the beneficial use of the increased stream flow below the Birch Creek hydroproject. If Sorenson's application is approved, it should be conditioned on the application of the increased stream flow to fill the decreed, but unsatisfied, water rights of the downstream water users of Birch Creek, specifically, Elda H. Wilding.

8. Assuming, arguendo, that the proposed project could be constructed and maintained as outlined in Sorenson's application, Sorenson's application is deficient because it does not provide any proposal to establish guidelines or duties under which the watermaster would administer the increased stream flow below the Birch Creek hydroproject.

9. Sorenson's application is deficient because it fails to define accurately the flow to be eliminated. Sorenson's application apparently proposed elimination of a maintenance flow of the lesser of 5 cfs or 11 percent of the flow of Birch Creek, but it does not establish the point of measuring the flow of Birch Creek. The flow in Birch Creek varies widely.

10. Sorenson's application is deficient because it fails to compare the amount of water presently used for

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JAN 08 2001

maintenance flows with the amount which would be required under Sorenson's proposal.

Elda H. Wilding hereby respectfully requests the right to amend this protest following receipt of reports and recommendations from his water engineer or following the receipt of additional information from Sorenson or other interested parties.

DATED This 30th day of August, 1990.

Jerry R. Rigby
of RIGBY, THATCHER, ANDRUS,
RIGBY & KAM, Chartered

MICROFILMED
5099E
JAN 0 8 2001

September 5, 1990

RE: Application for Amendment No. 32-7128/32-7136
SORENSEN ENGINEERING

Mr. George C. Petersen
Attorney at Law
485 "E" Street
Idaho Falls, ID 83402

Dear Mr. Petersen:

Your protest, in behalf of D & D Enterprises, Inc., against approval of the above referenced application for amendment has been received and a copy has been sent to the applicant. The Department suggests you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

Unless this office is advised that either the matter has been resolved or there exists extenuating circumstances requiring additional time, our objective is to schedule a conference and/or hearing to consider the protests within 60 days. At such a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying the application for amendment (Sec. 42-203, Idaho Code):

1. Will the proposed amendment reduce the quantity of water under existing water rights?

2. Is the proposed water supply insufficient for the purpose intended?

3. Is the amendment made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

6. That it is contrary to conservation of water resources within the State of Idaho.

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JAN 0 8 2001

The protestant must be prepared to present proof of allegations involving one or more of the five items.

If this office can be of further assistance, please contact us.

Very truly yours,

HAROLD W. JONES
Water Rights Supervisor

HWJ:CW

Enclosure

cc: IDWR - State Office

MICROFILMED

JAN 0 8 2001

RECEIVED
AUG 31 1990
Department of Water Resources
Eastern District Office

George C. Petersen, Jr., Esq.
PETERSEN, MOSS, OLSEN, MEACHAM & CARR
485 "E" Street
Idaho Falls, Idaho 83402
(208) 523-4650

Attorneys for D & D Enterprises, Inc.

BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION OF TED S. SORENSON, dba/SORENSON ENGINEERING or BIRCH POWER TO AMEND HYDROPOWER PERMIT NOS. 32-7128 and 32-7136.	**PROTEST OF D & D ENTERPRISES, INC.**

D & D Enterprises, Inc., an Idaho corporation, c/o George C. Petersen, Jr., Petersen, Moss, Olsen, Meacham & Carr, 485 "E" Street, Idaho Falls, Idaho 83402, hereby enters its protest against approval of the application of Ted S. Sorenson, dba/Sorenson Engineering or Birth Power (hereinafter "Sorenson") to amend Hydropower Permit Nos. 32-7128 and 32-7136 on the following grounds:

1. D & D Enterprises, Inc. is a substantial user of the waters of Birch Creek, said use thereof and the properties of D & D Enterprises, Inc. being situated downstream from the site of the proposed diversion and construction referred to in Sorenson's application. From a preliminary review of Sorenson's application, it

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JAN 08 2001

appears that the proposed diversion and construction would be detrimental to, and not in the best interests of, other water users of Birch Creek.

2. Sorenson's application fails to provide adequate plans on which a valid decision can be made regarding the possible detrimental effects of the proposed diversion and construction. Additionally, Sorenson has failed to provide adequate information to show whether sufficient financial resources will be available to complete and maintain the work proposed in Sorenson's application; D & D Enterprises, Inc. questions Sorenson's financial ability to maintain the changes proposed in the application and to restore Birch Creek to its present condition and flow should Sorenson make changes to the condition or flow of Birch Creek.

3. Sorenson's application presents inadequate proof of the feasibility of Sorenson's plan. Specifically, Sorenson's application lacks proof of feasibility that the ponds, drip irrigation system and other proposals can be established and maintained with the water flows proposed.

4. Sorenson's application contains no definitive statement of construction cost information which would allow a reasoned evaluation of the feasibility of the proposed project.

5. Sorenson's application contains no definitive statement of maintenance costs and other maintenance information which would allow a reasoned evaluation of the feasibility of the maintenance of the proposed project.

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JAN 0 8 2001

6. Sorenson's application contains no proof of any firm commitment of sufficient financial resources with which to complete the work proposed.

7. Assuming, arguendo, that the proposed project could be constructed and maintained as outlined in Sorenson's application, the application is deficient because it does not make provision for the beneficial use of the increased stream flow below the Birch Creek hydroproject. If Sorenson's application is approved, it should be conditioned on the application of the increased stream flow to fill the decreed, but unsatisfied, water rights of the downstream water users of Birch Creek, specifically, D & D Enterprises, Inc.

8. Assuming, arguendo, that the proposed project could be constructed and maintained as outlined in Sorenson's application, Sorenson's application is deficient because it does not provide any proposal to establish guidelines or duties under which the watermaster would administer the increased stream flow below the Birch Creek hydroproject.

9. Sorenson's application is deficient because it fails to define accurately the flow to be eliminated. Sorenson's application apparently proposes elimination of a maintenance flow of the lesser of 5 cfs or 11 percent of the flow of Birch Creek, but it does not establish the point of measuring the flow of Birch Creek. The flow in Birch Creek varies widely.

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JAN 08 2001

10. Sorenson's application is deficient because it fails to compare the amount of water presently used for maintenance flows with the amount which would be required under Sorenson's proposal.

D & D Enterprises, Inc. hereby respectfully requests the right to amend this protest following receipt of reports and recommendations from his water engineer or following the receipt of additional information from Sorenson or other interested parties.

DATED this 30th day of August, 1990.

PETERSEN, MOSS, OLSEN,
MEACHAM & CARR

George C. Petersen, Jr.
Attorneys for D & D Enterprises, Inc.

1862G

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JAN 0 8 2001

September 5, 1990

RE: Application for Amendment No. 32-7128/32-7136
SORENSEN ENGINEERING

Mr. Breck Barton
Attorney at Law
P.O. Box 100
Rexburg, ID 83440

Dear Mr. Barton:

Your protest, in behalf of Mac and Betty Wagoner, against approval of the above referenced application for amendment has been received and a copy has been sent to the applicant. The Department suggests you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

Unless this office is advised that either the matter has been resolved or there exists extenuating circumstances requiring additional time, our objective is to schedule a conference and/or hearing to consider the protests within 60 days. At such a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying the application for amendment (Sec. 42-203, Idaho Code):

1. Will the proposed amendment reduce the quantity of water under existing water rights?

2. Is the proposed water supply insufficient for the purpose intended?

3. Is the amendment made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

6. That it is contrary to conservation of water resources within the State of Idaho.

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JAN 08 2001

The protestant must be prepared to present proof of allegations involving one or more of the five items.

If this office can be of further assistance, please contact us.

Very truly yours,

HAROLD W. JONES
Water Rights Supervisor

HWJ:CW

Enclosure

cc: IDWR - State Office

MICROFILMED

JAN 0 8 2001

LAW OFFICES OF
BRECK BARTON & ASSOCIATES, P.A.
305 WEST MAIN
REXBURG, IDAHO 83440

BRECK H. BARTON

P.O. BOX 100
(208) 356-4880

August 28, 1990

RECEIVED
SEP 4 1990
Department of Water Resources
Eastern District Office

Idaho State Department of
Water Resources
150 Shoup Avenue, Suite 15
Idaho Falls, ID 83402

ATTN: Ron Carlson

RE: Notice of Proposed change of water right of
Ted Sorenson, d/b/a Sorenson Engineering

Dear Mr. Carlson:

For and behalf of our clients, Mac and Betty Wagoner, we hereby protest the Notice of Amending Water Permit #32-7128 and #32-7136. The basis of the protest is that the amendment of said water rights to provide 5 CFS or 11 per cent of the flow of Birch Creek may constitute an enlargement of use of said water right and may result in harm to Mac and Betty Wagoner. Further, Mr. Sorenson by way of Memorandum Agreement, has agreed to subordinate any interest in said water to Mac and Betty Wagoner. I've previously forwarded to you a copy of this Memorandum Agreement which was arrived at in a prior Birch Creek transfer proceeding but for your review I enclose an additional copy herein.

Our specific area of concern is as follows: Ted Sorenson by memorandum agreement intends to transfer water right #32-0067 and #32-0090 to Mac and Betty Wagoner. Mac and Betty Wagoner intend to transfer to Ted Sorenson and/or his assigns waters rights numbered 32-0102, 32-0073, 32-0085, 32-0077, 32-0086, 32-0078, 32-0087, 32-0079. We have previously forwarded to the Department of Water Resources information concerning the intent of applying for transfer of these rights.

The purpose of the transfers referenced above is to eliminate and settle controversies now existing between the Wagoners and Mr. Sorenson. The import and understanding of the agreement was that Mac and Betty Wagoner would have at their point of diversion a guaranteed 4 CFS of water. We recognize that the guarantee would of course be subject to stream flow of Birch Creek and any rights prior to those sought to be transferred to Wagoners.

Inasmuch as we are not specifically familiar with the provision of the water permits now sought to be amended by Ted Sorenson we

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JAN 0 8 2001

believe that the appropriate procedure should be to first effectuate the transfer above detailed between Sorenson and Wagoners so that there be no misunderstanding that Sorenson's water permits should not in any way impair nor affect the pending proposed transfer or delivery of water to Wagoners after the same has been completed.

We will be willing to withdraw this protest when transfers between Wagoner and Sorenson are finished and/or subrogation of the new Sorenson permits to the Wagoners is completed.

We understand pursuant to past requests that the Department is preparing the proposed applications for transfer and that the same will be done expeditiously. It is not our intent in any fashion to in any way hinder Mr. Sorenson in his now proposed amendment of water permit. Nevertheless, inasmuch as the proposed transfer between Sorenson and Wagoner has not taken place we believe it necessary for preservation of the legal position of Mac and Betty Wagoner that we file this protest.

Very truly yours,

Breck Barton

BB/cb

Enclosure

cc: Kent Foster
Mac & Betty Wagoner

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JAN 0 8 2001

RECEIVED
AUG 31 1990
Department of Water Resources
Eastern District Office

Howe, Idaho
8/ 30/ 90

Director
Keith Higginson
Department of Water Resources

Woodie Land and Livestock

Protest Amendments

No. 32-7128

No. 32-7136

Request to remove requirement to by pass 5 cfs or 11% of the flow of Birch Creek down the old Birch Creek channel.

Reason;

Consideration of stock water.

George K Woodie

President
Woodie Land and Livestock

Hc 65 Box 1018
Howe, Idaho
83244

Withdrawn

NOTICE OF PROPOSED AMENDING OF WATER PERMIT

NOTICE IS HEREBY GIVEN that TED S. SORENSON d/b/a SORENSON ENGINEERING or BIRCH POWER has applied to the Department of Water Resources to amend hydropower permits as follows:

NO. 32-7128
AMOUNT: 45 CFS
PURPOSE: POWER PRODUCTION
SOURCE: BIRCH CREEK tributary of BIRCH CREEK SINKS TO GROUND-WATER AQUIFER.
POINT OF DIVERSION: NENW SEC 3 T 8N R 30E, CLARK COUNTY
The water is used for power generation within the NENE SEC 14 T8N R 31E, B.M.

NO. 32-7136
AMOUNT: 30 CFS
PURPOSE: POWER PRODUCTION
SOURCE: BIRCH CREEK tributary of BIRCH CREEK SINKS TO GROUND-WATER AQUIFER.
POINT OF DIVERSION: NENW SEC 3 T 8N 30E, CLARK COUNTY
The water is used for power generation within the NENE SEC 14 T8N R 31E, B.M.
This amendment is requested to remove a requirement to bypass 5 cfs or 11% of the flow of Birch Creek down the old Birch Creek Channel.
Any protest to the proposed amending of the permits must be filed with the Idaho Department of Water Resources, 150 Shoup Ave., Idaho Falls, ID 83401, on or before SEPTEMBER 3, 1990.
Published: August 16, 23, 1990

...EMBER 3, 1990.
R. Keith Higginson, Director
Published: August 16, 23, 1990

MICROFILMED WITHDRAWN
SEP 0 8 1990

LAW OFFICES OF
BRECK BARTON & ASSOCIATES, P.A.
305 WEST MAIN
REXBURG, IDAHO 83440

BRECK H. BARTON

P.O. BOX 100
(208) 356-4880

August 28, 1990

RECEIVED
SEP 4 1990
Department of Water Resources
Eastern District Office

Idaho State Department of
Water Resources
150 Shoup Avenue, Suite 15
Idaho Falls, ID 83402

ATTN: Ron Carlson

RE: Notice of Proposed change of water right of
Ted Sorenson, d/b/a Sorenson Engineering

Dear Mr. Carlson:

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Inasmuch as we are not specifically familiar with the provision of the water permits now sought to be amended by Ted Sorenson we

MICROFILMED
JAN 08 2001

believe that the appropriate procedure should be to first effectuate the transfer above detailed between Sorenson and Wagoners so that there be no misunderstanding that Sorenson's water permits should not in any way impair nor affect the pending proposed transfer or delivery of water to Wagoners after the same has been completed.

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Very truly yours,

Breck Barton

BB/cb

Enclosure

cc: Kent Foster
Mac & Betty Wagoner

MICROFILMED

JAN 0 8 2001

RECEIVED
SEP 4 1990
Department of Water Resources
Eastern District Office

Donald L. Harris, Esq.
HOLDEN, KIDWELL, HAHN & CRAPO
P.O. Box 50130
Idaho Falls, Idaho 83405
Telephone: (208) 523-0620

Attorneys for Plaintiffs

IN THE DISTRICT COURT OF THE SEVENTH JUDICIAL DISTRICT OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF CLARK

TED S. SORENSON and GAYLE SORENSON, dba SORENSON ENGINEERING and BIRCH POWER COMPANY, INC., Plaintiffs, vs. MAC WAGONER and BETTY WAGONER, husband and wife, Defendants.	Case No. 2-462 MEMORANDUM OF AGREEMENT

COME NOW Ted S. Sorenson, Gayle Sorenson d/b/a Sorenson Engineering, Birch Power Company, Inc. and Birch Creek Ranches, Inc. (Sorensons) and Mac Wagoner and Betty Wagoner (Wagoners) and enter into the following Memorandum of Agreement which agreement shall be made final by execution of settlement and release documents consistent herewith.

1. The season of use for Water Right No. 32-7067 and .8 cfs of the Right No. 32-0090 of the waters of Birch Creek,

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which shall be transferred to Wagoners, shall hereafter be from April 1st of each year to and including October 15th of the same year; provided, however, that Wagoners may commence diversion of water under such right, if they deem it appropriate, later than April 1st in any given year, and if they do so, the same number of days from April 1st until the day such diversion is first commenced shall be added at the end of the irrigation season for such year so that they may continue diversions under such right for the same number of days after October 15th as elapsed between April 1st and the date subsequent thereto when diversion of water under such right actually began for such year. It is understood that regardless of the date diversions under such right commence, and regardless of whether water is or is not diverted under such right at any time during the above described season of use, such season shall not be extended longer than the actual number of days between April 1st and October 15th.

2. Sorensons will transfer to Wagoners the water rights on Birch Creek identified as Right No. 32-0067 for 3.2 cfs with a priority date of September 10, 1882 and Right No. 32-0090 for a portion of that right of .8 cfs with a priority date of May 10, 1886. Wagoners will transfer to Sorensons Water Right No. 32-0102 for 4.0 cfs with a priority date of May 10, 1889.

3. Sorensons will purchase from Wagoners, Wagoners "high

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water" rights consisting of the following:

NO.	CFS	PRIORITY
0073	.2	05/15/1909
0085	.2	05/10/1910
0077	.2	05/15/1910
0086	.2	05/01/1911
0078	.2	05/15/1911
0087	.2	05/01/1912
0079	.8	05/15/1913

Sorensons will pay to Wagoners the amount of fifteen thousand dollars ($15,000.00) after the transfer of the above-referenced rights.

4. Wagoners shall withdraw their notice of claim filed in the Snake River Basin Adjudication for 500 miner's inches (10 cfs) of "high water".

5. The 4 cfs or 200 inches of water represents Wagoners water. Sorensons agree to subordinate any additional water developed by them over which they have control as a result of any water saving effort such as lining portions of Birch Creek or any changes to the minimum bypass flow to Wagoners water. Wagoners will make no protest to any water saving activity undertaken by Sorensons.

6. Sorensons agree that in addition to the irrigation water rights listed herein Wagoners will be entitled to divert up to 40 miner's inches (.8 cfs) of the water right which Sorensons will transfer to them which is Right No. 32-0067 for

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JAN 0 8 2001

stockwatering purposes commencing on or after March 1st of any year until such time as irrigation water is diverted and may continue such diversions in the same amount from the time irrigation ceases to no later than December 1st.

7. Wagoners shall not acquire in any way, directly or indirectly, through whatever means any water rights to the waters of Birch Creek held by George Woodie.

8. That Wagoners will withdraw their protest to the transfer of Sorensons now pending before the Idaho Department of Water Resources. The parties agree that this Memorandum of Agreement and the Settlement and Mutual Release that shall be entered into shall be conditioned on the premise that the Idaho Department of Water Resources does not require Wagoners to take land out of production for having sold the "high water" rights.

Ted S. Sorenson

Gayle Sorenson

BIRCH POWER COMPANY, INC.

By: Ted S. Sorenson, President

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BIRCH CREEK RANCHES, INC.

By: _____

Approved as to Form and Content By:

_____
Donald L. Harris, Esq.
HOLDEN, KIDWELL, HAHN & CRAPO

_____
Mac Wagoner

_____
Betty Wagoner

Approved as to Form and Content By:

_____
Breck H. Barton, Esq.
BARTON & ASSOCIATES

#5491.00
8029h/srr

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JAN 08 2001

RECEIVED
AUG 31 1990
Department of Water Resources
Eastern District Office

George C. Petersen, Jr., Esq.
PETERSEN, MOSS, OLSEN, MEACHAM & CARR
485 "E" Street
Idaho Falls, Idaho 83402
(208) 523-4650

Attorneys for D & D Enterprises, Inc.

BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION OF TED S. SORENSON, dba/SORENSON ENGINEERING or BIRCH POWER TO AMEND HYDROPOWER PERMIT NOS. 32-7128 and 32-7136.	**PROTEST OF D & D ENTERPRISES, INC.**

D & D Enterprises, Inc., an Idaho corporation, c/o George C. Petersen, Jr., Petersen, Moss, Olsen, Meacham & Carr, 485 "E" Street, Idaho Falls, Idaho 83402, hereby enters its protest against approval of the application of Ted S. Sorenson, dba/Sorenson Engineering or Birth Power (hereinafter "Sorenson") to amend Hydropower Permit Nos. 32-7128 and 32-7136 on the following grounds:

1. D & D Enterprises, Inc. is a substantial user of the waters of Birch Creek, said use thereof and the properties of D & D Enterprises, Inc. being situated downstream from the site of the proposed diversion and construction referred to in Sorenson's application. From a preliminary review of Sorenson's application, it

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appears that the proposed diversion and construction would be detrimental to, and not in the best interests of, other water users of Birch Creek.

2. Sorenson's application fails to provide adequate plans on which a valid decision can be made regarding the possible detrimental effects of the proposed diversion and construction. Additionally, Sorenson has failed to provide adequate information to show whether sufficient financial resources will be available to complete and maintain the work proposed in Sorenson's application; D & D Enterprises, Inc. questions Sorenson's financial ability to maintain the changes proposed in the application and to restore Birch Creek to its present condition and flow should Sorenson make changes to the condition or flow of Birch Creek.

3. Sorenson's application presents inadequate proof of the feasibility of Sorenson's plan. Specifically, Sorenson's application lacks proof of feasibility that the ponds, drip irrigation system and other proposals can be established and maintained with the water flows proposed.

4. Sorenson's application contains no definitive statement of construction cost information which would allow a reasoned evaluation of the feasibility of the proposed project.

5. Sorenson's application contains no definitive statement of maintenance costs and other maintenance information which would allow a reasoned evaluation of the feasibility of the maintenance of the proposed project.

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JAN 08 2001

6. Sorenson's application contains no proof of any firm commitment of sufficient financial resources with which to complete the work proposed.

7. Assuming, arguendo, that the proposed project could be constructed and maintained as outlined in Sorenson's application, the application is deficient because it does not make provision for the beneficial use of the increased stream flow below the Birch Creek hydroproject. If Sorenson's application is approved, it should be conditioned on the application of the increased stream flow to fill the decreed, but unsatisfied, water rights of the downstream water users of Birch Creek, specifically, D & D Enterprises, Inc.

8. Assuming, arguendo, that the proposed project could be constructed and maintained as outlined in Sorenson's application, Sorenson's application is deficient because it does not provide any proposal to establish guidelines or duties under which the watermaster would administer the increased stream flow below the Birch Creek hydroproject.

9. Sorenson's application is deficient because it fails to define accurately the flow to be eliminated. Sorenson's application apparently proposes elimination of a maintenance flow of the lesser of 5 cfs or 11 percent of the flow of Birch Creek, but it does not establish the point of measuring the flow of Birch Creek. The flow in Birch Creek varies widely.

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10. Sorenson's application is deficient because it fails to compare the amount of water presently used for maintenance flows with the amount which would be required under Sorenson's proposal.

D & D Enterprises, Inc. hereby respectfully requests the right to amend this protest following receipt of reports and recommendations from his water engineer or following the receipt of additional information from Sorenson or other interested parties.

DATED this 30th day of August, 1990.

PETERSEN, MOSS, OLSEN,
MEACHAM & CARR

George C. Petersen, Jr.
Attorneys for D & D Enterprises, Inc.

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RECEIVED
AUG 31 1990
Department of Water Resources
Eastern District Office

Jerry R. Rigby
of RIGBY, THATCHER, ANDRUS,
RIGBY & KAM, Chartered
Attorneys at Law
25 North Second East
Rexburg, Idaho 83440
Telephone: 208 356-3633

Attorneys for Elda H. Wilding

BEFORE THE DEPARTMENT WATER RESOURCES
OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION OF TED S. SORENSON, dba SORENSON ENGINEERING or BIRCH POWER TO AMEND HYDROPOWER PERMIT NOS. 32-7128 and 32-7136.	PROTEST OF ELDA H. WILDING

Elda H. Wilding, c/o Jerry R. Rigby, of Rigby, Thatcher, Andrus, Rigby & Kam, Chartered, 25 North Second East, Rexburg, Idaho 83440, hereby enters her protest against approval of the application of Ted S. Sorenson, dba/Sorenson Engineering or Birth Power (hereinafter "Sorenson") to amend Hydropower Permit Nos. 32-7128 and 32-7136 on the following grounds:

1. Elda H. Wilding is a substantial user of the waters of Birch Creek, said use thereof and the properties of Elda H. Wilding being situated downstream from the site of the proposed diversion and construction referred to in Sorenson's application. From a preliminary review of Sorenson's application, it appears that the proposed diversion and

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construction would be detrimental to, and not in the best interests of, other water users of Birch Creek.

2. Sorenson's application fails to provide adequate plans on which a valid decision can be made regarding the possible detrimental effects of the proposed diversion and construction. Additionally, Sorenson has failed to provide adequate information to show whether sufficient financial resources will be available to complete and maintain the work proposed in Sorenson's application; Elda H. Wilding questions Sorenson's financial ability to maintain the changes proposed in the application and to restore Birch Creek to its present condition and flow should Sorenson make changes to the condition or flow of Birch Creek.

3. Sorenson's application presents inadequate proof of the feasibility of Sorenson's plan. Specifically, Sorenson's application lacks proof of feasibility that the ponds, drip irrigation system and other proposals can be established and maintained with the water flows proposed.

4. Sorenson's application contains no definitive statement of construction cost information which would allow a reasoned evaluation of the feasibility of the proposed project.

5. Sorenson's application contains no definitive statement of maintenance costs and other maintenance information which would allow a reasoned evaluation of the feasibility of the maintenance of the proposed project.

6. Sorenson's application contains no proof of any

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JAN 0 8 2001

firm commitment of sufficient financial resources with which to complete the work proposed.

7. Assuming, arguendo, that the proposed project could be constructed and maintained as outlined in Sorenson's application, the application is deficient because it does not make provision for the beneficial use of the increased stream flow below the Birch Creek hydroproject. If Sorenson's application is approved, it should be conditioned on the application of the increased stream flow to fill the decreed, but unsatisfied, water rights of the downstream water users of Birch Creek, specifically, Elda H. Wilding.

8. Assuming, arguendo, that the proposed project could be constructed and maintained as outlined in Sorenson's application, Sorenson's application is deficient because it does not provide any proposal to establish guidelines or duties under which the watermaster would administer the increased stream flow below the Birch Creek hydroproject.

9. Sorenson's application is deficient because it fails to define accurately the flow to be eliminated. Sorenson's application apparently proposed elimination of a maintenance flow of the lesser of 5 cfs or 11 percent of the flow of Birch Creek, but it does not establish the point of measuring the flow of Birch Creek. The flow in Birch Creek varies widely.

10. Sorenson's application is deficient because it fails to compare the amount of water presently used for

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maintenance flows with the amount which would be required under Sorenson's proposal.

Elda H. Wilding hereby respectfully requests the right to amend this protest following receipt of reports and recommendations from his water engineer or following the receipt of additional information from Sorenson or other interested parties.

DATED This 30th day of August, 1990.

Jerry R. Rigby
of RIGBY, THATCHER, ANDRUS,
RIGBY & KAM, Chartered

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JAN 08 2021

LAW OFFICES

RIGBY, THATCHER, ANDRUS,

RIGBY & KAM, *Chartered*

25 NORTH SECOND EAST - P.O. BOX 250 - REXBURG, IDAHO 83440
RAY W. RIGBY - GORDON S. THATCHER - G. RICH ANDRUS
JERRY R. RIGBY - MICHAEL S. KAM
TELEPHONE (208) 356-3633 - TELEPHONE (208) 529-5531 I.F.
FAX (208) 356-0768

August 30, 1990

Dept. of Water Resources
150 Shoup Avenue
Idaho Falls, ID 83401

Enclosed please find Protest of Elda H. Wilding. Please file the same.

Sincerely,

Jerry R. Rigby

JRR:aw
Enclosures

Dismissed

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AUG 31 1990
Department of Water Resources
Eastern District Office

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JAN 08 2001

LAW OFFICES OF
BRECK BARTON & ASSOCIATES, P.A.
305 WEST MAIN
REXBURG, IDAHO 83440

BRECK H. BARTON

P.O. BOX 100
(208) 356-4880

August 28, 1990

Idaho State Department of
Water Resources
150 Shoup Avenue, Suite 15
Idaho Falls, ID 83402

ATTN: Ron Carlson

RE: Notice of Proposed change of water right of
Ted Sorenson, d/b/a Sorenson Engineering

Dear Mr. Carlson:

For and behalf of our clients, Mac and Betty Wagoner, we hereby protest the Notice of Amending Water Permit #32-7128 and #32-7136. The basis of the protest is that the amendment of said water rights to provide 5 CFS or 11 per cent of the flow of Birch Creek may constitute an enlargement of use of said water right and may result in harm to Mac and Betty Wagoner. Further, Mr. Sorenson by way of Memorandum Agreement, has agreed to subordinate any interest in said water to Mac and Betty Wagoner. I've previously forwarded to you a copy of this Memorandum Agreement which was arrived at in a prior Birch Creek transfer proceeding but for your review I enclose an additional copy herein.

Our specific area of concern is as follows: Ted Sorenson by memorandum agreement intends to transfer water right #32-0067 and #32-0090 to Mac and Betty Wagoner. Mac and Betty Wagoner intend to transfer to Ted Sorenson and/or his assigns waters rights numbered 32-0102, 32-0073, 32-0085, 32-0077, 32-0086, 32-0078, 32-0087, 32-0079. We have previously forwarded to the Department of Water Resources information concerning the intent of applying for transfer of these rights.

The purpose of the transfers referenced above is to eliminate and settle controversies now existing between the Wagoners and Mr. Sorenson. The import and understanding of the agreement was that Mac and Betty Wagoner would have at their point of diversion a guaranteed 4 CFS of water. We recognize that the guarantee would of course be subject to stream flow of Birch Creek and any rights prior to those sought to be transferred to Wagoners.

Inasmuch as we are not specifically familiar with the provision of the water permits now sought to be amended by Ted Sorenson we

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believe that the appropriate procedure should be to first effectuate the transfer above detailed between Sorenson and Wagoners so that there be no misunderstanding that Sorenson's water permits should not in any way impair nor affect the pending proposed transfer or delivery of water to Wagoners after the same has been completed.

We will be willing to withdraw this protest when transfers between Wagoner and Sorenson are finished and/or subrogation of the new Sorenson permits to the Wagoners is completed.

We understand pursuant to past requests that the Department is preparing the proposed applications for transfer and that the same will be done expeditiously. It is not our intent in any fashion to in any way hinder Mr. Sorenson in his now proposed amendment of water permit. Nevertheless, inasmuch as the proposed transfer between Sorenson and Wagoner has not taken place we believe it necessary for preservation of the legal position of Mac and Betty Wagoner that we file this protest.

Very truly yours,

Breck Barton

BB/cb

Enclosure

cc: Kent Foster
Mac & Betty Wagoner

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JAN 0 8 2001

Donald L. Harris, Esq.
HOLDEN, KIDWELL, HAHN & CRAPO
P.O. Box 50130
Idaho Falls, Idaho 83405
Telephone: (208) 523-0620

Attorneys for Plaintiffs

IN THE DISTRICT COURT OF THE SEVENTH JUDICIAL DISTRICT OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF CLARK

TED S. SORENSON and GAYLE SORENSON, dba SORENSON ENGINEERING and BIRCH POWER COMPANY, INC., Plaintiffs, vs. MAC WAGONER and BETTY WAGONER, husband and wife, Defendants.	Case No. 2-462 MEMORANDUM OF AGREEMENT

COME NOW Ted S. Sorenson, Gayle Sorenson d/b/a Sorenson Engineering, Birch Power Company, Inc. and Birch Creek Ranches, Inc. (Sorensons) and Mac Wagoner and Betty Wagoner (Wagoners) and enter into the following Memorandum of Agreement which agreement shall be made final by execution of settlement and release documents consistent herewith.

1. The season of use for Water Right No. 32-7067 and .0 cfs of the Right No. 32-0090 of the waters of Birch Creek,

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which shall be transferred to Wagoners, shall hereafter be from April 1st of each year to and including October 15th of the same year; provided, however, that Wagoners may commence diversion of water under such right, if they deem it appropriate, later than April 1st in any given year, and if they do so, the same number of days from April 1st until the day such diversion is first commenced shall be added at the end of the irrigation season for such year so that they may continue diversions under such right for the same number of days after October 15th as elapsed between April 1st and the date subsequent thereto when diversion of water under such right actually began for such year. It is understood that regardless of the date diversions under such right commence, and regardless of whether water is or is not diverted under such right at any time during the above described season of use, such season shall not be extended longer than the actual number of days between April 1st and October 15th.

2. Sorensons will transfer to Wagoners the water rights on Birch Creek identified as Right No. 32-0067 for 3.2 cfs with a priority date of September 10, 1882 and Right No. 32-0090 for a portion of that right of .8 cfs with a priority date of May 10, 1886. Wagoners will transfer to Sorensons Water Right No. 32-0102 for 4.0 cfs with a priority date of May 10, 1889.

3. Sorensons will purchase from Wagoners, Wagoners "high

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water" rights consisting of the following:

NO.	CFS	PRIORITY
0073	.2	05/15/1909
0085	.2	05/10/1910
0077	.2	05/15/1910
0086	.2	05/01/1911
0078	.2	05/15/1911
0087	.2	05/01/1912
0079	.8	05/15/1913

Sorensons will pay to Wagoners the amount of fifteen thousand dollars ($15,000.00) after the transfer of the above-referenced rights.

4. Wagoners shall withdraw their notice of claim filed in the Snake River Basin Adjudication for 500 miner's inches (10 cfs) of "high water".

5. The 4 cfs or 200 inches of water represents Wagoners water. Sorensons agree to subordinate any additional water developed by them over which they have control as a result of any water saving effort such as lining portions of Birch Creek or any changes to the minimum bypass flow to Wagoners water. Wagoners will make no protest to any water saving activity undertaken by Sorensons.

6. Sorensons agree that in addition to the irrigation water rights listed herein Wagoners will be entitled to divert up to 40 miner's inches (.8 cfs) of the water right which Sorensons will transfer to them which is Right No. 32-0067 for

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stockwatering purposes commencing on or after March 1st of any year until such time as irrigation water is diverted and may continue such diversions in the same amount from the time irrigation ceases to no later than December 1st.

7. Wagoners shall not acquire in any way, directly or indirectly, through whatever means any water rights to the waters of Birch Creek held by George Woodie.

8. That Wagoners will withdraw their protest to the transfer of Sorensons now pending before the Idaho Department of Water Resources. The parties agree that this Memorandum of Agreement and the Settlement and Mutual Release that shall be entered into shall be conditioned on the premise that the Idaho Department of Water Resources does not require Wagoners to take land out of production for having sold the "high water" rights.

Ted S. Sorenson

Gayle Sorenson by

BIRCH POWER COMPANY, INC.

By: Ted S. Sorenson, President

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JAN 0 8 2001

BIRCH CREEK RANCHES, INC.

By: _____

Approved as to Form and Content By:

_____
Donald L. Harris, Esq.
HOLDEN, KIDWELL, HAHN & CRAPO

_____
Mac Wagoner

_____
Betty Wagoner

Approved as to Form and Content By:

_____
Breck H. Barton, Esq.
BARTON & ASSOCIATES

#5491.00
8029h/srr

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JAN 0 8 2001

LAW OFFICES
HOLDEN, KIDWELL, HAHN & CRAPO

IDAHO FALLS OFFICE

FRED J. HAHN
KENT W. FOSTER
ROBERT E. FARNAM
WILLIAM D. FALER
STEPHEN E. MARTIN
CHARLES A. HOMER
GARY L. MEIKLE
MICHAEL D. CRAPO
GAYLE A. SORENSON
DONALD L. HARRIS
MARIE T. FEELEY
JOHN G. SIMMONS
ROBERT M. FOLLETT

WEST ONE BANK
P.O. BOX 50130
IDAHO FALLS, IDAHO 83405

TELEPHONE (208) 523-0620
TELEFAX (208) 523-9518

KEY FINANCIAL CENTER
702 W. IDAHO SUITE 610
BOISE, IDAHO 83702

TELEPHONE (208) 343-0820
TELEFAX (208) 343-8078

BOISE OFFICE

WM. LYMAN BELNAP, P.C.
RANDALL B. REED

ARTHUR W. HOLDEN
(1877-1967)
ROBERT B. HOLDEN
(1911-1971)
TERRY L. CRAPO
(1939-1982)
WILLIAM S. HOLDEN
(1907-1988)

July 16, 1991

JUL 16 1991

Harold W. Jones, Water Rights Supervisor
IDAHO DEPARTMENT OF WATER RESOURCES
150 Shoup Avenue, #15
Idaho Falls, Idaho 83402

RE: Application for Amendment of Permits Nos. 32-07128 and 32-07136

Dear Mr. Jones:

We have received and are enclosing with this letter the Withdrawal of Protest of Woodie Land & Livestock, Inc., in the above entitled matter.

Yours very truly,

Kent W. Foster

#6936.00/srs

Enclosure

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JAN 0 8 2001

The Idaho Statesman

P.O. BOX 40, BOISE, IDAHO 83707

RECEIVED
AUG 13 1990
Dept. of Water Resources
Eastern District Office

LEGAL ADVERTISING INVOICE

Amount Due: 48.36

Account Name	Account Number
Idaho Water Resources - Eastern	100564

Address	City/State	Zip
150 Shoup Ave #15	Idaho Falls, ID	83402

Ordered By	P.O. Number	Rate	Run Dates
R Bodell		nt	August 2, 9, 1990

Identification	Estimated Inches	Real Inches
Proposed Amending of Water Right		

Legal Number: 6201

[1] Number of Affidavits Requested

NOTICE OF PROPOSED AMENDING OF WATER PERMIT

NOTICE IS HEREBY GIVEN that TED S. SORENSON d/b/a SORENSON ENGINEERING or BIRCH POWER has applied to the Department of Water Resources to amend hydropower permits as follows:

NO. 32-7128
AMOUNT: 45 CFS
PURPOSE: Power Production
SOURCE: Birch Creek tributary of Birch Creek Sinks To groundwater aquifer.
POINT OF DIVERSION: NENW Sec 3 T 8N R 30E, Clark County
The water is used for power generation within the NENE Sec 14 T8N R 31E, B.M.

NO. 32-7136
AMOUNT: 30 CFS
PURPOSE: Power Production
SOURCE: Birch Creek tributary of Birch Creek Sinks to groundwater aquifer.
POINT OF DIVERSION: NENW Sec 3 T 8N R 30E, Clark County
The water is used for power generation within the NENE Sec 14 T8N R 31E, B.M.

This amendment is requested to remove a requirement to bypass 5 CFS or 11% of the flow of Birch Creek down the old Birch Creek Channel.

Any protest to the proposed amending of the permits must be filed with the Idaho Department of Water Resources, 150 Shoup Ave., Idaho Falls, ID 83401, on or before August 20, 1990.

Pub. Aug. 2,9, 1990 6201

Julie Day, being duly sworn, deposes and says: That she is the Principal Clerk of The Idaho Statesman, a daily newspaper printed and published at Boise, Ada County, State of Idaho, and having a general circulation therein and which said newspaper has been continuously and uninterruptedly published in said County during a period of twelve consecutive months prior to the first publication of the notice, a copy of which is attached hereto; that said notice was published in The Idaho Statesman in conformity with Section 60-108, Idaho Code as amended, for two

XX consecutive weekly ☐ consecutive daily ☐ single ☐ odd skip

insertion(s) beginning with the issue of August 2, 1990

and ending with the issue of August 9, 1990

Julie Day

STATE OF IDAHO)
ss.
COUNTY OF ADA)

On this 9th day of August in the year of 1990, before me, a Notary Public, personally appeared Julie Day, known or identified to me to be the person whose name subscribed to the within instrument, and being by me first duly sworn, declared that the statements therein are true, and acknowledged to me that she executed the same.

Notary Public for Idaho
Residing at Boise, Id.
My commission expires: 12/93

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JAN 08 2001

NOTICE OF PROPOSED AMENDING OF WATER PERMIT

NOTICE IS HEREBY GIVEN that TED S. SORENSON d/b/a SORENSON ENGINEERING or BIRCH POWER has applied to the Department of Water Resources to amend hydropower permits as follows:

NO. 32-7128
AMOUNT: 45 CFS
PURPOSE: POWER PRODUCTION
SOURCE: BIRCH CREEK tributary of BIRCH CREEK SINKS TO GROUNDWATER AQUIFIER.
POINT OF DIVERSION: NENW SEC 3 T 8N R 30E, CLARK COUNTY.
The water is used for power generation within the NENE SEC 14 T8N R 31E, B.M.
NO. 32-7136
AMOUNT: 30 CFS
PURPOSE: POWER PRODUCTION
SOURCE: BIRCH CREEK tributary of BIRCH CREEK SINKS TO GROUNDWATER AQUIFIER.
POINT OF DIVERSION: NENW SEC 3 T 8N R 30E, CLARK COUNTY.
The water is used for power generation within the NENE SEC 14 T8N R 31E, B.M.

This amendment is requested to remove a requirement to bypass 5 cfs or 11% of the flow of Birch Creek down the old Birch Creek Channel.

Any protest to the proposed amending of the permits must be filed with the Idaho Department of Water Resources, 150 Shoup Ave., Idaho Falls, ID 83401, on or before August 20, 1990.

PUBLISH: ***Thursday,*** August 2 & 9, 1990.

Affidavit Publication № 21240

STATE OF IDAHO } ss.
COUNTY OF TWIN FALLS }

I, Linda Cooper McGuire being first duly sworn upon oath, depose and say that I am Legal Clerk of the TIMES-NEWS, published daily, at Twin Falls, Idaho, and do solemnly swear that a copy of the notice of advertisement, as per clipping attached, was published in the regular and entire issue of said newspaper, and not in any supplement thereof, for Two consecutive Weeks, commencing with the issue dated August 2, 1990, and ending with the issue dated August 9, 1990.

And I do further certify that said newspaper is a consolidation, effective February 16, 1942, of the Idaho Evening Times, published theretofore daily except Sunday, and the Twin Falls News, published theretofore daily except Monday, both of which newspapers prior to consolidation had been published under said names in said city and county continuously and uninterruptedly during a period of more than twelve consecutive months, and said TIMES-NEWS, since such consolidation, has been published as a daily newspaper except Saturday, until July 31, 1978, at which time said newspaper began daily publication under said name in said city and county continuously and uninterruptedly.

And I further certify that pursuant to Section 60-108 Idaho Code, Thursday of each week has been designated as the day on which legal notice by law or by order of any court of competent jurisdiction within the state of Idaho, to be published weekly, will be published; and that at the head of the editorial column of said combined newspapers, and in each issue thereof, Thursday is announced as the day on which said legal notices will be published.

STATE OF IDAHO
COUNTY OF TWIN FALLS

On this 10 day of August in the year of 1990, before me, a Notary Public, personally appeared Linda Cooper McGuire, *known or identified to me to* be the person whose name subscribed to the within instrument, and being by me first duly sworn, declared that the statements therein are true, and acknowledged to me that he executed the same.

Lura R. Fettman
Notary Public for Idaho
Residing at Twin Falls County
My commission expires: 5/19/94

MICROFILMED
JAN 0 8 2001

Proof of Publication

The Post-Register

RECEIVED
AUG 2 - 1990
Department of Water Resources
Eastern District Office

State of Idaho,
County of Bonneville } ss

I, Ted Delezene, first being duly sworn, depose and say: That I am the Foreman of The Post Company, a corporation of Idaho Falls, Bonneville County, Idaho, publishers of The Post-Register, a newspaper of general circulation, published daily, except Saturday, at Idaho Falls, Idaho; said Post-Register being a consolidation of the Idaho Falls Times, established in the year 1890, The Idaho Register, established in the year 1880 and the Idaho Falls Post, established in 1903, such consolidation being made on the 1st day of November, 1931, and each of said newspapers have been published continuously and uninterruptedly, prior to consolidation, for more than seventy-eight (78) weeks and said Post-Register having been published continuously and uninterruptedly from the date of such consolidation, up to and including the last publication of notice hereinafter referred to.

That the notice, of which a copy is hereto attached and made a part of this affidavit, was published in said Post-Register for Two consecutive weeks, first publication having been made on the 16th day of August, 19 90, last publication having been made on the 23rd day of August, 19 90, and that the said notice was published in the regular and entire issue of said paper on the respective dates of publication, and that such notice was published in the newspaper and not in a supplement.

Ted Delezene

Subscribed and sworn to before me, this 24th day of August, 19 90

Cathy Von Barstad
Notary Public

My commission expires March 5, 19 96

B10

NOTICE OF PROPOSED AMENDING OF WATER PERMIT

NOTICE IS HEREBY GIVEN that TED S. SORENSON d/b/a SORENSON ENGINEERING or BIRCH POWER has applied to the Department of Water Resources to amend hydropower permits as follows:

NO. 32-7128
AMOUNT: 45 CFS
PURPOSE: POWER PRODUCTION
SOURCE: BIRCH CREEK tributary of BIRCH CREEK SINKS TO GROUND-WATER AQUIFER.
POINT OF DIVERSION: NENW SEC 3 T 8N R 30E, CLARK COUNTY
The water is used for power generation within the NENE SEC 14 T8N R 31E, B.M.

NO. 32-7136
AMOUNT: 30 CFS
PURPOSE: POWER PRODUCTION
SOURCE: BIRCH CREEK tributary of BIRCH CREEK SINKS TO GROUND-WATER AQUIFER.
POINT OF DIVERSION: NENW SEC 3 T 8N 30E, CLARK COUNTY
The water is used for power generation within the NENE SEC 14 T8N R 31E, B.M.

This amendment is requested to remove a requirement to bypass 5 cfs or 11% of the flow of Birch Creek down the old Birch Creek Channel.

Any protest to the proposed amending of the permits must be filed with the Idaho Department of Water Resources, 150 Shoup Ave., Idaho Falls, ID 83401, on or before SEPTEMBER 3, 1990.

Published: August 16, 23, 1990

MICROFILMED
JAN 0 8 2001

TRIBUNE PUBLISHING COMPANY, INC.
The Lewiston Morning Tribune
– 505 C St., P.O. Box 957
Lewiston, Idaho 83501
(208) 743-9411

Date 080990 INVOICE No LOC204357

Account No. 446600 [redacted]128

Description 04357NOTIC

Times 2 Lines 29

Tab Lines

$ 32.63

LEGAL ADVERTISING
INVOICE

SOLD TO:

DEPT. OF WATER RESOURCES
150 SHOUP AVE. SUITE 15
IDAHOFALLS
ID 83402

NOTICE: This is an invoice of Purchase made by you. Statement will be rendered the first of the month.
Please Retain This Invoice as Your Statement Will Refer To Invoice by No. Only.

RECEIVED
AUG 13 1990
Department of Water Resources
Eastern District Office

04357

NOTICE OF PROPOSED AMENDING OF WATER PERMIT

NOTICE IS HEREBY GIVEN that TED S. SORENSON d/b/a SORENSON ENGINEERING or BIRCH POWER has applied to the Department of Water Resources to amend hydropower permits as follows:
NO. 32-7128 AMOUNT: 45 CFS PURPOSE: POWER PRODUCTION SOURCE: BIRCH CREEK tributary of BIRCH CREEK SINKS TO GROUNDWATER AQUIFER.
POINT OF DIVERSION: NENW SEC 3 T 8N R 30E, CLARK COUNTY
The water is used for power generation within the NENE SEC 14 T8N R 31E, B.M.

This amendment is requested to remove a requirement to bypass 5 cfs or 11% of the flow of Birch Creek down the old Birch Creek Channel.

Any protest to the proposed amending of the permits must be filed with the Idaho Department of Water Resources, 150 Shoup Ave., Idaho Falls, ID 83401, on or before August 20, 1990.

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO, ss.
County of Nez Perce

Sue Baumeister, being duly sworn, deposes and says, I am the Legal Clerk of the Tribune Publishing Company, a corporation organized and existing under and by virtue of the laws of the State of Idaho, publishers of the LEWISTON MORNING TRIBUNE, a newspaper of general circulation published at Lewiston, Nez Perce County, Idaho; That the said Lewiston Morning Tribune is an established paper and has been published regularly and issued regularly at least once a day for more than 21 consecutive years next immediately preceding the first publication of this notice, and has been so published uninterrupted for said period; that the

NOTICE OF PROPOSED AMENDIN

attached hereto and which is made a part of this affidavit was published in the said Lewiston Morning Tribune, 2 time(s). Publication being on 080290, or once a WEEK for 2 consecutive WEEKS, the first publication thereof being on the 080290, and the last publication thereof being on the 080990, and said NOTICE OF PROPOSED AMENDIN was so published in the regular and entire issue of said newspaper and not in a supplement thereof and was so published in every issue and number of the said paper, during the period and times of publication as set forth above.

Sue Baumeister

SUBSCRIBED AND SWORN BEFORE ME THIS THE 10 day of August 1990

Sheral M Lent

Notary Public in and for the State of Idaho, residing at Lewiston, therein.

MICROFILMED
JAN 08 2001

September 5, 1990

Mr. Ted S. Sorensen
Sorensen Engineering
2988 Tipperary Lane
Idaho Falls, ID 83401

Dear Mr. Sorensen:

Enclosed are copies of protests filed against the application for amendment of permit No. 32-07128/32-7136. The Department suggests you contact the protestants directly in an effort to determine the nature of the protest and to attempt to resolve the protests.

Unless this office is advised that either the matter has been resolved or there exists extenuating circumstances requiring additional time, our objective is to schedule a conference and/or hearing to consider the protests within 60 days. At a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying the application for permit (Sec. 42-203, Idaho Code):

1. Will the amendment reduce the quantity of water under existing water rights?

2. Is the proposed water supply insufficient for the purpose intended?

3. Is the application made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

6. That it is contrary to conservation of water resources within the State of Idaho.

MICROFILMED
JAN 08 2001

The applicant must be prepared to present evidence and/or testimony addressing each of the five items. Although representation by legal counsel is not mandatory at a proceeding before the Department, you may retain an attorney in your behalf.

If this office can be of further assistance, please contact us.

Very truly yours,

HAROLD W. JONES
Water Rights Supervisor

HWJ:CW

Enclosure

cc: IDWR - State Office

MICROFILMED

JAN 0 8 2001

September 5, 1990

RE: Application for Amendment No. 32-7128/32-7136
SORENSEN ENGINEERING

Mr. Breck Barton
Attorney at Law
P.O. Box 100
Rexburg, ID 83440

Dear Mr. Barton:

Your protest, in behalf of Mac and Betty Wagoner, against approval of the above referenced application for amendment has been received and a copy has been sent to the applicant. The Department suggests you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

Unless this office is advised that either the matter has been resolved or there exists extenuating circumstances requiring additional time, our objective is to schedule a conference and/or hearing to consider the protests within 60 days. At such a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying the application for amendment (Sec. 42-203, Idaho Code):

1. Will the proposed amendment reduce the quantity of water under existing water rights?

2. Is the proposed water supply insufficient for the purpose intended?

3. Is the amendment made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

6. That it is contrary to conservation of water resources within the State of Idaho.

MICROFILMED

JAN 0 8 2001

The protestant must be prepared to present proof of allegations involving one or more of the five items.

If this office can be of further assistance, please contact us.

Very truly yours,

HAROLD W. JONES
Water Rights Supervisor

HWJ:CW

Enclosure

cc: IDWR - State Office

MICROFILMED

JAN 0 8 2001

September 5, 1990

RE: Application for Amendment No. 32-7128/32-7136
SORENSEN ENGINEERING

Mr. George C. Petersen
Attorney at Law
485 "E" Street
Idaho Falls, ID 83402

Dear Mr. Petersen:

Your protest, in behalf of D & D Enterprises, Inc., against approval of the above referenced application for amendment has been received and a copy has been sent to the applicant. The Department suggests you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

Unless this office is advised that either the matter has been resolved or there exists extenuating circumstances requiring additional time, our objective is to schedule a conference and/or hearing to consider the protests within 60 days. At such a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying the application for amendment (Sec. 42-203, Idaho Code):

1. Will the proposed amendment reduce the quantity of water under existing water rights?

2. Is the proposed water supply insufficient for the purpose intended?

3. Is the amendment made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

6. That it is contrary to conservation of water resources within the State of Idaho.

MICROFILMED

JAN 0 8 2001

The protestant must be prepared to present proof of allegations involving one or more of the five items.

If this office can be of further assistance, please contact us.

Very truly yours,

HAROLD W. JONES
Water Rights Supervisor

HWJ:CW

Enclosure

cc: IDWR - State Office

MICROFILMED

JAN 0 8 2001

September 5, 1990

RE: Application for Amendment No. 32-7128/32-7136
SORENSEN ENGINEERING

Mr. Jerry R. Rigby
Attorney at Law
P.O. Box 250
Rexburg, ID 83440

Dear Mr. Rigby:

Your protest, in behalf or Elda H. Wilding, against approval of the above referenced application for amendment has been received and a copy has been sent to the applicant. The Department suggests you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

Unless this office is advised that either the matter has been resolved or there exists extenuating circumstances requiring additional time, our objective is to schedule a conference and/or hearing to consider the protests within 60 days. At such a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying the application for amendment (Sec. 42-203, Idaho Code):

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2. Is the proposed water supply insufficient for the purpose intended?

3. Is the amendment made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

6. That it is contrary to conservation of water resources within the State of Idaho.

MICROFILMED

JAN 0 8 2001

The protestant must be prepared to present proof of allegations involving one or more of the five items.

If this office can be of further assistance, please contact us.

Very truly yours,

HAROLD W. JONES
Water Rights Supervisor

HWJ:CW

Enclosure

cc: IDWR - State Office

MICROFILMED

JAN 0 8 2001

September 5, 1990

RE: Application for Amendment No. 32-7128/32-7136
SORENSEN ENGINEERING

Mr. George Woodie, President
Woodie Land & Livestock
HC 65, Box 1018
Howe, ID 83244

Dear Mr. Woodie:

Your protest against approval of the above referenced application for amendment has been received and a copy has been sent to the applicant. The Department suggests you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

Unless this office is advised that either the matter has been resolved or there exists extenuating circumstances requiring additional time, our objective is to schedule a conference and/or hearing to consider the protests within 60 days. At such a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying the application for amendment (Sec. 42-203, Idaho Code):

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2. Is the proposed water supply insufficient for the purpose intended?

3. Is the amendment made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

6. That it is contrary to conservation of water resources within the State of Idaho.

MICROFILMED

JAN 0 8 2001

The protestant must be prepared to present proof of allegations involving one or more of the five items.

If this office can be of further assistance, please contact us.

Very truly yours,

HAROLD W. JONES
Water Rights Supervisor

HWJ:CW

Enclosure

cc: IDWR - State Office

MICROFILMED

JAN 0 8 2001

NOTICE OF PROPOSED AMENDING OF WATER PERMIT

NOTICE IS HEREBY GIVEN that TED S. SORENSON d/b/a SORENSON ENGINEERING or BIRCH POWER has applied to the Department of Water Resources to amend hydropower permits as follows:

NO. 32-7128 AMOUNT: 45 CFS PURPOSE: POWER PRODUCTION
SOURCE: BIRCH CREEK tributary of BIRCH CREEK SINKS TO GROUNDWATER AQUIFER.
POINT OF DIVERSION: NENW SEC 3 T 8N R 30E, CLARK COUNTY
The water is used for power generation within the NENE SEC 14 T8N R 31E, B.M.

NO. 32-7136 AMOUNT: 30 CFS PURPOSE: POWER PRODUCTION
SOURCE: BIRCH CREEK tributary of BIRCH CREEK SINKS TO GROUNDWATER AQUIFER.
POINT OF DIVERSION: NENW SEC 3 T 8N R 30E, CLARK COUNTY
The water is used for power generation within the NENE SEC 14 T8N R 31E, B.M.

This amendment is requested to remove a requirement to bypass 5 cfs or 11% of the flow of Birch Creek down the old Birch Creek Channel.

Any protest to the proposed amending of the permits must be filed with the Idaho Department of Water Resources, 150

MICROFILMED
JAN 0 8 2001

Shoup Ave., Idaho Falls, ID 83401, on or before August 20, 1990.

Published in the Idaho Statesman on August 2 & 9, 1990.

MICROFILMED

JAN 0 8 2001

RECEIVED
JUN 26 1990
Department of Water Resources

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Birch Power Company — Project No. 7194-009
Idaho

ORDER MODIFYING MINIMUM FLOW REQUIRED BY ARTICLE 404, APPROVING RIPARIAN HABITAT MITIGATION PLAN AND DELETING ARTICLE 405

(Issued June 15, 1990)

On March 9, 1990, the Birch Power Company, licensee for the Birch Creek Hydroelectric Project, requested that the minimum flow requirement of article 404 be modified. Article 404 requires the licensee to discharge from the project a continuous minimum flow of 5 cubic feet per second (cfs), or 11 percent of the flow of Birch Creek, whichever is less, as measured immediately downstream from the project diversion, for the protection of riparian vegetation and wildlife resources. The licensee now proposes to reduce the minimum flow to the amount necessary to maintain riparian habitat it will develop below the project diversion.

As an alternative to releasing the required 5-cfs minimum flow, the licensee proposes to build and maintain 6 to 8 ponds below the diversion. Approximately 2.46 acres of riparian habitat will be created in association with the ponds. The principal components of the licensee's plan are installing about 6,000 feet of buried water pipeline, constructing 6 to 8 ponds, installing 1,000 feet of drip irrigation system, constructing 1.25 miles of livestock fencing, and developing one livestock water facility.

The licensee proposed the alternative minimum flow and riparian habitat mitigation plan because the current minimum flow discharged into Birch Creek will not preserve a significant portion of the riparian habitat below the project diversion. The bypass flow percolates into an alluvial fan within a short distance from the diversion. This flow will maintain only about 1.64 acres of riparian habitat. By implementing the alternative mitigation plan, about 2.46 acres of riparian habitat will be created and maintained.

The U.S. Fish and Wildlife Service, the Idaho Department of Fish and Game, and the Bureau of Land Management concur with the licensee's proposal to modify article 404 and develop the riparian habitat below the diversion.

The licensee's plan to create and maintain riparian habitat will result in an increase in riparian habitat compared to long-term conditions under the current minimum flow required by article 404. The minimum flow can be reduced to the amount necessary to maintain the planned riparian habitat without causing adverse impacts. Further, by reducing the minimum flow to the amount necessary to maintain the planned riparian habitat, about 2,700 acre-feet of water will be available for power production and irrigation.

After considering the environmental information in the licensee's request for modification of article 404, the staff's independent assessment 1/, and agency comments, the Director finds that the issuance of this order is not a major Federal action significantly affecting the quality of the human environment.

Article 405 requires the licensee to install a streamflow gage below the diversion. Because the streamflow gage will no longer be necessary, article 405 should be deleted from the license.

The Director orders:

(A) The licensee shall implement the Birch Creek Alternative Flow Mitigation Plan filed on March 9, 1990, to create and maintain riparian habitat below the project's diversion.

(B) Article 404 is amended as follows:

"Article 404. Licensee shall discharge from the Birch Creek Project diversion a continuous minimum flow sufficient to maintain the riparian habitat described in its Birch Creek Alternative Flow Mitigation Plan

1/ Environmental Assessment, Plan to Provide Alternative Minimum Flow and Create Riparian Habitat, Birch Creek Hydroelectric Project, FERC No. 7194-009, Idaho, Federal Energy Regulatory Commission, dated June 4, 1990. This document is available in the Commission's public files associated with this proceeding.

MICROFILMED
JAN 08 2001

32-7128
32-7136

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Birch Power Company

Project No. 7194-009
Idaho

NOTICE OF AVAILABILITY OF ENVIRONMENTAL ASSESSMENT

(June 7, 1990)

In accordance with the National Environmental Policy Act of 1969 and the Federal Energy Regulatory Commission's regulations, 18 CFR Part 380 (Order No. 486, 52 F.R. 47910), the Office of Hydropower Licensing (OHL) has reviewed the application for amendment of license for the Birch Creek Hydroelectric Project to amend the minimum flow requirement of article 404. The project is located on Birch Creek in Clark County, Idaho. The staff of OHL's Division of Project Compliance and Administration has prepared an Environmental Assessment (EA) for the proposed action. In the EA, staff concludes that approval of the amendment of license would not constitute a major federal action significantly affecting the quality of the human environment.

Copies of the EA are available for review in the Reference and Information Center, Room 3308, of the Commission's Offices at 941 North Capitol Street, NE, Washington, DC 20426

Lois Cashell
Secretary

Mary - 6-15-90
Files pulled from your table. New FERC letter. 38

RECEIVED
JUN 15 1990
Department of Water Resources

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JAN 08 2001

LAW OFFICES
HOLDEN, KIDWELL, HAHN & CRAPO

WEST ONE BANK BUILDING
P.O. BOX 50130
IDAHO FALLS, IDAHO 83405

TELEPHONE (208) 523-0620
TELEFAX (208) 523-9518

FRED J. HAHN
KENT W. FOSTER
ROBERT E. FARNAM
WILLIAM D. FALER
STEPHEN E. MARTIN
CHARLES A. HOMER
GARY L. MEIKLE
MICHAEL D. CRAPO
GAYLE A. SORENSON
DONALD L. HARRIS
GREGOR S. CHVISUK
RANDALL B. REED
MARIE T. FEELEY
ROBERT M. FOLLETT

ARTHUR W. HOLDEN (1877-1967)
ROBERT B. HOLDEN (1911-1971)
TERRY L. CRAPO (1939-1982)
WILLIAM S. HOLDEN (1907-1988)

R. VERN KIDWELL, OF COUNSEL

April 30, 1990

RECEIVED
MAY 01 1990
Department of Water Resources

Norm Young, Administrator of Resources
Administration Division
IDAHO DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street
Boise, Idaho 83720

RE: Permits Nos. 32-7128 and 32-7136 in the name of Ted S. Sorenson d/b/a Sorenson Engineering

Dear Norm:

We are enclosing for filing and for processing an Application for Amendment of the above-numbered permits. We have also enclosed documents from Idaho Fish and Game and from the United States Bureau of Land Management explaining the proposed alternative mitigation plan which would allow removal of the bypass flow condition for the two permits, together with Mr. Sorenson's check in the amount $20.00 for the filing fee. Please let us know if there is anything else we can provide or how we can be of further assistance as this matter is processed. Thank you for your kind attention to this matter.

Yours very truly,

Kent

Kent W. Foster

#6936.00/srr

Enclosure

MICROFILMED
JAN 0 8 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720 -(208) 327-7900

CECIL D. ANDRUS
GOVERNOR
R. KEITH HIGGINSON
DIRECTOR

March 20, 1990

Mr. Ted Sorenson
Sorenson Engineering
550 Linden Drive
Idaho Falls, ID 83401

Re: Birch Creek Bypass Flow 32-7128, 32-7136

Dear Mr. Sorenson:

Your letter of February 28, 1990 seeks the Department's concurrence to implementation of an alternative to bypassing a flow of water in Birch Creek to maintain riparian values.

As a condition of approval of applications 32-7128 and 32-7136, the Department required a continuous bypass of 5 cfs or 11% of the stream flow. This requirement was appealed and ultimately confirmed in D & D Enterprises v. Dunn, 7th Jud. Dist. Ct., Idaho, Bonneville Co. Case No. 33072, 1986.

The Department cannot waive this requirement without processing an application to amend the permits. Approval of an application for change requires finding that the change will not expand the amount of water appropriated, injure other rights, and is in the public interest.

While the Department will process a filing, no commitment can be made to approve the project until an application is filed, public notice has been given, and a record is developed upon which to evaluate the above listed criteria.

Data will be needed to confirm that the required flow has been consistently bypassed without achieving the expected protection of riparian values.

Processing of the applications, including the required legal notice, will require a minimum of 60 days, and a longer period will be required if the filing is protested or the information needed to evaluate the filing is not available. Until the Department approves a change in the bypass flow, the condition must be fully complied with.

Sincerely,

NORMAN C. YOUNG
Administrator
Resources Administration Division

cc: BLM, Idaho Falls Kent Foster
IDWR, Eastern Region

MICROFILMED

JAN 0 8 2001

IDAHO FISH & GAME
600 South Walnut / Box 25
Boise. Idaho 83707

March 12, 1990

Mr. Ted Sorenson
Sorenson Engineering
550 Linden Drive
Idaho Falls, ID 83401

Re: Birch Creek Hydro, FERC No. 7194
Amendment to Article 404
Minimum Stream Flow

Dear Mr. Sorenson:

Idaho Department of Fish and Game personnel have reviewed your proposal to mitigate lost riparian vegetation in Lower Birch Creek due to inadequate stream resource maintenance flows. The Idaho Department of Fish and Game will not object to the proposal as submitted, which includes:

1. Replace riparian vegetation at a rate of 1.5:1.
2. Eliminate the 5 cfs minimum flow in the by-pass reach.
3. Construct and maintain a drip irrigation system to support riparian vegetation.
4. Construct and maintain six to eight ponds/riparian systems.
5. Construct 1 1/4 miles of fence as outlined by the U.S. Bureau of Land Management.
6. Develop one livestock watering facility.

Although we will not object to the proposed mitigation for Lower Birch Creek, we wish to make it clear Idaho Fish and Game will not follow this same path again. For all future developers, we will insist on flows that will insure protection of riparian communities.

Thank you for the opportunity to comment.

Sincerely,

Tracey Trent, Chief
Bureau of Program Coordination

TT:WR:tlv

cc: Reg. 6 (Idaho Falls)
FERC
BLM (Big Butte Resource Area)
USF&WS

Cecil D. Andrus / Governor
Jerry M. Conley / Director

MICROFILMED
JAN 0 8 2001

SORENSON ENGINEERING
CONSULTING ENGINEERS
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401
208-522-8069

RECEIVED
MAR 2 1990
Department of Water Resources

February 28, 1990

R. Keith Higginson
Director, Idaho Department of Water Resources
Statehouse Mail
Boise, ID 83720

RE: BIRCH CREEK HYDROELECTRIC FACILITY; FERC #7194
IDHW WATER RIGHT # 327128 AND 327136

Dear Mr. Higginson:

This letter is written pursuant to the requirement for release of 5 cubic feet per second minimum flow at the Birch Creek Hydroelectric Facility. As shown by the attached letters, the BLM and Fish and Game concur in reducing this minimum stream flow in favor of building a lined pond riparian system.

The BLM requires your concurrence in the implementation of this project. I would appreciate your departments written concurrence in this matter. If I do not hear from you within 30 days, I will assume you concur.

I fully realize that a necessary water right transfer application will need to be filed in order to properly allocate the water; however, due to the drought conditions expected this spring, I would appreciate your preliminary concurrence in this matter so that I may obtain approval from the BLM subject to the allocation of the saved water by your department.

Very truly yours,

Ted S. Sorenson, P.E.
Project Engineer

TSS:mbk

enclosures: 8/17/89 F & G letter
2/21/90 BLM letter

cc: BLM
Kent Foster

MICROFILMED
JAN 0 8 2001

IDAHO FISH & GAME
600 South Walnut / Box 25
Boise, Idaho 83707

August 17, 1989

Mr. Ted Sorenson
Sorenson Engineering
550 Linden Drive
Idaho Falls, ID 83401

Dear Ted:

This letter is a follow up to our recent discussion on the need to amend Article 404 of your FERC license for the Birch Creek Project.

The objective of that Article, which requires the release of 5 cfs or 11% of the flow, was to maintain riparian habitat along Birch Creek below the diversion. Now that the project has been operating, it has become apparent that this will not meet the objective because the water "subs" out. We need to develop an alternate means of maintaining riparian habitat.

The plan we discussed, of providing piped irrigation to create and maintain an appropriate quantity of habitat, would seem to be a suitable alternative for all concerned. Please prepare a proposed plan for implementation for our review. Because of less than 100% establishment and lost availability until full establishment, a replacement to loss ratio of 1.5 to 1.0 should be incorporated. The proposed plan we discussed would take less than 5 cfs to meet the resource objective and "excess" water could be passed through your project and passed on to irrigators.

This diversion of water could take place as soon as a new system is in place and riparian plantings are made.

We will look forward to receiving a proposed plan. After agreeing on its specifics, we will then issue a joint request to FERC to modify your license Article.

Sincerely,

Al Van Vooren
Resident Fisheries Manager

Cecil D. Andrus / Governor
Jerry M. Conley / Director

Working for wildlife since 1938

MICROFILMED
JAN 08 2001

Cav

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
IDAHO FALLS DISTRICT OFFICE
940 LINCOLN ROAD
IDAHO FALLS, IDAHO 83401

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

I-16984
Amended

February 21, 1990

Ted Sorenson
Sorenson Engineering
550 Linden Dr.
Idaho Falls, Idaho 83401

Dear Mr. Sorenson,

Enclosed is the environmental assessment for the proposed alternative minimum flow mitigation associated with the Birch Creek Hydro Project. The proposal has been reviewed by the Region 6 Idaho Fish and Game Department Office, but as of this date we have not received written comments from them.

Based on this assessment the proposal appears to be a viable project that would result in long term improvement of the riparian/wetland complexes in Lower Birch Creek. Our concurrence with the project is provided in the attached Decision/Rationale Statement.

As we have discussed the mitigation work will be constructed on BLM administered land and will be considered BLM property. Therefore a Right-of-Way will not be required. Maintenance will remain the responsibility of Birch Power as per the attached decision statement.

We will plan on working with you during the final on the ground design and construction phases.

Sincerely,

LeRoy Cook

LeRoy Cook
Area Manager
Big Butte Resource Area

attachment

MICROFILMED
JAN 3 8 2001

FINDING OF NO SIGNIFICANT IMPACT

AND

DECISION/RATIONALE

EA Number: ID-030-9-46
EA Name: Lower Birch Creek Mitigation

Environmental Compliance:

The environmental document has been analyzed and a finding of no significant impact has resulted. Therefore, it is concluded that the proposed action would not significantly affect the quality of the human environment. Preparation of an environmental impact statement pursuant to Section 102(2)(c) of the National Environmental Policy Act of 1969 is not required to proceed with the proposed action.

Decision and Rationale:

I have received the environmental assessment and have determined that the proposed action would provide improved mitigation for Lower Birch Creek. Based on this review and my personal knowledge of the area, my decision is to accept the proposed action with the following stipulations:

1. Birch Power Company will obtain written concurrence or authorization from FERC, Idaho Department of Fish and Game, and Idaho Department of Water Resources prior to taking any action on this proposal.

2. The 5 cfs minimum flow will continue to be delivered to Lower Birch Creek until the mitigation pond system (2.0 acres) and drip system (0.46 acre) is in place and operational.

3. The drip system will be monitored and if determined to be in adequate to maintain the existing birch trees (within 600 feet below the diversion) an additional 0.46 acres of riparian pond system will be developed by Birch Power).

4. Birch Power will be responsible for construction, operation, and maintenance of the mitigation development.

5. Should the mitigation proposed fail to provide adequate aquatic/riparian habitat (as specified in proposal) due to improper design and construction or lack of necessary maintenance, the minimum flow requirement will be reinstated.

Approved By: LeRoy Cook
Area Manager

11 Jan 90
Date

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LOWER BIRCH CREEK MITIGATION
EA NUMBER ID-030-9-46

A. Purpose and Need

The Birch Creek Hydro Power project was constructed in late 1986. The development involved diverting Birch Creek proper from its original channel at a point about 5000* feet above the existing diversion. Water was then routed through a system of open canals and a buried penstock to the turbine at Reno Point. As a result of this action approximately 5000* feet of lower Birch Creek was dewatered (see EA ID-030-5-340).

As partial mitigation for the potential loss of riparian vegetation, wildlife habitat, and livestock water, Birch Power Company was required by FERC License No. 7194.001, Article 404, and BLM right-of-way I-19684 to discharge from the Birch Creek project a continuous flow of 5 CFS or 11 percent of the flow of Birch Creek (whichever is less) to the old Birch Creek channel immediately below the diversion. This requirement was based on the assumption that specified flows would be sufficient to provide stockwater and at least temporarily maintain the riparian system in the dewatered segment of Birch Creek below the hydro diversion to the Reno Ditch. In addition, it was anticipated that riparian vegetation would increase for about one mile below the Reno diversion.

After three years of project operation and a detailed evaluation of maintenance flows (Jensen, 1988), it has become apparent that this quantity of water delivered through the old channel system will not preserve riparian habitat in the dewatered segment. Water flows during the three summer periods have only reached a short distance (1400-2600 feet) below the hydro diversion before sinking into the substrate. This is resulting in a loss of riparian vegetation and unreliable livestock water.

In view of this situation, it was felt that an alternative course of action would result in more effective mitigation of the resources of lower Birch Creek. This environmental assessment addresses that proposal.

B. Description of the Proposed Action and Alternatives

1. Proposed Action

The proposed action consists of eliminating the 3-5 CFS (1347-2245 gpm) minimum flow down the segment of lower Birch Creek below the hydro diversion. In lieu of this requirement, Birch Power Company would provide funds and water in the amount necessary to develop and maintain 2.46** acres of aquatic/riprian habitat. (Map 1)

The major components of the plan are installation of approximately 6000 feet of buried water pipeline, construction of six to eight pond/riparian systems (2.0 acres), development of approximately 1000 feet of drip irrigation system (0.46 acres), construction of approximately 1 1/4 miles of fence and development of one livestock watering facility (Figure 1).

* The distance was calculated at 3,500' in EA ID-030-5-340. The more recent study by Jenson 1988, was based on a distance of 5,000'. This latter figure will be used for consistency in this EA.

** Based on a replacement and loss ratio of 1.5 to 1.0.

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Map 1

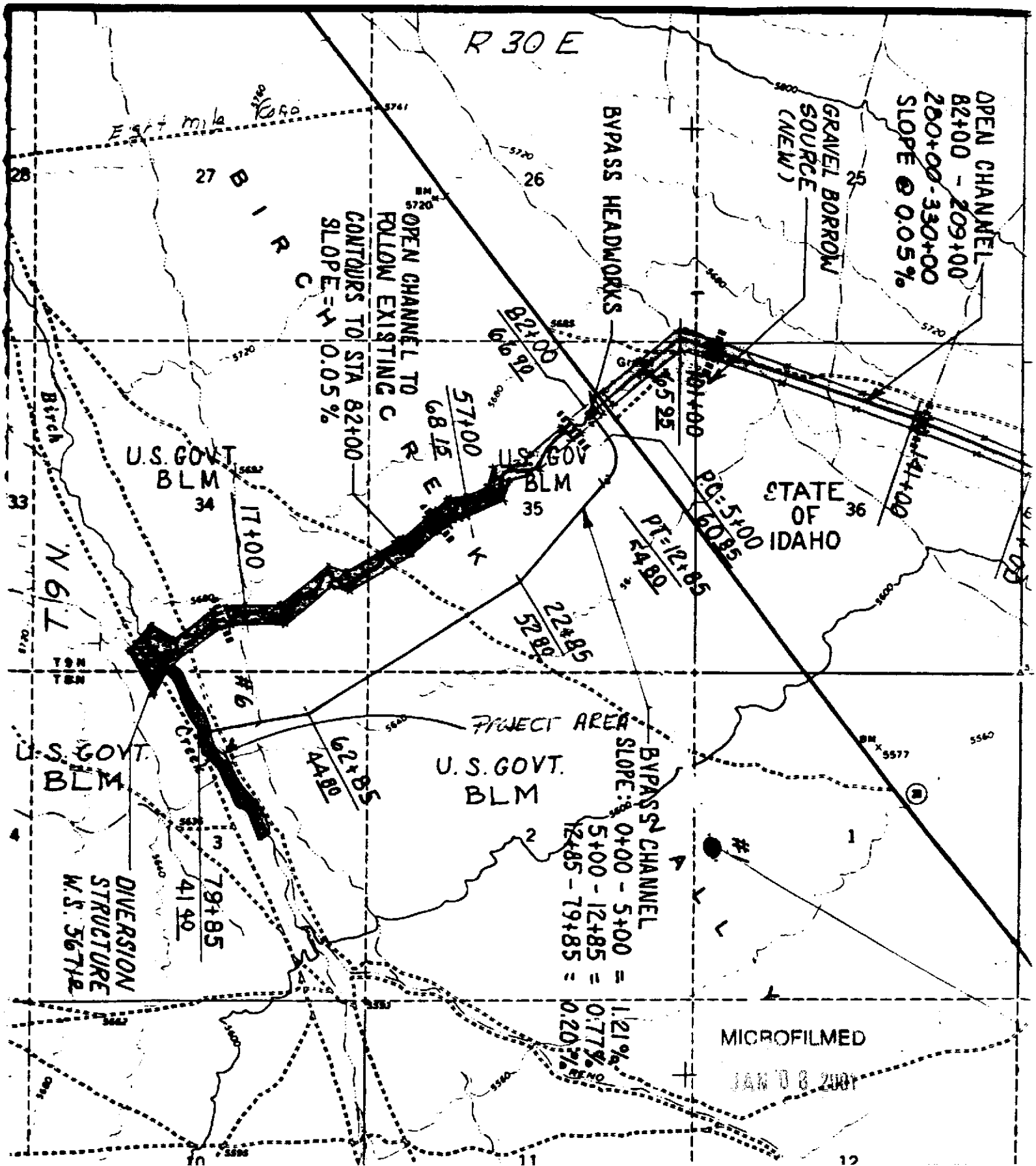
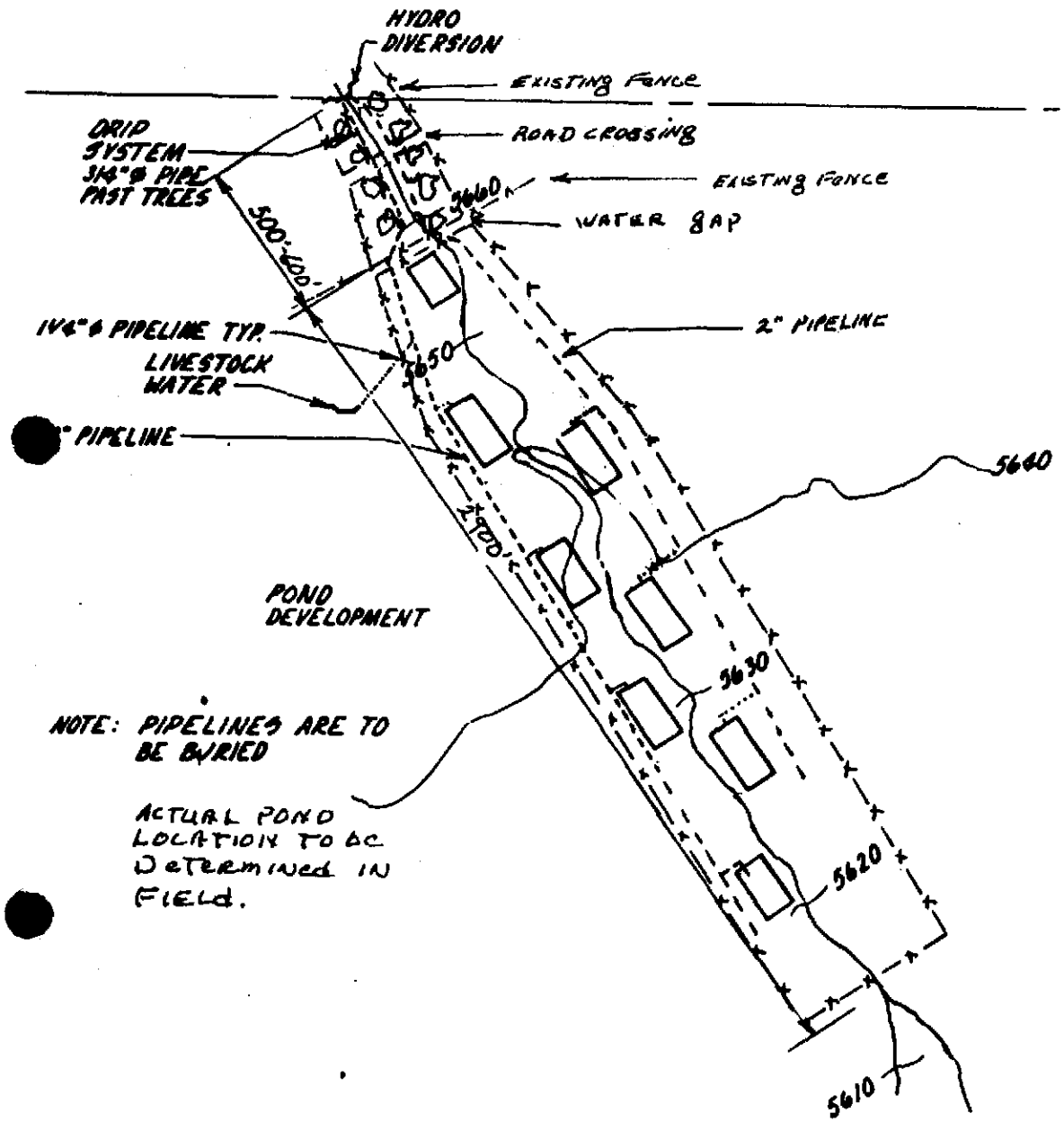
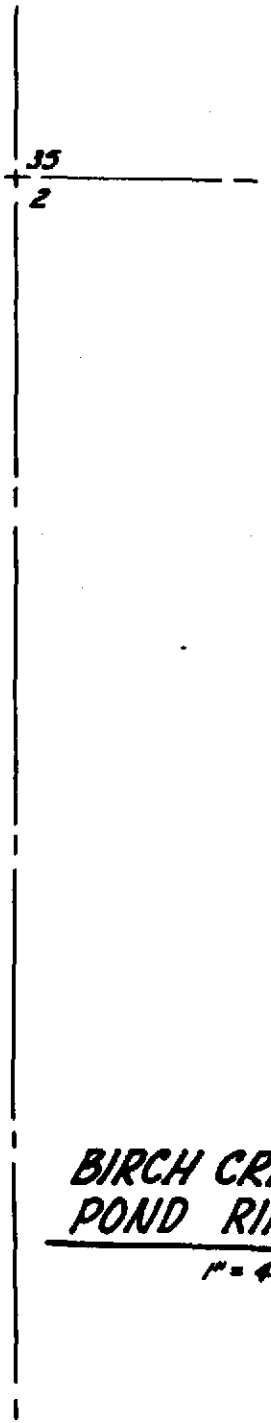

R 30 E
27
26
25
28
33
34
35
36
T 9 N
T 8 N
BIRCH CREEK
OPEN CHANNEL TO FOLLOW EXISTING C CONTOURS TO STA 82+00 SLOPE=H 0.05 %
OPEN CHANNEL 82+00 - 209+00 200+00-330+00 SLOPE @ 0.05 %
GRAVEL BORROW SOURCE (NEW)
BYPASS HEADWORKS
BYPASS CHANNEL SLOPE: 0+00 - 5+00 = 1.21 % 5+00 - 12+85 = 0.77 % 12+85 - 79+85 = 0.20 %
DIVERSION STRUCTURE W.S. 5674
PROJECT AREA
U.S. GOVT. BLM
STATE OF IDAHO
Birch Creek
East mile road
82+00
66 92
57+00
68 15
17+00
62+85
44 80
22+85
52 80
PC: 5+00
60 85
PT: 12+85
24 80
101+00
79+85
41 40
#6
#1
N 61 W
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Figure 1





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BIRCH CREEK
POND RIPARIAN LAYOUT

1" = 400'

a. The pipeline system will be designed to deliver water from the hydro diversion pond to the various components of the mitigation plan. The pipe will be laid using a crawler tractor with a ripper and pipe laying attachment to minimize the amount of surface disturbance.

b. The six to eight pond/riparian systems will be located adjacent to the existing stream channel and lined with PVC liner to prevent seepage loss. The pond configuration and back filling sequence is designed to provide suitable conditions for the development of aquatic and riparian habitat (Figure 2). A variety of adapted species will be planted to ensure rapid development of the system. Species to be seeded in the shallow water zone will include sedges, rushes, and bullrushes. The saturated upland soil will be planted to Black Birch, aspen, willow, and various grasses and forbs. The objective is to create vegetation complexes similar to pre-existing habitat types on Lower Birch Creek.

It is estimated that a lined system 50' X 200' will require a continuous flow of 1.5 gallon per minute to compensate for evaporation/ transpiration losses during the spring/summer/fall period. To provide water circulation and prevent salt build up. A flow of 2-3 gpm will be discharged into the pond system.

Construction will involve excavation of the pond area, placing the liner, and back-filling over the liner with the appropriate type and depth of substrate material. The water inflow pipe will be installed during initial construction. Any overflow waters will be piped to adjacent riparian areas or Birch Trees. The entire pond complex will be fenced to exclude livestock use. The fence will be designed to allow for antelope passage.

c. The proposed drip system will be developed to try and maintain a portion of the existing mature Birch. The Drip System will be state of the art using the most feasible design to accomplish the objectives. If the drip system does not prove to be effective an additional 0.46 ac of pond system will be developed.

d. One livestock watering facility will be constructed (Figure 1). It will consist of a standard five trough development.

e. At a minimum, 2.46 acres of aquatic/riparian habitat will be developed. This quantity represents 0.82 acres more than the amount of riparian habitat that would be sustained under the current maintenance flow requirement. (2.46 - 1.64 (acreage maintained under m.m. flow) = 0.82 acre)

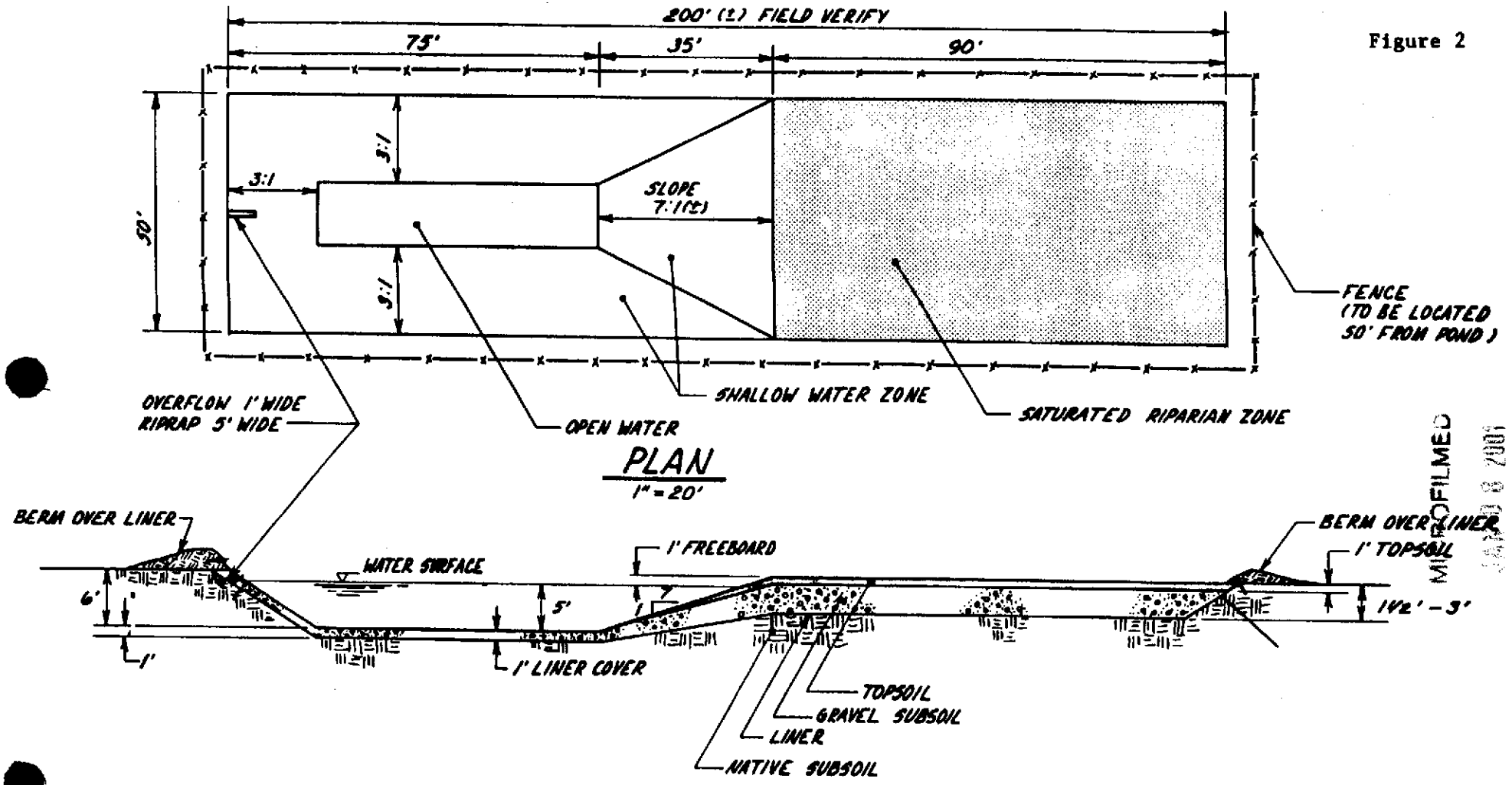
f. The pond system will extend as near as possible to the existing Reno Ditch Diverson Point. Actual location of ponds will depend on site condition and excavation opportunities.

g. Diversion of the excess minimum flow water into the hydro canal system would take place after the new riparian system is in place and operational.

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Figure 2



TYPICAL POND RIPARIAN DESIGN

NOTES:

1. POND DIMENSIONS & CONFIGURATION WILL VARY WITH SITE CONDITIONS & RESOURCE OBJECTIVES
2. POND PLACEMENT & GEOMETRY TO BE FIELD LOCATED BY BLM.

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h. All areas disturbed during construction will be recontoured, re-top soiled, and seeded to adapted plant species. Before any surface disturbance takes place, a cultural examination will be conducted.

i. Birch Power will be responsible for engineering design, construction, and maintenance of the entire mitigation system. Maintenance will include activating the pipeline system in the spring, monitoring the system during operation, and draining the pipeline in the fall. Repair of the pipeline, ponds, and riparian system will be the responsibility of Birch Power.

2. No Action Alternative

The "no action" alternative would continue the present course of action. The maintenance flow will preserve only a portion of the riparian community below the hydro diversion. It is expected that less than 1.64 acres of riparian habitat would be sustained and this would be located in the first 2600* feet below the hydro diversion. Riparian habitat and free water sources would not extend below this distance.

C. Affected Environment

1. Soils

Existing soils are very low in clay, generally have extremely gravelly substrata and are subject to high water seepage loss. Most soils have limited topsoil, relatively high soil pH, alkalinity, and salt content creating problems for riparian habitat except for existing stream bottom soils.

2. Vegetation

Jensen, 1988, described the following pre-existing habitat types along lower Birch Creek. (Figure 3):

1. Riparian shrub habitat: dominated by willows (Salix sp.) and birch (Betula occidentale); woods rose (Rosa woodsii) and current (Ribes spp.) often compliment the shrub stratum; the understory includes both obligate and facultative grasses and forbs;

2. Low sagebrush habitat: dominated by low sagebrush (Artenisia arbuscula) associated with lesser amounts of Wyoming big sagebrush (A. tridentata var. Wyomingensis); the understory is dominated by grasses including both facultative hydrophytes and upland species.

3. Herbaceous riparian habitat: dominated by succulent grasses and forbs including sedges (Carex spp.), rushes (Scirpus spp., Juncus spp.. and Eleocharis spp.), bluegrass (POA pratensis), and other obligate hydrophytes.

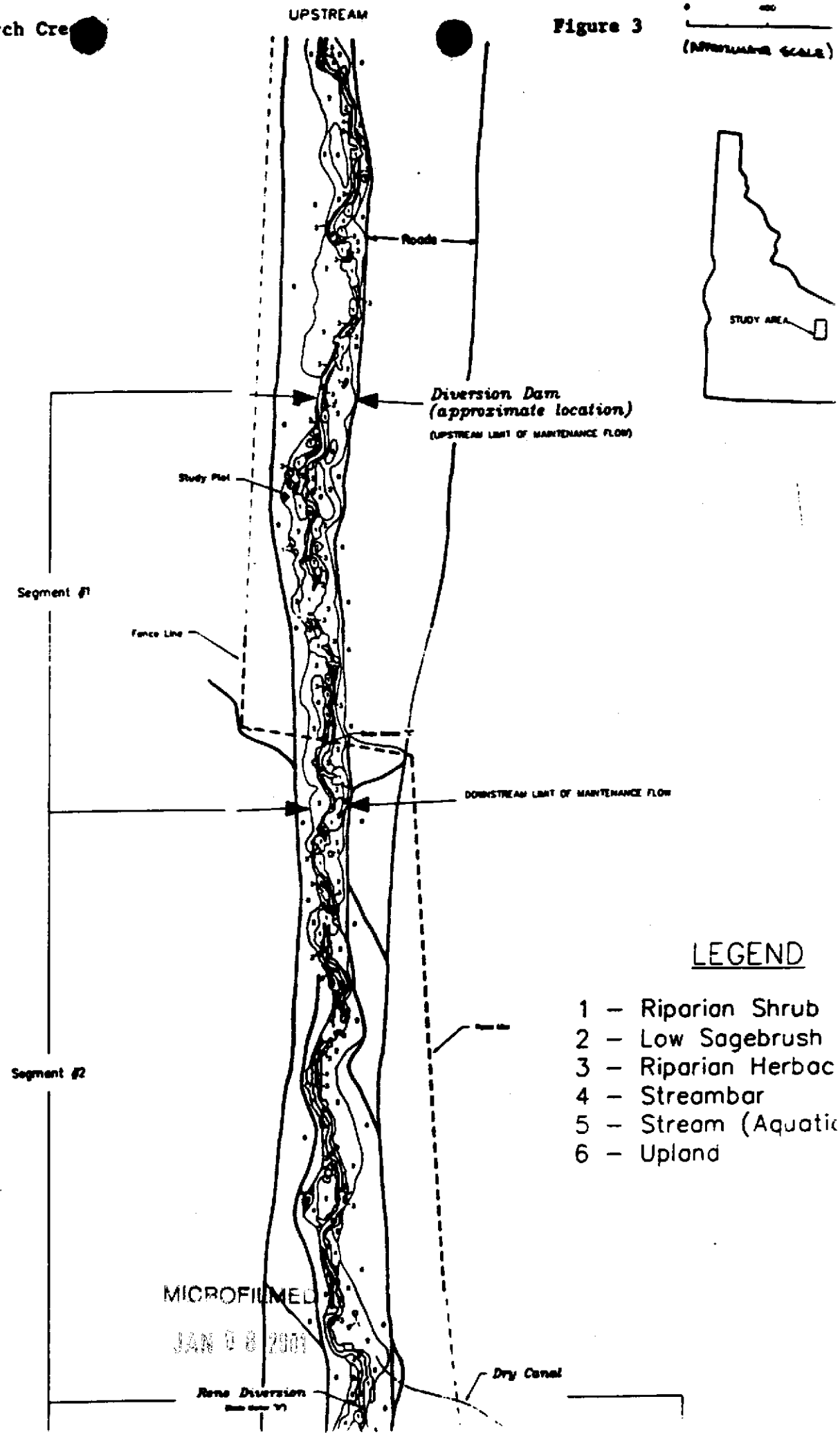
* On 7/21/89 water flows reached 2600 feet below the hydro diversion. BLM measurement.

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Lower Birch Cre

Figure 3



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Segment 2 of the lower Birch Creek has been dry during two of the last three summers. Approximately 600 feet received some water during the summer of 1989. Habitat dependent on summer water are not expected to survive in the lower 2400 feet of Segment 2. (Figure 4 and Table 1).

From the above discussion, it is apparent that a continuation of the existing conditions will result in maintenance of only a small percentage of riparian habitats that are located in close proximity to the hydro diversion. In segments 1 and 2, a total of 7.0 acres of riparian shrub, riparian herbaceous, and aquatic habitat will be lost. For a detailed description of the evaluation of maintenance flow upon riparian habitat in lower Birch Creek, refer to Appendix I of this document.

3. Wildlife

The riparian zone on Birch Creek produces vegetative characteristics that various wildlife species depend on for forage, cover, and breeding. The presence of surface water supports a diverse system of flora and fauna unique in its richness when compared to the adjacent sagebrush plains.

Some terrestrial species are riparian obligates. Without water and succulent vegetation, they would not be present. Examples of these species as on Birch Creek include mallards (Anan platyrhynchos), beaver (Castor canadensis), black- crowned night herons (Nycticorax nycticorax), and belted kingfishers (Megaceryle alcyon). Other species benefit from the riparian zone but would be present, (although not as prolific), without it. Examples of species on Birch Creek include pronghorn antelope (Antilocapra americana), sage grouse (Dendragapus obscurus), mourning dove (Zenaidura macroura), and black-billed magpies (Pica pica).

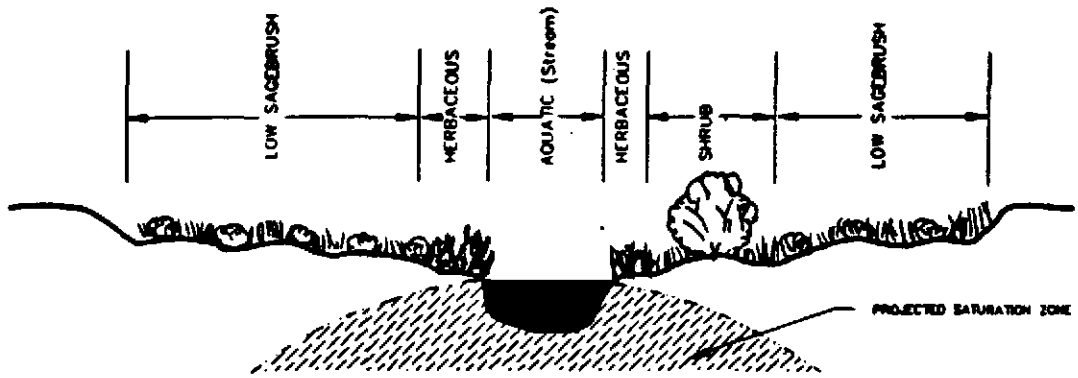
Table 2 is a list of common names of birds observed in the Birch Creek/Little Lost Unit by Glenn DeVoe, Big Butte Resource Area Range Conservationist. The list indicates whether or not the species is a riparian obligate. The required components are identified for the obligatory species. For the nonobligates, the components of the riparian zone that improve the quality of their environment are listed.

The endangered bald eagles occurs in the area during the winter only. Swainsons and ferruginous hawks may occur in the area during spring, summer, and fall. Some nesting of these hawks may occur along the lower Reno ditch. These hawks are on the sensitive species list as candidates for threatened and endangered species listing.

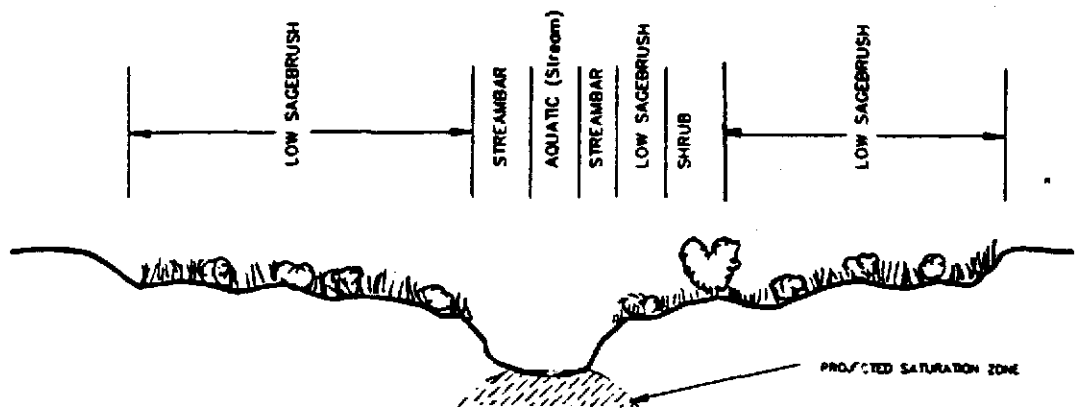
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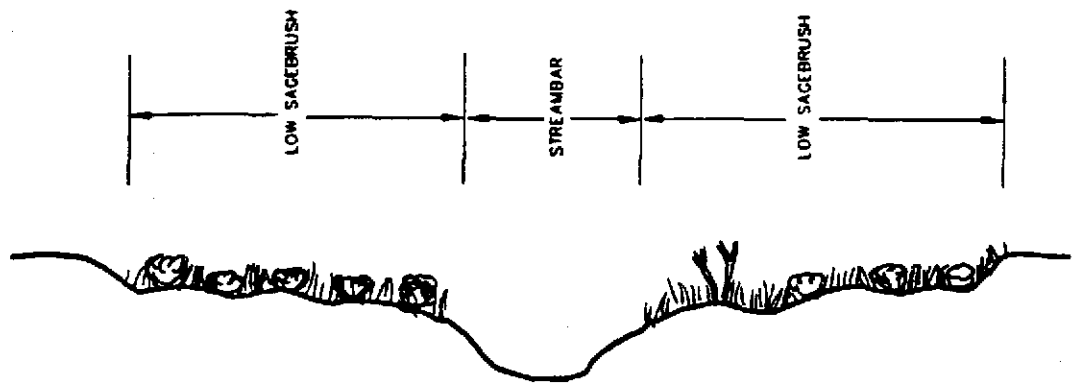
FIGURE 4



A) Unaltered Streamflow



B) Reduced Streamflow (segment #1)



C) Reduced Streamflow (segment #2)

Projected changes in Riparian Habitats Resulting from Maintenance Flow.

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TABLE 2

Common Name	Obligate	Component
Violet-green swallow	Yes	water, insects, trees
Tree swallow	Yes	water, insects, trees
Cliff swallow	Yes	water, insects
Spotted sandpiper	Yes	water, insects
Black-crowned night heron	Yes	water, trees
Canada goose	Yes	slow water, succulent forbs
Mallard	Yes	slow water, succulent forbs
Green winged teal	Yes	slow water, succulent forbs
Blue winged teal	Yes	slow water
Cinnamon teal	Yes	slow water, thick shrubs
Yellow-rumped warbler	Yes	water, thick shrubs, insects
Yellow warbler	Yes	water, thick shrubs, insects
Yellow throat	Yes	water, thick shrubs, insects
Wilson's warbler	Yes	water, thick shrubs, insects
Great Blue heron	Yes	water
Snipe	Yes	water, thick shrubs
Black-chinned hummingbird	Yes	succulent forbs
Rufus hummingbird	Yes	succulent forbs
Calliope hummingbird	Yes	succulent forbs
Belted kingfisher	Yes	water, trees
Red-winged blackbird	Yes	water, insects
Brewers blackbird	Yes	water, insects
Yellow-breasted chat	Yes	water, thick shrubs
Hermit thrush	Yes	water, thick shrubs
Ruby-crowned kinglet	Yes	water, thick shrubs
Black-capped chicadee	Yes	water, thick shrubs
Bald eagle	No	trees
Sage grouse	No	trees
common flicker	No	succulent forbs, insects
Eastern kingbird	No	trees
Black-billed magpie	No	trees
Common crow	No	trees
American robin	No	trees
Killdeer	No	trees
Northern oriole	No	water
Brown-headed cowbird	No	water, trees
Americana goldfinch	No	cows
Great-horned owl	No	succulent forbs
Swinson's hawk	No	trees
Red tailed hawk	No	trees
American ketrel	No	trees
Golden eagle	No	trees
Ferruginous hawk	No	trees
Franklin's gull	No	water
Meadowlark	No	water, insects
loggerhead shrike	No	trees, insects
Starling	No	trees
Sagethrasher	No	trees, shrubs, insects
Townsend's solitare	No	trees
Mountain bluebird	No	trees

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Common Name	Obligate	Component
Western bluebird	No	trees
Nighthawk	No	insects
Western kingbird	No	trees
Say's phoebe	No	water, shrubs
Savannah sparrow	No	insects
Sage sparrow	No	insects
Oregon junco	No	trees
Tree sparrow	No	trees
Brewer's sparrow	No	insects
White-crowned sparrow	No	trees, shrubs
Horned lark	No	*
House sparrow	No	*

*No riparian components were identified for these species as improving their environment.

Although the amount of riparian area will become more limited, its importance to those species dependent upon it is critical to their use of the area.

Pronghorn antelope, various furbearers, and many non-game mammals are present in the area. Pronghorn benefit from the availability of open water and succulent forbs. Furbearers prefer more open, slower moving water.

Populations of elk and chukar partridge are starting to increase on the adjacent mountains to the west. During dry years or late in the summer these animals may utilize the lower Birch Creek area for a source of water (Justin Naderman, Personal Communication, 1988).

The section of lower Birch Creek below the hydro diversion no longer supports a fishery. The proposed mitigation will have no fishery value.

4. Livestock grazing

Two grazing allotments have a common boundary generally along the western two miles of Reno ditch and the Scott Butte road. The north allotment (Spring Canyon) is grazed by cattle during spring west of the highway and in the winter east of the highway. The south allotment (Mahogany Butte) is rotation grazed by sheep in spring and winter. One permittee moves livestock (cattle) through the lower Birch Creek area in the spring and fall to summer and winter pastures.

Currently, livestock water is provided by the maintenance flow. During the summer, this flow only marginally reaches the pastures requiring water.

5. Recreation

Recreational use of this reach of lower Birch Creek is limited, primarily, to sage grouse and antelope hunting. Limited camping associated with this use takes place.

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2. Mitigation measures have been specified in the proposal action

3. Residual Impacts

Long term impacts to the riparian/aquatic habitat will be positive. A greater quantity (0.82 acres) and improved diversity of riparian habitat would be developed.

A portion of the existing mature birch trees that would persist under the "no action" alternative will not survive under the proposed action. However, the long term benefits of increased riparian quantity, diversity, and distribution should offset this loss.

E. Consultation and Coordination

1. Agencies, Groups, or Individuals Consulted

Idaho Department of Fish and Game
Birch Power Company
Lower Reno Ditch Irrigators

2. BLM Personnel Consulted

Tom Dyer - Planning and Environmental Coordinator
Dan Kotansky - Hydrologist
Mike McQueen - Biological Technician
Glenn DeVoe - Range Conservationist
Pat Koelsch - Fishery Biologist

3. References

Bureau of Land Management - 1985 Environmental Assessment No. ID-030-5-340 Idaho Falls, Idaho.

Jensen, Sherman - 1988 Evaluation of Maintenance Flow Upon Riparian Habitat in Lower Birch Creek, Prepared for Sorenson Engineering, Idaho Falls, Idaho.

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D. Environmental Consequences

1. Impacts

Impacts resulting from the proposed action can be divided into the following categories:

a. Changes in riparian/aquatic habitat

The amount of long-term riparian/aquatic habitat developed by the proposed action (2.46 acres) would be equal to or greater than that provided under the "no action" alternative (1.64 acres). There will be a five to ten year time lag before the newly established riparian communities developed vertical structures approaching existing conditions along lower Birch Creek.

However, a more diverse riparian/aquatic community would be developed providing open water, emergent wetland zones, herbaceous riparian plants, and woody shrub species to create a vertical habitat structure. This will be accomplished by the pond design (Figure 1) which includes areas of open water, shallow water shoreline and upland saturated soils. As stated in the proposed action, species will be planted to create the desired vegetative complexes. Development of eight 0.25 acre pond systems will result in 2.0 acres of riparian/aquatic habitat. (Actual size and number of ponds will be determined on the ground during pre-construction layout)

A portion of the riparian shrub that would be maintained under the "no action" alternative (approximately 0.46 acres) can probably be sustained by the use of the proposed drip system.

A dependable source of water would be available for livestock and wildlife use in the affected allotments.

b. Impacts resulting from surface disturbance and construction activities.

Soil and vegetation disturbance would occur during pipe laying operations. Disturbance would be limited to a two to three feet wide zone along the length of the pipeline. This would be temporary as revegetation would occur within one to two growing seasons. More extensive surface disturbance would be required during construction of the lined pond/riparian system. Approximately 2.0 acres would be excavated resulting in a total removal of existing vegetation. A portion of the excavated material would be backfilled into the pond system while the remaining material would be placed on adjacent areas. This also will be of a temporary nature.

Once completed, reclamation of the disturbance should be fairly rapid. It will take one to three years for the riparian system to establish and a longer period for woody species to gain in stature. Surface disturbance outside of the pond system will be reclaimed in one to two growing seasons.

Ice buildup is not anticipated below the diversion and therefore, should not impact the proposed developments. Soil erosion is expected to be minimal.

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EVALUATION OF MAINTENANCE FLOW UPON RIPARIAN HABITATS LOWER BIRCH CREEK CLARK COUNTY, IDAHO

PREPARED BY:

SHERMAN JENSEN
PHYSICAL ECOLOGIST

PREPARED FOR:

SORENSON ENGINEERING
IDAHO FALLS, IDAHO

(REVISED)
FEBRUARY, 1988

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1.0 INTRODUCTION

This document addresses the effects of maintenance flow upon riparian habitats occurring along the dewatered reach of Birch Creek between the outlet of the hydroelectric diversion pond and the Reno Canal diversion. This segment will be subsequently referred to as lower Birch Creek.

As ordered in the PROPOSED MEMORANDUM DECISION AND ORDER (PMDO) that was included in the application to the Federal Energy Regulatory Commission (FERC) submitted by Sorenson Engineering (1985):

> Eleven percent of the flow of Birch Creek at the diversion to the feeder ditch, the amount of water saved by the new ditch or 5 cubic feet per second (cfs) whichever is least, shall be allowed to flow past the feeder canal diversion in the natural channel of Birch Creek.

This order was founded on the assumption that the specified maintenance flow would be sufficient to provide stockwater and maintain the riparian zone along the segment of Birch Creek being dewatered.

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In the ENVIRONMENTAL ASSESSMENT (EA) prepared by the Bureau of Land Management and included as part of the Land Report (BLM 1985) it is stated that "the applicant proposes to leave 5 cfs, the amount of water saved by the new ditch, or 11% of flow, whichever is least to permanently bypass the proposed diversion to flow downstream for riparian habitat maintenance to, and beyond, the Reno Ditch diversion." Given this maintenance flow, the expected impacts of diversion were:

1. Reduction of livestock distribution and range utilization.

2. Elimination of fishery below the diversion pond.

3. Reduced flows will necessitate the redevelopment of riparian vegetation below the proposed diversion. Significant existing riparian vegetation would be lost as new vegetation forms within the old channel.

4. Wildlife in dewatered portions of the Reno Ditch would be displaced.

Losses of riparian habitat to be mitigated were calculated assuming that 4.8 acres of herbaceous and shrub habitat along lower Birch Creek would be reduced by 80 percent over the next 20 years.

Maintenance flow has been discharged to lower Birch Creek since the first start-up of the facility in December, 1986. Throughout most of the rest of that winter, streamflow was diverted back to lower Birch Creek from the terminal end of the Phase I canal, via the bypass canal, while extensive repairs were made to the penstock. During the winter of 1987-1988, maintenance flow during has been in excess of 5 cfs; discharge approached 20 cfs during periods when Birch Creek is laden with anchor ice, which was sluced from the diversion pond to lower

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Birch Creek. Average maintenance flow during the summer (May through October) has been 3 to 4 cfs. A conservative estimate of the annual maintenance flow is 120 million cubic feet (2,755 acre-feet).

During summer, the critical hydroperiod for riparian habitat, flow reaches between 1,400 and 2,000 feet below the outlet before sinking into the rubbly substrate. Maintenance flow covered less than half the width of the channel and was only a few inches deep. The lower 3,,000 feet of channel above the Reno Canal diversion was dry throughout the summer.

Preliminary evaluations indicate that maintenance flow will not preserve riparian habitat along the segment of Birch Creek being dewatered, as assumed in the PMDO. Short-term losses of herbaceous and shrub habitats are expected to be significant. An evaluation of the effects of maintenance flow upon riparian habitats is subsequently presented.

2.0 OBJECTIVES

The purpose was to evaluate the effects of maintenance flow on riparian habitats along lower Birch Creek. Objectives were:

1. Conduct an inventory of riparian habitats that occurred along lower Birch Creek prior to construction of the hydroelectric diversion.

2. Describe the hydrologic characteristics that were inherent to each habitat type prior to diversion and predict the effects of maintenance flow upon these habitats.

3. Given minimum maintenance flow, estimate the areas of riparian habitats that will be maintained, lost, or gained.

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3.0 METHODS

Riparian habitats were delineated on 1:2,400 scale infrared aerial photographs dated August, 1984. Stereo imagery was magnified 2X to facilitate accurate delineations. The area of the smallest map units delineated were about 200 square feet. Computer assisted design (CAD) software was used to prepare the inventory map and to measure the areas of map unit delineations.

Hydrologic interpretations were used to predict the effects of maintenance flow upon riparian habitat types. These interpretations were based on field measurements and observations, including several soil pits and ground-water measurements, and upon the experience of involved scientists.

4.0 RESULTS

Results are presented with respect to inventory, hydrologic interpretations and effects of maintenance flow, respectively.

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4.1 Inventory of Pre-existing Habitat Types

The six habitat types identified along lower Birch Creek were:

1 - Riparian shrub habitat: dominated by willows (Salix sp.) and birch (Betula occidentale); woods rose (Rosa woodsii) and current (Ribes spp.) often compliment the shrub stratum; the understory includes both obligate and facultative grasses and forbs;

2 - Low Sagebrush habitat: dominated by low sagebrush (Artemisia arbuscula) associated with lesser amounts of Wyoming big sagebrush (A. tridentata var. wyomingensis); the understory is dominated by grasses including both facultative hydrophytes and upland species.

3 - Herbaceous Riparian Habitat: dominated by succulent grasses and forbs including sedges (Carex spp.), rushes (Scirpus spp., Juncus spp. and Eleocharis spp.), bluegrass (Poa pratensis), and other obligate hydrophytes.

4 - Streambar Habitat: gravelly channel substrate; vegetative cover is generally less than 50 percent; given adequate moisture, weedy herbaceous vegetation may colonize streambars.

5 - Aquatic (stream) Habitat: land covered by water as viewed from an aerial perspective and exclusive of stream area covered by overhanging vegetation

6 - Upland Habitat: islands of upland habitat that are surrounded by riparian habitat; dominated by Wyoming big sagebrush and upland plant species.

These habitat types are synonymous with those identified in the EA (BLM 1985). The distributions of riparian habitats, relative to unaltered channel morphology and streamflow, are illustrated in Figure 4-1.

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JAN 08 2007

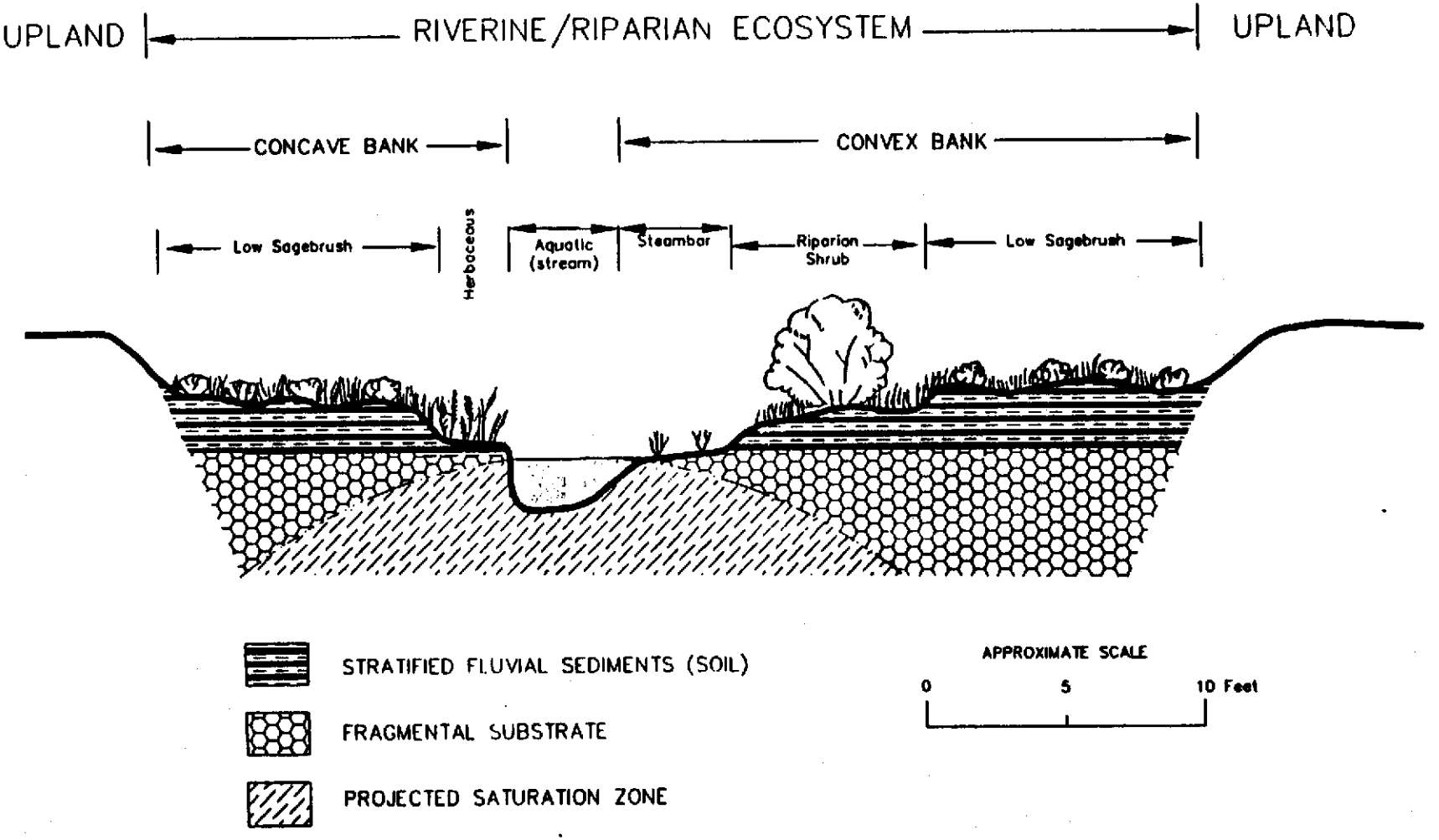


FIGURE 4-1.
Distribution of Riparian Habitats - Unaltered Streamflow.

Lower Birch Creek was divided into four segments (see attached map). These stream segments are:

Segment 1 - The reach of lower Birch Creek, about 2,000 feet in length, that was wetted by maintenance flow, during the summer, 1987.

Segment 2 - The reach of lower Birch Creek, about 3,000 feet in length, that was dry during summer, 1987.

Segment 3 - The upstream 2,700 feet segment of the Reno Canal; historically, this canal carries water throughout the irrigation season (May through September) and is dry during the winter.

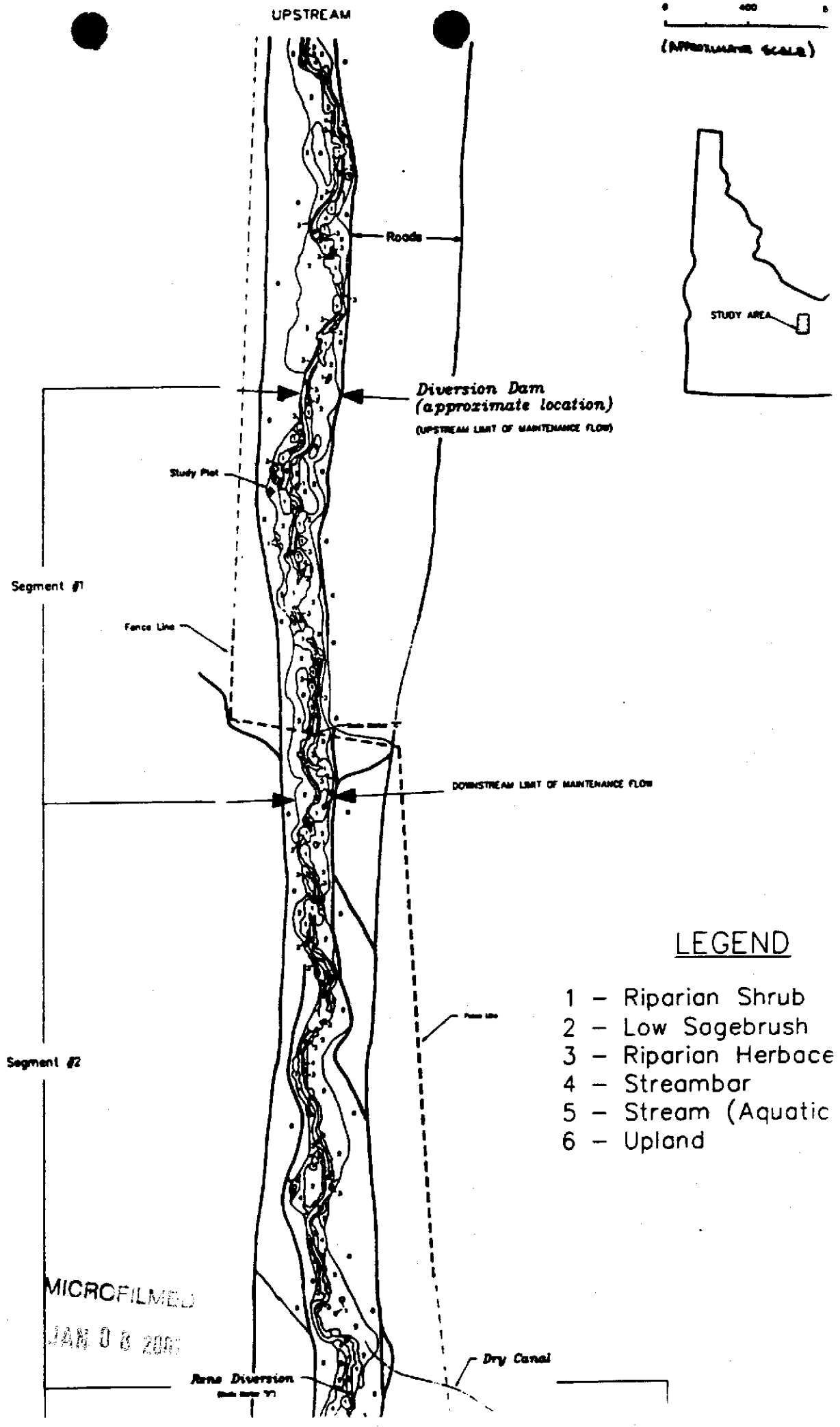
Segment 4 - The segment of Birch Creek that is about 2,700 feet downstream from the Reno Canal diversion; historically, this segment is dry during the irrigation season but receives flow throughout winter months (October through April).

The inventory of pre-existing riparian habitat types is summarized in Table 4-1.

Table 4-1. Areas of riparian habitats along lower Birch Creek.

RIPARIAN HABITAT	Stream Segment (1) (acres)	(2) (acres)	(3) (acres)	(4) (acres)	TOTAL (acres)
Riparian Shrub	1.59	1.47	.49	.20	3.75
Low sagebrush	4.25	5.63	.55	3.29	13.72
Riparian Herbaceous	1.25	1.59	.92	0	3.76
Streambar	.17	.65	0	2.18	3.00
Aquatic (stream)	.92	1.43	.93	0	3.28
Upland	.45	0	2.64	2.34	5.43
TOTAL	8.62	10.76	5.54	8.67	33.59

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4.2 Hydrologic Interpretations

In general, the distribution of riparian habitats is a reflection of the dynamics of streamflow and alluvial water. The typical distribution of habitats identified along lower Birch Creek relative to unaltered stream regimen is illustrated in Figure 4-3 A.

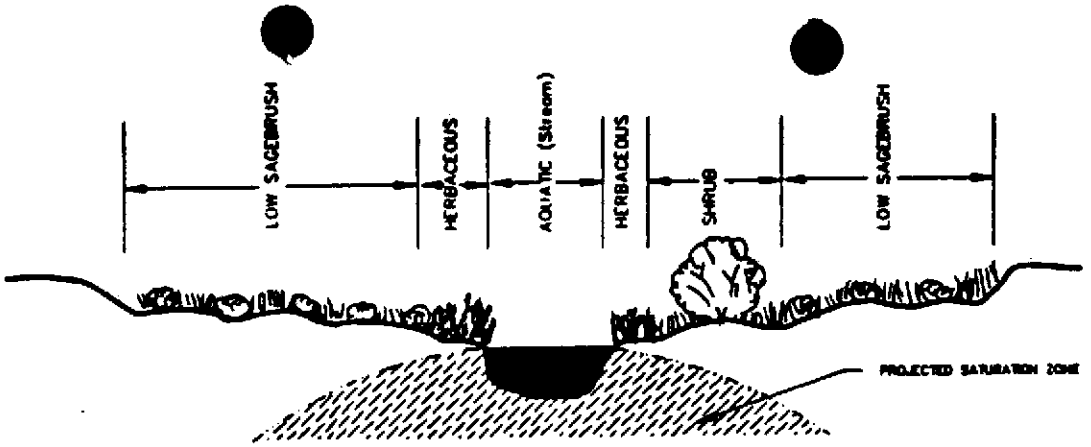
Relative to normal streamflow, maintenance flow to Segment 1 of lower Birch Creek resulted in decreases in stream width, stream depth, width of saturated zone, and the elevation of the saturated surface (see Figure 4-3 B). Maintenance flow covered less than half of the channel to a depth of only a few inches at a point about 700 feet downstream from the outlet. At a distance of about 10 feet from the stream, soils were dry at a depth 3 feet below the stream level, indicating that the flow is being depleated by deep percolation below the channel. Succulent plants typical of herbaceous riparian habitats were left "high-and-dry" and many willow and birch shrubs were stranded in the shadow of the saturated zone. The ice that forms across much of the floodplain during winter waters riparian habitats during early spring.

Segment 2 of lower Birch Creek is dry during summer months (see Figure 4-3 C). Habitats dependent upon summer water are not expected to survive long here. During winter, ice and wind-blown snow collect over much of the floodplain, which may help to sustain some riparian habitats.

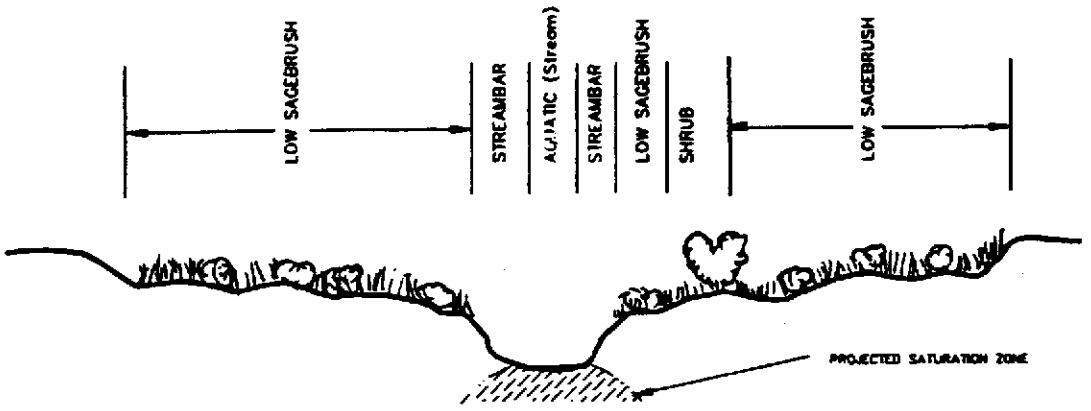
Hydrologic interpretations are further discussed with respect to discrete habitat types.

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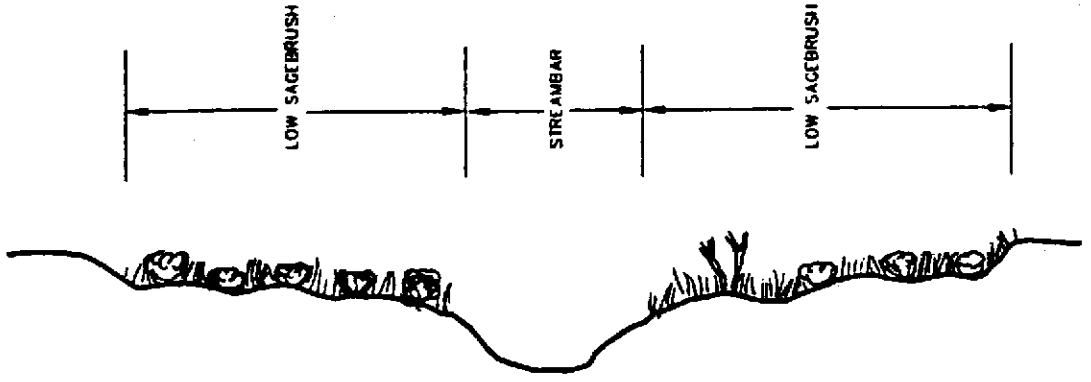
JAN 0 8 2001



A) Unaltered Streamflow



B) Reduced Streamflow (segment #1)



C) Reduced Streamflow (segment #2)

FIGURE 4-3.
Projected changes in Riparian Habitats Resulting from Maintenance Flow.

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4.2.1 Aquatic (Stream) Habitat

Prior to diversion, the aquatic (stream) habitat varied from about 25 to 35 feet wide and from 1 to 2 feet deep during summer months. Most of the floodplain was covered by ice and wind-deposited snow, in some areas to a depth of several feet, during the winter.

During summer (1987), maintenance flow covered less than half the width of the channel to a depth of only a few inches along Segment 1 of lower Birch Creek. Segment 2 was dry throughout the summer.

During winter, ice and windblown snow cover continue to form over much of the floodplain, though to a lesser degree than for before diversion. The melting these ice-packs are expected to maintain low sagebrush habitat. The short-term impacts of the reduced summer flow upon herbaceous and riparian shrub habitats are expected to be pronounced.

4.2.2 Riparian Shrub Habitat

In an unaltered setting, riparian shrub habitat occurred adjacent to (and overhanging) the stream on surfaces 1 to 2 feet above the level of streamflow. The frequency of this habitat decreases with increasing distance from the stream. Shrubs were watered throughout the growing season by percolation of water through streambanks and channel substrates. As indicated by the scant shrub habitat along Birch Creek below the Reno Canal diversion (Segment 3), this habitat is dependent summer streamflow. Contrarily, the establishment of riparian shrub communities along the Reno Canal indicates that these habitats

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may not require a consistent source of water during the winter.

Along Segment 1 of lower Birch Creek, shrubs that are situated near the stream may be maintained by reduced discharge. Shrubs that are distant from the stream are expected to die within the next few years. The maintenance flow is expected to sustain less than 50 percent of the pre-existing riparian shrub habitat along Segment 1.

Along Segment 2 of lower Birch Creek shrubs are expected to die out within a year or two due to elimination of streamflow and alluvial water during the critical summer period.

4.2.3 Herbaceous Riparian Habitat

Prior to diversion, herbaceous riparian habitats occurred as narrow communities adjacent to the stream and generally less than 1 foot above the level of streamflow. These habitats were watered by lateral percolation and capillary rise of water through streambanks.

Maintenance flow has left herbaceous riparian communities high-and-dry along Segments 1 and 2 of lower Birch Creek. During September, 1987, the sedges and obligate hydrophytes characteristic of herbaceous riparian habitat were not evident; the demise of these habitats was apparently rapid. Herbaceous habitats that are not lost through streambank erosion are expected to be replaced by low sagebrush habitat.

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4.2.4 Streambar Habitat

Prior to diversion, streambars occurred on the convex bank of channel-bends and in association with areas of degraded stream channels, such as road crossings. Surfaces were less than 1 foot above the level of streamflow. These habitats developed as a result of the lateral migration of the stream and were dependent upon intermittent flooding for deposition of fine-grained sediments and seed dispersal. The fragmental substrate characteristic of streambars was generally saturated below a depth of 1 to 2 feet by the lateral percolation of streamflow.

Reduced discharge has resulted in a reduction in stream width and length, and a consequent increase in the area of streambars. Streambank erosion of former herbaceous riparian habitats will also contributed to an increase in the area of streambars.

4.2.5 Low Sagebrush Habitat

Low sagebrush habitat occurred on undulating surfaces along the upland flanks of the floodplain. Surfaces were 2 to 3 feet above the level of streamflow. These habitats are maintained by ice and wind-blown snow that covers the surface, often to depths of 2 to 3 feet, throughout much of the winter. Remnant low sagebrush habitats along Birch Creek below the Reno Canal diversion indicate that these habitats are not dependent upon summer streamflow. The absence of these communities along the Reno Canal indicates that excessive moisture during summer may limit the extent of these habitats.

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Low sagebrush habitat is expected to increase in area, at the expense of riparian shrub and herbaceous habitats, as a result of reduced summer streamflow to lower Birch Creek.

4.2.6 Upland Habitat

Upland habitat is continuous along the lateral flanks of the riparian zone. Small islands of upland habitat surrounded by low sagebrush habitat were also identified. These islands of upland habitat were greater than 4 feet above the level of streamflow. These habitats, dominated by upland vegetation, are not influenced by streamflow or alluvial water.

Upland habitats will not be effected by the reduction in flow to lower Birch Creek.

4.3 Effects on Riparian Habitats

Assumptions, based on hydrologic interpretations and field observations, used to predict changes in the areas of riparian habitats along lower Birch Creek were:

1. Herbaceous riparian habitat will be eliminated along the entire length of lower Birch Creek; 50% of the herbaceous habitat will be replaced by low sagebrush habitat and the remainder will be eroded to form streambar habitat.

2. Riparian shrub habitat will be reduced by about 50 percent along Segment 1 of lower Birch Creek and will be completely eliminated along Segment 2; riparian shrub habitat will be replaced by low sagebrush habitat.

3. Aquatic habitat will be reduced by greater than 50 percent along Segment 1 and will be completely eliminated along Segment 2; aquatic habitat will be replaced by streambar habitat.

4. Pre-existing streambar habitats will not be affected by the reduced streamflow regimen.

5. Pre-existing low sagebrush and upland habitats will not be affected by the reduced streamflow regimen.

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These assumptions will result in a liberal estimate of the areas of aquatic and shrub habitats sustained by maintenance flow. Estimates of the areas of habitats that will be lost, sustained or gained as a result of maintenance flow to lower Birch Creek are summarized by stream segment in Table 4-2.

Table 4-2. Estimates of the areas of riparian habitats that will be lost, sustained, or gained, given maintenance flow to lower Birch Creek.

Habitat	Segment 1 LOSS	Segment 1 SUSTAIN	Segment 1 GAIN	Segment 2 LOSS	Segment 2 SUSTAIN	Segment 2 GAIN	Net
	(acres)			(acres)			(acres)
Riparian Shrub	0.80	0.80	0	1.47	0	0	-2.27
Low Sagebrush	0	4.25	1.43	0	5.63	2.27	+3.70
Riparian Herbaceous	1.25	0	0	1.59	0	0	-2.84
Streambar	0	0.17	1.08	0	0.65	2.22	+3.30
Aquatic (Stream)	0.46	0.46	0	1.43	0	0	-1.89
Upland	0	0.45	0	0	0	0	0

Projected changes to aquatic (stream) and herbaceous habitats have already occurred; the decline in riparian shrub habitat is apparent along the segment 2 of lower Birch Creek and is expected to continue for 3 to 5 years.

5.0 CONCLUSIONS

Prior to diversion of streamflow, the riparian ecosystem of lower Birch Creek included about 3.1 acres of riparian shrub habitat, 9.9 acres of low sagebrush habitat, 2.8 acres of riparian herbaceous habitat, 0.8 acres of streambar habitat, 2.4 acres of aquatic (stream) habitat, and 0.4 acres of upland habitat, as summarized in Section 4.1. The hydrologic effects of maintenance flow upon riparian habitats were summarized in Section 4.2.

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As summarized in Section 4.3, maintenance flow is expected to sustain about 33 percent of pre-existing shrub habitat along lower Birch Creek: the area of low sagebrush habitat is expected to increase by about 50 percent over that of pre-existing habitat: pre-existing herbaceous habitat was lost: the area of streambars associated with maintenance flow was increased by about 500 percent. relative unaltered regimen: aquatic (stream) habitat was reduced by more than 80 percent: islands of upland habitat will not be effected.

The order to discharge a maintenance flow to lower Birch Creek was founded on the assumption that it would provide water for livestock and wildlife and sustain riparian habitats from the outlet of the diversion pond to some point below the Reno Canal diversion. It has been found that maintenance flow will provide a consistent source of stockwater for less than half of lower Birch Creek and will preserve only a fraction of the riparian habitats of high value to wildlife (e.g. riparian shrub, riparian herbaceous, and aquatic). Annual maintenance flow, over 2,700 acre-feet, is expected to sustain less than 1.2 acres of riparian habitat.

Given the limited effectiveness of maintenance flow, it is recommended that alternative mitigation be considered.

6.0 LITERATURE CITED

Bureau of Land Management. 1985. Land report. Birch Power Company I-19684. Idaho Falls, Idaho

Sorenson Engineering. 1985. Application for license for the Birch Creek water power project. Idaho Falls, Idaho.

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JAN 0 8 2001

PART I. (To be completed by Requestor)

Project Title	Charge Coding	Legal Description (attach a map)
Lower Birch Cr. mitigation	4351	T. 8 N R. 30 E Section: 3, 10, 11, 14 + 23

Project/Action Description

See Background info. attached.

Date Clearance Requested By:	

PART II. (To be completed by Resource Specialist)

	Individual Making Field Exam	Date
(X) Full Clearance	Ronald M. Sterling	4/1/99
( ) Conditional Clearance	Reason for Specified Clearance	
( ) Negative Clearance		

Vegetation Type:

Special Conditions (if any):

Endangered and threatened plant clearance will indicate the above action has no impact upon endangered, threatened, or State-sensitive plants, or that impacts have been satisfactorily resolved. A conditional or negative clearance will indicate that problems are not resolved and further steps must be taken to mitigate the impact. If mitigation is not possible, then the project or action shall be cancelled.

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JAN 08 2001

SORENSON ENGINEERING
CONSULTING ENGINEERS
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401
208-522-8069

RECEIVED
FEB 22 1990
Department of Water Resources

February 20, 1990

Gary Spackman, Manager
Water Rights Permit Section
State of Idaho Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720

RE: BIRCH POWER COMPANY WATER RIGHT PERMITS #327128 AND #327136

Dear Mr. Spackman:

This letter is written to request the status of the issuance of the final license for these two permits. It is my understanding that the proof of beneficial use forms have been filed with you in a satisfactory manner by Cecil Thomas.

Your prompt concurrence in issuing the final permit is sincerely appreciated.

Very truly yours,

Ted S. Sorenson, P.E.
Project Engineer

TSS:mbk

MICROFILMED
JAN 0 8 2001

SORENSON ENGINEERING
CONSULTING ENGINEER
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401
208-522-8069
FAX 208-522-8223

RECEIVED
JAN 4 1990
Department of Water Resources

December 27, 1989

Gary Spackman
Manager, Water Rights Permit Section
Idaho Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720

RE: BIRCH CREEK FIELD EXAMINATION FOR PERMITS #327128 AND #327136

Dear Mr. Spackman:

Pursuant to your letter of December 13, 1989, to Cecil Thomas, I note that you have now accepted the field examination. I would be most appreciative if I could receive a copy of the issued water right as soon as possible. Please advise.

Very truly yours,

Ted S. Sorenson, P.E.
Project Engineer

TSS:mbk

MICROFILMED
JAN 0 8 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720 - (208) 327-7900

August 8, 1989

CECIL D. ANDRUS
GOVERNOR
R. KEITH HIGGINSON
DIRECTOR

Cecil Thomas
P.O. Box 868
Homedale, ID 83628

RE: Field Examination of Applications for Permit Nos. 32-7128 and 32-7136

Dear Cecil:

I have reviewed your field examination for permits nos. 32-7128 and 32-7136 for the Birch Creek Hydropower Project developed by Ted S. Sorenson. I congratulate you on a well prepared field examination. You obviously consulted the beneficial use examination rules and regulations.

Prior to discussing the field examination, I have searched the files, and do not find a proof of beneficial use. Proof of beneficial use for the two permits is not due until March 1, 1990. If you wish to use the field examination submitted for proof of beneficial use, the proof form must be signed by the permit holder and submitted to the department. I will carbon copy this letter to Ted Sorenson, and also enclose a proof of beneficial use form that he can complete, and mail back to this office.

A few minor questions arose in my review of your field examination. The questions do not warrant my returning the field examination to you, however:

1. Rule 5,1,6. requires a statement of compliance with the conditions of the permit. You prepared a very good summary of compliance with the conditions set forth in the memorandum decision issued by the Director. I am uncertain about compliance with two conditions, however. One of the conditions of the order states that a measuring device must be maintained both at the diverting works and near the end of the feeder ditch so loss can be determined. I cannot tell from the field exam report whether the measuring devices have been installed. The field examination report states that Don Shenton determined the loss in the delivery canal, but the method of determination is unclear.

2. Another condition requires that a minimum flow remain in Birch Creek downstream of the diversion works. The examination report does not state whether the minimum streamflow is being bypassed, and in what matter it is being controlled.

3. A statement in the examination leads me to believe that water may not be diverted year round. Rule 5,1,3 requires that

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the examiner set forth the period of use.

4. Rule 5,1,16. requires that the field examiner identify any changes in the description of the permit that must be amended. The point of diversion location on the field examination is different than the point of diversion identified by the permit. Do you recommend the Department send a licensing amendment to Mr. Sorenson?

5. I am uncertain what flow rate and volume you are recommending for licensing. You referred to flow data apparently gathered on the river, and used that data for determining a volume and a flow rate. I do not know, however, whether the flow rate recommended excludes the required bypass flow, and whether there are other diversions that require water before it can be delivered to the power plant. Please determine the maximum flow rate that has been diverted through the canal from Ted Sorenson's records. If the maximum flow rate does not represent the capacity of the canal and the generating facilities, I will accept some estimate of the flow capacity based on slope, configuration of the canal, size, type of pipe, and the capacity of the generators. Finally, an annual volume must be calculated from an average flow number. I believe annual volume should be calculated from an average of the water diverted to the power plant over the time that the plant has been producing electricity.

6. Last, I am disappointed that you did not provide photographs and an aerial photograph pinpointing the location of the twelve to fifteen inch fish you observed. I suppose I must travel to the site on my own time, and determine their location myself.

I request that this information be sent within thirty days of this letter. The permits will not lose priority for failure to immediately submit the information, however, because proof is not yet due. I urge you, however, to submit it as quickly as possible, and I will attempt to prioritize on review of this filing. We will also await receipt of the proof of beneficial use.

Sincerely,

Gary Spackman

GARY SPACKMAN, Manager
Water Right Permits Section

GS:js

Enclosure

cc. Ted Sorenson

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JAN 0 8 2001

SORENSON ENGINEERING
CONSULTING ENGINEERS
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401
208-522-8069

RECEIVED
FEB 16 1988
Department of Water Resources

February 10, 1988

Mr. Cecil Thomas, P.E.
3775 N. Locust Grove
Meridian, ID 83642

32-7128
-7136

SUBJECT: BIRCH CREEK HYDROELECTRIC FACILITY - WATER RIGHT CERTIFICATION, CLARK COUNTY, IDAHO

Dear Cecil,

I am anxious to have the water right certified for the water meeting by the 1st of March. Accordingly, I have talked to Mr Jim Johnson of the Idaho Department of Water Resources in Boise. He will be reviewing your certification. I would appreciate it if you would get the certification to him within the next week. Mr. Johnson is calling your attention to the supplemental information required for beneficial use. I would appreciate it if you would call him at 334-7947 to confirm precise information he needs.

Cecil, I really appreciate your help in this matter.

Very truly yours,

Ted S. Sorenson, P.E.
Project Engineer

TSS:

cc: Mr. Jim Johnson, Idaho Dept. of Water Resources, Boise, ID

MICROFILMED
JAN 08 2001

Bob Fleenor

IN THE DISTRICT COURT OF THE SEVENTH JUDICIAL DISTRICT

OF THE STATE OF IDAHO, COUNTY OF BONNEVILLE

* * *

RECEIVED
OCT 15 1986
Department of Water Resources

IN THE MATTER OF APPLICATION FOR PERMIT NOS. 32-7128 AND 32-7136 IN THE NAME OF BIRCH POWER COMPANY,	
D & D ENTERPRISES, INC., Protestant-Appellant, vs.	Case No. 33072
A. KENNETH DUNN, Director IDAHO DEPARTMENT OF WATER RESOURCES, Respondents, and BIRCH POWER COMPANY, Applicant-Respondent,	MEMORANDUM DECISION ADDENDUM

The Court in writing this Memorandum Decision adopts the prior decision of the Court, dated June 30, 1986. Through some misfortunate circumstances, D&D Enterprises did not receive a copy of the Court's earlier decision, and also the Court did not have the benefit of D&D's brief. That brief has been thoroughly reviewed, and the Court will treat the matters raised in the brief.

When D&D points out evidence or testimony that they were not receiving their decreed rights at the point of diversion, they are not raising any issue that could be used as a basis to overrule the Director's decision in this case. There is no evidence that this alleged shortage is due to anything but a reduced stream flow down Birch Creek when the water drops during the later summer. This has nothing to do with the salvaged water that we are dealing with.

The argument that has merit is the claim that the director has established a minimum stream flow without following the statutory requirements of Idaho Code 42-1503. D&D argues that to take the position that the diversion of five CFS of water down the existing Birch Creek channel is not the establishment of a minimum flow, but rather a permit condition under 42-2203(a), not only begs the question, but also defies logic. The Court is not sure what question it begs, and so that will not be discussed. But the defying of logic will be discussed.

As the Court understands the facts, the present Reno Ditch Diversion diverts the entire flow of Birch Creek throughout the year except when the

creek is frozen. As a condition for granting the permit to establish the hydroelectric project, the water that will be saved under the project will travel down the Birch Creek Channel that has always been dewatered. The order of the Director provides that 11 percent of the flow of Birch Creek at the diversion of the feeder ditch, the amount of water saved by the new ditch, or 5 cubic feet per second, whichever is least, shall be allowed to flow past the feeder canal diversion in the natural channel of Birch Creek. This order clearly provides that such a requirement is in the public interest. An appropriate question asks whether the Director promulgated this order under the authority of Idaho Code 42-1501 or 42-203(a). In Shokal v. Dunn 109 Idaho 330, the Court made the following statement:

> ...the term public interest (is) common to both Sections 42-1501 and 42-203(a), and common to the same title...also the legislature approved the term "public interest" in both sections on the same day. Clearly the legislature in 42-203(a) must have intended the public interest...to include the public interest elements listed in 42-1501. Fish and wildlife habitat....

From all the circumstances, it can be logically deduced that this flow, as established by the Department, is a viable condition under Idaho Code 42-203(a). That logic might be further enhanced by a

further analysis of Idaho Code 42-1503. The establishment of a minimum stream flow in this code section is through the process of appropriation. The statute makes it clear that the establishment of a minimum stream flow is an appropriation of unappropriated waters. The crucial question is whether we are dealing with appropriated or unappropriated waters in the instant case.

D&D has an established water right to cover the full flow of Birch Creek at the diversion. If the water is lost by seepage, such does not change the nature of the water from appropriated waters to unappropriated waters. If D&D had at any time over the many years of its diversion eliminated any amount of the seepage, they could have applied the water to a beneficial use it being their appropriated water. If someone else saves the water under the case law set forth in the Court's Memorandum Decision, that appropriated water gains a new owner. The law would not recognize a new owner if it were a race to see who saved the water first, but the original owner cannot just sit back and wait for the saving action and then step in and make a claim.

There is still another hurdle -- the use of the water by Birch Power will be non-consumptive,

and thus it could be argued that an appropriation does not take place. Idaho Code 42-203(b) speaks of what water right for power purposes, and that water right is held by Birch Power in the form of a trust. Idaho Code 42-203(b)(4) provides that the user of water for power purposes does so as beneficiary of the trust established in subsections 2 and 3, and shall be entitled to use water available at its facilities to the extent of the water right. The people of the State of Idaho are subject to becoming the beneficiaries of that trust. Thus Birch Power saves the water -- by permit the Director allows the water to be used for power purposes -- this appropriation to a power use is an appropriation in trust -- the public is the beneficiary of that trust. Birch Power becomes the vehicle through whom the appropriated water traverses from the D&D to the public.

The Court finds and reaffirms that the decision of the Director be affirmed and upheld.

Dated: October 8, 1986.

H. Reynold George
District Judge

cc: GEORGE C. PETERSON, JR.
RAY W. RIGBY
STEPHEN V. GODDARD
PHILLIP J. RASSIER

Legal — 9-30-86 IRA
[redacted] Right/pub —

36 FERC ¶ 61,302

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Birch Power Company	)	Project Nos. 9940-003 and 9725-003
	)	

32-7128 ✓

NOTICE OF DENIAL OF REHEARING 32-7136

(September 19, 1986)

The National Marine Fisheries Service (NMFS) has requested that the Commission rehear its August 8, 1986 order denying appeal in the above-captioned proceedings. 1/ Since the rehearing request raises no new questions of law or policy not previously considered by the Commission, the Commission agreed to take no action on NMFS' rehearing request. Accordingly, the request for a rehearing is denied pursuant to Section 313(a) of the Federal Power Act, 16 U.S.C. § 8251(a) (1982), and Rule 713(f) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.713(f) (1986).

Kenneth F. Plumb

Kenneth F. Plumb,
Secretary.

RECEIVED
SEP 29 1986
Department of Water Resources

DC-A-5

1/ 36 FERC ¶ 61,208 (1986).

[redacted]

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

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FERC-351

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DIRECTOR
IDAHO DEPARTMENT OF WATER RESOURCES
450 WEST STATE STREET
BOISE, ID 83720

84

32-7128 ✓
32-7136

P-7194-002

UNITED STATES OF AMERICA

FEDERAL ENERGY REGULATORY COMMISSION

Notice of Application Filed with the Commission

(September 10, 1986)

Take notice that the following hydroelectric application has been filed with the Federal Energy Regulatory Commission and is available for public inspection:

RECEIVED
SEP 15 1986
Department of Water Resources

a. Type of Application: Transfer of License

b. Project No.: 7194-002

c. Date Filed: August 11, 1986

d. Applicant: Birch Power Company - Licensee; Birch Power Company and Ted S. Sorenson, d/b/a Sorenson Engineering - Transferee

e. Name of Project: Birch Creek

f. Location: On Birch Creek in Butte and Clark Counties, Idaho

g. Filed Pursuant to: Federal Power Act, 16 U.S.C. §791(a) - 825(r)

h. Contact Person: Ted S. Sorenson
550 Linden Avenue
Idaho Falls, ID 83401
(208) 522-8069

i. Comment Date: OCT 2 7 1986

j. Description of Transfer: On May 21, 1986, a major license was issued to the Birch Power Company for the construction, operation, and maintenance of the Birch Creek Project No. 7194. Birch Power Company has proposed to transfer the license to the Birch Power Company and Ted S. Sorenson, d/b/a Sorenson Engineering. The transferee is a private corporation and a sole proprietorship organized and existing under the laws of the State of Idaho and qualified to do business in the State of Idaho.

The licensee certifies that it has fully complied with the terms and conditions of its license and obligates itself to pay all annual charges accrued under the license to the date of transfer. The transferee accepts all the terms and conditions of the license and agrees to be bound thereby to the same extent as though it was the original licensee.

k. This notice also consists of the following standard paragraphs: B and C.

DC-A-15

B. Comments, Protests, or Motions to Intervene - Anyone may submit comments, a protest, or a motion to intervene in accordance with the requirements of the Rules of Practice and Procedure, 18 C.F. R. §§385.210, .211, .214. In determining the appropriate action to take, the Commission will consider all protests or other comments filed, but only those who file a motion to intervene in accordance with the Commission's Rules may become a party to the proceeding. Any comments, protests, or motions to intervene must be received on or before the specified comment date for the particular application.

C. Filing and Service of Responsive Documents - Any filings must bear in all capital letters the title "COMMENTS", "NOTICE OF INTENT TO FILE COMPETING APPLICATION", "COMPETING APPLICATION", "PROTEST" or "MOTION TO INTERVENE", as applicable, and the Project Number of the particular application to which the filing is in response. Any of the above named documents must be filed by providing the original and the number of copies required by the Commission's regulations to: Kenneth F. Plumb, Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street N.E., Washington, D.C. 20426. An additional copy must be sent to: Mr. Fred E. Springer, Director, Division of Project Management, Federal Energy Regulatory Commission, Room 203-RB, at the above address. A copy of any notice of intent, competing application or motion to intervene must also be served upon each representative of the Applicant specified in the particular application.

Kenneth F. Plumb
Secretary



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REGULATORY COMMISSION
FERC-351

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

P -000719400A 101445
DIRECTOR
IDAHO DEPARTMENT OF WATER RESOURCES
450 WEST STATE STREET
BOISE, ID 83720

State of Idaho
DEPARTMENT OF WATER RESOURCES
STATE OFFICE, 450 W. State Street, Boise, Idaho

JOHN V. EVANS
Governor

A. KENNETH DUNN
Director

Mailing address:
Statehouse
Boise, Idaho 83720
(208) 334-4440

August 25, 1986

RE: Permit Nos. 32-7128/7136

Ted S. Sorenson
DBA Sorenson Engineering
2988 Tipperary Ln.
Idaho Falls, ID 83401

Dear Permit Holder:

This office acknowledges receipt of the Assignment of the above referenced permits to you.

Enclosed for your records are copies of the permits. Be sure to note the special conditions of approval on the fourth pages that identify requirements necessary for developing the permits into licensed water rights.

If you have any questions on this matter, please feel free to contact us.

Sincerely,

JIM JOHNSON
Water Rights Supervisor

JJ:sc
Enclosures

Permit No. 32-7128

ASSIGNMENT REVIEW CHECK LIST

1. Signature of Permit Holder? Yes
2. Notary? Yes
3. a. Full Assignment? Yes

   b. Partial Assignment?
4. "No assignment" condition on permit? ~~Yes~~ NO
5. Commencement of Works received? ~~Yes~~ N/A

   a. Commencement of works requested?

   b. Show Cause Order drafted & sent?

   c. Cancellation necessary?
6. Affidavit of residency required? ~~Yes~~ NO
7. Extension granted due to litigation? NO
   (If yes, commencement of works is not required.)

1. Type permit summary sheet. ✓ Shonla
2. Coding sheet. ✓ Shonla
3. Acknowledgement letter type. #1p (32-7136)
4. Copy to region. ✓ Shonla

Date 8-25-86

Employee Jm

LAW OFFICES
HOLDEN, KIDWELL, HAHN & CRAPO
IDAHO FIRST NATIONAL BANK BUILDING
P.O. BOX 129
IDAHO FALLS, IDAHO 83402

TELEPHONE 523-0620
AREA CODE 208

WILLIAM S. HOLDEN
R. VERN KIDWELL, P.A.
FRED J. HAHN
KENT W. FOSTER
ROBERT E. FARNAM
WILLIAM D. FALER
STEPHEN E. MARTIN
CHARLES A. HOMER
GARY L. MEIKLE
CURT R. THOMSEN
RANDALL K. BARTON
MICHAEL D. CRAPO
JAMES D. HOLMAN
GAYLE A. SORENSON
DONALD L. HARRIS
GREGOR S. CHVISUK
RANDALL B. REED
G. LANCE NALDER
J. MICHAEL WHEILER

ARTHUR W. HOLDEN (1877-1967)
ROBERT B. HOLDEN (1911-1971)
TERRY L. CRAPO (1939-1982)

August 21, 1986

RECEIVED
AUG 22 1986
Department of Water Resources

Idaho Department of Water Resources
Statehouse
Boise, Idaho 83720

RE: ASSIGNMENT OF WATER PERMIT #32-7136 & #32-7128

Dear Sir or Madam:

Enclosed are originals assigning the above water permits from Birch Power Company, an Idaho Corporation, to Ted S. Sorenson, an Idaho resident doing business as Sorenson Engineering. Also enclosed is an Affidavit of Residency for Mr. Ted S. Sorenson.

Please process the Assignments as soon as possible and send us a letter or other document verifying that the Assignments have been processed.

Thank you so much for your prompt attention to this matter.

Best wishes.

Very truly yours,

Gayle A. Sorenson

GAS/rfs

Enclosures

cc - Mr. Timothy D. Jaroch

State of Idaho
DEPARTMENT OF WATER RESOURCES
STATE OFFICE, 450 W. State Street, Boise, Idaho

JOHN V. EVANS
Governor

A. KENNETH DUNN
Director

Mailing address:
Statehouse
Boise, Idaho 83720
(208) 334-4440

August 19, 1986

RE: Permit Nos. 32-7128/7136

Birch Power Co.
550 Linden Dr.
Idaho Falls, ID 83401

Gentlemen:

Enclosed are copies of the approved Applications for Amendment submitted in connection with the above referenced permits.

If you have any questions concerning this matter, please contact us.

Sincerely,

JIM JOHNSON
Water Rights Supervisor

JJ:sc

Enclosures

~~CONVERSATION~~ MEMORANDUM

DATE 8-15-86

FILE 32-7128
32-7136

NAME OF PARTY

EMPLOYEE Ken Dunn

RE: Change in Place of Use.

The permit holder has purchased land in Section 14 T18N R31E BM to construct power plant. The change in place of use is approximately 3 miles from original location; however there are no users of water diverting from the additional length of the Reno Canal that will be dewatered. The landowners who sold land ~~and~~ were also protestants. Gayle Sorenson told me on 8-14-86 that there is a stipulation in the purchase that the land must be used only for the power plant.

There is no adverse impact on any party and there will be additional water savings available and reduced maintenance of the Reno Canal.

Other right holders will not be affected ammendment will be approved without re-advertising.

K. Dunn

MICROFILMED

Sorenson Engineering
2988 Tipperary Lane
Idaho Falls, Idaho 83401

August 14, 1986

RECEIVED
AUG 15 1986
Department of Water Resources

VIA REGIONAL EXPRESS

Mr. Kenneth Dunn
State of Idaho
Department of Water Resources
Statehouse
Boise, Idaho 83720

Re: Birch Power Company

Dear Mr. Dunn:

Enclosed for filing is an Application for Amendment of Permit No. 32-7128 for the above-referenced applicant. We inadvertently mailed to you on August 11, 1986, a like application for permit no. 32-7136 instead of the application for permit no. 32-7128 as stated in the letter. We apologize for this confusion.

However, both applications are to be filed in association with each other. Therefore, we would appreciate your filing both applications for permit nos. 32-7128 and 32-7136 as soon as possible.

Thank you for your kind assistance.

Very truly yours,

Gayle A. Sorenson

GAS:as
#5691.00/1979d
Enclosure

Ken Dunn

RECEIVED
JUL 8 1986
Department of Water Resources

IN THE DISTRICT COURT OF THE SEVENTH JUDICIAL DISTRICT
OF THE STATE OF IDAHO, COUNTY OF BONNEVILLE

* * *

D & D ENTERPRISES, INC., Plaintiffs,	Case No. 33072
-vs-	MEMORANDUM DECISION
A. KENNETH DUNN, et al., Defendants.	

This matter comes before the Court in its appellate capacity, and the Court will review the administrative decision made by the Director of the Idaho Department of Water Resources. Birch Power Company sought water right permits directed towards a proposed construction of a small hydroelectric project on Birch Creek. An administrative hearing was held, and the Director filed a Proposed Decision on November 27, 1985, and a Modified Memorandum Decision and Order was issued March 26, 1985. From that Modified Decision, D & D Enterprises filed its Petition for Review.

In the planned construction, which involves the construction of a new feeder ditch to the hydroelectric plant, Birch Power contends its feeder

ditch system will save water. The Director, in his Decision, placed a condition on the Birch Power Project that a portion of the water shall remain in the natural channel of Birch Creek to satisfy a public purpose. D & D Enterprises claims that this saved water is subject to their right to apply the water to a beneficial use on their farm ground, and that the Director's determination is in error.

The Court considers the primary issue to be whether D & D can make any legal claim to the salvaged water saved by the construction of the feeder ditch by Birch Power. In the case of Basenger v. Taylor 36 Idaho 591 (1922), the Court held that the party who saved an extensive amount of water by constructing a pipeline was allowed to receive the water so saved. The irrigators had an earlier priority date, but under the authority of the Basenger Case, they were not allowed to recoup any of the water that had been lost to seepage in their ditch and later saved by the pipeline. In the case of Hill v. Green 47 Idaho 157 (1928), the supply of water to prior appropriators was not decreased, and were not entitled to certain salvaged water. This reasoning or outcome was followed in the case of Reno v. Richards 22 Idaho 1. This being the law, D & D Enterprises has no

standing to attack the administrative decision in that it takes away its right to apply the water to a beneficial use on their properties.

The only other basis that D & D can attack the decision is based on a claim of abuse of discretion in directing the use or flow of the saved water. In the recent case of Shokal v. Dunn 109 Idaho 330; 707 P.2d 441, the Supreme Court reviewed the procedure involved in the public interest evaluations as carried out by the Water Resources Board. Using Shokal as a guideline, the Court finds, in the instant case, that the Water Resources Department has adequately shown that the impact of the hydroelectric project promotes the public interest. And the Court finds that D & D Enterprises has not carried its burden to show any harm peculiar to itself. Under Shokal, such a finding supports the decision of the public agency.

Based upon the transcript and the briefs, the Court upholds the ruling of the Idaho Department of Water Resources.

Date: June 26, 1986.

H. Reynold George
District Judge

cc: GEORGE C. PETERSEN, JR.
STEPHEN V. GODDARD
PHILLIP J. RASSIER
RAY W. RIGBY

32-7128
32-7136

RECEIVED
MAY 27 1986

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Birch Power Company) Project No. 7194-001

ORDER ISSUING LICENSE
(Major Project - Unconstructed)

(Issued May 21, 1986)

Birch Power Company has filed a license application under Part I of the Federal Power Act (Act) to construct, operate, and maintain the Birch Creek Project, located in Butte and Clark Counties, Idaho, on Birch Creek. The project would occupy lands of the United States under the jurisdictions of the Department of Energy and the Bureau of Land Management.

Notice of the application has been published. The motions to intervene that have been granted and the comments and protests filed by agencies and individuals have been fully considered in determining whether to issue this license, as discussed below.

The Idaho Department of Fish and Game (IDFG) filed a motion to intervene on November 13, 1985. The motion recommends that ten specific mitigative measures or stipulations be included in any license issued in order to protect or enhance the states fish and wildlife resources. The applicant's proposed fishery mitigative plan will provide for the implementation of six stipulations, the applicant's plan for the development of riparian vegetation along the proposed power canal will satisfy another two stipulations, and special articles included in this license will require the licensee to implement the two remaining stipulations.

SUMMARY OF FINDINGS

The design of this project is consistent with the engineering standards governing dam safety. The project will be safe if constructed, operated, and maintained in accordance with the requirements of this license. Analysis and support for related license articles are provided in the Safety and Design Assessment attached to this order.

ENVIRONMENTAL CONSIDERATIONS

Erosion and Sedimentation

Ground disturbance during borrow and spoil-producing activities, and construction of the dam, feeder ditch, intake, penstock, powerhouse, and tailrace will result in increased erosion and sedimentation, particularly along steeper slope segments of the

Department of Water Resources

penstock. Rupture of the penstock could cause locally severe erosion. Implementation of appropriate control measures will assure adequate protection against these impacts. Article 401 requires the licensee, after consultation with the U.S. Bureau of Land Management (BLM) and other appropriate resource agencies, to prepare and implement a BLM-approved erosion and sediment control plan.

An automatic shut-off device at the intake structure will minimize erosion in the event of a pipeline or penstock rupture. Article 402 requires the licensee to include at the intake structure an automatic shut-off device that will operate in the event of pipeline or penstock rupture.

Mineral Resources

The U.S. Department of the Interior (Interior) recommends that a field check be conducted to determine the project's effects on mineral deposit development and utilization. Ore minerals in the general project vicinity include copper, lead, zinc, silver, gold, uranium, and iron. Although the proposed project facilities will cross public lands that include several mining claims, no economically mineable deposits have been reported. A field check for mineral resources at the project site, including the transmission line corridor and the subsequent development of a mitigative plan to minimize project impacts to mineral resource development and utilization will ensure that any adverse impacts are minimal. Article 403 requires the licensee, after consultation with the BLM and the U.S. Bureau of Mines, to conduct a mineral resource field check and prepare a mineral resource mitigative plan for the project.

Riparian Vegetation

Operation of the project will result in significant adverse impacts to approximately 30 acres of riparian vegetation located (1) adjacent to the 0.6-mile-long reach of Birch Creek below the proposed diversion and (2) adjacent to the existing Reno Ditch. The Applicant, in consultation with the BLM, the U.S. Fish and Wildlife Service (FWS), and the Idaho Department of Fish and Game (IDFG), has developed and filed an extensive plan to establish riparian vegetation along the 6.6 miles of proposed feeder ditch. The applicant also will establish riparian vegetation at the new diversion impoundment and at several livestock and wildlife watering sites throughout the project area. The establishment of riparian vegetation, as planned, not only will mitigate project impacts, but also will increase the overall amount of riparian habitat in the project area. Because the implementation of the

applicant's plan to establish riparian vegetation addresses IDFG's Stipulation Nos. 4 and 9, and is necessary to mitigate project impacts to existing riparian communities, the plan is approved herein and made a part of the project license.

Minimum Flow for Riparian Habitat

Operation of the project will reduce flows in the 0.6-mile-long section of Birch Creek from the new diversion downstream to the existing Reno Ditch diversion. This area currently supports an excellent riparian community, including a variety of trees and shrubs with a lush herbaceous understory. The proposed flow reductions will decrease the extent and quality of riparian vegetation along this reach of Birch Creek. The applicant, IDFG's Stipulation No. 8, and the Idaho Department of Water Resources agree to the release of a minimum flow of 5 cubic feet per second (cfs), or 11 percent of the flow of Birch Creek, whichever is less, into Birch Creek below the project diversion. Although this minimum flow will not be sufficient to maintain pre-project levels of riparian vegetation, it will be adequate to support a remnant riparian community. Further, since the minimum flow will be allowed to remain in the Birch Creek channel downstream of the existing Reno Ditch diversion, the poor-quality, riparian habitat located below the Reno Ditch diversion will be enhanced for a distance of about 1 mile. Article 404 requires the licensee to release a minimum flow of 5 cfs, or 11 percent of the flow of Birch Creek, whichever is less, into Birch Creek below the project diversion.

Streamflow Monitoring

The BLM recommends that: (1) the applicant install a stream gage to measure flows released from the proposed diversion structure to Birch Creek; and (2) the applicant maintain a flow release record, which is made available for inspection by the BLM and the IDFG.

The maintenance of accurate minimum flow data is essential to monitor Applicant's proposed riparian mitigative plan. Article 405 requires that the licensee install streamflow monitoring equipment to ensure that the minimum flow is accurately measured and maintained.

Raptor Protection

A variety of raptors, including the golden eagle and the ferruginous hawk, a candidate for Federal listing as an endangered or threatened species, occur in the Birch Creek Project area. Unless the project's 0.5-mile-long transmission line is properly designed and constructed to prevent electrocution of raptors, it would be a hazard to the aforementioned species. The applicant proposes to protect raptors from hazards associated with the project's transmission line, thereby satisfying IDFG's Stipulation No. 10. Article 406 requires

the licensee to design and construct the project transmission line in a manner that minimizes the line's electrocution hazard to raptors.

Fishery Mitigative Plan

The applicant proposes to develop the first 1.5 miles of feeder ditch into fishery habitat as mitigation for the loss of fishery habitat in the 0.6-mile-long reach of Birch Creek below the project diversion. The applicant also will install fish screens at the end of the 1.5 miles of fishery habitat and will implement a monitoring program to assess the new fishery.

Because applicant's proposed fishery mitigative plan will satisfy IDFG's Stipulation Nos. 1, 2, 3, 5, 6 and 7, and will provide for adequate mitigation of major project impacts, the plan is approved herein and made a part of the project license. However, the plan currently lacks an implementation schedule and detailed drawings of fish screen(s). Article 407 requires the licensee to file, for Commission approval, an implementation schedule for its fishery mitigative measures. Further, Article 408 requires the licensee to consult with the IDFG and the FWS concerning the design of fish screens, and to file as-built drawings with the Commission upon completion of their installation.

Fisherman Access

The applicant proposes to construct fisherman access points: (1) along the 1.5-mile-long section of feeder ditch that will be developed as fish habitat; and (2) along the fence that will be installed around the 2-acre impoundment. No comments on these proposed facilities were received from the reviewing agencies. Article 409 requires the licensee to design, construct, operate, and maintain (or arrange for the design, construction, operation, and maintenance) of the above-named facilities and to file with the Commission as-built drawings that show the type, number, and location of these facilities.

Cultural Resources

No known archaeological or historic properties will be affected by the proposed project. The only known archeological property in the vicinity of the proposed project can be avoided. Article 410 requires the licensee (1) to implement cultural resources protection measures to avoid impacts to that site, and (2) to protect any archeological or historic sites that may be discovered during the proposed construction.

Northwest Power Planning Council Fish and Wildlife Program

The Fish and Wildlife Program (Section 1204) developed by the Northwest Power Planning Council contains a framework for assessing

the impacts of new hydroelectric development of fish and wildlife resources, and lists a number of generic mitigative measures that should be implemented for any new development. Part of this framework requires consultation between the developer and the agencies and Indian tribes on the formulation of appropriate mitigative measures.

The mitigative measures proposed by the applicant and required herein satisfy the intent of the Program that adequate mitigation be provided. The consultation requirements of the Program have occurred during the processing of this license application. However, Article 201 is included herein reserving to the Commission the right to require changes in project structures or operations, on its own motion or when petitioned by the agencies or Indian Tribes, to take into account the requirements of the Program.

Other Environmental Concerns

Water quality certification of the Birch Creek Hydroelectric Project, FERC No. 7194-001, as required by Section 401 of the Clean Water Act, was granted on April 15, 1985, by the State of Idaho, Department of Health and Welfare.

No Federally listed threatened or endangered species or critical habitat will be affected by the project.

FINDING OF NO SIGNIFICANT IMPACT

Construction of the proposed facilities will produce some minor, short-term, adverse impacts, including dust, noise, and exhaust emissions caused by vehicles and machinery. These effects will disturb trout anglers along Birch Creek and area wildlife. Construction activities will cause minor erosion on steep slopes as well as some sedimentation and turbidity in Birch Creek below the diversion site. During the proposed 10-month construction period, project-related truck and automobile traffic may cause minor traffic delays on Idaho State Highway 28 near the project site.

Operation of the project will divert all flows above 5 cfs, or 11 percent of the flow of Birch Creek, whichever is less, from a 0.6-mile-long portion of Birch Creek. The minimum instream flow will be sufficient to maintain some riparian habitat in Birch Creek below the project diversion, but aquatic habitat will be eliminated. To mitigate for this loss, the licensee will implement a plan to develop and maintain the first 1.5 miles of new feeder ditch as a trout fishery.

The proposed project will necessitate the permanent removal of approximately 3 acres of riparian vegetation from the diversion site. In addition, by diverting flows from the existing Reno

Ditch to the proposed ditch, the project will result in the eventual loss of existing riparian vegetation along the Reno Ditch. To mitigate for these losses, the licensee will implement an agency-approved plan to develop and maintain riparian vegetation at the periphery of the project's 2-acre impoundment and along the proposed project ditch.

Article 401 requires the licensee to prepare and implement a plan for the control of dust, erosion, and sediment. Article 402 requires the licensee to provide at the intake structure an automatic shut-off device that will prevent water from entering the pipeline/penstock in the event of a pipeline or penstock rupture. Article 403 requires the licensee to conduct a mineral resources field check of areas that will be impacted by the construction of project facilities, and to prepare a mitigative plan to protect any mineral resources that could be mined economically. Article 404 requires the licensee to provide a minimum instream flow of 5 cfs, or 11 percent of the flow of Birch Creek, whichever is less, below the project diversion dam for the protection of riparian vegetation and associated wildlife populations. Article 405 requires that the licensee install streamflow monitoring equipment to ensure that the required minimum flow is continuously released to Birch Creek below the project diversion dam. Article 406 requires that the licensee design and construct the project transmission line to minimize its electrocution hazard to raptors. Article 407 requires the licensee to file an implementation schedule for the project fishery mitigative plan. Article 408 requires the licensee to design and install fish screens at the project bypass headgate. Article 409 requires the licensee to implement the proposed plan to develop fishermen access points at the project impoundment and along the section of feeder ditch that is developed as fish habitat. Article 410 requires that the licensee implement the proposed plan to avoid 1 archeological site located along the route of the proposed pipeline.

In accordance with the National Environmental Policy Act of 1969, an environmental assessment was prepared for the Birch Creek Hydroelectric Project (FERC No. 7194-001) on January 30, 1986. This document is available in the Division of Public Information and in the Commission's public file associated with this proceeding.

On the basis of the record, and Staff's independent environmental analysis, issuance of a license for the project, as conditioned herein, will not constitute a major Federal action significantly affecting the quality of the human environment.

OTHER ASPECTS OF COMPREHENSIVE DEVELOPMENT

The Director, Office of Hydropower Licensing concludes that the project would not conflict with any planned or authorized development, and would be best adapted to comprehensive development of the waterway for beneficial public uses.

The Director orders:

(A) This license is issued to the Birch Power Company (licensee) for a period of 50 years, effective the first day of the month in which this order is issued, to construct, operate, and maintain the Birch Creek Project. This license is subject to the terms and conditions of the Act, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provision of the Act.

(B) The project consists of:

(1) All lands, to the extent of the licensee's interests in those lands, enclosed by the project boundary shown by Exhibit G:

Exhibit G-	FERC No. 7194-	Showing
1A(Rev.)	10	Project Land & Boundaries
1B	11	Project Lands & Boundaries
2A	12	Plan & Profile
2B	13	Plan & Profile

(2) Project works consisting of: (a) a 10-foot-high earth-fill diversion structure; (b) a small reservoir having normal water surface elevation 5671.0 feet; (c) an 8,200-foot-long, 25-foot-wide trapezodial-shaped feeder canal; (d) a headworks structure and a 7,985-foot-long return channel to Birch Creek; (e) a 26,700-foot-long, 25-foot-wide trapezodial-shaped canal; (f) a screened, concrete intake structure; (g) a 15,900-foot-long, 48-inch-diameter underground steel pipeline/penstock; (h) a powerhouse containing a generating unit rated at 2,850-kW operated at a head of 532 feet and at a flow of 75 cfs; (i) a tailrace to the Reno Ditch having water surface elevation 5122.0 feet; (j) a 37,200-foot-long outfall channel to the Birch Creek Sink; (k) a 2,400-v/12.47-kV transformer; (l) a 1,700-foot-long, 12.47-kV transmission line; and (m) appurtenant facilities.

The project works generally described above are more specifically shown and described by those portions of Exhibits A and F recommended for approval in the attached Safety and Design Assessment.

(3) All of the structures, fixtures, equipment or facilities used to operate or maintain the project and located within the project boundary, all portable property that may be employed in connection with the project and located within or outside the project boundary, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) The Exhibit G described above and those sections of Exhibits A and F recommended for approval in the attached Safety and Design Assessment are approved and made part of the license.

(D) The (1) Birch Creek Hydroelectric riparian mitigative plan included in the Report on Fish, Wildlife, and Botanical Resources, Exhibit E, of the Application for License filed February 21, 1985, and (2) the plan to provide mitigation and enhancement of riparian vegetation at the project's diversion impoundment, filed June 8, 1985, are approved and made part of the license.

(E) The Applicant's proposed fishery mitigative plan for the project entitled, "Feasibility of Developing a Trout Population in the Proposed Birch Creek Hydroelectric Project Feeder Ditch," filed on February 21, 1985, is approved and made a part of this license.

(F) the Report on Recreational Resources of the Environmental Report, Exhibit E, filed on February 21, 1985, is approved and made a part of this license.

(G) This license is subject to the articles set forth in Form L-2, (October 1975), entitled "Terms and Conditions of License for Unconstructed Major Project Affecting Lands of the United States." The license is also subject to the following additional articles:

Article 201. The Commission reserves the authority to order, upon its own motion or upon the recommendation of federal or state fish and wildlife agencies or affected Indian Tribes, alterations of project structures and operations to take into account to the fullest extent practicable the regional fish and wildlife program developed pursuant to the Pacific Northwest Electric Power Planning and Conservation Act.

Article 202. The licensee shall pay the United States the following annual charge, effective the first day of the month in which this license is issued:

a. For the purpose of reimbursing the United States for the cost of administration of Part I of the Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 3,800 horsepower.

b. For the purpose of recompensing the United States for the use, occupancy and enjoyment of 136.6 acres of its lands other than for transmission line right-of-way, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time.

c. For the purpose of recompensing the United States for the use, occupancy, and enjoyment of 0.7 acres of its lands for transmission line right-of-way, a reasonable amount as

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determined in accordance with the provisions of the Commission's regulations in effect from time to time.

Article 203. Pursuant to Section 10(d) of the Act, after the first 20 years of operation of the project under license, a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. One half of the project surplus earnings, if any, accumulated after the first 20 years of operation under the license, in excess of the specified rate of return per annum on the net investment, shall be set aside in a project amortization reserve account at the end of each fiscal year. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year after the first 20 years of operation under the license, the amount of that deficiency shall be deducted from the amount of any surplus earnings subsequently accumulated, until absorbed. One-half of the remaining surplus earnings, if any, cumulatively computed, shall be set aside in the project amortization reserve account. The amounts established in the project amortization reserved account shall be maintained until further order of the Commission.

The annual specified reasonable rate of return shall be the sum of the annual weighted costs of long-term debt, preferred stock, and common equity, as defined below. The annual weighted cost for each component of the rate of return shall be calculated based on an average of 13 monthly balances of amounts properly includable in the licensee's long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rates for long-term debt and preferred stock shall be their respective weighted average costs for the year, and the cost of common equity shall be the interest rate on 10-year government bonds (reported as the Treasury Department's 10 year constant maturity series) computed on the monthly average for the year in question plus four percentage points (400 basis points).

Article 301. The licensee shall commence construction of project works within two years from the issuance date of the license and shall complete construction of the project within four years from the issuance date of the license.

Article 302. The licensee shall at least 60 days prior to start of construction, submit one copy to the Commission's Regional Director and two copies to the Director, Division of Inspections, of the final contract drawings and specifications for pertinent features of the project, such as water retention structures, powerhouse, and water conveyance structures. The Director, Division of Inspections, may require changes in the plans and specifications to assure a safe and adequate project.

Article 303. The licensee shall review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction and shall ensure that construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days prior to start of construction of the cofferdam, the licensee shall submit to the Commission's Regional Director and Director, Division of Inspections, one copy each of the approved cofferdam construction drawings and specifications and the letter(s) of approval.

Article 304. The licensee shall within 90 days of completion of construction file with the Commission, for approval, revised Exhibits A, F, and G to describe and show the project as built.

Article 401. Licensee, after consulting with the U.S. Bureau of Land Management (BLM), the U.S. Fish and Wildlife Service, and the Idaho Department of Fish and Game, shall prepare and file with the Commission, within 1 year from the date of issuance of this license, a BLM-approved plan to control erosion and dust and to minimize the quantity of sediment or other potential water pollutants resulting from construction and operation of the project, including spoil disposal. The plan also shall include: functional design drawings and map locations of control measures; an implementation schedule; monitoring and maintenance programs for project construction and operation; and provisions for periodic review of the plan and for making any necessary revisions to the plan. Documentation of agency consultation, BLM approval, and copies of any agency comments or recommendations on the plan shall be included in the filing.

In the event that the Licensee does not concur with any agency recommendations, Licensee shall provide a discussion of the reasons for not concurring based on actual site geological, soil, and groundwater conditions. The Commission reserves the right to require changes to the plan. Unless the Director, Office of Hydropower Licensing, directs otherwise, the Licensee may commence ground-disturbing or spoil-producing activities at the project 90 days after filing the above plan.

Article 402. Licensee shall provide an automatic shut-off device at the pipeline intake structure to operate in the event of a pipeline or penstock rupture. Licensee shall file as-built drawings within 3 months after completion of its construction.

Article 403. Licensee, after consultation with the U.S. Bureau of Land Management (BLM) and the Section of Minerals Involvement of the U.S. Bureau of Mines-Western Field Operations Center (USBM), shall conduct a field check for mineral resources at the project site, including the transmission line route, and prepare and file with the BLM, USBM, and the Commission, within 1 year from the date of issuance of this license, a report on the results of

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the field check that includes: descriptions of any economic mineral deposits at the project; a description and map indicating the location of mineral claims with respect to the proposed project facilities; a description of any impacts that the project will have on mineral deposit development or utilization; a plan to minimize project impacts to the development and utilization of mineral resources discovered at the project; and documentation that consultation with the BLM and the USBM occurred prior to conducting the field check. The Commission reserves the right to require changes to the plan.

Article 404. Licensee shall discharge from the Birch Creek Project a continuous minimum flow of 5 cubic feet per second, or 11 percent of the flow of Birch Creek, whichever is less, as measured immediately downstream from the project diversion, for the protection of riparian vegetation and wildlife resources in Birch Creek. This flow may be temporarily modified if required by operating emergencies beyond the control of Licensee, and for short periods upon mutual agreement among the Licensee, the Idaho Department of Fish and Game, and the U.S. Bureau of Land Management.

Article 405. Licensee, within 6 months from the date of issuance of this license, and after consultation with the Idaho Department of Fish and Game, and the U.S. Bureau of Land Management, shall install a streamflow gage in Birch Creek immediately downstream of the diversion structure. Licensee shall monitor streamflows and maintain weekly records from April 16 to October 15 of each year, and monthly records for the remainder of the year. These streamflow records shall be made available to the above-named agencies upon request.

Article 406. Licensee, after consultation with the U.S. Fish and Wildlife Service, the U.S. Bureau of Land Management, and the Idaho Department of Fish and Game, and within 1 year from the date of issuance of the license, shall file a transmission line design plan, prepared in accordance with the guidelines set forth in "Suggested Practices for Raptor Protection on Power Lines," Raptor Research Report No. 4, Raptor Research Foundation, Inc., 1981. The plan shall include detailed design drawings of the transmission line, clearly showing phase spacing, configuration, and grounding practices, a construction schedule, and agency comments on the adequacy of the design plan. Unless the Director, Office of Hydropower Licensing, instructs otherwise, Licensee may commence construction of the project transmission line 90 days after filing the plan.

Article 407. Licensee, after consultation with the U.S. Bureau of Land Management, the U.S. Fish and Wildlife Service, and the Idaho Department of Fish and Game, shall prepare and file with the Commission, within 6 months from the date of issuance of this license, an implementation schedule for the project fishery

mitigative plan. In the event that Licensee does not concur with agency recommendations, the Licensee shall provide a discussion of the reasons for not concurring. The Commission reserves the right to require changes to the schedule. Unless the Director, Office of Hydropower Licensing, directs otherwise, the Licensee may commence ground-disturbing activities at the project 90 days after filing the above plan.

Article 408. Licensee shall consult with the U.S. Bureau of Land Management, the U.S. Fish and Wildlife Service, and the Idaho Department of Fish and Game on the final design of the bypass headworks and fish screening facilities. Within 6 months from the date of issuance of this license, Licensee shall file with the Commission, for approval, functional design drawings of the fish screening structure for the bypass headgate. The filing shall include documentation of consultation with the above-named agencies and any comments of the consulted agencies on the drawings. Licensee shall file as-built drawings with the Commission within 6 months after construction of the bypass headworks at the project.

Article 409. Licensee, after consultation with the U.S. Bureau of Land Management, the Idaho Department of Parks and Recreation, and the National Park Service, shall construct, operate, and maintain, or arrange for the construction, operation, and maintenance of fisherman access points along the first 1.5 miles of the project feeder ditch and around the proposed 2-acre impoundment. Within 4 years from the date of issuance of this license, the Licensee shall complete construction of the above-named recreational facilities, and file with the Commission as-built drawings that indicate their number, location, and type.

Article 410. Licensee, after consultation with the Idaho State Historic Preservation Officer (SHPO), shall develop and implement a cultural resource management plan to prevent impacts to archeological site BC-2, located near the proposed pipeline. Licensee, within 1 year from the date of issuance of this license, shall file: (a) a detailed plan for avoiding the site, and (b) a copy of a letter from the SHPO accepting the plan. The Commission reserves the right to require changes to the plan. Unless the Director, Office of Hydropower Licensing, directs otherwise, the Licensee may commence ground disturbing or spoil-producing activities at the project 90 days after filing the above plan. Licensee, within 4 years from the date of issuance of this license, shall file a letter from the SHPO indicating that the plan has been implemented as approved and that archeological site BC-2 has been avoided.

If any previously unrecorded archeological or historic properties are discovered during the course of construction or development of any project works or other facilities at the project, construc-

tion activity in the vicinity of these properties shall be halted, a qualified archeologist shall be consulted to determine the significance of the properties, and the SHPO shall be consulted in the development of a mitigative plan for the protection of significant archeological or historic resources. If Licensee and the SHPO cannot agree on the amount of money to be expended on archeological or historical work related to the project, the Commission reserves the right to require Licensee to conduct, at its own expense, any such work found necessary.

Article 411. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain other types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the uses and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, cancelling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 water craft at a time and where said facility is intended to serve single-family type dwellings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the uses and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before

granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges and roads for which all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certificates or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (1) the

amount of land conveyed for a particular use is five acres or less: (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 45 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraphs (c) or (d) of this article:

(1) Before conveying the interest, the licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

(2) Before conveying the interest, the licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved Exhibit R or approved report on recreational resources of an Exhibit E; or, if the project does not have an approved Exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include covenants running with the land adequate to ensure that: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; and (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project.

(4) The Commission reserves the right to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised Exhibit G or K drawings would be filed for approval for other purposes.

(g) The authority granted to the licensee under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

(H) This order is issued under authority delegated to the Director and is final unless appealed under Rule 1902 to the Commission by any party within 30 days from the issuance date of this order. The licensee's failure to appeal this order shall constitute acceptance of the license.

Kenneth M. Pusateri
Acting Director, Office of
Hydropower Licensing

SAFETY AND DESIGN ASSESSMENT
BIRCH CREEK PROJECT
FERC NO. 7194-001--IDAHO

I. EVALUATION OF DESIGN, CONSTRUCTION AND PERFORMANCE

The proposed Birch Creek Project would be located on Birch Creek, near Idaho State Highway 28, in Clark County, Idaho.

The Birch Creek Project would consist of a 10-foot-high, earthen diversion dam that would create an insignificant amount of impoundment; a 34,900-foot-long earthen feeder ditch; a 48-inch-diameter steel penstock approximately 15,900 feet long; and a prefabricated steel powerhouse containing a Francis turbine and a 2850-kW generator unit.

The applicant would operate the project as a run-of-river facility diverting up to 75 cfs from Birch Creek. During the 7-month irrigation season (April 15 to November 15), flows exiting the powerhouse would be returned to Reno Ditch for delivery to downstream irrigators. During the non-irrigation season, all flows through the powerhouse would be returned to Birch Creek via the project's outfall channel.

Our review indicates that the upstream and downstream slopes of the proposed small homogeneous earthfill dam are within the standard ranges recommended for small dams by the U.S. Bureau of Reclamation (P.265, Design of small Dams, 1977). The dam would impound only an insignificant amount of water and its failure would not cause loss of downstream life or property damage. There are no engineering problems which would make the construction, operation and maintenance of the project infeasible.

Construction of the project is estimated to be completed within 20 months from the date the license is issued. Article 301 would provide the licensee adequate time to initiate and complete construction.

Since the details of the design and construction procedures have not been finalized, article 302 should be included in the license requiring the licensee to submit a copy of final contract plans and specifications prior to start of construction.

Article 303 requires the licensee to review and approve the design of contractor-designed cofferdams and deep excavations to ensure that construction is consistent with the approved design.

Article 304 requires the filing with the Commission of as-built exhibits. The license will be amended to include these revised exhibits.

The project will be safe and adequate if constructed in accordance with sound engineering practices.

II. *EXHIBITS*

The following portions of Exhibit A and the following Exhibit F drawings conform to the Commission's rules and regulations and should be included in the license.

Exhibit A Paragraphs (1) through (2) of the application filed on February 21, 1985.

Exhibit F - Drawing	FERC No. 7194-	Description
1 (Rev)	1	Diversion Structure
2	2	Canal Section
3 (Rev)	3	Bypass Headworks
4	4	Typical Canal Section
6	6	Inlet Canal Section
7	7	Powerhouse - Plan
8	8	Powerhouse - Elevation

There exists a finite number of economically feasible hydroelectric sites. Generally, hydro sites are selected based on the availability of adequate streamflow, favorable topography, i.e. sharp vertical drop in a short horizontal distance, accessability, power transmission distance and minimum streamflow and fishery requirements. This site has been selected for development by the applicant and alternatives are either to construct or not construct the project.

If the project is not constructed, the energy represented by falling water will continue to be wasted and the power that would have been developed will be provided by non-renewable fuels, a negative influence on energy independence. With regard to considering other non-passive renewable resources in lieu of the project, it is presumed they will be installed when commercially and economically feasible. Likewise, whether the project is built or not, installation of passive renewable resources and conservation efforts will continue until the market saturates or economic feasibility becomes unfavorable.

III. RESOURCES DEVELOPMENT

A. Purpose

The proposed project would provide an estimated average annual generation of 15,500,000 kWh for use by the Utah Power and Light Company.

B. Hydroelectric Power and Resources Utilization Evaluation

The proposed project would operate run-of-river. The 2.85-MW power plant would operate when the stream flows available for generation are between 25 cfs and 75 cfs. The project will not have any dependable capacity.

We have made an independent study of hydropower potential at the proposed project site based on streamflows recorded at the U.S. Geological Survey Gaging Station #13117030 on Birch Creek. Our study found that the average annual energy generation would be 9.4 GWh instead of 15.5 GWh as estimated by the applicant. The difference can be attributed to the different flow duration curves the energy calculations were based on. The applicant used an annual duration curve where as we used separate monthly duration curves. We believe our estimate is more accurate because measurable flows at the stream gage are available only during irrigation season (i.e. April through September) each year.

Power generated by the project would be sold to Utah Power and Light Company. Based on the power sale contract between Utah Power and Light and Robert Fackrell, filed on February 5, 1986, 13.0 percent of cost of money, and an average annual energy production of 9.4 GWh, the project would be economically feasible.

Agency comments received at this time regarding the construction and operation of the proposed powerplant do not impact on the safety, adequacy or economic feasibility of the project.

Alternatives to the Proposed Project

Hydroelectric projects are unique in the electric power generation field because of their rugged machinery, high reliability, low operation and maintenance costs, long life, and use of a renewable resource. These characteristics plus a guaranteed market under PURPA and tax advantages such as rapid depreciation and energy credits have made small hydroelectric project development an attractive business venture and have fostered a considerable amount of competition for the more feasible hydroelectric projects.

Form L-2
(Revised October, 1975)

FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR
UNCONSTRUCTED MAJOR PROJECT
AFFECTING LANDS OF THE UNITED STATES

Article 1. The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

Article 2. No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: Provided, however, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

Article 3. The project works shall be constructed in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

Upon the completion of the project, or at such other time as the Commission may direct, the Licensee shall submit to the Commission for approval revised exhibits insofar as necessary to show any divergence from or variations in the project area and project boundary as finally located or in the project works as actually constructed when compared with the area and boundary shown and the works described in the license or in the exhibits approved by the Commission, together with a statement in writing setting forth the reasons which in the opinion of the Licensee necessitated or justified variation in or divergence from the approved exhibits. Such revised exhibits shall, if and when approved by the Commission, be made a part of the license under the provisions of Article 2 hereof.

Article 4. The construction, operation, and maintenance of the project and any work incidental to additions or alterations shall be subject to the inspection and supervision of the Regional Engineer, Federal Power Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of the project and for any subsequent alterations to the project. Construction of the project works or any feature or alteration thereof shall not be initiated until the program of inspection for the project works or any such feature thereof has been approved by said representative. The Licensee shall also furnish to said representative such further information as he may require concerning the construction, operation, and maintenance of the project, and of any alteration thereof, and shall notify him of the date upon which work will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

Article 5. The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction, maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights of occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

Article 6. In the event the project is taken over by the United States upon the termination of the license as provided in Section 14 of the Federal Power Act, or is transferred to a new licensee or to a non-power licensee under the provisions of Section 15 of said Act, the Licensee, its successors and assigns shall be responsible for, and shall make good any defect of title to, or of right of occupancy and use in, any of such project property that is necessary or appropriate or valuable and serviceable in the maintenance and operation of the project, and shall pay and discharge, or shall assume responsibility for payment and discharge of, all liens or encumbrances upon the project or project property created by the Licensee or created or incurred after the issuance of the license: Provided, That the provisions of this article are not intended to require the Licensee, for the purpose of transferring the project to the United States or to a new licensee, to acquire any different title to, or right of occupancy and use in, any of such project property than was necessary to acquire for its own purposes as the Licensee.

Article 7. The actual legitimate original cost of the project, and of any addition thereto or betterment thereof, shall be determined by the Commission in accordance with the Federal Power Act and the Commission's Rules and Regulations thereunder.

Article 8. The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may be mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

Article 9. The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

Article 10. The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission may direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

Article 11. Whenever the Licensee is directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement, the Licensee shall reimburse the owner of the headwater improvement for such part of the annual charges for interest, maintenance, and depreciation thereof as the Commission shall determine to be equitable, and shall pay to the United States the cost of making such determination as fixed by the Commission. For benefits provided by a storage reservoir or other headwater improvement of the United States, the Licensee shall pay to the Commission the amounts for which it is billed from time to time for such headwater benefits and for the cost of making the determinations pursuant to the then current regulations of the Commission under the Federal Power Act.

Article 12. The operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Commission may prescribe for the purposes hereinbefore mentioned.

Article 13. On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity

for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

Article 14. In the construction or maintenance of the project works, the Licensee shall place and maintain suitable structures and devices to reduce to a reasonable degree the liability of contact between its transmission lines and telegraph, telephone and other signal wires or power transmission lines constructed prior to its transmission lines and not owned by the Licensee, and shall also place and maintain suitable structures and devices to reduce to a reasonable degree the liability of any structures or wires falling or obstructing traffic or endangering life. None of the provisions of this article are intended to relieve the Licensee from any responsibility or requirement which may be imposed by any other lawful authority for avoiding or eliminating inductive interference.

Article 15. The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

Article 16. Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

Article 17. The Licensee shall construct, maintain, and operate, or shall arrange for the construction, maintenance, and operation of such reasonable recreational facilities, including modifications thereto, such as access roads, wharves, launching ramps, beaches, picnic and camping areas, sanitary facilities, and utilities, giving consideration to the needs of the physically handicapped, and shall comply with such reasonable modifications of the project, as may be prescribed hereafter by the Commission during the term of this license upon its own motion or upon the recommendation of the Secretary of the Interior or other interested Federal or State agencies, after notice and opportunity for hearing.

Article 18. So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

Article 19. In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

Article 20. The Licensee shall consult with the appropriate State and Federal agencies and, within one year of the date of issuance of this license, shall submit for Commission approval a plan for clearing the reservoir area. Further, the Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. Upon approval of the clearing plan all clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Article 21. Timber on lands of the United States cut, used, or destroyed in the construction and maintenance of the project works, or in the clearing of said lands, shall be paid for, and the resulting slash and debris disposed of, in accordance with the requirements of the agency of the United States having jurisdiction over said lands. Payment for merchantable timber shall be at current stumpage rates, and payment for young growth timber below merchantable size shall be at current damage appraisal values. However, the agency of the United States having jurisdiction may sell or dispose of the merchantable timber to others than the Licensee: Provided, That timber so sold or disposed of shall be cut and removed from the area prior to, or without undue interference with, clearing operations of the Licensee and in coordination with the Licensee's project construction schedules. Such sale or disposal to others shall not relieve the Licensee of responsibility for the clearing and disposal of all slash and debris from project lands.

Article 22. The Licensee shall do everything reasonably within its power, and shall require its employees, contractors, and employees of contractors to do everything reasonably within their power, both independently and upon the request of officers of the agency concerned, to prevent, to make advance preparations for suppression of, and to suppress fires on the lands to be occupied or used under the license. The Licensee shall be liable for and shall pay the costs incurred by the United States in suppressing fires caused from the construction, operation, or maintenance of the project works or of the works appurtenant or accessory thereto under the license.

Article 23. The Licensee shall interpose no objection to, and shall in no way prevent, the use by the agency of the United States having jurisdiction over the lands of the United States affected, or by persons or corporations occupying lands of the United States under permit, of water for fire suppression from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license, or the use by said parties of water for sanitary and domestic purposes from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license.

Article 24. The Licensee shall be liable for injury to, or destruction of, any buildings, bridges, roads, trails, lands, or other property of the United States, occasioned by the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license. Arrangements to meet such liability, either by compensation for such injury or destruction, or by reconstruction or repair of damaged property, or otherwise, shall be made with the appropriate department or agency of the United States.

Article 25. The Licensee shall allow any agency of the United States, without charge, to construct or permit to be constructed on, through, and across those project lands which are lands of the United States such conduits, chutes, ditches, railroads, roads, trails, telephone and power lines, and other routes or means of transportation and communication as are not inconsistent with the enjoyment

of said lands by the Licensee for the purposes of the license. This license shall not be construed as conferring upon the Licensee any right of use, occupancy, or enjoyment of the lands of the United States other than for the construction, operation, and maintanance of the project as stated in the license.

Article 26. In the construction and maintenance of the project, the location and standards of roads and trails on lands of the United States and other uses of lands of the United States, including the location and condition of quarries, borrow pits, and spoil disposal areas, shall be subject to the approval of the department or agency of the United States having supervision over the lands involved.

Article 27. The Licensee shall make provision, or shall bear the reasonable cost, as determined by the agency of the United States affected, of making provision for avoiding inductive interference between any project transmission line or other project facility constructed, operated, or maintained under the license, and any radio installation, telephone line, or other communication facility installed or constructed before or after construction of such project transmission line or other project facility and owned, operated, or used by such agency of the United States in administering the lands under its jurisdiction.

Article 28. The Licensee shall make use of the Commission's guidelines and other recognized guidelines for treatment of transmission line rights-of-way, and shall clear such portions of transmission line rights-of-way across lands of the United States as are designated by the officer of the United States in charge of the lands; shall keep the areas so designated clear of new growth, all refuse, and inflammable material to the satisfaction of such officer; shall trim all branches of trees in contact with or liable to contact the transmission lines; shall cut and remove all dead or leaning trees which might fall in contact with the transmission lines; and shall take such other precautions against fire as may be required by such officer. No fires for the burning of waste material shall be set except with the prior written consent of the officer of the United States in charge of the lands as to time and place.

Article 29. The Licensee shall cooperate with the United States in the disposal by the United States, under the Act of July 31, 1947, 61 Stat. 681, as amended (30 U.S.C. sec. 601, et seq.), of mineral and vegetative materials from lands of the United States occupied by the project or any part thereof: Provided, That such disposal has been authorized by the Commission and that it does not unreasonably interfere with the occupancy of such lands by the Licensee for the purposes of the license: Provided further, That in the event of disagreement, any question of unreasonable interference shall be determined by the Commission after notice and opportunity for hearing.

Article 30. If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

Article 31. The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

Article 32. The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

Ltr 32-7128 P
32-7136 P

P-7194-001

RECEIVED
SEP 23 1985
Department of Water Resources

UNITED STATES OF AMERICA

FEDERAL ENERGY REGULATORY COMMISSION

Notice of Application Filed with the Commission

(September 17, 1985)

Take notice that the following hydroelectric application has been filed with the Federal Energy Regulatory Commission and is available for public inspection:

a. Type of Application: Major License

b. Project No.: 7194-001

c. Date Filed: February 21, 1985

d. Applicant: Birch Power Company

e. Name of Project: Birch Creek

f. Location: On Birch Creek in Clark County, Idaho, and affecting U.S. lands under the jurisdictions of the Department of Energy and the Bureau of Land Management

g. Filed Pursuant to: Federal Power Act, 16 U.S.C. §§791(a) - 825(

h. Contact Person: Ted S. Sorenson, P.E.
550 Linden Drive
Idaho Falls, ID 83401

i. Comment Date: NOV 18 1985

j. Description of Project: The proposed run-of-river project would consist of: (1) a 10-foot-high earth-fill diversion structure; (2) a small reservoir having normal water surface elevation 5671.0 feet; (3) an 8,200-foot-long, 25-foot-wide trapezodial-shaped feeder canal; (4) a headworks structure and a 7,985-foot-long return channel to Birch Creek; (5) a 26,700-foot-long, 25-foot-wide trapezodial-shaped canal; (6) a screened, concrete intake structure; (7) a 15,900-foot-long, 48-inch-diameter underground steel pipeline/penstock; (8) a powerhouse containing a generating unit rated at 2,850-kW operated at a head of 532 feet and at a flow of 75 cfs; (9) a tailrace to the Reno Ditch having water surface elevation 5122.0 feet; (10) a 37,200-foot-long outfall channel to the Birch Creek Sink; (11) a 2,400-v/12.47-kV transformer; and (12) a 1,700-foot-long, 12.47-kV transmission line.

The application was filed during the term of Applicant's preliminary permit. Applicant estimates that the average annual energy generation would be 15,500,000 kWh and that the total capital cost would be $3,600,000 in 1985 dollars.

k. Purpose of Project: Project energy would be sold to Utah Power & Light Company.

l. This notice also consists of the following standard paragraphs: A3, A9, B, C, D1

A3. Development Application -- Any qualified development applicant desiring to file a competing application must submit to the Commission, on or before the specified comment date for the particular application, a competing development application, or a notice of intent to file such an application. Submission of a timely notice of intent allows an interested person to file the competing development application no later than 120 days after the specified comment date for the particular application. Applications for preliminary permit will not be accepted in response to this notice.

A9. Notice of intent -- A notice of intent must specify the exact name, business address, and telephone number of the prospective applicant, include an unequivocal statement of intent to submit, if such an application may be filed, either (1) a preliminary permit application or (2) a development application (specify which type of application), and be served on the applicant(s) named in this public notice.

B. Comments, Protests, or Motions to Intervene - Anyone may submit comments, a protest, or a motion to intervene in accordance with the requirements of the Rules of Practice and Procedure, 18 C.F.R. §§385.210, .211, .214. In determining the appropriate action to take, the Commission will consider all protests or other comments filed, but only those who file a motion to intervene in accordance with the Commission's Rules may become a party to the proceeding. Any comments, protests, or motions to intervene must be received on or before the specified comment date for the particular application.

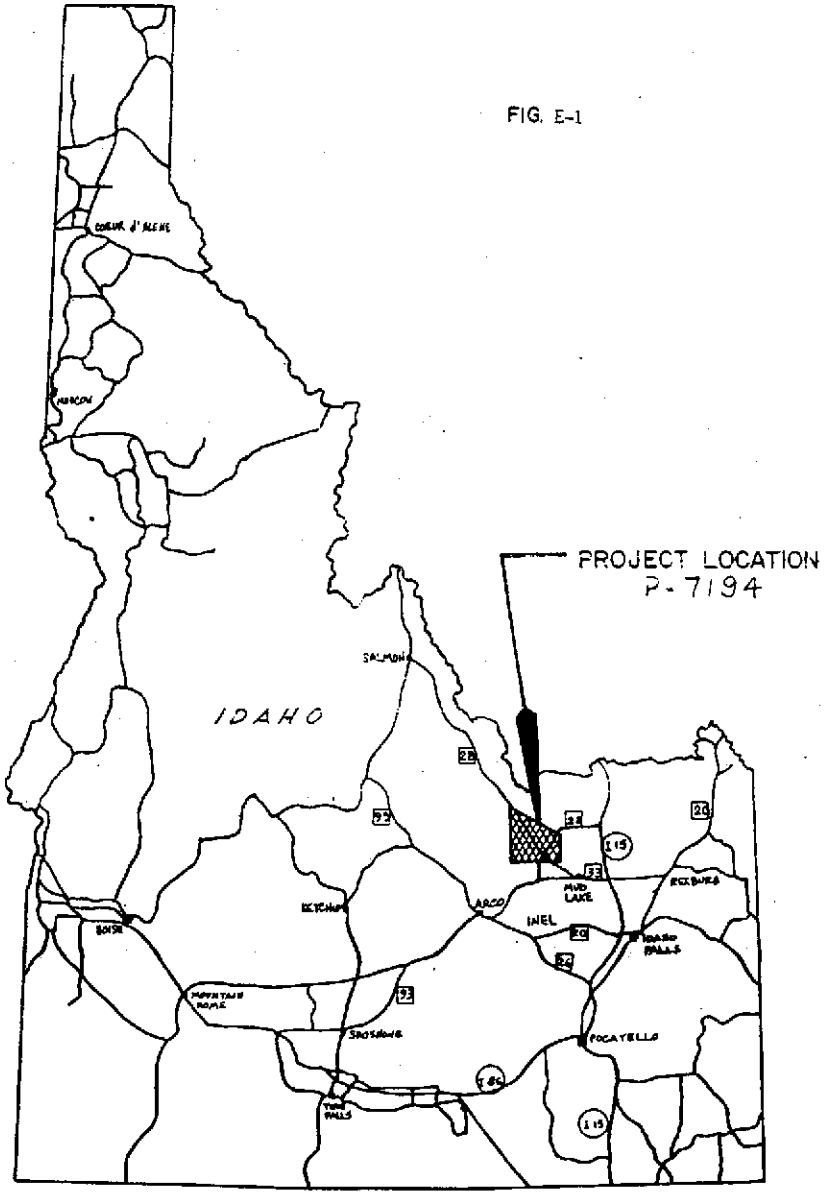
C. Filing and Service of Responsive Documents - Any filings must bear in all capital letters the title "COMMENTS", "NOTICE OF INTENT TO FILE COMPETING APPLICATION", "COMPETING APPLICATION", "PROTEST" or "MOTION TO INTERVENE", as applicable, and the Project Number of the particular application to which the filing is in response. Any of the above named documents must be filed by providing the original and the number of copies required by the Commission's regulations to: Kenneth F. Plumb, Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street, N.E., Washington, D.C. 20426. An additional copy must be sent to: Mr. Fred E. Springer, Director, Division of Project Management, Federal Energy Regulatory Commission, Room 203-RB, at the above address. A copy of any notice of intent, competing application or motion to intervene must also be served upon each representative of the Applicant specified in the particular application.

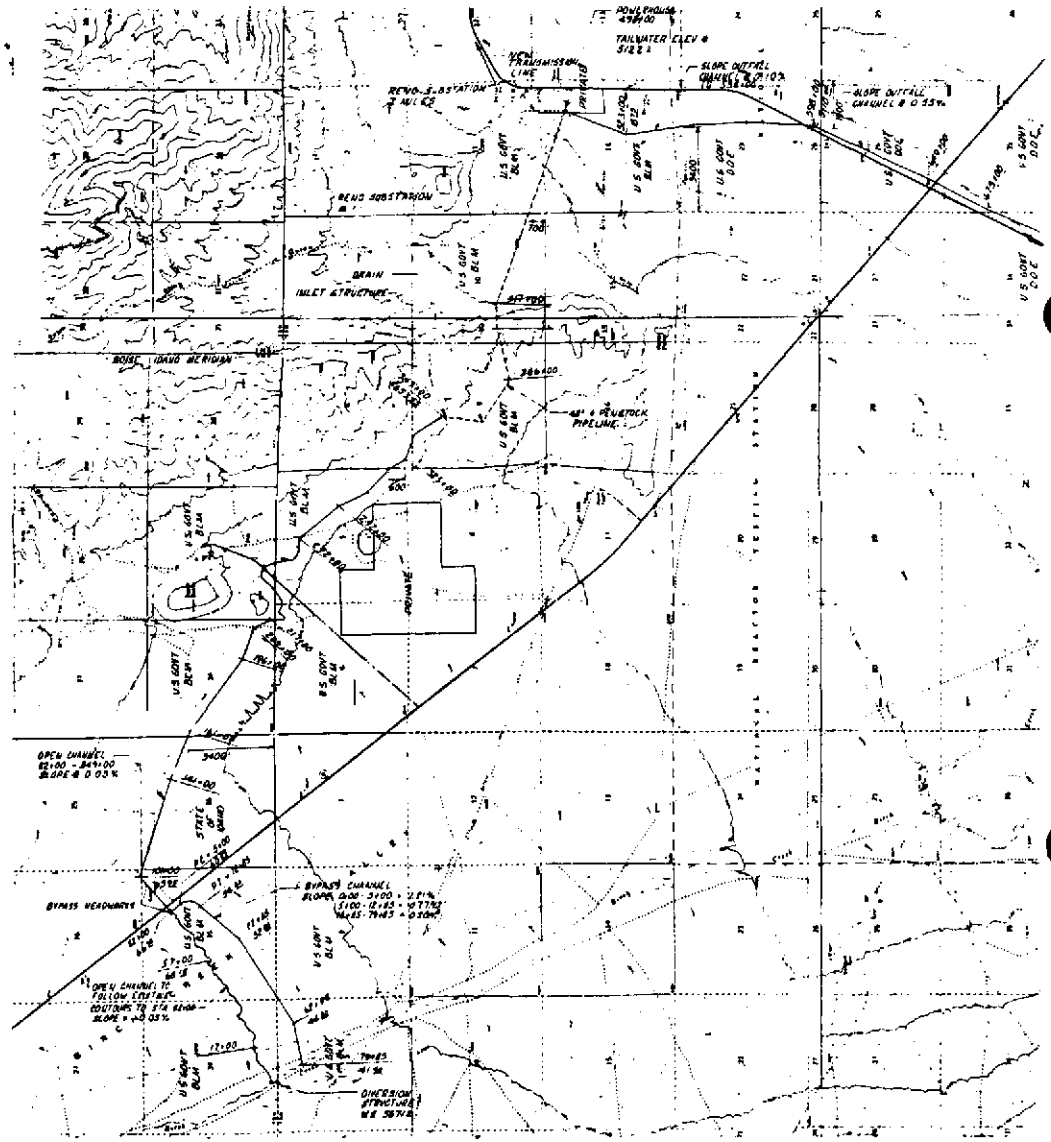
D1. Agency Comments - Federal State, and local agencies that receive this notice through direct mailing from the Commission are requested to provide comments pursuant to the Federal Power Act, the Fish and Wildlife Coordination Act, the Endangered Species Act, the National Historic Preservation Act, the Historical and Archeological Preservation Act, the National Environmental Policy Act, Pub. L No. 88-29, and other applicable statutes. No other formal requests for comments will be made.

Comments should be confined to substantive issues relevant to the issuance of a license. A copy of the application may be obtained directly from the Applicant. If an agency does not file comments with the Commission within the time set for filing comments, it will be presumed to have no comments. One copy of an agency's comments must also be set to the Applicants representatives.

Lois D. Cashell
Acting Secretary

FIG. E-1


COEUR d' ALENE
KETCHUM
SALMON
IDAHO
PROJECT LOCATION
P-7194
BOISE
MOUNTAIN HOME
TWIN FALLS
ARCO
MUD LAKE
INEL
IDAHO FALLS
POCATELLO
BLACKFOOT
93
28
20
26
15
84


RENO SUBSTATION
DRAIN
INLET STRUCTURE
BOISE IDAHO MERIDIAN
PRIVATE
OPEN CHANNEL
BYPASS HEADWORKS
BYPASS CHANNEL
DIVERSION STRUCTURE
U.S. GOVT BLM
U.S. GOVT DOE

State of Idaho
DEPARTMENT OF WATER RESOURCES
STATE OFFICE, 450 W. State Street, Boise, Idaho

JOHN V. EVANS
Governor

A. KENNETH DUNN
Director

Mailing address:
Statehouse
Boise, Idaho 83720
(208) 334-4440

SEPTEMBER 1, 1985

DEAR PERMIT HOLDER:

ACCORDING TO OUR RECORDS, YOU ARE THE HOLDER OF A WATER PERMIT ON WHICH PROOF OF BENEFICIAL USE OF WATER WAS NOT SUBMITTED BEFORE JULY 1, 1985, WHICH INDICATES YOUR PROJECT IS NOT COMPLETE. THEREFORE, YOU NEED TO BE AWARE OF CHANGES IN IDAHO LAW, EFFECTIVE JULY 1, 1985, WHICH IMPACT ALL WATER PERMITS ISSUED BY THIS DEPARTMENT.

SPECIFICALLY, PURSUANT TO SECTION 42-203D, IDAHO CODE, THE DEPARTMENT MUST REVIEW ALL PERMITS FOR WHICH DEVELOPMENT OF WATER USE WAS NO COMPLETED ON OR BEFORE JULY 1, 1985, TO DETERMINE IF THEY MEET THE NEW REQUIREMENTS OF CHAPTER 2, TITLE 42, IDAHO CODE. RULES AND REGULATIONS GOVERNING THE RE-EVALUATION OF PERMITS ARE NOT YET FINALIZED. HOWEVER, IF YOU COMPLETED THE DEVELOPMENT UNDER YOUR PERMIT BEFORE JULY 1, 1985, YOU SHOULD SUBMIT A PROOF OF BENEFICIAL USE STATEMENT, STATING THAT THE PROJECT WAS COMPLETED BEFORE JULY 1, 1985 SO THAT YOUR PERMIT WILL NOT BE SUBJECT TO THE REVIEW REQUIREMENTS OF SECTION 42-203D, WHICH READS AS FOLLOWS:

> 42-203D. REVIEW OF PERMITS - OPPORTUNITY FOR HEARING. - (1)THE DEPARTMENT SHALL REVIEW ALL PERMITS ISSUED PRIOR TO THE EFFECTIVE DATE [JULY 1, 1985] OF THIS SECTION, EXCEPT TO THE EXTENT A PERMIT HAS BEEN PUT TO BENEFICIAL USE PRIOR TO JULY 1, 1985, TO DETERMINE WHETHER THEY COMPLY WITH THE PROVISIONS OF CHAPTER 2, TITLE 42, IDAHO CODE. IF THE DEPARTMENT FINDS THAT THE PROPOSED USE DOES NOT SATISFY THE CRITERIA OF CHAPTER 2, TITLE 42, IDAHO CODE, THEN THE DEPARTMENT SHALL EITHER CANCEL THE PERMIT OR IMPOSE THE CONDITIONS REQUIRED TO BRING THE PERMIT INTO COMPLIANCE WITH CHAPTER 2, TITLE 42, IDAHO CODE. IF THE DEPARTMENT FINDS THAT THE PERMIT SATISFIES THE CRITERIA ESTABLISHED IN CHAPTER 2, TITLE 42, IDAHO CODE, THEN THE DEPARTMENT SHALL ENTER AN ORDER CONTINUING THE PERMIT. (2)THE DEPARTMENT SHALL PROVIDE AN OPPORTUNITY FOR HEARING IN ACCORDANCE WITH SECTION 42-1701A, IDAHO CODE, AND SECTIONS 67-5209 THROUGH 67-5215, IDAHO CODE, FOR EACH HOLDER OF A PERMIT THAT IS PROPOSED EITHER TO BE CANCELLED OR MADE SUBJECT TO NEW CONDITIONS.

YOU MAY OBTAIN PROOF OF BENEFICIAL USE FORMS FROM THE DEPARTMENT. IF YOU HAVE ANY QUESTIONS, PLEASE LET US KNOW.

SINCERELY,

L. Glen Saxton

L. GLEN SAXTON
CHIEF, OPERATIONS BUREAU

JIM JONES
Attorney General
State of Idaho
Statehouse, Room 210
Boise, Idaho 83720
Telephone: (208) 334-2400

RECEIVED
AUG 19 1985
Department of Water Resources

WILLIAM B. DILLON, III
STEPHEN V. GODDARD
Deputy Attorneys General
Idaho Dept. of Fish and Game
600 South Walnut
P. O. Box 25
Boise, ID 83707
Telephone: (208)334-3715

BEFORE THE DEPARTMENT OF WATER RESOURCES OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NOS. 32-7128 AND 32-7136 IN THE NAME OF BIRCH POWER COMPANY	PERMIT NOS. 32-7128 AND 32-7136 OBJECTIONS TO THE TRANSCRIPT
D & D ENTERPRISES, INC. Protestant-Appellant, v. A. KENNETH DUNN, Director, Idaho Department of Water Resources Respondent, and BIRCH POWER COMPANY Applicant-Respondent.	

TO: THE DEPARTMENT OF WATER RESOURCES, ALL PARTIES AND THEIR COUNSEL.

The Idaho Department of Fish and Game hereby objects to certain portions of the transcript filed in this matter. The table

DOCUMENT SCANNED

below shows the objected language and the language Fish and Game believes to be correct.

Transcript	Objected Language	Correct Language
P. 19, L. 3	litigation	mitigation
P. 23, L. 11 & 13	natural	financial
P. 24, L. 15	site	side
P. 31, L. 12	anchors in size	(?)
P. 48, L. 15	Bill M.	BLM
P. 70, L. 14	moral	oral
P. 110, L. 15	preparing	repairing
P. 147, L. 21	they	the

Fish and Game does not desire oral argument on these objections.

DATED This 15th day of August, 1985.

William B. Dillon, III
Deputy Attorney General

JIM JONES
Attorney General
State of Idaho
Statehouse, Room 210
Boise, Idaho 83720
Telephone: (208) 334-2400

CERTIFICATE OF MAILING

I HEREBY CERTIFY That true and correct copies of the foregoing OBJECTIONS TO THE TRANSCRIPT were mailed, postage prepaid, to the following on August 15th 1985:

Ray W. Rigby, Esq.
RIGBY, THATCHER, ANDRUS, RIGBY
& PERKES
25 N. Second East
P. O. Box 250
Rexburg, ID 83440

George C. Petersen, Jr., Esq.
PETERSEN, MOSS, OLSEN, MEACHAM
& CARR
485 "E" Street
Idaho Falls, ID 83401

Phillip J. Rassier, Esq.
Deputy Attorney General
Idaho Dept. of Water Resources
Statehouse
Boise, ID 83720

James A. Esget and Robert McCardy
Bureau of Land Management
920 Lincoln Road
Idaho Falls, ID 83401

William T. Simmons
Dubois, ID 83423

Ben Wilding, Watermaster
Water District No. 32-D
Dubois, ID 83423

WILLIAM B. DILLON, II
Deputy Attorney General
Idaho Dept. of Fish and Game

R9AT185TV

JIM JONES
Attorney General
State of Idaho
Statehouse, Room 210
Boise, Idaho 83720
Telephone: (208) 334-2400

FERC 7194
DA 32-7[illegible], 32-7136

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Idaho Falls District
940 Lincoln Road
Idaho Falls, Idaho 83401

IN REPLY
REFER TO: I-19684

June 19, 1985

RECEIVED
JUN 24 1985
Department of Water Resources

Mr Bob Fleenor
Idaho Dept. of Water Resources
Statehouse
Boise, ID 83720

Dear Mr. Fleenor:

Enclosed for your review is a copy of our environmental assessment of the Birch Creek Water Power Project.

Please submit any comments you may have to this office by July 5, 1985.

Sincerely,

Brent D. Jensen

Brent D. Jensen
Area Manager
Big Butte Resource Area

Enclosure

BIRCH CREEK WATER POWER PROJECT

ENVIRONMENTAL ASSESSMENT

ID-030-5-340

Bureau of Land Management
Idaho Falls District

I. Purpose and Need for Action

The purpose of the project is to construct a diversion ditch across public land which would produce a renewable resource as electrical power for sale to Utah Power and Light Company.

II. Description of the Proposed Action and Alternatives

A. Alternative A - Proposed Action

Birch Power Company proposes to obtain a right-of-way across public land to divert water from Birch Creek through an earthen diversion structure to 34,900 linear feet of earthen feeder ditch and 15,900 linear feet of 48" and/or 42" diameter steel penstock to a power plant. Approximately 0.5 miles of new three phase electrical transmission line will be required.

The proposed right-of-way would be located in:

T. 9 N., R. 30 E., B.M.
Sec. 34: SE1/4SW1/4, S1/2SE1/4, NE1/4SE1/4;
Sec. 35: SW1/4, SE1/4NW1/4, NE1/4, NW1/4SE1/4;
Sec. 26: SE1/4SE1/4

T. 9 N., R. 31 E., B.M.
Sec. 34: S1/2NW1/4, NE1/4SW1/4, N1/2SE1/4, SE1/4SE1/4;
Sec. 35: S1/2SW1/4.

T. 8 N., R. 31 E., B.M.
Sec. 4: SW1/4SW1/4;
Sec. 5: NE1/4NW1/4, W1/2NE1/4, SE1/4NE1/4, E1/2SE1/4;
Sec. 6: NE1/4NE1/4;
Sec. 9: E1/2NW1/4, NE1/4SW1/4, N1/2SE1/4;
Sec. 10: N1/2SW1/4, E1/2SE1/4, SE1/4SE1/4;
Sec. 11: S1/2SW1/4;
Sec. 14: NE1/4NW1/4, NE1/4, W1/2SE1/4;
Sec. 23: W1/2NE1/4, W1/2SE1/4;
Sec. 26: W1/2NE1/4, SE1/4NW1/4, W1/2SW1/4, SW1/4SW1/4;
Sec. 34: SE1/4NE1/4, SE1/4;
Sec. 35: W1/2NW1/4.

T. 7 N., R. 31 E., B.M.
Sec. 3: W1/2NE1/4, NW1/4SE1/4, E1/2SW1/4;
Sec. 9: E1/2SE1/4,
Sec. 16: N1/2NE1/4, SW1/4NE1/4, NW1/4SE1/4

T. 8 N., R. 30 E., B.M.
Sec. 2: NW1/4NW1/4;
Sec. 3: N1/2NE1/4, NE1/4NW1/4

(See Attachment 1 of EA and Exhibit 1A of FERC application.)

The water would then be routed to either irrigation or returned to Birch Creek through an earthen ditch.

All of the preceeding would be new construction. No existing dams or impoundments would be utilized. The mode of operation would be run of the river. (See Exhibits G-2A and G-2B of FERC application)

(1)	(i)	Existing & Future Generating	None
		Proposed Generating Unit	One
		Proposed Generating Output Capacity	2850 KW
	(ii)	Type of Hydraulic Turbine	Impulse or Reaction Type (Frances)
	(iii)	Power Plant Operation	Manual Start, Auto Shut Down, Run of the River
	(iv)	Average Annual Generation	15.5 x 10^6 KW-HRS
	(v)	Power Plant Design Head	532 feet
		Power plant Average Head	518 feet
	(vi)	Area of Pipeline Intake Forebay	1/3 acre
		Surface Elevation	5653.5
		Net Storage	2/3 acre-ft.
		Gross Storage	2 acre-ft.
	(vii)	Plant Hydraulic Capacity	75 cfs
		Average Birch Creek Flow	49.9 cfs
	(viii)	Earthen Dam	10' high compacted native soils
		Feeder Ditch	34,900 L.F. Open Channel Trapezoidal Earthen - 85 cfs capacity
		Intake Facility	Concrete w/Steel Bar Screen
		Penstock	15,900 L.F. 42" and/or 48" diameter steel pipe
		Powerhouse	Concrete base, prefabricated steel building
		Transmission Line	0.5 miles new 3 phase, 12.4 KVA to existing Utah Power & Light Transmission Line.

		Reno Subcircuit #1 located 7 miles from Reno Substation. 3 - #I/O ACSR Conductors 1 - #2 ACSR Conductor
	Generator Voltage	2400 volt
	Transformer	One (1) 3,000 DVA, 7200/ 12470Y 2,400 volt, Pad Mounted Transformer
(ix)	Estimated Project Capital Cost	$3,600,000.00

The applicant proposes to leave 5 cfs to permanently bypass the proposed diversion to flow downstream for riparian habitat maintenance to, and beyond, the Reno Ditch Diversion.

The applicant proposes to develop the first 1.5 miles of the new feeder ditch into a fisheries habitat. This area would be fenced. (See Riparian Habitat plan included in FERC application.)

The project would essentially divert all the water from Birch Creek at the proposed diversion except 5 cfs (to a maximum of 75 cfs). This amount would then be routed through the feeder ditch penstock to the powerhouse. All waters emanating from the powerhouse would be available for downstream irrigation use.

An approximately 10' high diversion structure would be placed in Birch Creek to divert waters into the proposed feeder canal. The 10' high diversion structure would provide approximately two acres of surface area varying in depth from 2 to 8 feet. The pond would provide a pool during winter conditions for accumulation of slush ice that occasionally occurs in Birch Creek. This would allow a reservoir for this ice so water could be routed downstream to the fisheries habitat reach. This would also provide water flow continuity for powerplant operation.

The proposed action includes extensive mitigation requirements to allow maximum opportunity to replace riparian habitat. About 34,900 feet of new ditch would be developed in three phases. Each phase would be designed to establish riparian vegetation under a specific timeframe.

The riparian zone canal section design (Exhibit F-2 in FERC application) would be installed along the entire ditch. The only exception would be where steep slopes prohibit this design. The primary riparian zone would be varied from 2 to 30 feet on either side of the ditch. An average riparian width (both sides of the stream) of 25 feet is would be provided in the phase one area (refer to Exhibit G-3 in FERC application). Field design would involve varying the width of the riparian zone as the topography allows (i.e. riparian zone on meanders could be developed 15-30 feet wide while straight runs could be 2-5 feet wide). The top one foot of the sides of the ditch would be left unsealed to allow water percolation into the riparian zone.

Animal crossings would be developed every 1/2 to 3/4 mile by widening the ditch. This would provide a shallow area for animals to wade across. Riffles could be developed at these crossings if needed for fish habitat.

PHASE I

The ditch from Birch Creek to Highway 28 should provide good riparian vegetation diversity and structure averaging 25 feet in width within 5 years. Existing topsoil in this area would not provide suitable characteristics for riparian vegetation production. Riparian soil (silt loam, loam or sandy loam textures) capable of growing cottonwood, willow, rose, birch and a diversity of grasses and forbs is necessary. Riparian soil with these characteristics would be placed in the riparian zone to average 1 foot deep (about 5,000 cubic yards would be required). The old Birch Creek channel provides this type of material. Care would be taken not to compact the soil with heavy equipment. Hauling would be accomplished in the fall to prevent excessive soil drying. Substrate soils should allow sufficient drainage to support cottonwoods. Alkalinity of riparian soil should not be high enough to inhibit establishment of cottonwood, rose and willow species. Both sides of the ditch would be fenced to exclude livestock with two watergaps provided for cattle access to drinking water. The ditch should be meandered as topography allows.

Reseeding would be done the fall following ditch construction. The riparian zone would be flood irrigated twice a week during the summer until the woody vegetation has become established. Grasses and forbs would be broadcast seeded and covered with soil by mechanical means (i.e. dragging a chain behind a tractor). Woody species would be planted as nursery starts and clumped in areas of deeper topsoil. Native willows starts and birch seeds would be collected on site and grown in a nursery for one year before planting. Willows would be planted close to the stream edge, where maximum soil moisture would promote survival. Cottonwoods would be planted on meanders where riparian is at least 2 feet deep. Native sedges would be transplanted in mats from other parts of Birch Creek. Other follow-up plantings may be required depending on success of the first attempt.

A mixture of native and exotic species would be planted to improve diversity. The following species list is a guide and would be updated prior to planting:

Trees and shrubs

Black Poplar	Populus trichocarpa
Narrowleaf Cottonwood	Populus angustifolia
Black Birch	Betula occidentalis
Willow	Salix spp
Rose	Rosa spp
Honeysuckle	Lonicera spp
Big Sagebrush	Artemisia tridentata
Rabbitbrush	Chrysothamnus spp.
Russian Olive	Elaeagnus angustifolia
Three tip Sagebrush	Artemisia tripartita

Grasses and Sedges

Orchard grass	Dactylis glomerata
Basin Wildrye	Elymus cinereus
Bluebunch wheatgrass	Agropyron spicatum
Brome	Bromus spp.
Western wheatgrass	Agropyron smithii
Idaho fescue	Festuca idahoensis
Alta fescue	Festuca arundinacea
Pine grass	Calamagrostis rubescens
Timothy	Phleum pratense
Watersedge	Carex aquatilis
Beaked sedge	Carex rostrata
Nebraska sedge	Carex nebraskensis

Forbs

Alfalfa	Medicago sativa
Small Burnet	Sanguisorba minor
Aster	Aster spp.
Western Yarrow	Achillea lanulosa
Dandelion	Taraxacum spp.
Eriogonum	Eriogonum spp.
Scarlet Globemallow	Sphaeralcea spp.
Milkvetch	Astragalus spp.
Goatsbeard	Tragopogon
China lettuce	Lactuca spp.
Columbine	Aquilegia spp.
Monkey flower	Mimulus spp.
Butter and eggs	Linaria vulgaris
Parsnip	Sium spp.
Buttercup	Ranunculus spp.

The topsoil source would be reseeded to dryland species the fall following soil removal. Six to 12 inches of topsoil would be left at the site to facilitate reseeding operations. Certain species would be seeded with a rangeland drill while others could be broadcast and covered. The following species list is a guide and would be updated prior to planting:

Shrubs

* Big Sagebrush	Artemisa tridentata
* Shadscale	Atriplex confertifolia
+ Fourwinged saltbush	Atriplex canescens
* Three tipped Sagebrush	Artemisia tripartita
+ Winterfat	Ceratoides lanata
+ Rabbitbrush	Chrysothamnus spp.

Grass

* Crested Wheatgrass	Agropyron cristatum
* Russian wildrye	Elymus giganteus
* Bluebunch wheatgrass	Agropyron spicatum
* Giant wildrye	Elymus cinereus

Forbs

+ Eriogonum	Eriogonum spp.
+ Small burnet	Sanguisorba minor
+ Lewis flax	Linum Lewis
+ Goatsbeard	Tragopogon spp.
+ China lettuce	Lactuca spp.
+ Alfalfa	Medicago sativa

* - Drill seeded species
+ - Broadcast seeded species

PHASE TWO

Development of a riparian zone averaging 14 feet in width along the ditch from Highway 28 to Scott Butte would be complete within 10 years. This area would be developed similarly to phase one except the topsoil that currently occurs in the area would be used (no hauling from the old channel). Flood irrigation would not be controlled, although some spring flooding could be expected. Establishment of seeded species and nursery stock would be more difficult.

Silt loam and loam topsoil would be stockpiled during ditch construction and replaced in the riparian zone to a 1-2 foot depth. Soil alkalinity would be tested and adjusted through gypsum treatment to fall within the range for cottonwood establishment.

Riparian topsoil preparation and reseeding would be accomplished as stated in phase one. Reseeding of understory vegetation would be accomplished the fall following completion of the ditch. Woody species would be planted to provide vertical structure within 10 years. A fence with 3 livestock watergaps would be constructed along both sides of the ditch. Woody vegetation would be clumped as stated in phase one. The species list would be similar to phase one with more emphasis on drought tolerant species. Follow-up plantings would be required depending on the success of the first attempts.

Small ponds and marshes would be created in the phase two area for slow water and thick shrub habitat. This operation would begin after 5 years of monitoring water levels in the new ditch to determine proper placements.

PHASE THREE

Development of a riparian zone averaging 8 feet wide along the ditch from Scott Butte to the penstock would be complete within 15 years. No special ditch design would be required. Berms would be topsoil reclaimed from the ditching operation and then reseeded. This area would require experimentation with different species and establishment would be more difficult than the phase one or phase two area.

Reseeded species would be the same as in phase one with more emphasis on tree and shrub species. Willows and cottonwoods would become established on the edge of the ditch, although some treatment for alkalinity may be required. A tree and thick shrub environment in the phase three area would provide productive bird habitat where fishing opportunity would be lacking.

PIPELINES

Drinking facilities for livestock and wildlife would be developed to maintain current distribution patterns. Pipelines must be functional when the water is diverted. Wildlife waterers would be constructed on livestock trough overflow areas. These would consist of a 500 gallon guzzler tank unless a year-round flow is provided. A one-acre fenced exclosure would be built around the overflow area. Plantings of riparian species would be attempted in these overflow areas. Livestock troughs and associated wildlife waterers would be constructed as follows (refer to map, Exhibit G3):

Pipeline (#1): 1-1/4 miles with cattle trough located in the NW1/4SW1/4 Section 1.

Pipeline (#2): 1 mile with sheep troughs located in the SW1/4NE1/4 Section 17.

Pipeline (#3): Flow of water in the old Birch Creek channel below the hydro diversion would consistently reach Section 14. If not, then an extension of pipeline #1 or #2 (about 2 miles) would be needed to place water in sheep troughs located in SE1/4 of Section 13.

Sheep Troughs (#4): These troughs are necessary in the SW1/4SE1/4 of Section 10.

Pipeline (#5): Water would be available in the first 2 miles of the outfall ditch during the months of December through February and April through June. If not, a 1-1/4 mile pipeline to sheep troughs located in NE1/4NE1/4 Section 22 would be necessary. During the months of May and June, this need can be satisfied by providing water in the NE1/4 Section 14.

Pipeline (#6): If the Water Resources' final decision regarding flow in the old Birch Creek channel does not assure adequate water for livestock below the creek crossing fence in the NW1/4 of Section 3, then sheep troughs would be needed there. (No wildlife waterer needed.)

For development #1, two 500-gallon troughs with a recharge capability of 5 gallons per minute would be necessary. For developments #2 through #6, five 500-gallon troughs with a 5 gallon per minute recharge would be necessary.

Pipelines would be 1-1/4" plastic pipe buried at a depth of about 18 inches. Fencing would be four wire (barbed) with steel posts one rod apart. Animal crossings would be shallow fords or bridges. About five miles of channel would be fenced on both sides. Seven animal crossings would be provided. The map (Exhibit G3 of FERC Application) shows the location of these developments.

B. Alternative B

Under Alternative B, all flows would be diverted from Birch Creek (except for 11%, 5 CFS or the amount of water saved by the new ditch, whichever is least) through the feeder ditch 34,500' to the penstock intake. The water would then be routed 5,000' to the powerhouse through a 42"-48" diameter steel pipe. Only the route and length of the penstock differ between Alternatives A and B. The feeder ditch remains the same between these two alternatives. (See Attachment 1 and 2). Alternative B was the applicant's original proposal. Due to the outfall of the ditch, Alternative A would be more economically feasible. Under Alternative B the applicant would not be able to do the mitigation required by the Bureau of Land Management because of the economics involved.

C. Alternative C - No Action

The application would be rejected.

III. Affected Environment

WATER QUALITY

Birch Creek is a springfed stream draining an area of about 400 square miles composed of two mountain ranges, the Beaverhead and Lemhi. These ranges are composed primarily of sedimentary rocks including sandstone, limestone, and quartzite. Above Lone Pine, Idaho a few outcrops of volcanic material is present. Drainage area figures are referenced from the Eight-Mile Canyon Road U.S. Geological Survey (USGS) stream gage (13117030) near Reno, Idaho. This gage is located in T. 9 N., R. 30 E., Sec. 28 and is located approximately 1.6 river miles above the proposed feeder ditch diversion for this project.

The large drainage area, numerous springs and geologic struture within the basin contribute to the rather stable flow patterns observed in the stream. Water quality, as in most spring fed streams with stable flow patterns, is

good to excellent. The stream is highly buffered, has high levels of dissolved oxygen and supports a blue ribbon trout fishery composed of wild trout supplemented with hatchery catchable trout. Suspended sediment and bedload transport consists primarily of materials scoured from streambanks with little contribution from offstream sources.

WATER QUANTITY

Flows in Birch Creek near the project area have been recorded at two USGS stream gages: Birch Creek at Eight-Mile Canyon Road, near Reno, Idaho (13117030) located about 1.6 stream miles above the proposed feeder ditch diversion and Birch Creek at Blue Dome Inn, near Reno, Idaho (13117020) located about 5.3 stream miles above the proposed diversion. Flow records exist for the two gages for the following periods: 13117030, Eight-Mile Canyon - June 1967 to September 1981 (reopened Spring 1984); 13117020, Blue Dome - June 1967 to September 1981 (reopened Spring 1985).

Peak flows of record for these periods are:
13117030 - 108 cf July 31, 1969
13117020 - 149 cfs July 30, 1969

Minimum recorded flows are:
13117030 - 11 cfs July 5, 1967
13117020 - 47 cfs June 26-29, 1977

Average flow at the Eight-Mile gage for months April-September are 45.2 cfs for the existing period of record.

In the past few years, all flows have been diverted from Birch Creek at the Reno Ditch diversion, located about 3,500 feet below the proposed diversion (2.3 miles below the Eight-Mile gage), during irrigation season and for periods during non-irrigation season. Winter flows are diverted down Reno Ditch when channel ice conditions in the ditch allow passage of the diverted flows.

Groundwater surface elevations lie generally well below (over 100') the land surface downstream of the Blue Dome gage past the project area and along Reno Ditch. Fine channel sediments transported by Birch Creek act to seal the channel bottom through filling of interspaces between bottom aggregate materials. This seal acts to reduce percolation losses through the channel bottom to the groundwater system. Even with the sealing action, measured losses in Birch Creek range from 1.5 cfs to 2.5 cfs per mile below the Blue Dome gage. Similar losses were measured in the Reno Ditch as shown in Mr. Sorenson's FERC application.

One hundred year flood estimates at the Eight-Mile Road gage using a Log-Pearson distribution with computed skew indicated a flow of about 145 cfs based upon 15 years of record. (Use of regionalized skews reflecting rainfall only indicated a flow of about 141 cfs while use of a regional rainfall and snowmelt skew obtained a value of 134 cfs).

WATER RIGHTS

Existing water rights within the Birch Creek Valley and near the project area are the result of adjudication proceedings which took place in 1922. Reno Ditch rights totaled 29.77 cfs under the Reno vs. Richards decree. Priority dates in that decree range from 9/10/1882 to 5/15/1913. On April 10, 1984, the Bureau of Land Management filed a claim for 4.54 cfs, claim #32-4062 (June 28, 1934 priority) for stock watering from the open channel below the proposed diversion. Mr. Sorenson has made water right application for hydropower uses under permit applications: 32-7128 for 45 cfs and 32-7136 for 30 cfs.

In a recent decision by the Water Resources Department on protests of the Sorenson applications 32-7128 and 32-7136, the Department ruled in favor of approval. For flows below the proposed feeder ditch, the Department fuled that the amount of water to remain in the channel below the proposed diversion would be 11% of the flow of Birch Creek, 5 cfs or the amount of water saved in the new ditch, whichever is least. The BLM has submitted a letter to the Department indicating that the criterion of "the amount of water saved in the new ditch" could impact claim # 32-4062 by the BLM. The BLM indicated that at such time as damage to the claim could be clearly shown from the stipulation, then the BLM would request a supplementary adjudication of that claim through the courts. Unit that time the BLM would abide by the Department's decision.

FISHERIES

(1.) Populations - Rainbow trout (Salmo gairdneri) are essentially the only salmonid fish species present in the project area, although brook trout (Salvelinus fontinalis) are reported to be present in the drainage. Both wild rainbow and hatchery rainbow are present in most reaches of the stream. Idaho Department of Fish and Game plant approximately 20,000 catchable-sized hatchery rainbow trout in the lower portion of the river each year. Fish populations examined by BLM and Idaho Fish and Game personnel in October 1982 revealed only wild rainbow populations of 296 trout per mile and 434 trout per mile at the two sites near the project area. Trout size averaged about 8.5 inches at both sites. Shorthead sculpin were sampled at both sites. Populations in Reno Ditch were very low and will be considered negligible.

(2.) Fish Habitat - Stream invertebrate diversity and abundance indicate a moderately high level of production on a substrate of cobble and gravel. Availability of invertebrates for trout feed is good.

According to Stream Survey Reports by BLM and Idaho Fish and Game personnel produced in July 1976, 9% of total channel area near the project is composed of pool structure. Channel shade is also very low. Actual riparian vegetation by area was assessed using low level color infared aerial photos and the Linear Measuring System in the BLM State Office (see riparian section). Pool-Riffle ratio is poor to fair below the proposed diversion.

(3.) Current Fishery Management Plan Objectives - Existing BLM Management Plans call for an increase in deep water habitat by 100% and for an increase in average fish size from 8.5 inches to 10.5 inches in the lower seven miles of stream above Reno Ditch. Idaho Fish and Game objectives include the maintenance of the current catch rate of about one trout per angler-hour.

Past management actions to improve stream depth in these lower seven miles include: the construction of several K-dam structures (14), digger logs (5), large rock placements and gabions (5). Monitoring results after habitat improvement showed increases in trout populations of 240 percent to 860 percent. After ten years reported increases appeared to stabilize at 300-400 percent. No improvement structures were placed below the proposed diversion.

TERRESTRIAL WILDLIFE

The riparian zone on Birch Creek produces vegetative characteristics that various wildlife species depend on for forage, cover and breeding. The presence of surface water supports a diverse system of flora and fauna unique in its richness when compared to the adjacent sagebrush plains. The riparian zone on Reno Ditch is smaller and less diverse than that of Birch Creek. It has, however, developed some woody and succulent vegetation that adds structure and diversity to the otherwise dry non-alluvial area between the Reno Ranch and Birch Creek.

Some terrestrial species are riparian obligates. Without water and succulent vegetation, they would not be present. Examples of these species on Birch Creek include mallards (Anas platyrhynchos), beaver (Castor canadensis), black-crowned night herons (Nycticorax nycticorax), and belted kingfishers (Megaceryle alcyon). Other species benefit from the riparian zone but would be present, although not as prolific, without it. Examples of these non-obligate species on Birch Creek include pronghorn antelope (Antilocapra americana), sage grouse (Dendragapus obscurus), mourning dove (Zenaidura macroura), and black-billed magpies (Pica pica).

Table 1 is a list of common names of birds observed on Birch Creek by Glenn DeVoe (Big Butte Resource Area Range Conservationist). The list indicates whether or not the species is a riparian obligate. The required components are identified for the obligatory species. For the nonobligates, the components of the riparian zone that improve the quality of their environment are listed.

The endangered bald eagle occurs in the area during the winter only. Swainsons and ferruginous hawks occur in the area during spring, summer, and fall. Some nesting of these hawks may occur along the lower Reno ditch. These hawks are on the sensitive species list as candidates for threatened and endangered species listing.

Table 1

Common Name	Obligate	Component
Violet-green swallow	yes	water, trees, insects
Tree swallow	yes	water, trees, insects
Cliff swallow	yes	water, insects
Spotted sandpiper	yes	water, insects
Black-crowned night heron	yes	water, trees
Canada goose	yes	slow water, succulent forbs
Mallard	yes	slow water, succulent forbs
Green winged teal	yes	slow water, succulent forbs
Blue winged teal	yes	slow water
Cinnamon teal	yes	slow water, thick shrubs
Yellow-rumped warbler	yes	water, thick shrubs, insects
Yellow warbler	yes	water, thick shrubs, insects
Yellow throat	yes	water, thick shrubs, insects
Wilson's warbler	yes	water, thick shrubs, insects
Great Blue heron	yes	water
Snipe	yes	water, thick shrubs
Black-chinned hummingbird	yes	succulent forbs
Rufus hummingbird	yes	succulent forbs
Calliope hummingbird	yes	succulent forbs
Belted kingfisher	yes	water, trees
Red-winged blackbird	yes	water, insects
Brewers blackbird	yes	water, insects
Yellow-breasted chat	yes	water, thick shrubs
Hermit thrush	yes	water, thick shrubs
Ruby-crowned kinglet	yes	water, thick shrubs
Golden-crowned kinglet	yes	water, thick shrubs
Black-capped chicadee	yes	trees
Bald eagle	no	trees.
Sage grouse	no	succulent forbs, insects
Common flicker	no	trees
Eastern kingbird	no	trees
Black-billed magpie	no	trees
Common crow	no	trees
American robin	no	trees
Killdeer	no	water
Northern oriole	no	trees, water
Brown-headed cowbird	no	cows
American goldfinch	no	succulent forbs
Great-horned owl	no	trees
Swainson's hawk	no	trees
Red-tailed hawk	no	trees
American kestrel	no	trees
Golden eagle	no	trees
Ferruginous hawk	no	trees
Franklin's gull	no	water

Common Name	Obligate	Component
Meadowlark	no	water, insects
Loggerhead shrike	no	trees, insects
Starling	no	trees
Sagethrasher	no	trees, shrubs, insects
Townsend's solitare	no	trees
Mountain bluebird	no	trees
Western bluebird	no	trees
Nighthawk	no	insects
Western kingbird	no	trees
Say's phoebe	no	water, shrubs
Savannah sparrow	no	insects
Sage sparrow	no	insects
Oregon junco	no	trees
Tree sparrow	no	trees
Brewer's sparrow	no	insects
White-crowned sparrow	no	trees, shrubs
Horned lark	no	*
House sparrow	no	*

*No riparian components were identified for these species as improving their environment.

The structure (height, width and density) and diversity (number of species present) of riparian vegetation determines the quality of habitat to wildlife. Birds are especially responsive to the availability of specific vegetative structure and diversity for breeding (nesting sites), foraging (forbs and berries) and cover (camouflage and thermal). The juxtaposition of vegetative types with different structures determines the quality of habitat for certain wildlife species. Stream flow characteristics may also determine the value of habitat for some species. For example, certain raptors need tall, leafy trees with many branches (i.e. cottonwoods) for nesting sites; Sage grouse need both sagebrush and succulent forbs for security cover and forage during broodrearing; and mallards need slow water pools and succulent forbs for foraging and loafing.

Quantification of habitat on affected portions of Birch Creek and Reno Ditch was performed by analyzation of low-level infared photographs taken in August 1984. Vegetative type delineation was done using the Measuronics Video Graphics System-300, provided by the Soil Conservation Service. Acreage estimates of 5 different habitat types were calculated for about 3,100 feet of Birch Creek and 6,700 feet of Reno Ditch (refer to Attachments 3, 4, and 5). The data from Reno ditch was then extrapolated to include another 15,300 feet of similar habitat from the Reno Diversion to the radio relay tower east of Idaho Highway 28. The remainder of the habitat along Reno Ditch was quantified using field measurements of riparian widths and linear length of ditch. A description of each habitat type delineated follows:

Sage-Grass - Sagebrush-grass types growing in the primary flood plain were delineated. The alluvium soil is rich in nutrients and the vegetative cover of this type is denser than the adjacent upland sagebrush habitats. Low sagebrush (Artemesia arbuscula) associated with lesser amounts of Wyoming big sagebrush (Artemesia tridentata var. wyomingensis) typically dominate this site. Understory production is mixed dryland forbs and sod-forming grasses. These areas are subject to annual flooding associated with winter anchor icing.

Tree-Shrub - This vegetative type is dominated by willows (Salix spp.), black birch (Betula occidentalis) and rose (Rosa spp.)along Birch Creek. These shrubs provide a medium height structure of 15-20 feet. They are thick, however, and do provide good thermal cover. Along Reno ditch, other species including quaking aspen (Populus tremuloides), Russian olive (Elaeagnus angustifolia) and cottonwood (Populus angustifolia) occur in clumps and provde a higher structure of 35-50 feet. The acreage estimates of this type are the actual foliage canopy cover, not basal area of stems. The understory is usually the grass-forb type or water. The lower portions of the Reno Ditch also grow some juniper (Juniperus spp.) and taller willows. A large concentration of stick nests occur in this area.

Gravel bed - This type consists of old meanders on Birch Creek channel which have been closed by irrigators or by natural changes in stream location. They offer some potential for reoccupation of riparian vegetation but currently are gravelly river bottom material.

Grass-Forb - This vegetative type consists of succulent grasses and forbs growing mostly along the streambanks. It occurs on saturated soils where effective moisture is available throughout the summer. Typical species of this site include Sedges (Carex spp.), water hemlock (Circuta douglasii), Kentucky bluegrass (Poa pratensis) and Rocky Mountain iris (Iris missouriensis). This site is the most fragile area in the riparian zone and provides bank stability when in good condition. It is the most susceptible site to damage from stream flow manipulation, grazing and recreation use. However, it usually responds quickly to management designed to protect and enhance vegetative production.

Water - This site consists of surface water as seen from the air. Where the tree-shrub type covers the water, the acreage was not calculated. Acreage was also not calculated for Reno Ditch from the radio tower to Reno Ranch. Much of the water in lower Reno Ditch is shaded by cottonwood, willow, Russian olive and juniper.

Table 2

	Sage-Grass	Tree-Shrub	Water	Gravel	Grass-Forbs
Birch Creek	11.07	3.20	2.57	1.60	1.57
Upper Reno Ditch (Birch Cr.to Radio Tower)		1.30	5.89	0	3.88
Lower Reno Ditch (Radio Tower to private)		8.32	*	0	.49
	11.07	12.82	8.46	1.60	5.94

* Measurement not taken.

The riparian habitat quality was determined by the availability of the components for birds listed on Table 1. Birds are used as an example due to their responsiveness to the presence or absence of these components. This data is summarized in Table 3. Birch Creek provides the highest quality habitat for the most avian species. Upper Reno Ditch is lacking in slow water, trees and thick shrubs. Lower Reno Ditch lacks slow water and succulent forbs but contains the largest concentration of trees and thick shrubs, so species that require these components do best there even though Birch Creek provides more overall values. This comparison was prepared to show the riparian value to the maximum number of avian species.

Table 3

	Water	Slow Water	Trees Shrubs	Shrub Thickets	Succulent Forbs	Total
Birch Creek	5	2	4	4	5	20
Upper Reno Ditch	5	0	1	1	4	11
Lower Reno Ditch	5	0	5	5	2	17

5 = Abundant
4 = Present in Significant Amounts
3 = Adequate for most obligate species.
2 = Sparse
1 = Barely Present
0 = Not available

A list of mammals, reptiles and amphibians occurring in the area is available in the Little Lost-Birch Creek Unit Resource Analysis. Pronghorn antelope, and furbearers would be the primary impacted species from the proposal. Pronghorn benefit from open water and succulent forbs along Birch Creek and Reno Ditch. Furbearers benefit from open water with slow moving water being most desirable. Habitat for these species is currently lacking on Reno Ditch due to the fast water current.

SOILS

Existing soils are described in Mr. Sorenson's FERC application, page E6-10 through 19. These soils are very low in clay, generally have extremely gravelly substrata and are subject to high water seepage loss. Soil mapping units 75EF and G are on steep slopes, are very shallow to bedrock and will require considerable blasting to construct feeder ditch or to bury penstock pipe. All soils have high soil pH, alkalinity and salt content creating problems for riparian habitat except for existing soils on stream bottom soils.

DOMESTIC LIVESTOCK GRAZING

The area is characterized by sagebrush/native grass vegetation types with medium to low overstory height. Two grazing allotments have a common boundary generally along the western 2 miles of Reno Ditch and the Scott Butte road. The north allotment (Spring Canyon) is rotation grazed by cattle during spring west of the highway and winter grazed east of the highway. The south allotment (Mahogany Butte) is rotation grazed by sheep in spring and winter. Further explanation of the project area environment and livestock stocking rates can be found in Chapter 2 of the Little Lost-Birch Creek Range Management Environmental Statement.

Since the document was published (1979) however, range condition has improved from poor to fair as a result of several years of excellent forage production and improved livestock management.

MINERALS

According to current BLM mining claim records (March 12, 1985 microfische), the structures proposed in Alternatives A and B would cross public lands under as many as 60 to 90 mining claims. These public lands are in Sections 4, 5, 6, 8, 9, 10 and 17 of T. 8 N., R. 31 E., and in Section 35 of T. 9 N., R. 31 E., Boise Meridian. The claims are located by Mapco Minerals Corp. of Denver; Nerco Delmar Co. of Portland; Birch Creek Mining Co. of Idaho Falls, Idaho; Robert M. Byrd of Loveland, Colorado and E.J. Wilson and Sons of Lidy Hot Springs, Idaho. No discoveries of economically mineable mineral deposits on the claims have been reported. However, Mapco conducted exploration operations in 1983 that involved the drilling of several holes in the vicinity of the proposed facility. One hole was drilled within 200 feet of the proposed feeder ditch near the center of the E1/2 of Section 5, T. 8 N., R. 31 E.

Most of the prospects and mines that occur in the vicinity of the proposed facility were developed when the nearby Birch Creek Mining District was active from the 1880's through the 1940's. Ore minerals reported to occur in this District include copper, lead, zinc, silver, gold, uranium and iron. Industrial-grade limestone may also occur. The only mine currently active in the area is an open-pit iron mine operated by E. J. Wilson and Sons in the N1/2 of Section 26, T. 9 N., R. 31 E.

Gravel deposits occur throughout most of the lands affected by this proposal. However, there are other sources in the vicinity that have sufficient reserves to satisfy future demands for this mineral material. Several thousand cubic yards of soil, rock and gravel from public lands may be needed in the construction of the proposed structures. Environmental considerations regarding the mining of these materials will be assessed in a separate document.

CULTURAL

Sixteen prehistoric, open campsites are located in or near the project area. These sites are identified by surface lithic tool and waste flake scatters, and pottery fragments. Site's cultural material depths are unknown. Site size varies from a few meters in diameter to extensive scatters 100 meters long and 30 meters wide. Sites represent seasonal, single or intermittant occupation by aboriginal hunters. These sites are found on well drained ground, near old stream channels and near vantage or view points.

Alternative A - Seven sites are located along or near the route of the proposed action. BC-4 is a small surface lithic scatter. It is located between the Birch Creek diversion and return channels, and near stock tank #6. Sites BC-2 and BC-5 are small surface scatters located along the enclosed penstock route. Site 10-CL-142 is an extensive scatter located along the penstock route, and near sites BC-5 and BC-2. Sites 10-CL-48 and 10-CL-70 are mid-sized surface lithic scatters. They are located near livestock pipeline and trough #2. Site BC-1 is a small scatter located near the outfall channel's water release point.

Alternative B - One documented site could be adversely affected by this alternative. Site 10-CL-70 is a prehistoric surface lithic and pottery site. For additional information about the project area's cultural resources, review Final Report on 1976 Cultural Resource Inventory of the Little Lost River-Birch Creek Planning Unit (Kingsbury, 1977).

RECREATION

The primary recreational activity along the 3,500 foot section of Birch Creek that would be effected by the proposed project is fishing. Overnight camping and picnicing occur in conjunction with fishing, but are low because the area lacks developed facilities.

The fishing season is from the Memorial Day weekend in May until the end of September. Most of the fishing effort occurs along Birch Creek below Blue Dome where access is provided on BLM-administered lands. Estimates for 1982 show that 13,866 hours were spent by fisherman in this section of the Creek. (Idaho Fish and Fame, 1982.) An estimated three percent of the total fishing effort or 415 hours are spent in the lower 3,500 feet of Birch Creek. This figure is low because most of the fishing occurs in the first two miles below the John Day Campground, and is centered around developed recreation facilities and fish habitat improvements.

IV. Impacts

A. Alternative A

WATER QUALITY

No water quality components are expected to change substantially with the proposed alternative. The suspended sediment and bedload components may be improved slightly as both the bedload and suspended sediments are deposited in the diversion pond, and as primarily suspended materials are deposited in the feeder ditch. These fine materials would be expected to be deposited in areas of lower velocity such as near the ditch edges and in any pool areas.

WATER QUANTITY

As shown in Mr. Sorenson's FERC application, Page E2-2, 10-12 cfs flow is expected to be saved as a result of sealing to feeder ditch with bentonite and/or soil polymers. Of this 10-12 cfs, 11 percent of existing flows in Birch Creek would be bypassed down the old Birch Creek channel. The remaining portion of the "saved" water would pass through the turbines and become available for Reno Ditch irrigation uses.

Flow losses in the portion of Birch Creek below the proposed diversion would have the following impacts:

1. Reduced flows below the diversion and dewatered portions of Reno Ditch will impact range stock distribution and will affect range utilization (see Range section).

2. A flow of 11 percent or 5 cfs would not allow the maintenance of any fishery in the 3,500 feet of channel on Birch Creek below the proposed diversion and above the Reno Ditch diversion (see Fishery Section).

3. Reduced flows will necessitate the redevelopment of riparian vegetation below the proposed diversion. Significant existing riparian vegetation would be lost as new vegetation forms within the old channel (see the Riparian section).

4. Wildlife in dewatered portions of Reno Ditch would be displaced (see Wildlife section).

Additional water is expected to be available for irrigation uses on private lands along Reno Ditch.

Project design under the preferred alternative is adequate to handle flows in excess of 100-year peak as determined by flood flow analysis.

WATER RIGHTS

There is no expected impact to existing water rights in the project area under the proposed action. If at least 5 cfs were not saved in the new ditch, the Bureau of Land Management would request a supplementary adjudication of claim #32-4062.

FISHERIES

Population - Under this alternative, all fisheries below the proposed feeder ditch would be lost. Populations in this reach average 8.5 inches in length. Total number of trout estimated to be in this reach based upon 1982 electrofishing samples is:

$$\frac{296 + 434}{2} \times \frac{3,500'}{5,280'} = 240 \text{ fish}$$

Fish Habitat - Under this alternative about 3,500' of stream habitat would be lost. This habitat is in poor to fair condition due to shallow water depth and low pool/riffle ratio. Trout would be saved each year that are lost from downstream migration into Reno Ditch and are eventually lost in periods of dewatering into Reno Ditch.

Impacts to Management Objectives - Management objectives for an increase in deep water habitat by 100 percent, increase in average length from 8.5 to 10.5 inches, and maintenance of catch rates of about one trout per angler-hour would be lost in those 3,500' of channel.

TERRESTRIAL WILDLIFE

The proposed action would dewater all of Reno Ditch. Flow would be reduced on Birch Creek below the hydroelectric diversion facility to a maximum of 5 cubic feet per second (5 cfs). Five cfs should reach at least 1 mile down the old channel (below Reno Diversion). This area would no longer receive the winter flows that have occurred after the irrigation season when the Reno Ditch is closed.

The riparian areas impacted by the proposed action will respond differently, depending on the vegetative types present. Wildlife species would adjust to the habitat changes differently, depending on their individual life requirements for the components provided by the riparian zone.

Short term impacts would be negative because the water would be removed from most of the established ecosystem. Long-term impacts should be positive depending on the success of establishing a riparian zone along the new ditch. Extensive measures to attempt to create the new riparian zone are proposed in Alternative A.

The riparian areas impacted by the proposal vary in condition. The Reno Ditch provides good vertical structure of woody species on 9.62 acres. Another 3.37 acres is a narrow strip of succulent grasses and forbs. The old channel below Reno Ditch Diversion still supports about 5 miles of intermittent woody vegetation. Understory vegetation is mostly sod-wheat grass and giant wild-rye due to lack of summer water. Birch Creek between the proposed hydroelectric diversion and Reno diversion supports an excellent diversity of woody species and wet understory.

Succulent grasses and forbs on Reno Ditch will gradually revert back to a sagebrush-grass vegetative type. Some of the woody species may take 10 to 20 years to die out, but the understory should revert to dryland vegetation relatively quickly.

The impacts of the proposal to vegetation on Birch Creek depend on the minimum stream flow allowed past the new diversion. The riparian zone on Birch Creek between the new and Reno diversions would be reduced, but not lost, with a summer-long flow of 5 cfs. Beyond the Reno Diversion, wet vegetation would increase on the old channel for about 1 mile.

A continuous flow of 5 cfs throughout the year would continue to provide a riparian zone on Birch Creek while efforts are made to establish a riparian zone along the new ditch. However, 3,000 feet would trend toward dry vegetation for 40 to 50 years until it adapts to the lesser flow.

The reduced amount of surface water on Birch Creek below the hydroelectric diversion would no longer support fish. Succulent forb and grass production would decline and fewer insects would be available. Wildlife species that require these components would be negatively affected. However, this riparian zone would still provide habitat for many obligate species.

Wildlife species that require open water or succulent forbs for survival would no longer occur on Reno Ditch. Non-obligates to the riparian zone would be affected less than obligates. The thick shrubs and trees would remain for 10 to 20 years to provide habitat for species that do not require open water or succulent forbs. For example, raptors that use trees to nest will continue to occur on Reno Ditch because they do not require water. Various warblers will no longer occur on Reno Ditch because surface water will not be available. Habitat quality for sage grouse would decline because their key components (insects and succulent forbs) would be reduced by dewatering the ditch.

In 20 years, the new ditch should produce a riparian environment that would replace habitat lost below the hydroelectric diversion. Opportunity exists to enhance the riparian ecosystem by providing components currently lacking on the Reno Ditch. No effort to construct a riparian zone along Reno Ditch has been documented. This ecosystem has evolved by itself over 80 years. The labor intensive techniques described in the proposed action should upgrade the current situation by providing more trees, shrubs, forbs and slow water in the long term.

Table #3 shows the acreage figures for the three phases of riparian development outlined in the proposed action. Assuming that water will percolate an average of 5 feet into either side of the ditch enough to produce the grass forb type, phase one and phase two areas combined would provide 5.63 acres of succulents forage. This figure does not include other potential gains from flood irrigating phase one and additional riparian systems created around ponds and marshes in phase two. Long term tree and shrub production should create an average canopy cover of 25 feet along the new ditch. This is a conservative estimate when compared to the production on Birch Creek and Reno Ditch. Sagebrush habitat is plentiful along the new ditch and surface water will remain available throughout the system. Surface water will flow slower than in Reno Ditch or Birch Creek, thus benefiting waterfowl.

Table #3
Riparian Habitat Development Potential
Hydroelectric Diversion Ditch

Area	Linear Feet	Width	Sq/ Feet	Acres	Type
PHASE ONE	8,200	10	82,000	1.88	Grass-Forb
	8,200	25	205,000	4.71	Tree-Shrub
PHASE TWO	16,300	10	163,000	3.74	Grass-Forb
	16,300	25	407,500	9.35	Tree-Shrub
PHASE THREE	10,400	8	83,200	1.91	Grass-Forb
	10,400	25	260,000	5.97	Tree-Shrub

Table #4 compares short term and long term acreage of key riparian habitat features. Emphasis is put on the grass-forb and tree-shrub vegetative types as these provide the lacking components to the most wildlife species. The short term existing environment figures are based on field measurements and air photo interpretation. The long term figures assume a 20 percent increase in riparian habitat over 20 years with existing management. Alternative 1 figures assume a grass-forb community on 5 feet either side of the new ditch after 5 years and an average tree-shrub canopy cover of 25 feet after 20 years.

Analysis of Table 4 shows a long term gain in riparian vegetation in spite of dewatering the Reno Ditch and reducing habitat quality on Birch Creek (80 percent reduction in grass-forb and tree-shrub communities over 20 years.) Wildlife species dependant on trees and shrubs, succulent grass and forbs and open water would benefit in the long term. Short term impacts would include some displacement and mortality for these species but healthy populations will still occur on the unaffected portions of Birch Creek to recolonize the long term habitat gains.

Table 4
Acres of Grass-Forb and Tree-Shrub
Riparian Vegetation

	No Action				Alternative A			
	Short-term		Long-term		Short-term		Long-term	
	G-F	T-S	G-F	T-S	G-F	T-S	G-F	T-S
Upper Reno Ditch	3.88	1.30	4.66	1.56	0	0	0	0
Lower Reno Ditch	.49	8.32	.59	9.98	0	0	0	0
Birch Creek	1.57	3.20	1.88	3.84	1.57	3.20	.31	.6
Hydroelectric Ditch	0	0	0	0				
Phase I					1.88	0	1.88	4.71
Phase II					3.74	0	3.74	9.35
Phase III					1.91	0	1.91	5.97
Total	5.94	12.82	7.13	15.38	9.1	3.20	7.84	20.63

G - F = Grass-Forb vegetative type with open water
T - S = Tree-Shrub vegetative type with open water

Attachment 6 portrays short and long term impacts to birds occuring on Birch Creek and Reno Ditch. This analysis is based on changes in critical habitat components listed on Table 1 and summarized on Table 4. For example, short term impacts to species that require water, trees and shrubs would be negative due to the short term reduction in this type of habitat. Long term impacts would be positive because more trees and shrubs with open water would be expected width implementation of the riparian reestablishment plan. A total of 9 species would be positively affected and 16 species negatively affected in the short term. Long term impacts would be positive for 46 species. No avian species would be negatively affected in the long term.

The bald eagle would not be affected by the proposal in the short or long term. Swainson's and ferruginous hawks would not be affected in the short term but could receive a minor long term positive impact due to the increase in trees for nesting.

Pronghorn should benefit from short term and long term increases in succulent grasses and forbs. The fencing would be built to antelope specifications, but some disruption in antelope movement may occur. This situation could be resolved by installation of Davidson fence clips if a problem occurs. The fence is necessary to established and maintain the riparian vegetation by excluding livestock. Animal crossings will be provided every 1/2 to 3/4 mile to facilitate antelope movement. These will normally be unfenced to provide watergaps to cattle.

Furbearers should benefit in the long term because more slow water will be available. These species would be negatively impacted in the short term due to mortality on Reno Ditch. Eventually, populations should increase as the new ditch becomes reoccupied with species moving in from Birch Creek above the diversion.

SOILS

Soil erosion problems with open channel ditch design would be minimal because of nearly level slopes. Erosion problems may be severe if the designed ditch overflows or breeches its banks or the diversion dam should over top or break. Displaced rock and soil material in mapping unit 75EF or G would erode if not cared for properly and the soil would erode down to bedrock on steep slopes should the ditch or penstock break.

Ditch seepage loess would generally be controlled by methods described in this alternative. Riparian silt loam, loam or sandy loam topsoil obtained from the old existing stream channel would successfully support riparian habitat.

Because of the natural low clay content of soils in the area, the diversion dam could fail by dam seepage if a proper dam core were not included in the dam design. Proper spillway design of the diversion dam would be necessary to prevent dam failure.

DOMESTIC LIVESTOCK GRAZING

Ground disturbance caused by the pipeline and fence construction would be minimal. In four or five years disturbed areas would be almost totally revegetated.

Livestock grazing use would decrease in most areas to be dewatered along Birch Creek and Reno Ditch. These areas, estimated at about 2,500 acres, have been in upward trend (range condition: fair) since 1980 and would continue to improve.

Livestock grazing would increase in trough areas 1, 3, 4 and 5 which are distant from present water sources. These areas, estimated at about 3,500 acres, have been in upward trend (range condition: fair) since 1980 and can be expected to improve under the present rotation management plans.

Grazing in most areas associated with the proposed channels would increase. Along the upper channel, this would affect about 2,000 acres presently in upward trend (range condition: fair) since 1980 and it is expected that this area would continue to improve under present rotation management. Along the outflow channel 4 or 5 sections of land receiving infrequent grazing would be used more often under the management system.

In the area of the proposed channel, east of the highway, the availability of water would increase cattle use near the highway. This would also increase the risk of animal/vehicle collisions.

MINERALS

Anticipated impacts to mineral exploration and development operations, impacts that would result from the construction of the proposed facility,

would not be very significant. Mining claimants' rights to explore and develop mineral deposits on pre-existing mining claims, without regard for the protection of right-of-way (R/W) structures, supercede rights granted in a R/W that crosses such claims.

Although a R/W does not withdraw lands from mining claim location, operations conducted on mining claims located on lands within a pre-existing R/W would have to honor the prior rights granted by the R/W. Disturbance of R/W structures would not be allowed unless an agreement between claimant and R/W holder permits such disturbance. The mining of minerals along such a R/W corridor would require compensating the holder of the R/W for any damage to R/W structures. The probability for the occurence of economic mineral deposits along the proposed R/W corridor that crosses lands not presently under mining claims is not known. Therefore, the impacts that this R/W could have on mineral operations on these lands cannot be assessed.

It is not known if or when further mineral exploration or development operations will be planned by existing or future mining claimants for lands in the vicinity of the proposed hydro-power R/W. However, the hydro-power structure could restrict physical access to some mining claims and interfere with such operations.

CULTURAL

Diversion ditch and penstock construction could damage or destroy sites 10-CL-70, 10-CL-142, BC-1, BC-2, BC-4 and BC-5. It should be possible to avoid sites except BC-5. This small surface lithic scatter lies in the penstock's path. Avoidance may be difficult or impossible and mitigation will be necessary.

RECREATION

Under this alternative, fishing opportunies will be lost in the lower 3,500 feet of Birch Creek. These opportunities, amounting to an estimated 415 hours of effort, would be replaced and probably enhanced throughout the 1.5 miles in the proposed feeder ditch. When the design goals are met, trout density will be equivalent to that in the lower 3,500 feet, and will increase fishable waters by 225%. Fishing effort should also increase to at least double, in the newly created waters, when catchable populations of trout are achieved. Recreational access and convenience improvements for anglers will also increase fishing use. The potential use could equal that found in the more heavily fished reaches of Birch Creek.

B. Alternative B

WATER QUALITY

Same as Alternative A.

WATER QUANTITY

Because of a shorter penstock with this alternative, less water savings would be obtained through the penstock. Estimated water savings would run about 5-6 cfs. The flood flows would be the same as in Alternative A.

WATER RIGHTS

Same as Alternative A.

FISHERIES

Same as Alternative A.

TERRESTRIAL WILDLIFE

No development plan for establishing riparian vegetation on the new ditch would be implemented. Some riparian vegetation would establish naturally over the long-term. However, the riparian habitat lost on Birch Creek and upper Reno Ditch would not be mitigated. Lower Reno Ditch would continue to provide the habitat requirements for obligate species as the water would be returned to the ditch at the radio tower.

The estimated acreage for the grass-forb and tree-shrub vegetative types are displayed in Table 5 for the No Action and B Alternatives. With no plan for riparian reestablishment, no tree-shrub component could be expected on the new ditch for 30 to 50 years. A grass-forb type should become established naturally within 20 years. The acreage figure shown for long-term grass-forb type assumes wet vegetation will become established on 4 feet either side of the new ditch.

Table 5
Acres of Grass-Forb and Tree-Shrub
Riparian Vegetation

	No Action				Alternative B			
	Short-term		Long-term		Short-term		Long-term	
	G-F	T-S	G-F	T-S	G-F	T-S	G-F	T-S
Upper Reno Ditch	3.88	1.30	4.66	1.56	0	0	0	0
Lower Reno Ditch	.49	8.32	.59	9.98	.49	8.32	.59	9.98
Birch Creek	1.57	3.20	1.88	3.84	1.57	3.20	.31	.6
Hydroelectric Ditch	0	0	0	0	0	0	6.41	0
	5.94	12.82	7.13	15.38	2.06	11.52	7.31	10.58

G - F = Grass-Forb vegetative type with open water
T - S = Tree-Shrub vegetative type with open water

Analyzation of Table #5 shows both a short term and long term loss of tree-shrub riparian habitat. A short term loss of grass-forb riparian habitat would occur, but over the long term a small strip along either side of the new ditch should become established to roughly equal the amount lost on Reno ditch and Birch Creek. Wildlife species dependant on trees, shrubs and open water would be adversly affected under Alternative B in the short and long term.

Attachment 6 portrays short and long term impacts of Alternative B to birds occurring on Birch Creek and Reno Ditch. This analysis is based on changes in critical habitat components listed on Table 1 and summarized on Table 5. A total of 4 species would be positively affected and 23 species negatively affected in the short term. Long term impacts would be positive for 9 species and negative for 39 species.

The bald eagle and sensitive Swainson's and ferruginous hawks would not be affected in the short term but could receive a minor long term negative impact due to a decrease in trees for roosting and nesting.

Pronghorn should be negatively impacted in the short term due to an initial loss of suculent grasses and forbs. Long term increases in grasses and forbs would benefit pronghorn.

Furbearers should benefit in the long term because more slow water will be available. These species would be negatively impacted in the short term due to mortality on Reno Ditch. Eventually, populations should increase as the new ditch becomes reoccupied with species moving in from Birch Creek above the diversion.

SOILS

The same as Alternative A.

DOMESTIC LIVESTOCK GRAZING

Impacts would be the same as in Alternative A except in areas along that section of Reno Ditch below the proposed powerhouse where grazing would not change from the present situation.

MINERALS

The same as Alternative A.

CULTURAL

Alternative B could seriously damage site 10-CL-70. Site avoidance would require relocation of the hydroelectric power plant. Even if this were accomplished, constructed-related and plant operations could damage the site. Mitigation would be required.

RECREATION

Under this alternative fishing opportunities would be lost in the lower 3,500 feet of Birch Creek. These opportunities, amounting to an estimated 415 hours of effort, would likely shift to waters above the feeder ditch diversion. They would not be replaced in the proposed feeder ditch because fish habitat would be provided for.

C. Alternative C - No Action

Under this alternative, no project would be authorized and the right-of-way rejected. There would be no on-the-ground impacts associated with the proposed project.

V: Mitigating Measures

A. Alternative A

WATER QUALITY

Only positive impacts result from Alternative A.

WATER QUANTITY

Impacts to livestock distribution below the proposed diversion will be mitigated through several (5) pipelines to six troughs in those areas requiring improved stock distribution (see Domestic Livestock Grazing Section). Only 4 pipelines would be required if reliable water is obtained down the old channel (near 5 cfs).

WATER RIGHTS

FISHERIES

A fishery mitigation plan was developed by Dr. J.S. Griffith, Fisheries Professor, Idaho State University, Pocatello, Idaho. See "Feasibility of Developing a Trout Population in the Proposed Birch Creek Hydroelectric Project Feeder Ditch" - Revised 5 April 1984, located in the Sorenson FERC application.

The Birch Power Company would be held to all stipulations in this mitigation plan. The plan recommends development of trout habitat in 8,000 feet of feeder ditch from the diversion to the highway 28 bridge.

Specific criteria are described in the mitigation plan. A memorandum of agreement between Idaho State University and Birch Power Company was signed November 16, 1983 for this mitigation (See the Sorenson FERC application).

The design goal as described on page 4 of the mitigation plan would consist of providing habitat to sustain a minimum of 560 trout (370 trout/mile), a density equivalent to that in the 3,000 feet of Birch Creek that would be dewatered by the project. The average size would be required to be maintained at at least 8.5 inches which is equivalent to existing average size in the portion of Birch Creek to be dewatered.

Proper mitigation should not only replace fish populations on a fish for fish basis, but should also mitigate somewhat for potential population increase for management. Effective mitigation would also provide for catch rates in the mitigation reach which are equal to these in the dewatered reach.

Analysis: Fish for Fish Replacement.

1. Existing population in the dewatered reach are:

365 fish/mile x $\frac{3,500'}{5,200'}$ = 245 wild rainbow trout.

500 trout are to be provided in the new ditch.

2. Replacement of fish habitat.

Existing habitat below the proposed ditch in Birch Creek is rated at poor to fair (3,500'). This would be replaced with fish habitat rated fair to good (5,000').

3. Partial replacement of management potential.

With management of the 3,500 feet of Birch Creek below the proposed feeder ditch, it is estimated that deep water habitat could be increased by 100%, average trout length could be increased from 8.5 " to 10.5", and according to existing population studies upstream, populations could be increased by 300 - 400% by construction of k-dams.

With the mitigation plan, deep water habitat would increase by more than 100% on 5,000' of ditch compared to 3,500' of mostly shallow habitat in the old channel. Average depths in the feeder ditch are expected to run 3-4' except in the riffles. Although no increase in average trout size is provided for in the mitigation plan, there is a provision for increases in total trout numbers and miles of stream.

Existing - 245 wild rainbow trout in the old channel.
Mitigation - 560 trout, an increase of 125% in trout numbers and total trout habitat increase of 40% (5,000' verses 3,500'). Catch rates are expected to remain near one trout per angler-hour in the proposed ditch which is similar to present catch rates in the old channel to be dewatered. Trout densities should be equivalent in the new feeder ditch, 370 trout per mile, compared with 365 trout per mile average, in the dewatered reach of Birch Creek.

The project would be bonded to ensure completion of all mitigation stipulations as written in Dr. Griffith's mitigation plan. Failure to meet these criteria within stated time frames would result in use of a portion of the bend to meet mitigation stipulations. Failure to meet overall mitigation objectives of 560 trout would result in use of a portion of the bond money to provide further fishery mitigation thru k-dam, rock placement or other management action on Birch Creek upstream of the proposed diversion.

Overall, the mitigation plan as proposed would provide at least direct replacement of fish habitat and populations in the dewatered reach of Birch creek. Partial replacement of management potential in the reach of Birch creek below the proposed diversion appears very reasonable as provided in the mitigation plan.

TERRESTRIAL WILDLIFE

The riparian reestablishment plan is detailed in the proposed action. The plan is summarized below.

Riparian Reestablishment Plan

Phase One Area

A. Ditch design as shown on Exhibit F-2
   1. Allow percolation by not sealing one foot of top of ditch.
   2. Vary riparian zone from 2-30 feet as topography allows.
   3. Animal crossing every 1/2 to 3/4 mile.

B. Establish riparian vegetation along ditch averaging 25 feet wide.
   1. Develop structure and diversity within 5 years.
   2. Meander ditch as topography allows.
   3. Haul in loamy topsoil to average one foot deep from the old Birch Creek abandoned channel.
   4. Fence out livestock except at two watergaps.
   5. Plant area to trees, shrubs, forbs and grass (native and introduced species).
   6. Use nursery to start woody species.

C. Monitor vegetation response and replant unsuccessful areas.

D. Reseed topsoil removal source.

Phase Two Area

A. Same as Phase One.

B. Establish riparian vegetation along ditch averaging 14 feet wide.
   1. Develop structure and diversity within 10 years.
   2. Reclaim and treat existing topsoil or use soil source from Birch Creek channel.
   3. Fence out livestock except at 3 watergaps.
   4. Plant area to trees, shrubs, forbs and grass (native and introduced species).
   5. Irrigation will not be controlled but some highwater flooding should occur.
   6. Nursery starts for woody species would be phased in over 10 year period.

C. Same as Phase One.

Phase Three Area

A. Ditch design would not include riparian zone shown on Exhibit F-2.

B. Establish riparian vegetation along ditch averaging 8 feet wide.
   1. Develop structure and diversity within 15 years.
   2. Reclaim and treat existing topsoil.
   3. Plant area to trees, shrubs, forbs and grass (native and introduced species).
   4. Nursery starts for woody species would be phased in over 15 year period.

C. Same as Phases One and Two.

The 5 cfs flow past the diversion is a key point to mitigation of this development. If 5 cfs if provided to help maintain and improve the riparian zone below the diversion, and the efforts outlined here are successful, the hydroelectric proposal should improve the present riparian habitat situation.

SOILS

Riparian silt loam, loam or sandy loam topsoil for the feeder ditch west of highway would have to be obtained from the old abandoned stream channel from below the diversion structure.

Topsoil to reduce seepage in the feeder ditch east of the highway could be obtained from silt loam or loam material from the ditch construction, the old stream channel or a proper designated area east of the highway. The soil east of the highway would not be suitable to sustain natural riparian habitat in its present condition.

A clay core or impermeable layer for the earthen dam would be necessary to prevent seepage that may cause dam failure and a proper designed spillway would be necessary to handle channel overflows during flood stages.

Repairs for dam failure, breaching of open feeder ditch or penstock pipe damage would be covered by bond money.

DOMESTIC LIVESTOCK GRAZING

The proposed livestock watering facilities would mitigate adverse grazing impacts.

In order to mitigate the problem of possible animal/vehicle collisions in Spring Canyon Allotment, approximately 5 miles of highway fence from Scott Butte road to Spring Canyon road would be necessary.

MINERALS - No mitigation required.

CULTURAL

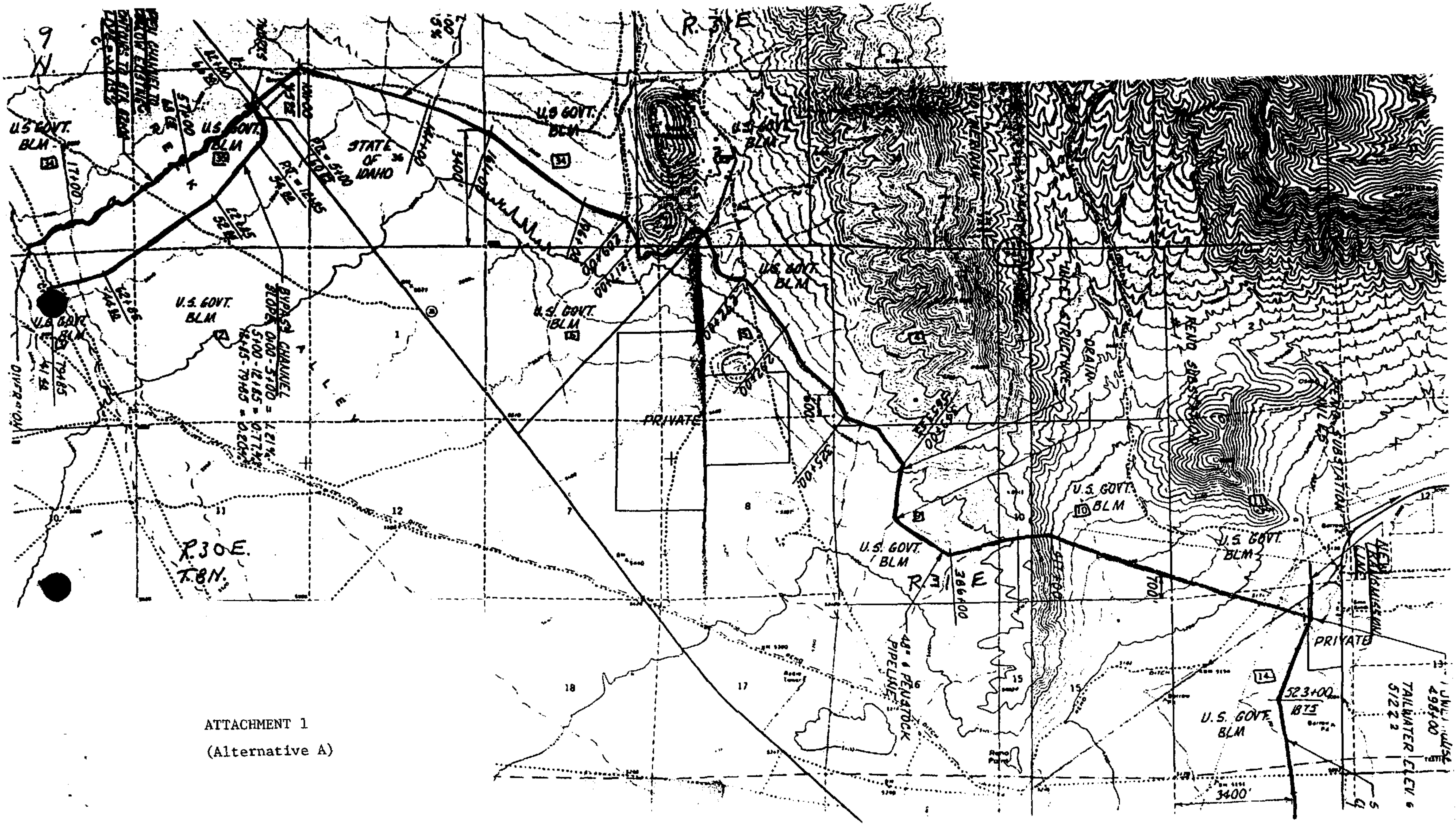
Stipulations would be developed to protect threatened archaeological sites, and sensitive archaeological areas. An archaeologist should accompany project surveyors when final project routes and facilities are flagged and staked. This should insure complete site avoidance. If small surface lithic scatters, i.e. BC-5, cannot be avoided they should be mapped, photographed and recovered. If mid-sized scatters for any site with apparent cultural material depth cannot be avoided, mapping, detailed recordation and test excavations may be necessary. Extensive data recovery efforts will be coordinated and developed with the District and the State Historic Preservation Officer (SHPO).

VI. Consultation and Coordination

Ted Sorenson, Applicant
Idaho Dept. of Fish & Game, Idaho Falls, Idaho
Idaho Dept. of Water Resources, Idaho Falls, Idaho
Idaho Falls Advisory Council
Thomas Green, State Archaeologist, Boise, Idaho
Susanne J. Miller, Archaeologist Consultant, Idaho Falls
Rich Howard, U.S. Fish and Wildlife Service, Boise, Idaho

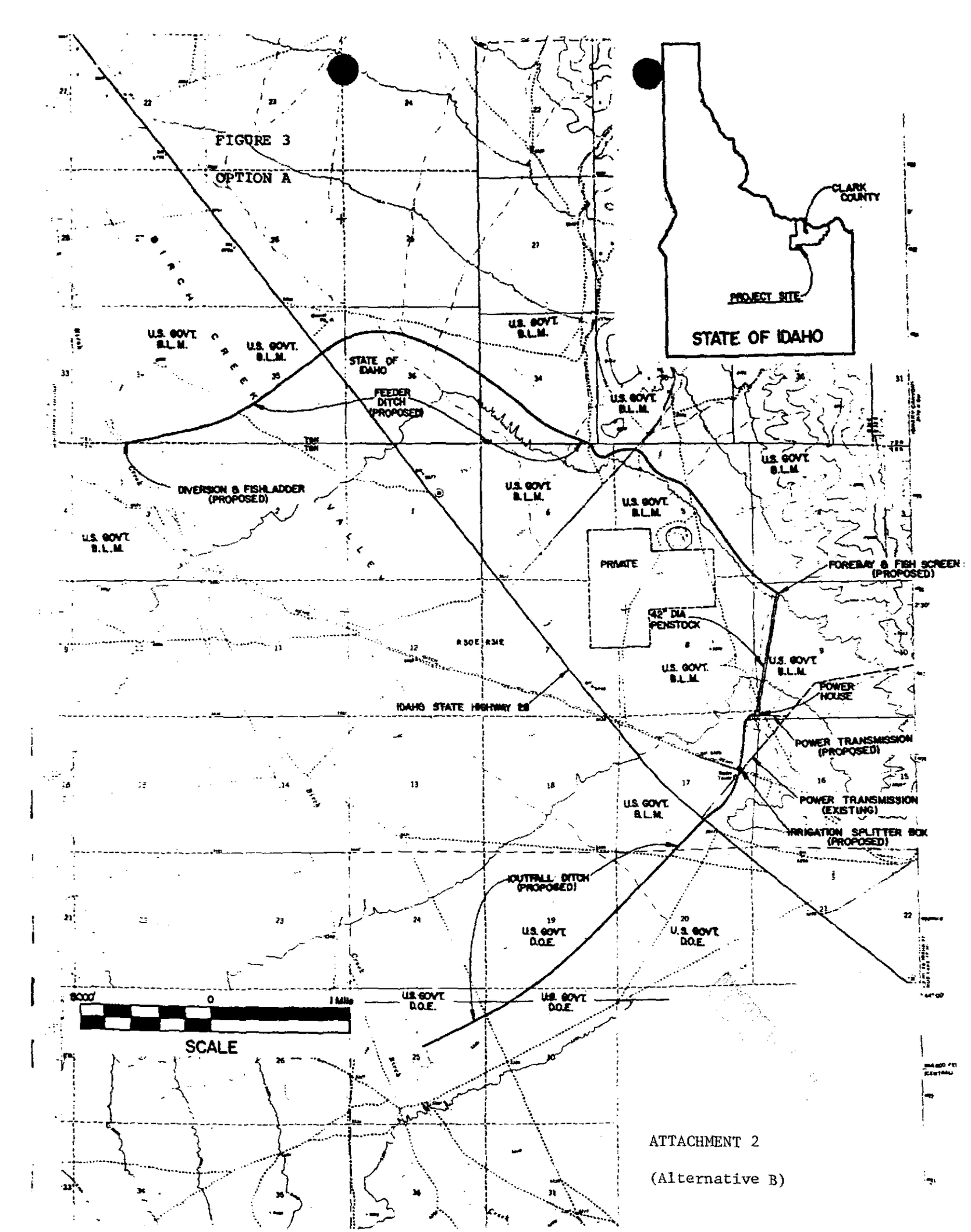
List of Preparers

Barbara Klingenberg	Realty Specialist, Team Leader
Robert McCarty	Wildlife Biologist
Glenn DeVoe	Range Conservationist
Richard Hill	Archeologist
Tim Carroll	Geologist
Darwin Jeppesen	Soils Scientist
Jim Esget	Hydrologist
John Butz	Recreation Planner



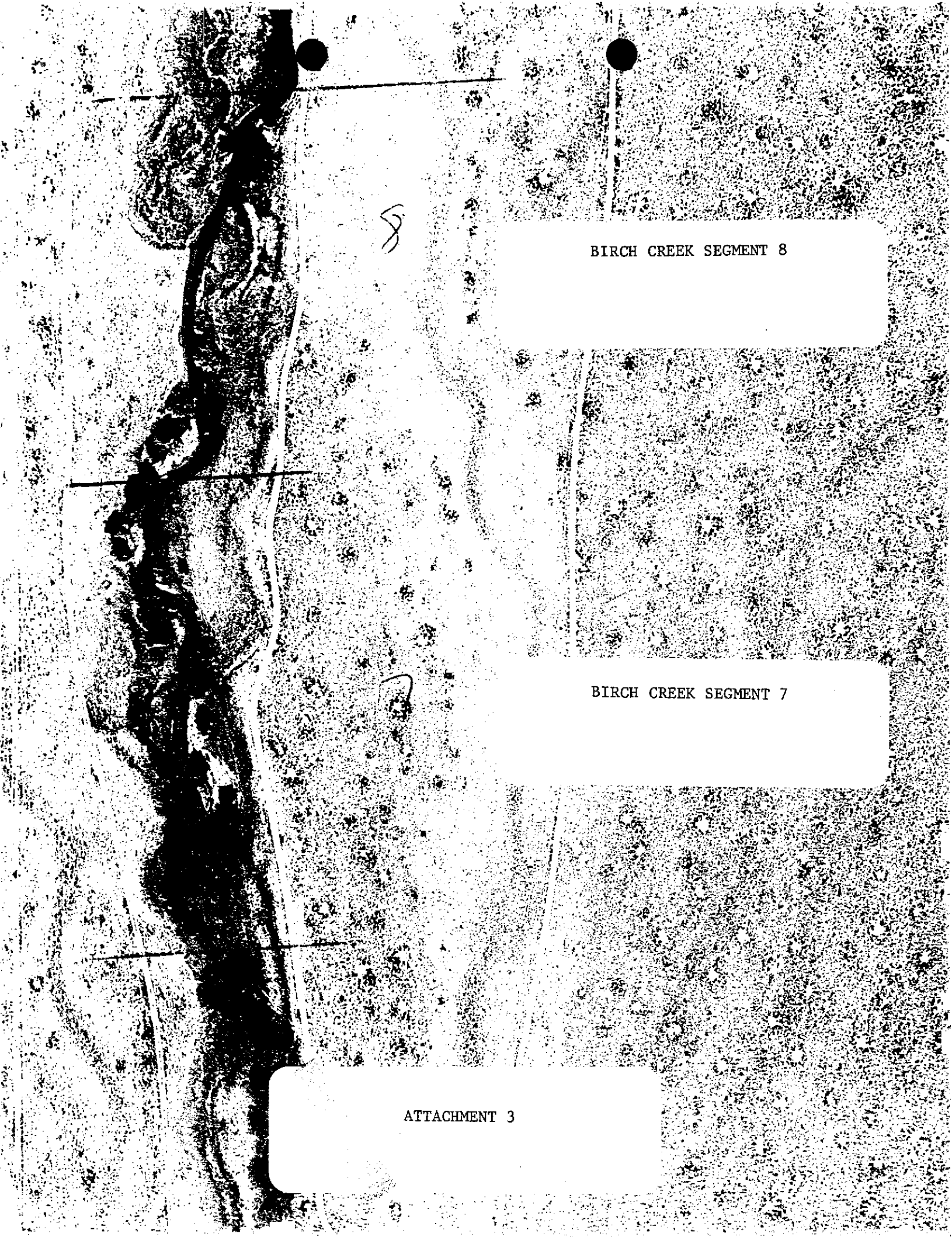
ATTACHMENT 1

(Alternative A)



ATTACHMENT 2

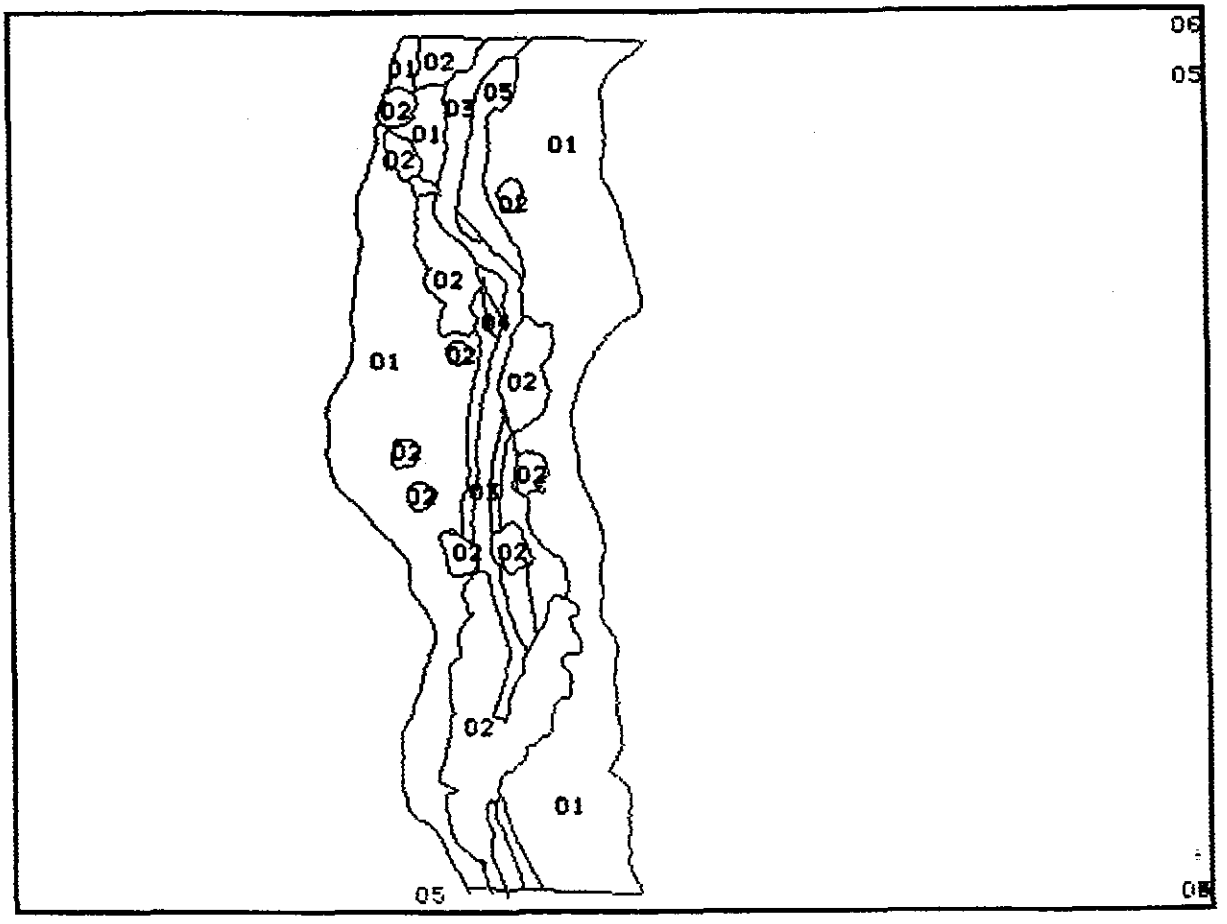
(Alternative B)



ATTACHMENT 3

Screen ID# --> seg 6

Birch Creek Segment 7



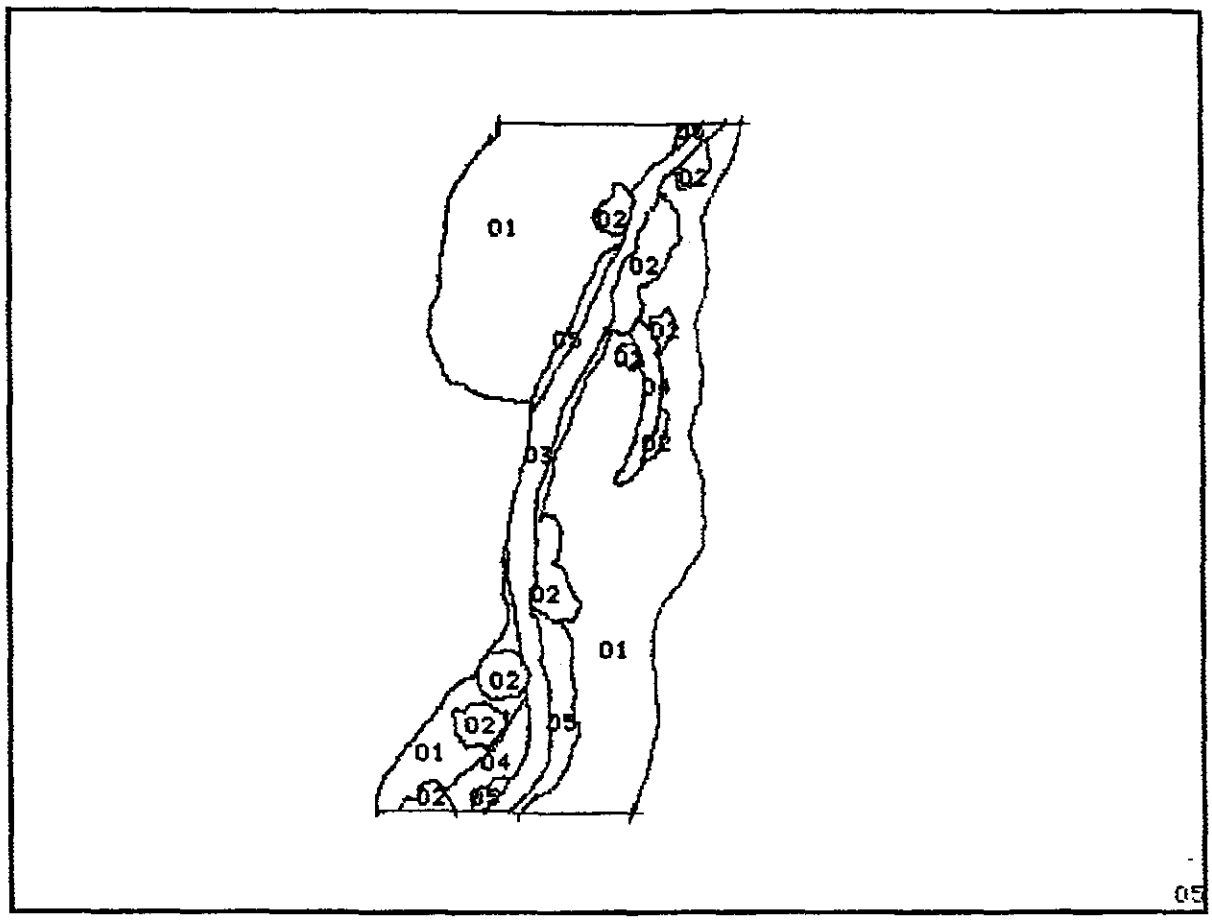
Pixel Area = 0.00 acres
Pixel Length = 2.25 ft

Birch Creek Segment 7

Polygon #	Area	Description
1	2.59acres	sage-grass
2	0.88acres	tree-shrub
3	0.32acres	water
4	0.11acres	gravel bed
5	0.26acres	grass-forb
6	0.04acres	sage-grass

Screen ID# --> seg 7

Birch Creek Segment 8



Pixel Area = 0.00 acres
Pixel Length = 2.25 ft

Birch Creek Segment 8

Polygon #	Area	Description
1	2.26acres	sage-grass
2	0.38acres	tree-shrub
3	0.34acres	water
4	0.13acres	gravel bed
5	0.18acres	grass-forb

Screen ID# --> seg 8

OBLIGATES

	Alternative A		Alternative B	
	Short-term	Long-term	Short-term	Long-term
Violet-green swallow	-	+	-	-
Tree swallow	-	+	-	-
Cliff swallow	0	0	0	0
Spotted sandpiper	0	0	0	0
Black-crowned night heron	-	+	-	-
Canada goose	+	+	+	+
Mallard	+	+	+	+
Green winged teal	+	+	+	+
Blue winged teal	+	+	+	+
Cinnamon teal	-	+	-	-
Yellow-rumped warbler	-	+	-	-
Yellow warbler	-	+	-	-
Yellow throat	-	+	-	-
Wilson's warbler	-	+	-	-
Great blue heron	0	0	0	0
Snipe	-	+	-	-
Black-chinned hummingbird	+	+	-	+
Rufus hummingbird	+	+	-	+
Calliope hummingbird	+	+	-	+
Belted kingfisher	-	+	-	-
Red-winged blackbird	0	0	0	0
Brewers blackbird	0	0	0	0
Yellow-breasted chat	-	+	-	-
Hermit thrush	-	+	-	-
Ruby-crowned kinglet	-	+	-	-
Golden-crowned kinglet	-	+	-	-
Black-capped chicadee	0	+	-	-
Bald eagle	0	0	0	-
Sage grouse	+	+	-	+
Common flicker	0	+	0	-
Eastern kingbird	0	+	0	-
Black-billed magpie	0	+	0	-
Common crow	0	+	0	-
American robin	0	+	0	-
Killdeer	0	0	0	0
Northern oriole	-	+	-	-
Brown-headed cowbird	0	0	0	0
American goldfinch	+	+	-	+
Great-horned owl	0	+	0	-
Swainson's hawk	0	+	0	-
Red-tailed hawk	0	+	0	-
American kestrel	0	+	0	-
Golden eagle	0	+	0	-

Ferruginous hawk	0	+	0	-
Franklin's gull	0	0	0	0
Meadowlark	0	0	0	0
Loggerhead shrike	0	+	0	-
Starling	0	+	0	-
Sagethrasher	0	+	0	-
Townsend's solitare	0	0	0	-
Mountain bluebird	0	+	0	-
Western bluebird	0	+	0	-
Nighthawk	0	0	0	0
Western kingbird	0	+	0	-
Say's phoebe	-	+	-	-
Horned lark	0	0	0	0
House sparrow	0	0	0	0
Savannah sparrow	0	0	0	0
English sparrow	0	0	0	0
Sage sparrow	0	0	0	0
Oregon junco	0	+	0	-
Tree sparrow	0	+	0	-
Brewer's sparrow	0	0	0	0
White-crowned sparrow	0	+	0	-
Total Species +	09	46	4	9
Total Species -	16	0	23	39
Total Species 0	39	18	37	16

+ positive impact
- negative impact
0 no impact

RECEIVED
MAY 31 1985
Department of Water Resources

Before the

FEDERAL ENERGY REGULATORY COMMISSION

RESPONSE TO DEFICIENCY LETTER DATED MAY 8, 1985

FOR THE

BIRCH CREEK WATER POWER PROJECT

A MAJOR WATER POWER PROJECT

(5 megawatts or less)

FERC #7194-001

CLARK COUNTY, IDAHO

Prepared by:

SORENSON ENGINEERING, P.A.
550 Linden Drive
Idaho Falls, ID 83401

May 22, 1985

SUBMITTED

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

MAY 0 8 1985

OHL-PM
Project No. 7194-001 - Idaho
Birch Power Company

Ted S. Sorenson, P.E.
550 Linden Drive
Idaho Falls, ID 83401

Subject: Birch Power Company's application submitted on February 21, 1985, for major license for the Birch Creek Project No. 7194.

Dear Mr. Sorenson:

Your application for the subject project has been reviewed by staff. The application for the subject project does not conform to the relevant requirements of the Commission's regulations. In addition, review of your application indicates that additional information is needed to evaluate fully the proposed project. A listing of the deficiencies and the additional information is enclosed as Schedule A.

Pursuant to Section 4.31(d) of the Commission's regulations, you have 90 days from the date of this letter to correct the deficiencies in your application. Further, pursuant to Section 4.31(f) of the Commission's regulations, you have 90 days from the date of this letter to provide the additional information requested, or a schedule indicating when the additional information will be filed with the Commission. The additional information need not be included in the copies of the application but may be submitted separately.

If the information requested is not received by the Secretary of the Commission within the time frame indicated, your application may be rejected; therefore, you are advised to contact Charles T. Raabe, in the Division of Project Management at (202) 376-9814, if you have any questions concerning the substance of what must be provided in order to satisfy fully the information requested in Schedule A.

Any submittals made pursuant to this letter should be filed with: Kenneth F. Plumb, Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street, N.E., Washington, D. C. 20426.

Authority to act on this matter is delegated to the Director, Office of Hydropower Licensing, under §375.314 of the Commission's regulations, 49 Fed. Reg. 29,369 (1984)(Errata issued July 27, 1984)(to be codified at 18 C.F.R. §375.314).

Sincerely,

Quentin A. Edson
Director, Office of
Hydropower Licensing

Enclosure:
Schedule A

Schedule A
Project No. 7194-001

DEFICIENCIES

Under the requirements in 18 CFR at §4.41(f), Exhibit E, the Environmental Report, must be revised to include evidence of consultation on the project as described in the application filed on February 21, 1985.

In order to satisfy agency consultation requirements, the Applicant must: (a) provide copies of the application, as filed, to the appropriate Federal and state resource agencies; (b) allow the agencies at least 60 days to comment; (c) provide the Commission with copies of any letters received from the agencies; (d) provide a discussion of the specific measures recommended by the agencies to protect and enhance environmental resources or to mitigate adverse impacts; and (e) provide Applicant's reasons for rejecting any measures recommended by an agency.

ADDITIONAL INFORMATION

Under the requirements in 18 CFR at §4.31(f), the application may be dismissed unless the following additional information or a schedule for filing the additional information is provided within 90 days from the date of this letter. When the Applicant files this additional information with the Commission, the Applicant should at the same time serve exact copies of the filings on the agencies that the Applicant consulted during the preparation of the Exhibit E.

(1) Provide a description, to include functional design drawings, of any fish passage facilities that the Applicant would construct at the project diversion.

(2) Provide a supplement to the Birch Creek Hydroelectric Riparian Plan that addresses the development and protection of riparian habitat at the proposed 2-acre diversion impoundment.

(3) Provide a discussion of the Applicant's proposed plans to handle excavated material. Identify the locations of any areas that the Applicant would use for spoil disposal. In addition, describe any erosion control measures that the Applicant would employ to stabilize spoil materials.

1. AGENCY CONSULTATION

Attached is a list of agencies who received the application on or before March 15, 1985. Also attached is a brief summary of the responses received as of May 22, 1985.

The following is the applicant's response to each of the letters received.

		Response as of Wednesday, May 22, 1985
1.	Mr. Kenneth F. Plumb, Secretary FEDERAL ENERGY REGULATORY COMMISSION 825 No. Capital Street, N.E. M.S. 208 R.B. Washington, D.C. 20426	Deficiency Letter May 8, 1985
2.	Mr. Jack Quarles FEDERAL ENERGY REGULATORY COMMISSION 819 Taylor St. 9A05 Ft. Worth, TX 76102	None
3.	Mr. Jim Fellows U.S. ARMY CORPS OF ENGINEERS Building 602 City/County Airport Walla Walla, WA 99362	None
4.	Mr. Jerry Conley, Director Attn: Virgil Moore IDAHO DEPT. OF FISH & GAME P.O. Box 25 Boise, ID 83707	See memo dated May 17, 1985 on fish screen by Grant Christesen
5.	Mr. Brent Jensen, Area Manager BUREAU OF LAND MANAGEMENT 940 Lincoln Road Idaho Falls, ID 83401	Comments on Diversion Impoundment riparian per Robert McCarty's letter of May 16, 1985
6.	Mr. Tom Reinecker Regional Supervisor IDAHO DEPARTMENT OF FISH & GAME 1515 Lincoln Road Idaho Falls, ID 83401	See letter dated February 27, 1985
7.	Mr. John P. Wolflin Field Supervisor FISH & WILDLIFE SERVICE (U.S.) Ecological Services 4620 Overland Rd., Rm 209 Boise, ID 83705	See Letter Dated March 15, 1985
8.	Mr. Thomas J. Green State Archaeologist IDAHO STATE HISTORICAL SOCIETY 610 North Julia Davis Drive Boise, ID 83702	None
9.	Mr. Bobby Fleenor IDAHO DEPT OF WATER RESOURCES Statehouse Mail Boise, ID 83720	Order Issuing Water Rights Dated March 26, 1985 Kenneth Dunn, Director
10.	Mr. Mark Torf IDAHO DEPT OF HEALTH AND WELFARE 150 No. Third Pocatello, ID 83201	Water Quality Certification issued by Lee Stokes, Administrator, April 15, 1985
11.	Professor Jack Griffith Fishery Biologist Idaho State University Pocatello, ID 83201	None

4. IDAHO DEPARTMENT OF FISH AND GAME, BOISE, IDAHO

At the project diversion, per the memo from Grant Christensen, Idaho Department of Fish & Game, no passage facilities would be required at the project diversion.

The applicant has further discussed the specifics of the fish screen required at the project bypass diversion located approximately one half mile downstream in the newly constructed feeder canal. This fish screen would maintain the fish in the fishery habitat reach and prevent fish from moving downstream into the feeder canal where habitat improvements are not being constructed.

All of this action is undertaken to protect and enhance environmental resources. The applicant is complying with all of the measures recommended in this letter.

The screen would be according to the attached design criteria. The screen would be similar to the screen shown on Fish & Game sketch except the power source would be replaced by an electric motor. Also attached is revised Exhibit F-3 "Bypass Headworks" which shows details of the screen installation.

DESIGN CRITERIA

ELECTRICALLY POWERED DRUM FISH SCREENS

Ted S. Sorenson, P.E.

May 22, 1985

Design Flow	75 cfs
Approach Velocity	1 ft/sec
Minimum Submerged Area	75 ft^2
Drum Submergence	75%
Drum Length	10 feet
Drum Diameter	5.0 feet
Number of Drums	2
Total Drum Area	100 ft^2
Submerged Drum Area	(.75)100 = 75 ft^2
Mesh Maximum Opening	3/16"

Speed Letter

TO: Ted Sorenson
550 Linden Drive
Idaho Falls, ID 83401

FROM: Idaho Department of Fish and Game
600 S. Walnut St., P.O. Box 25
Boise, Idaho 83707

Subject Rotary Drum Fish Screens

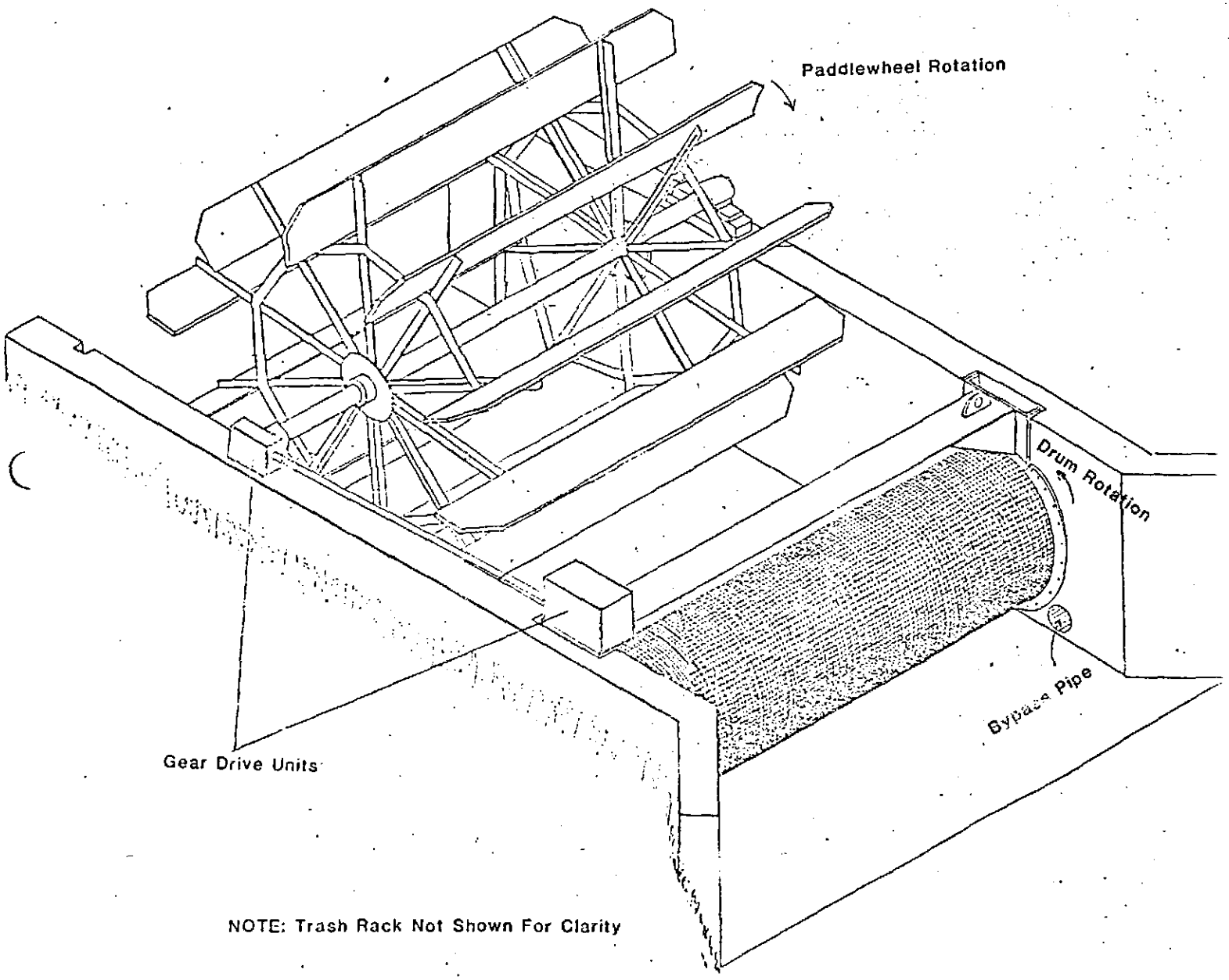
MESSAGE

Attached are the schematics and photocopies showing rotary drum fish screens. If you use the drum screen on Birch Creek, you should use a mesh with a maximum opening of 3/16-inch. Virgil Moore confirms that a fishway is not necessary. If I can be of further assistance, please let me know.

Date 5/17/85 **Signed**

REPLY

Date **Signed**



REV	DATE	DESCRIPTION	BY

STATE OF IDAHO
FISH AND GAME DEPARTMENT
BOISE, IDAHO

SELF-POWERED
ROTARY DRUM SCREEN

Fig. 1-2

5. BUREAU OF LAND MANAGEMENT

Attached is a letter from Robert McCarty dated May 16, 1985, which details the requirements for the riparian mitigation around the diversion impoundment.

Also attached is revised Exhibit F-1 "Diversion Structure" which illustrates the riparian mitigation and enhancement area. Please note the area would also be fenced.

The applicant can and will comply with BLM's requirements to provide riparian mitigation and environmental enhancement.

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Idaho Falls District
940 Lincoln Road
Idaho Falls, Idaho 83401

IN REPLY
REFER TO: I-19684

May 16, 1985

Mr. Ted Sorenson
Birch Power Company
550 Linden Drive
Idaho Falls, ID 83401

SUBJECT: BIRCH CREEK HYDROELECTRIC PROJECT

Dear Mr. Sorenson:

This letter is written with respect to the mitigation plan for the diversion impoundment area. This area will have about two surface acres of water. The mitigation for this will be covered in our environmental assessment which we are preparing and the proposed action therein.

Plantings of the following nature should be initiated in a 25 foot radius around the reservoir impoundment as briefly outlined on the attached sketch. Where possible the existing topsoil should be dozed to the new riparian zone. Existing large birch trees and willows in the inundated area will be replanted in the new riparian zone. Other plantings will include species from the list referenced in the mitigation section of the Birch Creek Hydroelectric Riparian Plan dated December 21, 1984. This plan is included in your application for license to the Federal Energy Regulatory Commission.

Trusting this information to be of value.

Sincerely,

Bob McCarty

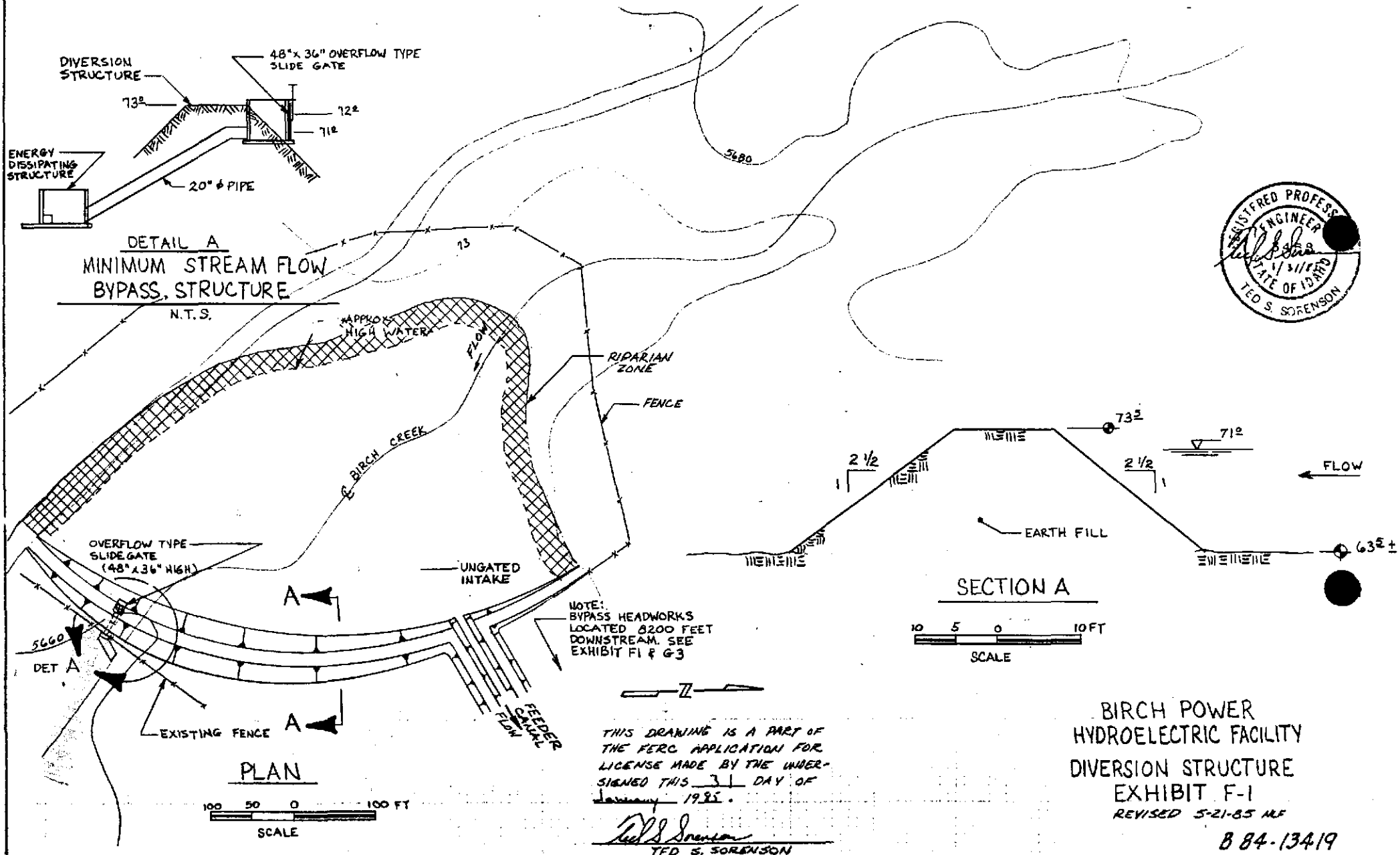
Robert McCarty
Wildlife Biologist
Big Butte Resource Area

Enclosure

DETAIL A

MINIMUM STREAM FLOW BYPASS, STRUCTURE

N.T.S.



PLAN

100 50 0 100 FT

SCALE

SECTION A

10 5 0 10 FT

SCALE

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 31 DAY OF January 1985.

Ted S. Sorenson

TED S. SORENSON

REGISTERED PROFESSIONAL ENGINEER
1/31/85
STATE OF IDAHO
TED S. SORENSON

BIRCH POWER
HYDROELECTRIC FACILITY

DIVERSION STRUCTURE
EXHIBIT F-1

REVISED 5-21-85 MF

B 84-13419

6. IDAHO DEPARTMENT OF FISH & GAME, IDAHO FALLS, IDAHO

The applicant concurs with and can comply with the requirements set forth in the Idaho Department of Fish & Game's letter of February 27, 1985 as follows:

1) Minimum bypass flow of 5 cfs. The applicant has no objection to a minimum bypass flow of 5 cfs. This bypass flow, however, is under the jurisdiction of the Idaho Department of Water Resources, not the applicant. However, the Idaho Department of Water Resources has issued an order requiring a 5 cfs minimum bypass flow contingent upon bedloss elimination in the feeder ditch. The applicant can accept and can provide bedloss elimination in the new feeder ditch to meet the requirements of the Idaho Department of Water Resources and thus make the 5 cfs available for the minimum bypass flow.

   Please see Section 9 of this deficiency response (i.e. Issuing Order of Kenneth Dunn, Director of Idaho Department of Water Resources).

2) Other items discussed include the riparian mitigation at the diversion impoundment, please see item 5, letter from Robert McCarty, Bureau of Land Management.

3) With respect to providing a minimum of 16" of clearance between the lower strand of barb wire and the ground, the applicant can and will meet this requirement. Please note Exhibit F-5 of application shows bottom strand to be barbless.

The other items listed in the letter are with respect to typographical errors in the original application.

The applicant can meet these specific requirements to protect and enhance the environmental resources. The applicant does not reject any of the measures recommended by the agency with the exception of the requirement for the 5 cfs minimum streamflow. The applicant requests that this 5 cfs minimum streamflow be per the order of the Idaho Department of Water Resources.

IDAHO DEPARTMENT OF FISH AND GAME
REGION 6
1515 Lincoln Road
Idaho Falls • Idaho • 83401

February 27, 1985

Mr. Ted Sorenson
Sorenson Engineering, P.A.
550 Linden Drive
Idaho Falls, ID 83401

Re: FERC Application for License for Birch Creek Water Power Project - 7194-000

Dear Ted:

Idaho Department of Fish and Game (IDFG) has the following comments on FERC License Application No. 7194. The Department's comments reflect past correspondence and meetings between representatives from IDFG, Bureau of Land Management and Sorenson Engineering.

IDFG continues to request a minimum flow of 5 cfs be retained for riparian maintenance at the point of diversion. Idaho Department of Water Resources (IDWR) has issued a ruling on water rights for Birch Creek which likely will meet the 5 cfs instream flow. However, the decision by IDWR is currently under appeal by several groups. There is no guarantee, following the appeals process, that any minimum flow to the historic channel will be required by this project. Until final resolution of this controversy is reached, IDFG will continue to request FERC require a minimum flow of 5 cfs past the project. Also IDFG has objected to IDWR's decision to tie minimum flow provisions to bed loss reductions until such time as the bed loss savings can be physically demonstrated (see E2-23 Order 4).

The proposal to include a dam and impoundment was added to the project proposal late in 1984. Prior comments had not addressed the possible impacts of the impoundment on the Birch Creek stream environment. IDFG requests mitigation be added to compensate for the 500 to 600 feet of stream which will be affected by the impoundment. The major impact above the dam will be flooding of the riparian zone within the impoundment. The project should add provisions to provide riparian revegetation along the impoundment boundaries. IDFG requests sportsman access be granted to the impoundment for fishing purposes.

Design criteria in Exhibit F-5 for fencing of riparian lands should be modified. To permit antelope passage, range fencing should have a barbless lower strand of wire which is placed a minimum of 16 inches above the ground.

IDFG suppors the criteria for riparian enhancement developed by BLM and the licensee.

Table E-3 contains errors in the bed loss column. August 2 and 14 bed loss estimates should read 16 and 15, respectively.

All provisions, except numbers 8 and 10, made in our March 26, 1984 letter are applicable and should be addressed.

Sincerely,

Steve Elle for Tom Reinecker

Tom Reinecker
Regional Supervisor
Region 6

TR:SE:ai
cc: Bureau of Land Management, Idaho Falls
US Fish & Wildlife Service
Bureau of Fisheries - Virgil Moore
Bureau of Program Coordination

9. IDAHO DEPARTMENT OF WATER RESOURCES

The applicant can and will abide by the order issuing the water right from the Idaho Department of Water Resources.

The applicant further supports and believes that the provisions contained therein are in the best interest of the community and the state in terms of a balance between the goals of enhancing environmental resources, mitigation of any potential adverse impacts, agriculture and hydroelectric development. The applicant does not reject any measure recommended by the agency.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
BOISE FIELD OFFICE
4620 Overland Road, Room 209
Boise, Idaho 83705

March 15, 1985

Ted Sorenson
Sorenson Engineering
550 Linden Drive
Idaho Falls, Idaho 83401

Re: Application for License
Birch Creek Hydro - FERC #7194

Dear Mr. Sorenson:

Your letter of February 13 asked us to comment on the referenced license application, if our response is different from our letter to you of April 4, 1984. The statements in the April 4 letter are still current. In addition, we state the following:

1. We will object to the project if a continuous minimum flow of 5 cfs is not released by the licensee from the diversion dam into Birch Creek. We are willing to trade the loss of the Birch Creek fishery below the dam for the gain of the created fish habitat in 1.5 miles of feeder ditch. However, there must be no net loss of riparian vegetation in the project area (see item 2, below). The 5 cfs release is essential to maintain valuable streamside vegetation on Birch Creek.

2. We endorse the Birch Creek Hydroelectric Riparian Plan described in the BLM's memo by Mr. McCarty dated December 21, 1984. However, we disagree that exotic plant species are necessary or appropriate to establish and maintain the riparian zone. We especially disagree with the proposal to plant crested wheatgrass and Kentucky bluegrass in the riparian zone.

3. Your new plan for a small reservoir at the Birch Creek diversion point will likely destroy a significant amount of riparian habitat. The application should clearly state how this loss will be mitigated.

Thank you for the opportunity to provide these comments.

Sincerely yours,

John P. Wolflin
Field Supervisor

cc: see next page

7. U.S. FISH & WILDLIFE SERVICE (Letter dated March 15, 1985)

The applicant agrees and can meet all of the requirements of Mr. Wolflin's letter dated March 15, 1985.

The 5 cfs minimum streamflow will be met per the Idaho Department of Water Resources Order which is contained herein as Section 9.0.

I have discussed the suggestion with respect to plantings of crested wheat grass and kentucky bluegrass with Mr. Robert McCarty of the U.S. Bureau of Land Management. Mr. McCarty has indicated he will work this planting disagreement out with Mr. Wolflin. However, this is a very minor item. The bulk of the plantings will be other species.

See Section 5.0 for riparian mitigation plan in the diversion impoundment area.

The applicant can and will abide with the requirements of the U.S. Fish and Wildlife Service subject to the above comments.

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATIONS FOR PERMIT NOS. 32-7128 AND 32-7136 IN THE NAME OF BIRCH POWER COMPANY	ORDER ADOPTING MODIFIED MEMORANDUM DECISION AND ORDER

A Proposed Memorandum Decision and Order was issued on November 21, 1984 by Bobby D. Fleenor, Hearing Officer and served on the parties on November 27. Those parties wishing to file exceptions to the proposed decision or request oral argument were allowed fifteen days to do so.

Exceptions to the proposed decision were received on December 12, 1984 from the Idaho Department of Fish and Game and from the Birch Creek Water Users and on December 14, 1984 from the Bureau of Land Management. No requests for oral argument before the Director were received.

The Birch Creek Water Users took exception to the conclusion that the saved water belongs to the applicant and also to the requirement that water must be left in the natural channel of Birch Creek to provide water for livestock and to maintain the vegetation along the stream. In answer, I find that the court has consistantly awarded water saved to the person saving it. I also find that the preservation of the riparian habitat along the stream is in the public interest, is consistant with the policy of the Water Resource Board and will not deprive the water users of any water they normally would receive.

The Department of Fish and Game objected to the portion of paragraph 4 of the order that would require "amount of water saved by the new ditch" as one of the alternatives for the amount of water released past the new point of diversion and to the wording of paragraph 2 of the order on the timing of a

review of the license by the Director. In answer, I find that the release of the amount of water saved must be included as an alternative in the amount of water allowed to flow past the proposed point of diversion in order to prevent injury to existing prior irrigation rights. There must, however, be water saved so condition 5 of the order has been modified to require an 11% savings of water in the new system. Also, I find that no change is necessary in paragraph 2 since it is clear that the license conditions can only be modified at the FERC license renewal or in 30 years.

The Bureau of Land Management's exception suggested Finding of Fact No. 15 be changed to read "few woody plants ..." and No. 16 be changed to "maintain a riparian zone ...". Both changes have been made. An exception also is made to paragraph 3 of the Order which places the diversion of water under the control of the watermaster. This exception is rejected since the statutory method of delivery is by the state appointed watermaster. The last exception is to paragraph 4 of the Order which is similar to the exception of the Idaho Department of Fish and Game and, therefore, would receive the same response concerning the water saved.

On January 14, 1985, D & D Enterprises, Inc. responded to the exceptions of the Birch Creek Water Users, the Idaho Department of Fish and Game and the Bureau of Land Management. The primary objection of D & D Enterprises, Inc. concern the disposition of the saved water. While I would agree that if the holder of a decreed water right saves the water normally lost in his conveyance works to seepage he would be entitled to the water under his decree. That, however, is not the case here. The water in this instance is being saved by a party other than the owners of the decreed rights. Therefore, the arguments of D & D Enterprises, Inc. do not convince me to reach a different decision.

The Proposed Memorandum Decision and Order has been modified for clarification at the following places: Findings of Fact 10, 11, 12, 15, 16 and 22; Conclusion of Law 1 and 3; and Order 4.

The modifications of the Proposed Decision do not substantially change the decision and, therefore, the Proposed Decision as modified is hereby adopted as the Final Decision.

Dated this 26th day of March, 1985.

A. KENNETH DUNN, Director

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATIONS FOR PERMIT NOS. 32-7128 AND 32-7136 IN THE NAME OF BIRCH POWER COMPANY	MODIFIED MEMORANDUM DECISION AND ORDER

On September 8, 1982, Birch Power Company filed with the Department of Water Resources Application for Permit No. 32-7128 to appropriate 45 cubic feet per second less a minimum of 5 cubic feet per second for fish propagation from Birch Creek in Clark County. The water would be diverted in the NE1/4NW1/4, Sec. 3, Twp. 8N, Rge. 30E and used to generate 900 horsepower in the NE1/4NE1/4, Sec. 17, Twp. 8N, Rge. 31E.

Notice of the application was published in the Rexburg Journal on September 23 and 30, 1982 and was subsequently protested on September 23, 1982 by the Idaho Department of Fish and Game. On October 12, 1982, additional protests were received from the Bureau of Land Management and from William T. Simmons, C. A. Wagoner, and Ben R. Wilding.

On January 3, 1984, Birch Power Company filed with the Department of Water Resources Application for Permit No. 32-7136 to appropriate an additional 30 cubic feet per second from Birch Creek to be used in combination with Application No. 32-7128.

Notice of this application was published in the Rexburg Journal on January 19 and 26, 1984 and subsequently protested on February 1, 1984 by the Bureau of Land Management. Additional protests were received from the Idaho Department of Fish and Game, and Ben Wilding, Watermaster of Water District 32-D, on February 2 and 3, 1984, respectively. A petition for D & D Enterprises

to intervene in the matter of Application for Permit No. 32-7128 was received on September 16, 1983. The applicant had previously advised the Department he would not object to such a petition so on February 23, 1984, the Department issued an order allowing D & D Enterprises to intervene in the matter.

The protests and petition to intervene cited several reasons for objecting to the proposed project which are summarized as follows:

1) Diversion of 75 cubic feet per second at the proposed diversion point would have an adverse impact on the fishery and riparian habitat along the 3,000 feet of Birch Creek between the proposed point of diversion and the Reno Ditch diversion.

2) The construction of the proposed diversion would be incompatible with the interests of the water users of Birch Creek.

3) The applicant's plans are inadequate to allow an assessment of possible detrimental effects.

4) The application contains no proof of a firm commitment to finance the project and the applicant has not demonstrated financial ability to complete it.

5) Information provided on the application is not sufficient to evaluate feasibility of the project.

6) The application appears to be made for speculative purposes.

On April 5, 1984, a combined hearing was held in Idaho Falls, Idaho to consider the objections against Applications for Permit No. 32-7128 and 32-7136. Present at the hearing and representing the applicant were Ted Sorenson, owner of Birch Power Company and Ray Rigby, Attorney at Law. The protestants present at the hearing were William Dillon, Deputy Attorney General and Virgil Moore, Regional Fisheries Manager representing the Idaho Department of Fish and Game; Ben Wilding, Watermaster representing Water District 32-D, Birch Creek; Jim

Esget, District Hydrologist and Robert McCardy, Wildlife Biologist representing U.S. Bureau of Land Management; and George Peterson, Attorney at Law representing D & D Enterprises. The following evidence was obtained during the hearing and considered in reaching this decision.

Review of Evidence

1) Applications for Permit Nos. 32-7128 and 32-7136

2) Hearing tapes numbered 1 through 9.

3) Applicant's Exhibit No. 1, Birch Power Company Preliminary Design and Report.

4) Applicant's Exhibit No. 2, letter from Don McGahey, General Manager of Midstate Distributing, Inc. dated April 4, 1984.

5) Applicant's Exhibit No. 3, letter from Brian D. Holt, Director Consumer Service, Planning and Research for Utah Power and Light Company, dated February 14, 1984.

6) Applicant's Exhibit No. 4, letter from Lyle J. Larson, Assistant Vice-president, Continental Bank & Trust Company, dated January 6, 1984.

7) Applicant's Exhibit No. 5, letter from Lyle J. Larson, Assistant Vice-president, Continental Bank & Trust Company, dated October 24, 1983.

8) Applicant's Exhibit No. 6, a report by J. S. Griffeth, PhD, entitled "Feasibility of Developing a Trout Population in the Proposed Birch Creek Hydroelectric Project Feeder Ditch" dated April 5, 1984.

9) Applicant's Exhibit No. 7, photos of Birch Creek in vicinity of proposed diversion.

10) Applicant's Exhibit No. 8, photos of riparian habitat along Reno Ditch.

11) Applicant's Exhibit No. 9, photos of general area where feeder ditch will be constructed.

12) Applicant's Exhibit No. 10, order from Federal Energy Regulatory Commission issuing preliminary permit to Birch Power Company, Project No. 7194-000 issued September 7, 1983.

13) Protestant's Exhibit Fish and Game No. 1, letter from Tom Reinecker, Region VI Supervisor, Idaho Department of Fish and Game, dated March 26, 1984.

14) Policy Statement of Idaho Water Resource Board on Birch Creek.

15) Court decree entitled Agnes B. Reno, et al vs J. R. Richards, et al dated September 6, 1922 adjudicating water rights on Birch Creek and tributaries.

Birch Creek flows in a southeasterly direction from Gilmore Summit down through Birch Creek Valley and adjacent to State Highway 28 for several miles. Birch Creek is used heavily by campers and fishermen partially because of the ease of access to the creek and because picnic and camping areas have been developed along it. About 3 miles above the proposed point of diversion Birch Creek turns more south and diverges from Highway 28 until at the proposed point of diversion it is about 1 1/2 miles west of the highway. The creek continues in a southerly direction about 3000 feet to the diversion structure for the Reno Ditch where during most of the time the entire flow is diverted leaving the channel of Birch Creek below the diversion without water.

The Reno Ditch takes the water from the east side of the creek and runs in a east-southeasterly direction about 5 miles before it is used. The slope of the ditch is steep enough so that the velocity of water is between 5 and 8 feet per second.

The applicant plans to divert the water from Birch Creek about 3000 feet upstream from the Reno Ditch diversion into a feeder ditch with a flatter slope with the velocity of the water reduced to 1.8 to 2.25 feet per second.

The water would be conveyed for about 5 1/2 miles in the feeder ditch then enter a steel penstock leading downhill to the generation facility located adjacent to the Reno Ditch. The water leaving the generation facility would return directly to the Reno Ditch for use by the irrigators.

The applicant claims that the water lost to seepage in the new feeder ditch will be at least 5 cubic feet per second less than in the 3000 feet of Birch Creek and in the approximately 5 miles of the Reno Ditch to the point where the water is returned to the Reno Ditch. This possible decrease in water loss raises the question of whether the water previously lost to seepage should be used to fill the decreed rights of the irrigators on the Reno Ditch or should it be used to provide a minimum flow in the Birch Creek channel downstream from the proposed point of diversion.

The hearing officer has considered the evidence and reviewed the testimony, and based upon his understanding of the law, proposes the following Findings of Fact, Conclusions of Law and Order:

FINDINGS OF FACT

1) Birch Power Company, the applicant, is a corporation qualified to do business in the State of Idaho, under the laws of the State of Idaho.

2) The applicant has applied to the Department of Water Resources for 45.0 cubic feet per second under Application for Permit No. 32-7128 and 30.0 cubic per second under Application for Permit No. 32-7136.

3) The applicant, through Ted Sorenson sole owner verbally deleted at the hearing all reference to the intent of the applicant to leave 5.0 cubic feet per second maintenance flow in Birch Creek between the proposed point of diversion and the Reno Ditch diversion.

4) The applicant has filed an application to divert water from Birch Creek in the NE1/4NW1/4, Sec. 3, Twp. 8N, Rge. 30E, convey this water through

5 miles of feeder ditch and 1 mile of penstock to a point in the NE1/4NE1/4, Sec. 17, Twp. 8N, Rge. 31E, where it will be used to generate 1,600 horsepower under 278 feet of head. This plan is option A in Applicant's Exhibit 1. Option B shown in Exhibit 1, but not shown on the application, would use the same feeder ditch but would use about 3 miles of penstock to a generating station in the NE1/2SE1/2, Sec. 15, T8N, Rge. 31E. The effect on Birch Creek and the downstream users would be the essentially the same for both options.

5) Based upon the records of the USGS gaging station at Eight Mile Canyon Road, flows at the proposed point of diversion are expected to range consistantly from 41.0 cubic feet per second to 75.0 cubic feet per second with flows in excess of 75.0 cubic feet per second occurring primarily in the period from October to May.

6) Water normally conveyed through the Reno Ditch for irrigation purposes will be the same water used for power generation during the irrigation season.

7) The proposed point of diversion is approximately 3,000 feet upstream from the head of the Reno Ditch.

8) Diversion of water from Birch Creek during the summer months is subject to regulation by the watermaster of Water District No. 32-D, Birch Creek.

9) Losses in the Birch Creek channel between the proposed point of diversion and the Reno Ditch are estimated at 1.0 cubic foot per second.

10) Loss measurements in the Reno Ditch indicate 9.0 cubic feet per second or approximately 22% of the water diverted is lost in the existing system between the proposed point of diversion and the point where the water will be returned to the Reno Ditch from the generation facility.

11) The use of sealants by the applicant in the feeder ditch is

expected to reduce the loss by about 50% between the proposed point of diversion and the point where the water is returned to the Reno Ditch.

12) The water lost to seepage does not reach the downstream water user as either surface or subsurface flow and has never been used for irrigation by those water users on the Reno Ditch.

13) Utah Power and Light to whom the power will be sold, and General Electric, the major supplier of the electrical equipment, have reviewed the project and found it financially feasible.

14) The Continental Bank & Trust Company has a verbal contract with Birch Power Company to secure or provide the best available financing. The bank would finance the project itself or arrange financing with several other alternate sources which are available pending the issuance of a water right permit.

15) Existing riparian habitat will be lost along that portion of the Reno Ditch and Birch Creek where dewatering is expected to occur. The existing riparian habitat is mainly willows and other brushy plants along Birch Creek and grasses and few woody plants along the Reno Ditch.

16) The fishery existing in Birch Creek below the proposed point of diversion will be eliminated. A maintenance flow of 5 cubic feet per second bypassing the proposed point of diversion is not sufficient to maintain a fishery, but would be sufficient to provide stockwater and maintain a riparian zone along the 3000 feet of Birch Creek being dewatered.

17) The first 1 1/2 miles of the feeder ditch is being designed to support a riparian zone and create a fishery habitat where the population density of trout should equal the fishery existing in Birch Creek below the proposed diversion. A continuous flow of water must be maintained in that section of the feeder ditch to assure a fishery.

18) A grazing allotment administered by the BLM has used for many

years, the Reno Ditch and Birch Creek below the proposed point of diversion for the watering of 4,000 sheep from April 1 to June 30. The proposed feeder ditch is also located within this grazing allotment.

19) Under a trailing allotment administered by the BLM, 450 head of cattle have watered along the 1 1/2 miles of Birch Creek below the proposed point of diversion between November 1 and February 1.

20) Section 42-113, Idaho Code charges the Department with recognizing and protecting water rights for instream livestock use and other purposes based on priority.

21) On September 7, 1983, the applicant received from the Federal Energy Regulatory Commmission a preliminary permit to conduct investigations and secure data necessary to determine the feasibility of the project.

22) None of the protestants are participating in the cost on the construction of the project.

CONCLUSIONS OF LAW

1) The water that will be saved by sealing the feeder ditch is new water that has never been available for use by the Reno Ditch irrigators, therefore, the existing irrigation rights will not be injured if the water being saved is used to provide water for livestock and to protect the public interest by preserving the riparian habitat along the natural stream channel of Birch Creek. The person who saves the water is entitled to the benefit of the water with his right to the saved water being prior to the right of the other parties. Reno v. Richards, 32 Idaho 1, 6, 13 (1918) and Basinger v. Taylor, 36 Idaho 591, 596-597, 599 (1922).

2) Streamflows at the proposed point of diversion have been shown to be adequate for the project as designed for the use of 75 cubic feet per second.

3) The adverse impacts to riparian habitat caused by the appropriation

and diversion of water from the 3,000 feet of stream will be sufficiently mitigated by the establishment of 1 1/2 miles of riparian zone plus the riparian vegetation that will naturally occur in the remaining length of the feeder ditch and the riparian vegetation that will be maintained by the flow left in the natural channel.

4) Establishing 1 1/2 miles of fishery habitat in the feeder ditch as shown in Applicant's Exhibit 6, will mitigate the loss of 3,000 feet of fishery below the proposed point of diversion as long as feeder ditch is not dewatered.

5) Stockwatering use from Birch Creek predates diversion and use of water under the two Birch Power Company applications.

6) Water rights established for instream livestock use on the 3,000 feet of Birch Creek above the Reno Ditch diversion must be satisfied.

7) The applicant has sufficient financial resources to complete the project.

8) The diversion of water under these permits when conditioned to protect the existing irrigation and stockwater rights and to mitigate the riparian, fish and wildlife values, is in the public interest.

9) The applicant is entitled to have both permits approved for a combined diversion of 75 cubic feet per second.

ORDER

IT IS, THEREFORE, HEREBY ORDERED that Applications for Permit Nos. 32-7128 and 32-7136 be APPROVED subject to the following limitations and conditions:

1) Subject to all prior water rights.

2) A measuring device and lockable controlling works of a type acceptable to the Department shall be permanently installed and maintained as part of the diverting works. A second measuring device shall be installed near the end

or interfere with future diversion of water for irrigation or other beneficial consumption.

10) Project construction shall commence within one year from the date of permit issuance and shall proceed diligently to completion unless it can be shown to the satisfaction of the Director of the Department of Water Resources that delays were due to circumstances over which permit holder had no control.

11) The diversion and use of water under this permit and any license subsequently issued is subject to review by the Director on the date of expiration of any license issued by FERC or if no license from FERC is issued, then thirty (30) years from the date the permit is issued. Upon appropriate findings relative to the interest of the public, the Director may cancel all or part of the use authorized herein and may revise, delete or add conditions under which the rights may be exercised.

12) These permits do not constitute Idaho Public Utilities Commission or Federal Energy Regulatory Commission approval that may be required.

13) Proof of construction of works and application of water to beneficial use shall be submitted on or before March 1, 1990.

Dated this 27 day of March, 1985.

Bobby D. Fleenor

BOBBY D. FLEENOR
Hearing Officer

of the feeder ditch so that the amount of water lost in the feeder ditch can be determined.

3) Use of water under these permits is subject to control by the watermaster of State Water District No. 32-D, Birch Creek.

4) Eleven percent of the flow of Birch Creek at the diversion to the feeder ditch, the amount of water saved by the new ditch, or 5 cubic feet per second whichever is the least, shall be allowed to flow past the feeder canal diversion in the natural channel of Birch Creek. The amount of water saved shall be computed by subtracting the amount of water being lost in the new feeder ditch which can be measured, from the amount that would have been lost in the 3,000 feet of stream channel and the Reno Ditch, which is 22% (0.22) of the water flowing in the stream at the new point of diversion.

5) The feeder canal shall be constructed and maintained in a manner that will reduce the amount of seepage loss by at least 11% of the flow at the proposed point of diversion.

6) The first 1 1/2 miles of ditch must be designed, constructed, maintained and operated in a manner that supports a fishery as shown in Applicant's Exhibit No. 6.

7) Provisions shall be made to return the water to Birch Creek at the end of the first 1 1/2 mile of feeder ditch to assure that the section of feeder ditch will not be dewatered if the generator malfunctions or icing occurs or any other event necessitates that the water not be conveyed to the generator.

8) These permits are subject to the provisions of Sections 42-205 through 42-210, Idaho Code restricting sale, transfer, assignment, or mortgage of these permits. Failure to comply with these provisions is cause for immediate cancellation of the permits.

9) This project shall be operated in a manner that will not conflict

Form 202
3/78

Ident. No. 32 7128
32-7125

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

To appropriate the public waters of the State of Idaho

1. Name of applicant BIRCH POWER COMPANY Phone (208) 529-2469

   Post office address 550 Linden Drive, Idaho Falls, Idaho 83401

2. Source of water supply Birch Creek which is a tributary of Birch Ck. sinks to groun water aquifer.

3. Location of point of diversion is NE ¼ of NW ¼ of Section 3 Township 8N

   Range 30 E*B.M. Clark County, additional points of diversion if any:

*kw 5/18/84

4. Water will be used for the following purposes:

   Amount 45 cfs (cfs ~~or acre-feet per annum~~) for power productio purposes from Jan. 1 to Dec. 31 (both dates inclusive)

   Amount _____ (cfs or acre-feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

   Amount _____ (cfs or acre-feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

   Amount _____ (cfs or acre-feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

5. Total quantity to be appropriated:

   a. 45 cubic feet per second ~~and/or~~ ~~xxxx~~ less minimum 5 cfs for fish propagation

6. Proposed diverting works:

   a. Description of ditches, flumes, pumps, headgates, etc. headgate with five miles of feeder ditch, penstock and power house

   b. Height of storage dam none feet, active reservoir capacity none acre-feet; total reservoir capacity None acre-feet, materials used in storage dam: N/A

   Period of year when water will be diverted to storage None (Month/Day) to None (Month/Day) inclusive.

   c. Proposed well diameter is N/A inches; proposed depth of well is N/A feet.

7. Time required for the completion of the works and application of the water to the proposed beneficial use is 5 years *(minimum 1 year – maximum 5 years).*

8. Description of proposed uses:

   a. If water is not for irrigation: Power Generation

   (1) Give the place of use of water: NE ¼ of NE ¼ of Section 17 Township ~~31E~~ 8N*

   Range 8N 31E* B.M.

   (2) Amount of power to be generated: 900 horsepower under 278 feet of head.

   (3) List number of each kind of livestock to be watered N/A

   (4) Name of municipality to be served N/A, or number of families to be supplied with domestic water _____.

   (5) If water is to be used for other purposes describe: Power Generation

b. If water is for irrigation, indicate acreage in each subdivision in the tabulation below:

TWP	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	

Total number of acres to be irrigated _____

c. Describe any other water rights used for the same purposes as described above. _____

N/A

9. a. Who owns the property at the point of diversion US Dept. of Interior, Bureau of Land Mgmt.

b. Who owns the land to be irrigated at or place of use US Dept. of Interior, Bureau of Land Mgmt.

c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing Right-of-way application on file with U.S. Dept. of Interior, Bureau of Land Management.

10. Remarks The water use is nonconsumptive. All water will be available for present irrigational uses and/or returned to Birch Creek

The power plant feeder ditch will reduce existing bed losses by approximately 5 cfs. This additional flow will be available to meet irrigational and/or fish propagation needs.

The outfall ditch will be filled with a concrete diversion box at the intersection with Reno Ditch to afford irrigational diversion as desired.

Priority: 09/08/82

Received by BP Date 9/8/82 Time 9:45

Preliminary check by Emc Fee $ 675.00

Receipted by BP Date 9/10/82 # 22496

Publication prepared by BP Date 9/15/82

Published in Standard Journal

Publication dates 9/16 ; 9/23/82

Publication approved CW Date 10-14-82

Protests filed by: Water District 32-D, BLM, Fish & Game

Copies of protests forwarded by CW

Hearing held by _____ Date _____

Recommended for approval denial by EMC

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

This is to certify that I have examined Application for Permit to appropriate the public waters of the State of Idaho No. 32-7128, and said application is hereby APPROVED.

1. Approval of said application is subject to the following limitations and conditions:

   a. SUBJECT TO ALL PRIOR WATER RIGHTS.

   b. Proof of construction of works and application of water to beneficial use shall be submitted on or before March 1, 19 90.

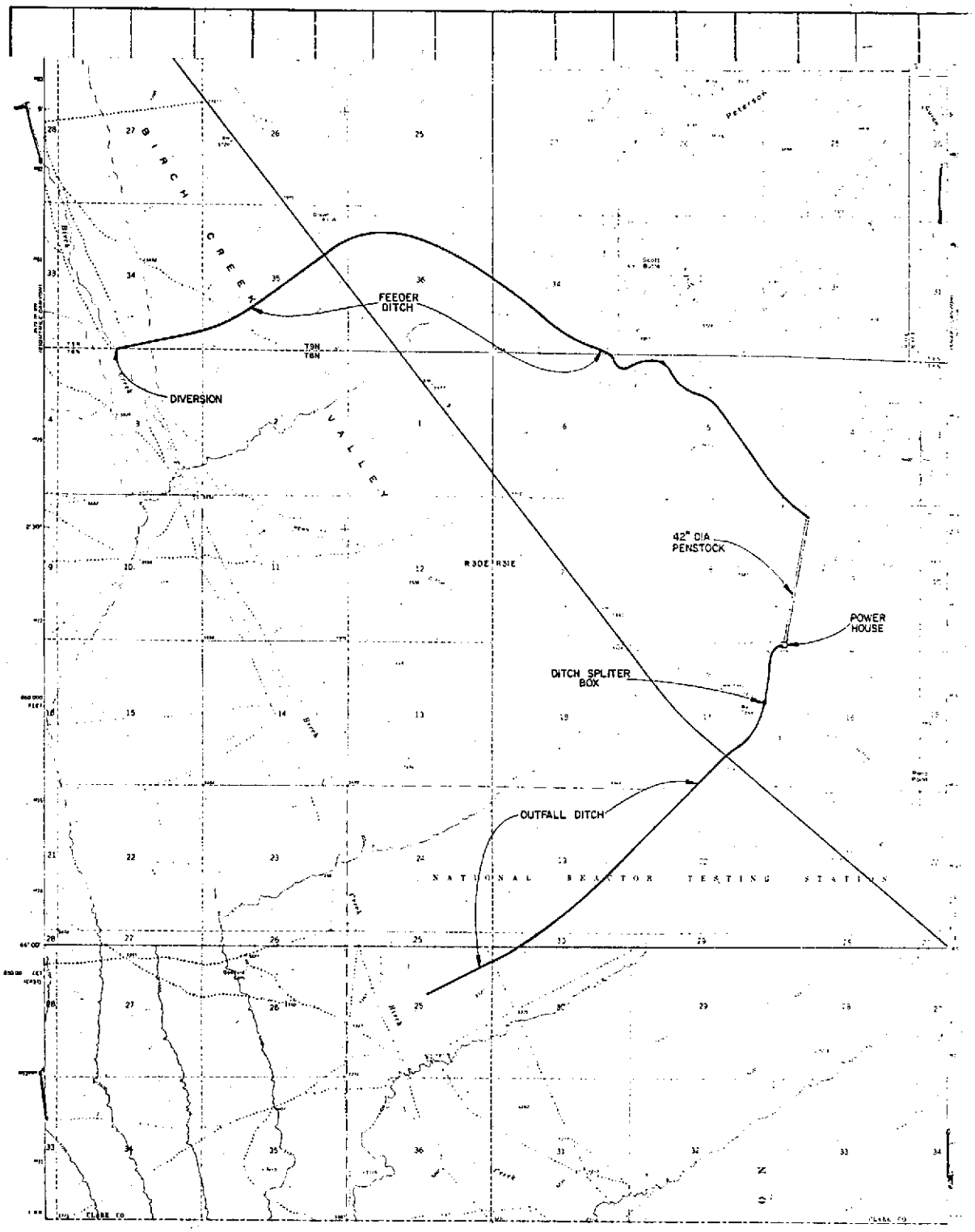
   c. The rate of diversion, if water is to be used for irrigation under this permit, when combined with all other water rights for the same land shall not exceed 0.02 cubic feet per second for each acre of land.

   d. Other: Pursuant to Order Adopting Modified Memorandum Decision and Order and Modified Memorandum Decision and Order.

Dated this 27th day of March, 1985.

L. Glen Saxton
Chief, Operations Bureau

11. Map of proposed project: show clearly the proposed point of diversion, place of use, section number, township and range number.



BE IT KNOWN that the undersigned hereby makes application for permit to appropriate the public waters of the State of Idaho as herein set forth.

(Applicant)

Form 202
3/78

32 7136
Ident. No. _____

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

To appropriate the public waters of the State of Idaho

1. Name of applicant BIRCH POWER COMPANY Phone (208) 522-8069

Post office address 550 Linden, Idaho Falls, ID 83401

2. Source of water supply Birch Creek which is a tributary of Birch Ck. sinks to ground-water aquifer.

3. Location of point of diversion is NE ¼ of NW ¼ of Section 3 Township 8N

Range 30E*B.M. Clark County, additional points of diversion if any: ____

*kw 5/18/84

4. Water will be used for the following purposes:

Amount 30 cfs (cfs ~~or acre-feet per annum~~) for power production purposes from Jan. 1 to Dec. 31 (both dates inclusive)

Amount _____ (cfs or acre-feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

Amount _____ (cfs or acre-feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

Amount _____ (cfs or acre-feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

5. Total quantity to be appropriated:

a. ~~25~~ *30 cubic feet per second and/or b. _____ acre-feet per annum.

6. Proposed diverting works: *Changes as per telecon with Ted Sorenson 1/6/84 EMC

a. Description of ditches, flumes, pumps, headgates, etc. Headgate with five miles of feeder ditch, penstock and power house.

b. Height of storage dam none feet, active reservoir capacity none acre-feet; total reservoir capacity none acre-feet, materials used in storage dam: N/A

Period of year when water will be diverted to storage None (Month/Day) to None (Month/Day) inclusive.

c. Proposed well diameter is N/A inches; proposed depth of well is N/A feet.

7. Time required for the completion of the works and application of the water to the proposed beneficial use is 5 years *(minimum 1 year – maximum 5 years).*

8. Description of proposed uses:

a. If water is not for irrigation:

(1) Give the place of use of water: NE ¼ of NE ¼ of Section 17 Township 31E

Range 8N B.M.

(2) Amount of power to be generated: 700 horsepower under 278 feet of head.

(3) List number of each kind of livestock to be watered N/A

(4) Name of municipality to be served N/A, or number of families to be supplied with domestic water _____.

(5) If water is to be used for other purposes describe: Power Generation

b. If water is for irrigation, indicate acreage in each subdivision in the tabulation below:

TWP	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	

Total number of acres to be irrigated _____

c. Describe any other water rights used for the same purposes as described above. _____

N/A

9. a. Who owns the property at the point of diversion US Dept. of Interior, Bureau of Land Mgmt.

b. Who owns the land ~~to be irrigated~~ at place of use US Dept. of Interior, Bureau of Land Mgmt.

c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing Right-of-way application on file with U.S. Dept. of Interior, Bureau of Land Management.

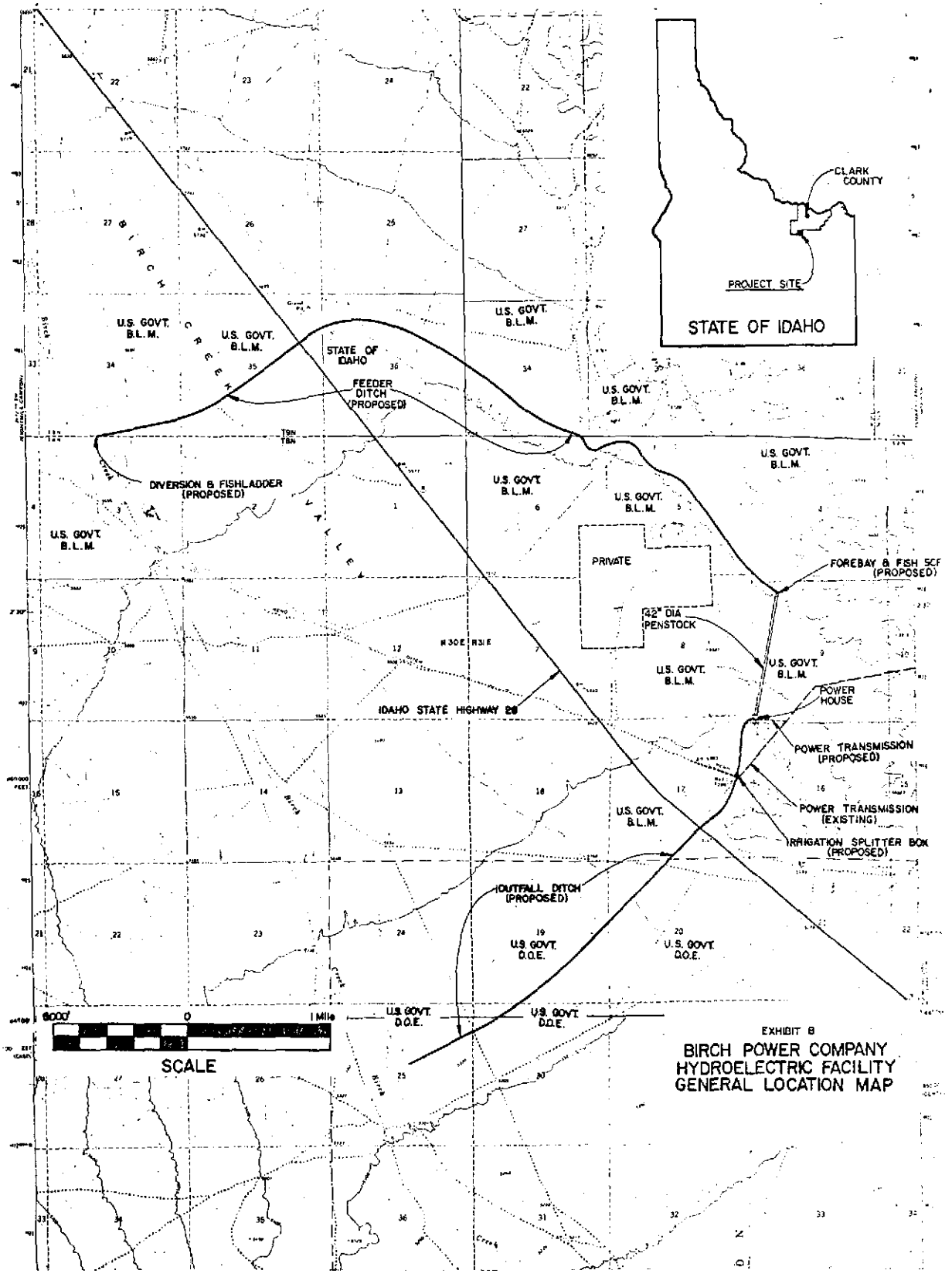
10. Remarks The water use is nonconsumptive. All water will be available for present irrigational uses and/or returned to Birch Creek.

The power plant feeder ditch will reduce existing bed losses by approximately 5 cfs.

The outfall ditch will be filled with a concrete diversion box at the intersection with Reno Ditch to afford irrigational diversion as desired.

This application seeks to amend application for Permit #32-7128 via addition of 30 cfs.

11. Map of proposed project: show clearly the proposed point of diversion, place of use, section number, township and range number.



Earl A. Sorensen
(Applicant)

Priority date: January 3, 1984

Received by BP Date 1/3/84 Time 4:30 pm

Preliminary check by EMC Fee $ 525.00

Receipted by BP Date 1/4/84 #29785

Publication prepared by BP Date 1/11/84

Published in Standard Journal

Publication dates 1/19 & 1/26/84

Publication approved BP Date 2/9/84

Protests filed by: Ben Wilding, W.M. Water District 32-D; Fish & Game, BLM

Copies of protests forwarded by CW

Hearing held by _____ Date _____

Recommended for approval denial by EMC

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

This is to certify that I have examined Application for Permit to appropriate the public waters of the State of Idaho No. 32-7136, and said application is hereby APPROVED.

1. Approval of said application is subject to the following limitations and conditions:

   a. SUBJECT TO ALL PRIOR WATER RIGHTS.

   b. Proof of construction of works and application of water to beneficial use shall be submitted on or before March 1, 19 90.

   c. The rate of diversion, if water is to be used for irrigation under this permit, when combined with all other water rights for the same land shall not exceed 0.02 cubic feet per second for each acre of land.

   d. Other: Pursuant to Order Adopting Modified Memorandum Decision and Order and Modified Memorandum Decision and Order.

Dated this 27th day of March, 1985.

L. Glen Saxton

Chief, Operations Bureau

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATIONS FOR PERMIT NOS. 32-7128 AND 32-7136 IN THE NAME OF BIRCH POWER COMPANY	CERTIFICATE OF MAILING

I HEREBY CERTIFY that on this the 27th day of March, 1985, true and correct copies of the ORDER ADOPTING MODIFIED MEMORANDUM DECISION AND ORDER and MODIFIED MEMORANDUM DECISION AND ORDER, were mailed, postage prepaid to:

Ted S. Sorenson
Birch Power Co.
550 Linden Dr.
Idaho Falls, ID 83401

Idaho Dept. of Fish and Game
1515 Lincoln Road
Idaho Falls, ID 83401

William B. Dillon, III
Attorney General's Office
Statehouse
Boise, ID 83720

James A. Esget and Robert McCardy
Bureau of Land Management
920 Lincoln Road
Idaho Falls, ID 83401

William T. Simmons
Dubois, ID 83423

Ben Wilding, Watermaster
Water District No. 32-D
Dubois, ID 83423

D & D Enterprises, Inc.
c/o George C. Petersen, Jr.
485 "E" St.
Idaho Falls, ID 83402

Ray W. Rigby, Esq.
RIGBY, THATCHER, ANDRUS, BARTON & WALTERS
25 N. 2nd E.
Rexburg, ID 83440

RITA I. FLECK
Secretary/Records Manager
Idaho Dept. of Water Resources

10. IDAHO DEPARTMENT OF HEALTH AND WELFARE (Water Quality Certification)

The applicant can and will comply with the requirements of the Department of Health and Welfare, Division of Environment, with respect to minimizing environmental impacts during construction and subsequent erosion.

This letter also constitutes Section 404 on water quality certification.

STATE OF IDAHO

DEPARTMENT OF HEALTH
AND WELFARE

DIVISION OF ENVIRONMENT
Statehouse
Boise, Idaho 83720

April 15, 1985

Mr. Ted S. Sorenson, P.E.
Agent for Birch Power Company
550 Lincoln Drive
Idaho Falls, Idaho 83401

REFERENCE TO: FERC #7194, Birch Power Company,
Birch Creek, Clark County, Idaho

Dear Mr. Sorenson:

We have reviewed the "Exhibit E" portion of the Federal Energy Regulatory Commission application for license for the Birch Creek Hydroelectric Project in Clark County, Idaho. The Division of Environment finds that as long as environmental impacts are minimized during construction and subsequent erosion of disturbed soil is controlled, the facility will not impact the water quality of Birch Creek.

From this determination, we certify under Section 401 that this facility will comply with applicable requirements of Sections 301, 302, 303, 306 and 307 of PL 92-500 and will not violate Idaho Water Quality Standards and Wastewater Treatment Requirements.

This certification does not imply approval of the activity by other agencies of the State of Idaho.

Sincerely,

Lee W. Stokes, Ph.D.
Administrator

LWS:lab

cc: Fred Springer, FERC
Al Murrey/Larry Koenig
Gordon Hopson/Mark Torf
Susan Martin

EQUAL OPPORTUNITY EMPLOYER

EXHIBIT A DEFICIENCIES - ADDITIONAL INFORMATION

1. The functional design drawings of fish passage facilities the applicant would construct at the project diversion. It should be noted that the project diversion is actually located 1.5 miles downstream from the diversion impoundment at the request of the Idaho Department of Fish and Game. This will allow the initial 1.5 miles of ditch to be developed for fishery habitat. Per the letter of Grant Christensen dated May 17, 1985, no fish passage facilities are required. However, at the bypass diversion point, fish screens are required to prevent downstream migration. Attached is the design criteria for the drum screen. Also attached is a revised Exhibit F3 showing the installation of the fish screens.

2. Riparian Development at the Proposed 2 Acre Diversion Impoundment - Attached is a letter from Bob McCarty of the Bureau of Land Management and also a revised sketch (F-1) which shows the riparian habitat improvement zone and fencing around the diversion impoundment. The plantings would be per Mr. McCarty's letter and per the riparian management plan described by him in the original FERC Application Filing.

3. Plans to Handle Excavated Material - All excavated material in the area of the diversion impoundment will be utilized to construct the diversion berm. Along all reaches of the ditch, all excavated materials would be utilized to construct the ditch embankment and/or the riparian water maintenance berm as shown on Exhibit F-2 and F-3. On the diversion berm and ditch embankments - the maximum slope would be 2 horizontal or more to 1 vertical. This slope is such that no significant erosion would occur. In addition it should be noted that the ditch itself would be located on a relatively flat sidehill slope, therefore no specific measures to control erosion would be required. However, the diversion berm embankments as well as on any ditch slopes would be seeded in accordance with the riparian management plan. The only area where soil and rock spoil will be required is between stations at the rock excavation areas along the penstock at approximately station 411 + 00. The amount of materials would be located in the adjacent draw to the west of the saddle and would be covered with suitable soils and seeded to match adjacent landscape.

   Attached is a revised Exhibit 1A showing the location of the spoil area.

I hereby certify that on the 28th day of May, 1985, I sent, by Certified-Registered Mail, a copy of the foregoing Deficiency Response for the Birch Creek Hydropower Project, propertly addressed with postage prepaid, to the following parties:

Mr. Kenneth F. Plumb, Secretary
Office of Electric Power Regulation
FEDERAL ENERGY REGULATORY COMMISSION
825 No. Capital St. N.E.
M.S. 208 R.B.
Washington, D.C. 20426

Mr. John P. Wolflin
Field Supervisor
FISH & WILDLIFE SERVICE (U.S.)
Ecological Services
4620 Overland Rd., Rm 209
Boise, ID 83705

Mr. Jack Quarles
FEDERAL ENERGY REGULATORY COMMISSION
819 Taylor St. 9A05
Ft. Worth, TX 76102

Mr. Thomas J. Green
State Archaeologist
IDAHO STATE HISTORICAL SOCIETY
610 North Julia Davis Drive
Boise, ID 83702

Mr. Jim Fellows
U.S. ARMY CORPS OF ENGINEERS
Building 602
City/County Airport
Walla Walla, WA 99362

Mr. Bobby Fleenor
IDAHO DEPARTMENT OF WATER RESOURCES
Statehouse Mail
Boise, ID 83720

Mr. Jerry Conley, Director
Attn: Virgil Moore
IDAHO DEPARTMENT OF FISH & GAME
P.O. Box 25
Boise, ID 83707

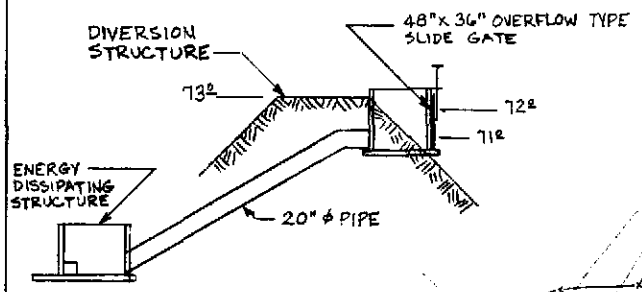
Mr. Mark Torf
IDAHO DEPARTMENT OF HEALTH & WELFARE
150 No. Third
Pocatello, ID 83201

Professor Jack Griffith
Fishery Biologist
Idaho State University
Pocatello, ID 83201

Mr. Brent Jensen
Area Manager
BUREAU OF LAND MANAGEMENT
940 Lincoln Road
Idaho Falls, ID 83401

Mr. Tom Reinecker
Regional Supervisor
IDAHO DEPARTMENT OF FISH & GAME
1515 Lincoln Road
Idaho Falls, ID 83401

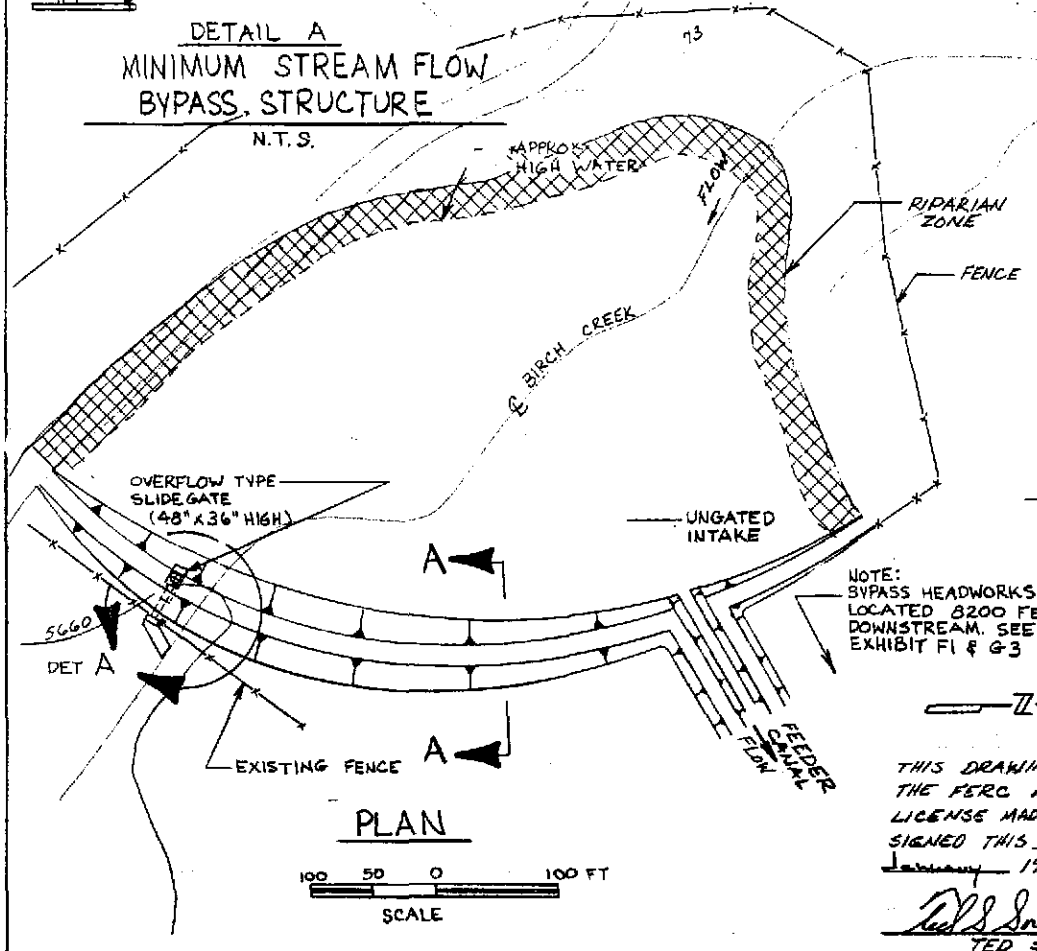
Ted S. Sorenson, P.E.
Birch Power Company



DETAIL A

MINIMUM STREAM FLOW BYPASS STRUCTURE

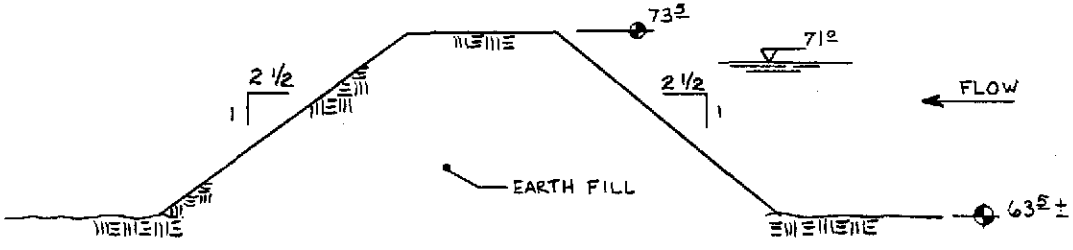
N.T.S.



PLAN

100 50 0 100 FT

SCALE



SECTION A

10 5 0 10 FT

SCALE

NOTE:
BYPASS HEADWORKS LOCATED 8200 FEET DOWNSTREAM. SEE EXHIBIT F1 & G3

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 31 DAY OF January 1985.

Ted S. Sorenson
TED S. SORENSON

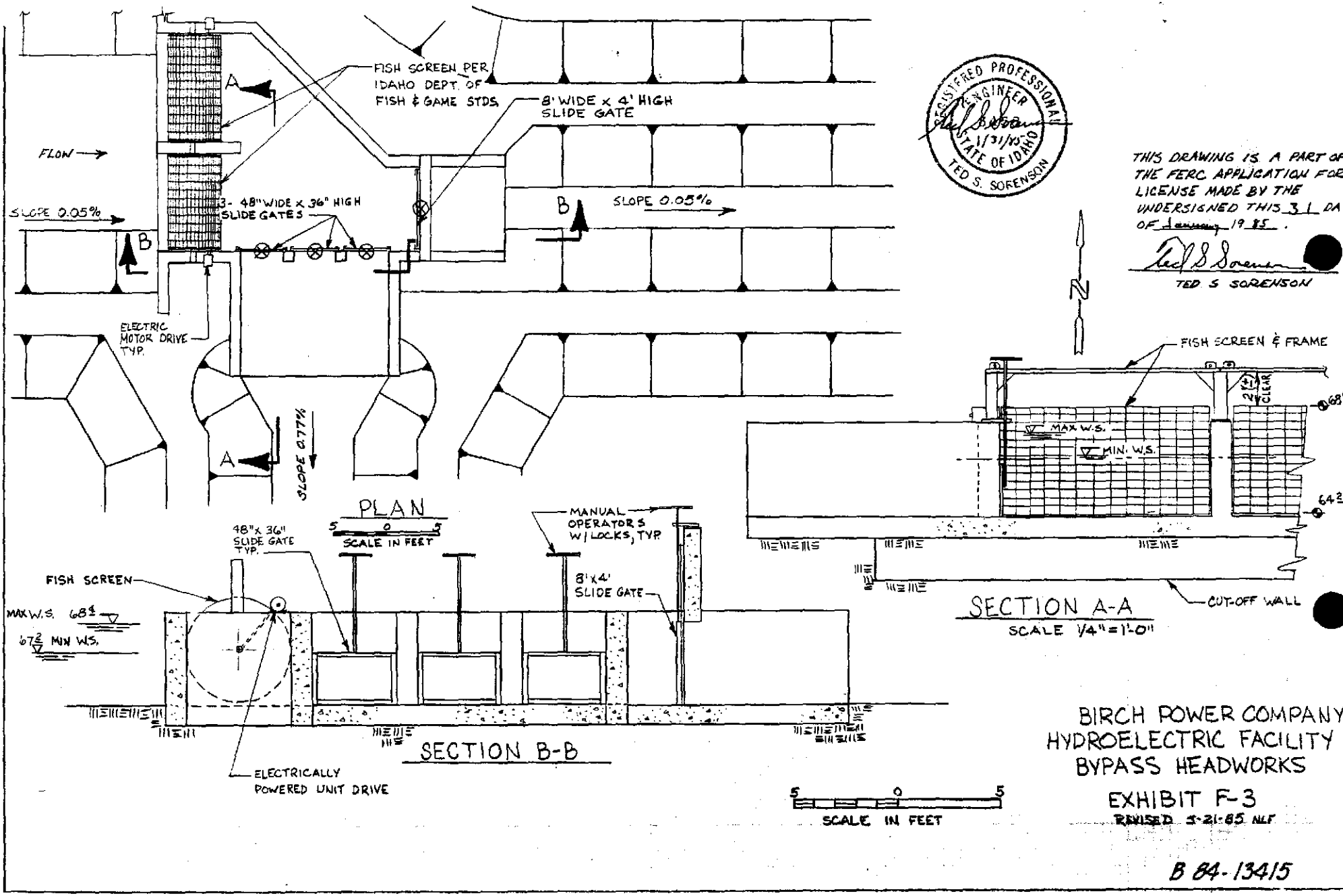
REGISTERED PROFESSIONAL ENGINEER
1/31/85
STATE OF IDAHO
TED S. SORENSON

BIRCH POWER HYDROELECTRIC FACILITY

DIVERSION STRUCTURE EXHIBIT F-1

REVISED 5-21-85 MF

B 84-13419



REGISTERED PROFESSIONAL ENGINEER
1/31/85
STATE OF IDAHO
TED S. SORENSON

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 31 DAY OF January 19 85.

Ted S Sorenson

TED S SORENSON

BIRCH POWER COMPANY HYDROELECTRIC FACILITY BYPASS HEADWORKS

EXHIBIT F-3

REVISED 3-21-85 NLF

B 84-13415

March 27, 1985

Ted S. Sorenson
Birch Power Co.
550 Linden Drive
Idaho Falls, ID 83401

Dear Mr. Sorenson:

Re: Application for Permit Nos. 32-7128 and 32-7136

Enclosed is a copy of each of the approved applications for permit along with a copy of the Order Adopting Modified Memorandum Decision and Order and Modified Memorandum Decision and Order. Be sure to note the conditions of approval as set forth in the Modified Memorandum Decision and Order.

Please note the requirement that as a permit holder you must commence the excavation or construction of diverting works within one year of the date the permit was issued, and yourmust proceed diligently until the project is completed. The enclosed blue card must be completed and returned to this office as soon as you commence construction, no later than one year from the date the permit was approved.

Enclosed is a sheet entitled "Instructions for Proof of Beneficial Use". Please read the instructions carefully since you must take further action to develop this permit into a license.

Any person who does not agree with the decision of the Department may request a rehearing before the Director within 20 days or may appeal directly to the district court within 30 days of the date the decision is mailed.

Sincerely,

L. GLEN SAXTON
Chief, Operations Bureau

cc: Idaho Dept. of Fish and Game
William Dillon, III
James A. Esget and Robert McCardy
William T. Simmons
Ben Wilding, Watermaster
D & D Enterprises, Inc.
Ray W. Rigby, Esq.

SORENSON ENGINEERING, P.A.
CONSULTING ENGINEERS
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401
208-522-8069

RECEIVED
FEB 19 1985
Department of Water Resources

January 30, 1985

Mr. Bobby Fleenor
Idaho Dept. of Water Resources
Statehouse Mail
Boise, ID 83720

RE: BIRCH CREEK HYDROELECTRIC PROJECT FERC 7194

Dear Mr. Fleenor,

Enclosed is a copy of the FERC Minor License Application for your information.

Trusting this to be of value.

Very truly yours,

Ted S. Sorenson, P.E.
Project Engineer

TSS:kw
enc.
cc: Ray Rigby

RECEIVED

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Idaho Falls District
940 Lincoln Road
Idaho Falls, Idaho 83401

IN REPLY REFER TO: 7250.4

RECEIVED
JAN 25 1985
Department of Water Resources

January 23, 1985

Mr. Bobby D. Fleenor
Department of Water Resources
Statehouse
Boise, ID 83720

Dear Mr. Fleenor:

Based upon your phone conversation of January 18, 1985, with our District Hydrologist, we have again reviewed the Order Issuing Proposed Decision in the matter of applications for permit Nos. 32-7128 and 32-7136 in the name of Birch Power Company.

The BLM takes exception to portions of Section 4 of the Order which reads as follows: "Eleven percent of the flow of Birch Creek at the diversion to the feeder ditch, the amount of water saved by the new ditch or 5 cubic feet per second whichever is least, shall be allowed to flow past the feeder canal diversion in the natural channel of Birch Creek."

The BLM recommends that Section 4 be modified to read as follows: "Eleven percent of any flows of Birch Creek at the diversion to the feeder ditch or 5 cubic feet per second whichever is least shall be allowed to flow past the feeder canal diversion in the natural channel of Birch Creek".

We recommend this modification because reference to water saved by the new ditch would make our well established historical stock use in the old channel dependent upon the success of a project proposed by another party. This modification is in agreement with Idaho Fish and Game recommendations dated December 17, 1984.

These exceptions supersede and modify our exceptions dated December 14, 1984.

Sincerely,

O'dell A. Frandsen
District Manager

PETERSEN, MOSS, OLSEN, MEACHAM & CARR

GEORGE C. PETERSEN, JR.
REED L. MOSS
DENNIS M. OLSEN
GREGORY P. MEACHAM
WM. CHARLES CARR
EARL BLOWER
ALAN E. BARBER
SCOTT P. ESKELSON

ATTORNEYS AT LAW
485 "E" STREET
IDAHO FALLS, IDAHO 83402

TELEPHONE
AREA CODE 208
523-4650

January 11, 1985

RECEIVED
JAN 14 1985
Department of Water Resources

Department of Water Resources
ATTN: Bobby D. Fleenor
Statehouse
Boise, Idaho 83720

RE: In the Matter of Applications for Permit Numbers 32-7128 and 32-7136 in the Name of Birch Power Company

Dear Mr. Fleenor:

Enclosed herewith please find Response of D & D Enterprises, Inc., to Exceptions Filed by Ben R. Wilding, BLM, and Idaho Department of Fish and Game.

Very truly yours,

PETERSEN, MOSS, OLSEN,
MEACHAM & CARR

GEORGE C. PETERSEN, JR.

GCP/jo
Enclosure
7671a

George C. Petersen, Jr., Esq.
PETERSEN, MOSS, OLSEN, MEACHAM & CARR
485 "E" Street
Idaho Falls, Idaho 83402
(208) 523-4650

Attorneys for D & D Enterprises, Inc.

BEFORE THE DIRECTOR OF THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATIONS FOR PERMIT NUMBERS 32-7128 and 32-7136 in the name of BIRCH POWER COMPANY	RESPONSE OF D & D ENTERPRISES, INC. TO EXCEPTIONS FILED BY BEN R. WILDING, BLM, and IDAHO DEPARTMENT OF FISH AND GAME

D & D Enterprises has reviewed the exceptions of Ben R. Wilding, the BLM and the Idaho Department of Fish and Game to the Proposed Memorandum Decision and Order in the within matter, and it agrees with some of the exceptions expressed and disagrees with others.

At page 4 of the director's Proposed Memorandum Decision and Order, the director refers to the possible decrease in water loss and indicates that it raises the question "whether the water previously lost to seepage should be used to the fill the decreed rights of the irrigators on the Reno ditch or should it be used to provide a minimum flow in the Birch Creek Channel downstream from the proposed point of diversion."

RESPONSE OF D & D ENTERPRISES, INC. - 1

December 28, 1984

Ted S. Sorensen
Birch Power Company
550 Linden Drive
Idaho Falls, ID 83401

Dear Mr. Sorensen:

Re: Permit Nos. 32-/128 and 32-/136 BIRCH POWER COMPANY

Enclosed is a copy of two exceptions submitted on the above-referenced applications for permit.

If you wish to respond to either or both exceptions, please do so within 15 days of the date of this letter.

Sincerely,

BOBBY D. FLEENOR
Chief, Regional Office Bureau

BDF:rf

Enclosures

December 28, 1984

Steve Elle
Idaho Department of Fish and Game
1515 Lincoln Road
Idaho Falls, ID 83401

Dear Mr. Elle:

Re: Permit Nos. 32-7128 and 32-7136 BIRCH POWER COMPANY

Enclosed is a copy of two exceptions submitted on the above-referenced applications for permit.

If you wish to respond to either or both exceptions, please do so within 15 days of the date of this letter.

Sincerely,

BOBBY D. FLEENOR
Chief, Regional Office Bureau

BDF:rf

Enclosures

December 28, 1984

William T. Simmons
Dubois, ID 83423

Dear Mr. Simmons:

Re: Permit Nos. 32-7128 and 32-7136 BIRCH POWER COMPANY

Enclosed is a copy of two exceptions submitted on the above-referenced applications for permit.

If you wish to respond to either or both exceptions, please do so within 15 days of the date of this letter.

Sincerely,

BOBBY D. FLEENOR
Chief, Regional Office Bureau

BDF:rf

Enclosures

December 28, 1984

D & D Enterprises, Inc.
c/o George C. Petersen, Jr.
485 "E" St.
Idaho Falls, ID 83402

Gentlemen:

Re: Permit Nos. 32-7128 and 32-7136 BIRCH POWER COMPANY

Enclosed is a copy of two exceptions submitted on the above-referenced applications for permit.

If you wish to respond to either or both exceptions, please do so within 15 days of the date of this letter.

Sincerely,

BOBBY D. FLEENOR
Chief, Regional Office Bureau

BDF:rf

Enclosures

December 28, 1984

Ray W. Rigby, Esq.
RIGBY, THATCHER, ANDRUS, BARTON & WALTERS
25 North 2nd East
Rexburg, ID 83440

Dear Mr. Rigby:

Re: Permit Nos. 32-7128 and 32-7136 BIRCH POWER COMPANY

Enclosed is a copy of two exceptions submitted on the above-referenced applications for permit.

If you wish to respond to either or both exceptions, please do so within 15 days of the date of this letter.

Sincerely,

BOBBY D. FLEENOR
Chief, Regional Office Bureau

BDF:rf

Enclosures

December 23, 1984

William B. Dillon, III
Idaho Dept. of Fish and Game
P. O. Box 25
Boise, ID 83707

Dear Mr. Dillon:

Re: Permit Nos. 32-7128 and 32-7136 BIRCH POWER COMPANY

Enclosed is a copy of two exceptions submitted on the above-referenced applications for permit.

If you wish to respond to either or both exceptions, please do so within 15 days of the date of this letter.

Sincerely,

BOBBY D. FLEENOR
Chief, Regional Office Bureau

BDF:rf

Enclosures

December 28, 1984

Ben Wilding, Watermaster
Water Ditrict No. 32-D
Dubois, ID 83423

Dear Mr. Wilding:

Re: Permit Nos. 32-7128 and 32-7136 BIRCH POWER COMPANY

Enclosed is a copy of the exception submitted on the above-referenced applications for permit.

If you wish to respond to the exception, please do so within 15 days of the date of this letter.

Sincerely,

BOBBY D. FLEENOR
Chief, Regional Office Bureau

BDF:rf

Enclosures

December 28, 1984

James A. Esget and Robert McCardy
Bureau of Land Management
920 Lincoln Road
Idaho Falls, ID 83401

Gentlemen:

Re: Permit Nos. 32-7128 and 32-7136 BIRCH POWER COMPANY

Enclosed is a copy of the exception submitted on the above-referenced applications for permit.

If you wish to respond to the exception, please do so within 15 days of the date of this letter.

Sincerely,

BOBBY D. FLEENOR
Chief, Regional Office Bureau

BDF:rf

Enclosures

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Idaho Falls District
940 Lincoln Road
Idaho Falls, Idaho 83401

IN REPLY
REFER TO: 7250.4

RECEIVED
DEC 14 1984
Department of Water Resources
Eastern District Office

RECEIVED
DEC 19 1984
Department of Water Resources

Mr. Bobby D. Fleenor
Department of Water Resources
Statehouse
Boise, ID 83720

Dear Mr. Fleenor:

The Idaho Falls District Office of the Bureau of Land Management has reviewed and discussed the information contained in the "Order Issuing Proposed Decision", in the matter of applications for permit Nos. 32-7128 and 32-7136 in the name of Birch Power Company.

We have found the record of events, review of evidence, findings of fact and conclusions of law to be true and accurate. We would propose only two wording changes. Under Findings of Fact, section 15) - "no woody plants along the Reno ditch " should be changed to read, "few woody plants along the Reno Ditch". Section 16) "maintain the reparian zone along the 3000 feet of Birch Creek" should be changed to read, "maintain a riparian zone along the 3000 feet of Birch Creek".

We have specific exceptions to Sections 3) and 4) of the proposed ORDER and are filing a brief explaining these exceptions as enclosure #1 to this letter. We would be happy to meet with the Director of your Department to further explain these exceptions in detail. We appreciate the opportunity to respond to your proposed decision.

Sincerely,

O'dell A. Frandsen
District manager

Enclosure

RECEIVED
DEC 19 1984
12/14/84
Department of Water Resources

RECEIVED
DEC 14 1984
Department of Water Resources
Eastern District Office

BRIEF - BIRCH CREEK

In the matter of applications for permit Nos. 32-7128 and 32-7136 in the name of Birch Power Co.

Order - Section 3) - Use of water under these permits is subject to control by the watermaster of State Water District No. 32-D, Birch Creek.

We have no exceptions to this section of the order as a matter of water law. As a matter of practicality under the proposed Birch Creek Hydropower Project however, we have some exception. A major water user below the proposed feeder ditch is also acting as District Watermaster. We have had problems in the past obtaining water for maintenance of riparian vegetation and stock water below the present Reno Diversion. This has been true even when flows were more than sufficient to fill all existing beneficial use rights on Reno Ditch. As a matter of practicality, we see some conflicts of interest and subsequent potential for future disputes arising from the Section 3) order.

Order - Section 4) - Eleven percent of the flow of Birch Creek at the diversion to the feeder ditch, the amount of water saved by the new ditch or 5 cubic feet per second whichever is least, shall be allowed to flow past the feeder canal diversion in the natural channel of Birch Creek.

Under the Conclusions of Law Section of the proposed decision order, subsections 5) and 6), the following conclusions of law were presented:

> 5) Stockwatering use from Birch Creek predates diversion and use of water under the two Birch Creek Power Company applications.
>
> 6) Water rights established for instream livestock on 3,000 feet of Birch Creek above the Reno Ditch must be satisfied.

We believe these conclusions are true and accurate under existing water law. However, we do not believe that Order - Section 4) meets these two conclusions of law.

A) If stockwatering use from Birch Creek predates the Birch Power Company applications (see claim #32-4062 Bureau of Land Management) and in fact may predate Reno Ditch irrigation uses (see exhibit #2), then the priority date for this stock use would necessarily predate at least the Birch Power Company priority date. By Idaho Code 42-106, the first in time should be the first in right, and once the Reno Ditch rights were satisfied, the next right to be fully satisfied should be the stockwatering beneficial use by BLM. This fact is independent of any action by Birch Power Company to seal or not seal their feeder ditch.

INVESTIGATED

Enclosure 1

We believe that reference to the amount of water saved by the new ditch in Order - Section 4 is not in conformance with existing water law.

B) Reference to 11 percent of the flow of Birch Creek at the diversion to the feeder ditch or 5 cubic feet per second whichever is least has the net impact of damaging our existing beneficial use during irrigation season.

Average flow for the months June - September (irrigation season) at USGS gaging station 13117030 - Birch Creek at Eight-Mile Canyon Road, near Reno, ID just upstream from the proposed diversion, are 45.2 cfs for the period of record (45.2 cfs x 11% = 4.97 cfs). Since cattle use takes place during irrigation season 4/20 - 12/23 each year, if the BLM were allowed 11 percent of all flows, with no mention of 5 cubic feet per second whichever is least, then the BLM would average 5 cfs flow. However, with the 5 cfs maximum, at flows above the Reno Ditch right ($\cong$ 30 cfs) and below 45.2 cfs, there is an impact to BLM stock uses. The chart, exhibit #1, illustrates the net impact of the order-section 4 stipulation to the existing stock use.

As shown on the graph attached, during flows of 33 cfs - 45.2 cfs, the BLM beneficial use would be negatively impacted by the criterion of Order - Section 4. We believe this is inconsistent with existing water law.

C) The Order - Section 4 as written, would require extensive monitoring by our agency to determine the water saved in the ditch, 11 percent of the flow, or 5 cfs. We do not see this as practical for our agency. The monitoring difficulty is even greater when combined with existing conflicts of interest regarding control of flows as mentioned earlier. For practical monitoring purposes, the Bureau would prefer a straight allocation of flow rather than presented as a percent of existing flows (recognizing that the allocation would be junior in right to Reno Ditch irrigation rights). A constant flow allocation would allow a diversion structure to be engineered for flows above the Reno Ditch right, which would require minimal flow monitoring.

NO. 340-10 DIETZGEN GRAPH PAPER
10 X 10 PER INCH

DIETZGEN CORPORATION
MADE IN U.S.A.

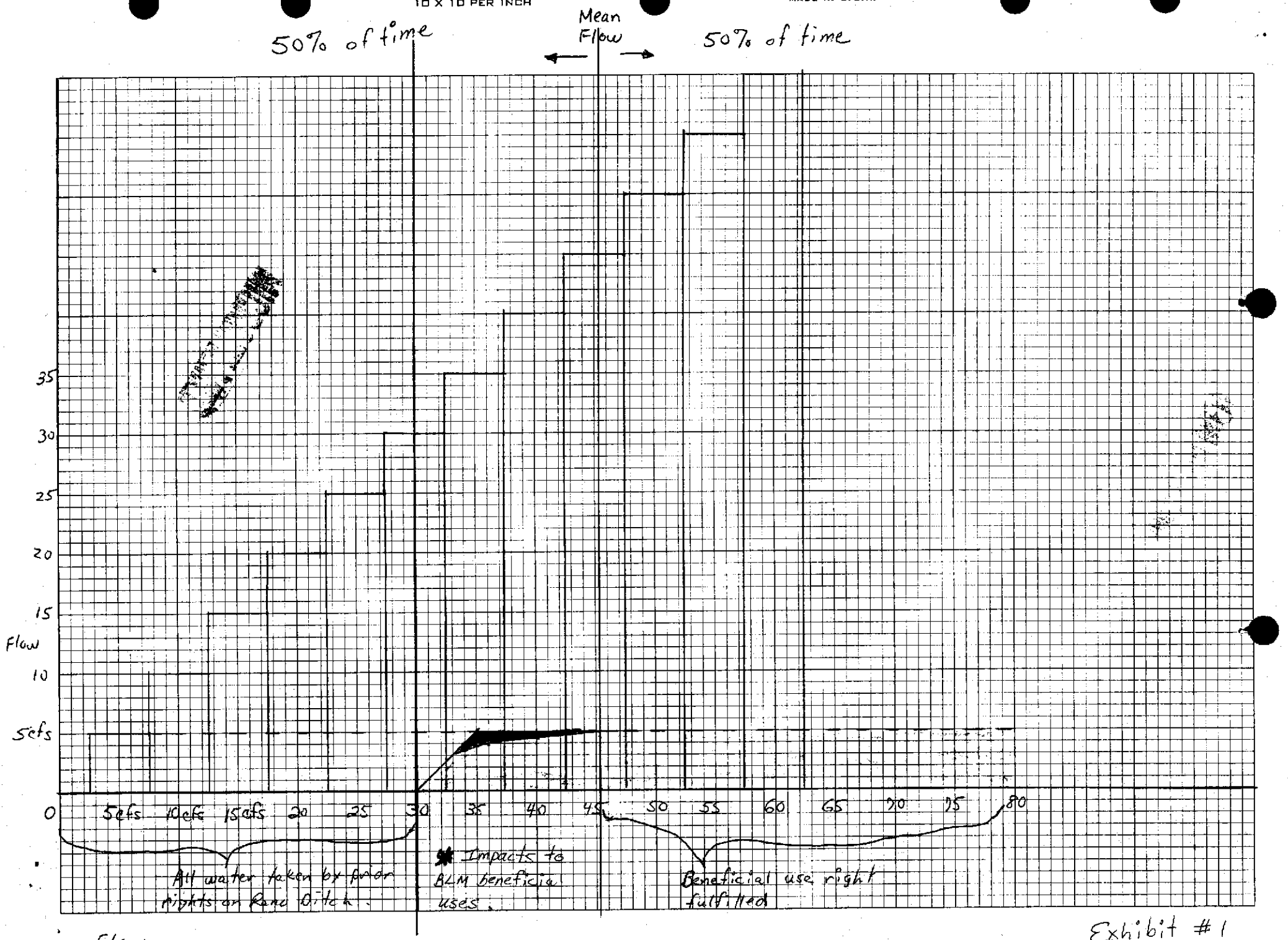


Exhibit #1

RECEIVED
DEC 19 1984
Department of Water Resources

RECEIVED
DEC 19 1984
Department of Water Resources

RECEIVED
DEC 14 1984
Department of Water Resources
Eastern District Office

AFFIDAVIT

State of IDAHO

County of BUTTE

I May Woodie LeVan moved to Spencer Idaho in 1919 and lived there until 1931 at which time I moved to Howe Idaho and have lived here to the present time. My Husband Fred Woodie worked for Wood Livestock Company for 30 years. He was born in 1879 And moved to Spencer as a young man.
Some of the earliest ranchers in the Birch Creek Valley were D.B. Hawley and ER. Hawley. They settled in the Little Lost Valley in 1875 and filed the first water right in the Little Lost Valley in 1879. They grazed large Numbers of horses in Birch Creek Valley and the entire surrounding area to the Big Southern Butte.
Another original ranching operation were the millers, David, Thomas, and his son Gene Miller. They ran large numbers of horses and cattle throughout Birch Creek Valley and established the priority water right in 1882 later acquired by Wood livestock Co. I learned these things through association with the families of these people and in living in the area since 1919.
These statements are true and factual to which I do solemnly swear and attest.

Witness: George Woodie Signature: Mary Woodie LeVan

Witness: Brent D Jensen Date: Dec 11, 1984

On the 11 day of DECEMBER, 1984, personally came before me a notary public on and for said County and State, the within-named MARY WOODIE LEVAN, GEORGE WOODIE, BRENT JENSEN to me personally known to be the identical persons described in and who executed the within and foregoing instrument and acknowledge to me that THEY executed the same as THEIR free and voluntary act and deed, for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal this day and year in this certificate first above written.

Notary Public in and for the

State of IDAHO

Residing at 940 LINCOLN RD

IDAHO FALLS, IDAHO

My commission expires; JAN 17, 1988

(Seal)

Exhibit #2

JIM JONES
Attorney General
State of Idaho
Statehouse, Room 210
Boise, Idaho 83720
Telephone: (208) 334-2400

WILLIAM B. DILLON, III
Deputy Attorney General
Idaho Dept. of Fish and Game
600 South Walnut
P. O. Box 25
Boise, ID 83707
Telephone: (208)334-3715

RECEIVED
DEC 12 1984
Department of Water Resources

BEFORE THE DIRECTOR OF THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATIONS FOR PERMIT NOS. 32-7128 AND 32-7136 IN THE NAME OF BIRCH POWER COMPANY	EXCEPTIONS TO PROPOSED MEMORANDUM DECISION AND ORDER

The Idaho Department of Fish and Game submits the following exceptions to the proposed memorandum decision and order:

I.

EXCEPTION TO PARAGRAPH 4, ORDER

The Department of Fish and Game excepts to that paragraph and believes that it should read as follows:

> Eleven percent of the flow of Birch Creek at the diversion to the feeder ditch, or 5 cubic feet per second, whichever is the least, shall be allowed to flow past the feeder canal diversion in the natural channel of Birch Creek.

Fish and Game objects to "the amount of water saved by the new ditch" being included as one of the alternative amounts of water being allowed

to flow past the feeder canal diversion. Fish and Game believes that the local public interest, the Birch Creek riparian zone, and the stock watering uses would be better served by insuring that some water definitely be allowed to flow past the diversion. By allowing "the amount of water saved by the new ditch" to be one of the alternative flows, the risk of the new ditch not being able to conserve water is placed on the public and the stock owners watering their stock below the proposed diversion. The risk should be upon the applicant, since the water savings is hypothetical and unproved.

II.

EXCEPTION TO PARAGRAPH 11, ORDER

The Department of Fish and Game excepts to that paragraph if it means that, at any time, the Director may revise the license that may be issued to the applicant. If paragraph 11 is meant to state that the Director may revise the license only at the date of expiration of the FERC license granted or at the end of 30 years if no FERC license is issued, then Fish and Game has no objection but requests that the paragaraph be redrafted to more clearly indicate that the review shall occur conditioned upon the events mentioned in the first sentence.

DATED This 12th day of December, 1984.

William B. Dillon, III
Deputy Attorney General
Attorney for the Department
of Fish and Game

JIM JONES
Attorney General
State of Idaho
Statehouse, Room 210
Boise, Idaho 83720
Telephone: (208) 334-2400

CERTIFICATE OF MAILING

I HEREBY CERTIFY That on this 12th day of December, 1984, true and correct copies of the foregoing EXCEPTIONS TO PROPOSED MEMORANDUM DECISION AND ORDER, were mailed, postage prepaid to:

Ted S. Sorenson
Birch Power Company
550 Linden Drive
Idaho Falls, ID 83401

Steve Elle
Idaho Department of Fish and Game
1515 Lincoln Road
Idaho Falls, ID 83401

James A. Esget and Robert McCardy
Bureau of Land Management
920 Lincoln Road
Idaho Falls, ID 83401

William T. Simmons
Dubois, ID 83423

Ben Wilding, Watermaster
Water District No. 32-D
Dubois, ID 83423

D & D Enterprises, Inc.
c/o George C. Petersen, Jr.
485 "E" St.
Idaho Falls, ID 83402

Ray W. Rigby, Esq.
RIGBY, THATCHER, ANDRUS, BARTON
& WALTERS
25 North 2nd East
Rexburg, ID 83440

William B. Dillon, III
Deputy Attorney General

R9AT039TV

JIM JONES
Attorney General
State of Idaho
Statehouse, Room 210
Boise, Idaho 83720
Telephone: (208) 334-2400

EXCEPTION AGAINST ADOPTING THE DECISION PROPOSED

RECEIVED
DEC 12 1984
Department of Water Resources
Eastern District Office

IN THE MATTER OF APPLICATIONS FOR PERMITS)
NOS. 32-7128 AND 32-7136 IN THE NAME OF)
BIRCH POWER COMPANY)
)

The Birch Creek Water Users, having reviewed the Memorandum Decision proposed in the matter of application for permit 32-7128 and 32-7136 by hearing officer Bobby D. Fleenor and find that his conclusions of law to be without justification and not consistent with State Law and not consistent with facts presented at the hearing. It is clear from the record that the Birch Creek Water Users have made consistent and substantial efforts to get the entire flow of Birch Creek to the lands decreed water rights in the case of Agnes B. Reno, et al -vs- J. R. Richards, et al dated September 6, 1922. Every reasonable effort to prevent seepage losses in Birch Creek has been made. For the hearing officer to find that, because the water users have not been able to totally prevent seepage, the water saved by a new canal is unavailable for their use is a novel interpretation of the law to say the least. On wonders if the department would make a similar finding if a water user decided to pipe water from a decreed source in order to get the amount decreed.

It is also unique reasoning for the hearing officer to take upon himself the establishment of a minimum streamflow on the lower end of Birch Creek since the request to the Water Resources Board for an instream flow on Birch Creek has been withdrawn. Because we find no basis for the department to, at will establish an instream flow, we must assume that the five (5) cubic feet per second is available for appropriation in which case our rights must be filled first and the five (5) cfs requirement can not stand.

For these and other reasons, we object to conclusion

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DEC 26 1984
Department of Water Resources

No. 1 and 8, and request that the director remove these conclusions from his decision, and eliminate condition No. 4 in the Order approving applications for permits Nos. 32-7128 and 32-7136.

Dated this 12th day of December, 1984.

Ben R. Wilding
Watermaster for
District 32-D

Sworn to before me this 12th day of December, 1984 and appeared Ben R. Wilding, Watermaster for Water District 32-D as above subscribed.

Notary

Residing at: Idaho Falls

My Commission Expires: 6/15/85.

STATE OF IDAHO
OFFICE OF THE ATTORNEY GENERAL
BOISE 83720

JIM JONES
ATTORNEY GENERAL

DEPARTMENT OF WATER RESOURCES
STATEHOUSE, BOISE, IDAHO 83720
TELEPHONE: (208) 334-4448

MEMORANDUM

TO: Donald Kramer, Chairman, Idaho Water Resource Board, and Members of the Board

FROM: Phillip J. Rassier, Deputy Attorney General, Department of Water Resources

RE: Policy Statement of Idaho Water Resource Board on Birch Creek

DATE: September 10, 1984

This memorandum of legal guidance is provided at the request of Mr. Wayne Haas, Administrator of the Department of Water Resources.

QUESTION:

Does the "Policy Statement of Idaho Water Resource Board on Birch Creek" approved April 7, 1982 preclude the approval by the Director of the Department of Water Resources of any permit for the diversion of water from a specified reach of Birch Creek?

CONCLUSION:

The Board's policy statement reflects the Board's opposition to the approval of any additional permits for the diversion of water from a specified reach of Birch Creek but does not legally preclude the approval of such permits. A prohibition against further diversions could only be accomplished pursuant to the Minimum Stream Flow Act or the Board's constitutional authority to formulate a state water plan.

ANALYSIS:

The resolution portion of the Board's April 7, 1982 policy statement on Birch Creek provides as follows:

> Based upon the foregoing facts, the Board resolves as follows:

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1. The Idaho Water Resource Board recognizes and declares that protection of the existing flows as identified in the application for permit received November 16, 1979 and as supported by testimony at the formal public hearing on July 8, 1980 for Birch Creek from a point below the Reno Ditch diversion upstream eight miles to the north boundary of the John Day Rest Area is in the local public interest and is compatible with and supported by the State Water Plan. The Board requests that the Director enter this statement or a summary as expressing the policy of the Idaho Water Resource Board as in opposition to any diversion for any out of stream use at any subsequent time. Nothing in this statement shall be construed as in any manner affecting any prior or present existing water right or use.

2. The Idaho Water Resource Board requests that the Director terminate and withdraw the application for a minimum stream flow on Birch Creek without prejudice.

The Board's policy statement may be summarized as (1) recognizing and declaring that the protection of existing flows on a specified reach of Birch Creek is in the local public interest and is compatible with and supported by the State Water Plan; and (2) requesting the Director to enter the Board's statement in opposition to any diversion for any out of stream use from the specified reach of Birch Creek at any subsequent time.

The wording of the policy statement does not prohibit the filing or consideration of subsequent applications for permit to appropriate water from the specified reach of Birch Creek. Neither does the Board's statement dictate to the Director the final outcome of his consideration of the local public interest criterion required to be determined by the Director before issuing a permit under Idaho Code § 42-203. Rather, the Board has requested that the Director enter the Board's statement in opposition to any future diversion of water out of the specified reach of Birch Creek.

Assuming that the Director has complied with the Board's request on an application to appropriate water from Birch Creek, the Board's policy statement will constitute a part of the agency record in that proceeding to be weighed along with other evidence on the issue of local public interest. If the Director upon

giving due consideration to the recreational, fish and wildlife and other benefits associated with Birch Creek is convinced that the local public interest criterion and the other criteria of I.C. § 42-203 are satisfied a permit should be issued.

Procedures do exist through which the Board could act to assure that no further diversions below a certain flow be authorized from a specified reach of Birch Creek. The most obvious method available would be for the Board to obtain a minimum stream flow water right pursuant to chapter 15, title 42, Idaho Code. The Board did file and subsequently withdrew such a filing.

The second method available to the Board would be to set or propose an average daily flow for the specified reach of Birch Creek pursuant to the Board's constitutional authority to formulate a state water plan. Since, however, the Board has not acted in either of these two methods there cannot presently be considered to be a prohibition against any further diversions from Birch Creek which are determined by the Director to be in the local public interest. A Board resolution cannot effectively bind the Director in carrying out his statutory responsibility to determine the local public interest under I.C. § 42-203. Nor can a Board resolution serve to prohibit the appropriation of the unappropriated waters of the state.

Phillip J. Rassier

PHILLIP J. RASSIER

AMENDED POLICY STATEMENT OF IDAHO WATER RESOURCE BOARD

ON BIRCH CREEK

At the request of the Bureau of Land Management, the Idaho Water Resource Board on November 6, 1979 filed an application for a minimum stream flow on Birch Creek in Butte County. On July 8, 1980 the Department of Water Resources held a public hearing upon the application in Dubois as required by law. It was apparent to the members of the Idaho Water Resource Board attending that hearing that there was considerable confusion among persons holding prior water rights and others concerning the nature of a minimum flow. There was also uncertainty among the Board members about the necessity and the extent of the minimum flow under the application as filed. The Board asked the Director of the Department of Water Resources to withhold further action on the application.

In November of 1980 the Board adopted guidelines on minimum flow applications which allowed for an informal public meeting in the nature of a conference prior to proceeding with a formal public hearing. On November 19, 1981 such a meeting was held in Dubois and was attended by approximately 40 farmers, an attorney, several legislators and by representatives of the Bureau of Land Management and the Idaho Fish and Game Department. A full, frank and candid discussion was held from which the following salient facts emerged:

1. Birch Creek in the area covered by the application from a point below the Reno Ditch diversion upstream eight miles to the north boundary of the John Day Rest Area qualifies for protection under the minimum stream flow law. The stream provides a blue ribbon trout fishery which is heavily used by local fishermen. Maintenance of the minimum flow as sought is essential to maintaining the fishery resources and to the continued use of the John Day Rest Area.

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ATTACHMENT NO. 1 TO MINUTES OF 6-84 MEETING OF IDAHO WATER RESOURCE BOARD, Sept 12, 1984

2. Most of the land contiguous to Birch Creek is owned by the federal government and is managed by the Bureau of Land Management. There does not appear to be any foreseeable threat of diversion from that reach of the stream.

3. This historic manner of operation by those holding prior water rights both upstream and downstream has been compatible with the high quality fishery and the recreational use of the stream. It is evident from the discussion at the meeting that there exists a high degree of cooperation and good will between the irrigators and the local federal and state personnel charged with the responsibility for the fish and recreational use of Birch Creek.

4. On December 8, 1981 O'dell A. Frandsen, Assistant Manager for the Bureau of Land Management, wrote to M. Reed Hansen, Chairman of the Idaho Water Resource Board to request that application for minimum flow be withdrawn but that the Board make a statement recognizing the need to protect the flows in Birch Creek.

5. On April 7, 1982 the Board approved a "Policy Statement of Idaho Water Resource Board on Birch Creek," and withdrew Application for Permit No. 32-7103. This policy has been found to require modification, and is hereby amended.

Based upon the foregoing facts, the Board resolves as follows:

The Idaho Water Resource Board hereby recognizes and declares that protection of the existing flows as identified in the application for permit received November 16, 1979 and as supported by testimony at the formal public hearing on July 8, 1980 for Birch Creek from a point below the Reno Ditch

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ATTACHMENT NO. 1 TO MINUTES OF 6-84 MEETING
IDAHO WATER RESOURCE BOARD, Sept. 12, 1984

diversion upstream eight miles to the north boundary of the John Day Rest Area is in the local public interest and is compatible with and supported by the State Water Plan. The Board requests that the Director enter this statement expressing the policy of the Idaho Water Resource Board as in support of only diversions which are found by the Department of Water Resources to not be detrimental to the recreational, fish and wildlife values associated with Birch Creek. Northing in this statement shall be construed as in any manner affecting any water right with date of priority prior to November 16, 1979.

ATTACHMENT NO. 1 TO MINUTES OF 6-84 MEETING OF THE WATER RESOURCE BOARD, Sept 12, 1984

Chairman Donald R. Kramer introduced the new Board member, Frank Dave Rydalch and welcomed him to the Board.

Vera N. White, Nez Perce County Commissioner, welcomed the Board to Lewiston and expressed her appreciation for the opportunity to talk with the Board. A group called Inland Empire Local Government Task Force, comprised of city and county officials in approximately 55 counties in eastern Washington, northern Idaho and western Montana, has set water quality as one of the main priorities of the area. The group in conjunction with Eastern Washington University has scheduled a meeting on Saturday, September 15, 1984 in Spokane, Washington called "Water Quality Management." All interested in the program are invited to attend.

Agenda Item No. 2. Approval of 5-84 Minutes of July 25, 1984 Board Meeting.

Franklin Jones, Secretary, moved Board approval of 5-84 Minutes of July 25, 1984 Board meeting as circulated to members. Frank Dave Rydalch, Member, seconded the motion.

Motion passed by voice vote: 6 Ayes, 0 Nays, Williams, Absent and Shawver, Absent.

Agenda Item No. 3. Minimum Stream Flow Applications
a. Board Policy Statement on Birch Creek
b. Information Meetings and Public Hearings

a. Board Policy Statement on Birch Creek. Wayne T. Haas, Administrator, Resources Analysis Division, reported the Board at its last meeting delayed action on Birch Creek until today. Phil Rassier, Deputy Attorney General, Department of Water Resources, wrote a memo dated September 10, 1984 to the Board's Chairman on legal guidance concerning the Board's policy statement on Birch Creek. Mr. Rassier concluded that the policy statement "reflects the Board's opposition to the approval of any additional permits for the diversion of water from a specified reach of Birch Creek but does not legally preclude the approval of such permits." The Board received additional information during its work session on Birch Creek from Dr. Jack Griffith, Fish Biologist at Idaho State University.

Ted Sorenson, Birch Power Company, applicant for the proposed project, explained that Birch Creek is a spring fed stream which is part of the Lost River series of streams in southeastern Idaho. Presently, Mr. Sorenson is proposing to replace an existing irrigation ditch which is causing the ranchers to lose approximately one third of their water to bed loss. The proposed project would develop a nonconsumptive use of generating 2.8 mw of electricity, include a new ditch and three miles of pipeline to deliver more water for downstream users, and create a mile and half fishery with protected fenced riparian habitat. In order to put in a new ditch, the point of diversion is being moved upstream 3,000 feet. In Mr. Sorenson's judgment, the proposed project will eliminate 10 cfs of the 16 cfs bed loss. Mr. Sorenson is willing to stipulate

and guarantee an elimination of a minimum 5 cfs bed loss or abandon the project in the Bureau of Land Management's right-of-way permit, the state's water right permit and FERC's hydropower permit. Idaho Department of Fish and Game supports the project as long as some water passes the Reno Ditch diversion; Bureau of Land Management's Advisory Board unanimously approved the project; Utah Power & Light Company has signed a sales contract with Birch Power Company; financing is available and the project is ready to proceed. The department has prepared at the Board's request an amended policy statement on Birch Creek for the Board's consideration.

Gene M. Gray, Vice Chairman, moved Board approval of an amended policy statement (ATTACHMENT 1) on Birch Creek. Robert M. Hammes, Member, seconded the motion.

Motion passed by voice vote: 6 Ayes, 0 Nays, 2 Absent.

b. Information Meetings and Public Hearings. A. Kenneth Dunn, Director, issued for the Board's consideration a scheduled itinerary (ATTACHMENT 2) for minimum stream flow meetings in September and a proposed itinerary (ATTACHMENT 3) for minimum stream flow hearings in October. The director hearing no objection to the itineraries will proceed to make the necessary arrangements.

A. Kenneth Dunn, Director, reported the Board in its June meeting amended its East Fork Rock Creek Minimum Stream Flow Application to include an additional upper reach of the stream. The Idaho Department of Fish and Game has completed a study the Board requested on the actual flow needed in the stream, and has found 11 cfs to be adequate and maintained 96 percent of the time. The department in considering the application will change the amount from 20 cfs to 11 cfs on the permit, if approved, based on the Fish and Game's recommendation. The Board has two alternatives it must consider in making a decision on the minimum stream flow application on East Fork Rock Creek: (1) amend the existing application to include the additional reach whereby the priority date is advanced to the date the amended application is signed, or (2) file a new application for the additional reach of the river whereby the application would have a priority date when it was signed and the original application on the stream would retain its original priority date. Since the Board has filed its original minimum stream flow application on East Fork Rock Creek, there have been two intervening filings of .03 cfs and .04 cfs for irrigation in the middle of the reach of stream where the Board filed its application. If the Board should refile its application to include the additional reach, the Board will have a later priority date than the two irrigation applications.

Gene M. Gray, Vice Chairman, moved Board approval for refiling an application for minimum stream flow on East Fork Rock Creek of 11 cfs for the total reach of the stream in lieu of the 20 cfs. Frank Dave Rydalch, Member, seconded the motion.

Motion Withdrawn.

CONVERSATION MEMORANDUM

DATE July 16, '84

522-8069
529-2469

FILE 32-7128 / 32-7136

NAME OF PARTY Ted Sorenson (Applicant); ✓ Steve Elle (522-7783) IDFG;

EMPLOYEE Dave Tuthill ✓ Robert Mc Carty (529-1020) BLM;

✓ Ben Wilding (657-2577) Wtrmaster 32-D

RE: IWRB Policy on Birch Cr. ✓ Jim De Mordaunt (356-9427) D&D Enterprises

Pursuant to a request from Norm Young I contacted the principle parties interested in the Birch Power hydropower apps on Birch Creek, regarding the IWRB meeting on 25 July 84, where they will discuss their policy on Birch Creek (see other info in this file and the Birch Cr minimum stream flow file No. 32-7128)

I was able to contact the following: Jim Esget for Bob Mc Carty of the BLM; Mrs Ben Wilding; Mr. Ben Wilding; Jim De Mordaunt; Virgil Moore & Steve Elle, IDFG; & Ted Sorenson to follow-up and explain the notification of the Water Board meeting that Anita Warhtjesskent to each of the parties listed above last week.

AMENDED

State of Idaho
Department of Water Resources

AMENDED

Water Right License

WATER RIGHT NO. 32-07128

Priority: September 8,1982

Maximum Diversion Rate: 45.00 CFS
Maximum Diversion Volume: 32,600.0 AF

It is hereby certified that TED S SORENSON And/Or SORENSON ENGINEERING
5203 S 11 E
IDAHO FALLS ID 83404 have complied with the terms and conditions of the permit, issued pursuant to Application for Permit dated September 8, 1982; and have submitted Proof of Beneficial Use on September 22, 1989. An examination indicates that the works have a diversion capacity of 79 cfs of water from:

SOURCE
BIRCH CREEK **Tributary:** SINKS

and a water right has been established as follows:

BENEFICIAL USE	PERIOD OF USE	DIVERSION RATE	ANNUAL DIVERSION VOLUME
POWER	01/01 to 12/31	45.00 CFS	32,600.0 AF

LOCATION OF POINT(S) OF DIVERSION:
BIRCH CREEK L5 SE¼SW¼ Sec. 34, Twp 09N, Rge 31E, B.M. CLARK County

PLACE OF USE: POWER

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
08N 31E 14			X														

CONDITIONS OF APPROVAL

1. Use of water under this right shall be non-consumptive.
2. This right does not constitute Idaho Public Utilities Commission or Federal Energy Regulatory Commission approval that may be required.
3. Use of water under this water right will be regulated by the watermaster of State Water District No. 32D.
4. A measuring device and lockable controlling works of a type acceptable to the Department shall be permanently installed and maintained as part of the diverting works. A second measuring device shall be maintained near the end of the feeder ditch so that the amount of water lost in the feeder ditch can be determined.
5. The rights for the use of water confirmed in this license shall be junior and subordinate to all rights for the use of water other than hydropower, within the State of Idaho that are initiated later in time than the priority of this right and shall not give rise to any right or claim against any future rights for the use of water, other than hydropower, within the State of Idaho initiated later in time than the priority of this right.

MICROFILMED

AMENDED

State of Idaho
Department of Water Resources

AMENDED

Water Right License

WATER RIGHT NO. 32-07128

CONDITIONS OF APPROVAL

6. The diversion and use of water for hydropower purposes under this license is subject to review by the Director after the date of expiration of license 7194-001 issued by the Federal Energy Regulatory Commission. Upon appropriate findings relative to the interest of the public, the Director may cancel all or any part of the use authorized herein and may revise, delete or add conditions under which the right may be exercised.

7. The right holder shall maintain the pond and irrigation system that utilizes 0.11 cfs of water, described in the Bureau of Land Management's "Finding of No Significant Impact and Decision/Rationale," EA Number ID-030-9-46 (January 11, 1990) including but not limited to 6 to 8 ponds below the hydropower diversion that create 2.46 acres of riparian habitat.

8. If the right holder does not comply with Condition No. 7 listed above, the right holder shall build and maintain a gate in the hydropower diversion located in the NENW, S3, T8N, R30E, B.M. and shall allow 11% of the flow of Birch Creek or 5.0 cfs, whichever is smaller, to flow past the feeder canal diversion on Birch Creek, said water to remain in the natural channel of Birch Creek.

9. Provisions shall be made to return the water to Birch Creek at the end of the first 1 1/2 mile of feeder ditch to assure that the section of feeder ditch will not be dewatered if the generator malfunctions or icing occurs or any other event necessitates that the water not be conveyed to the generator.

10. The first 1 1/2 miles of ditch must be maintained and operated in a manner that supports a fishery as described in the report entitled Feasibility of Developing a Trout Population in the Proposed Birch Creek Hydroelectric Project Feeder Ditch written by J.S. Griffith, PhD, and found in the official record of application for this water right.

11. The right holder shall maintain a gate in the hydropower diversion sufficient both to control and measure the flows through the hydropower diversion and to allow the entire flow of Birch Creek to flow through the hydropower diversion in the natural channel of Birch Creek.

12. The feeder canal shall be maintained in a manner that will reduce the amount of seepage loss by at least 11% of the flow at the point of diversion.

13. Right 32-07136 is also diverted through the point of diversion described above.

This license is issued pursuant to the provisions of Section 42-219, Idaho Code. The water right confirmed by this license is subject to all prior water rights and shall be used in accordance with Idaho law and applicable rules of the Department of Water Resources.

Signed and sealed this 7TH day of DECEMBER, 2001.

Acting for KARL J. DREHER
Director

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State of Idaho
Department of Water Resources

Water Right License

WATER RIGHT NO. 32-07128

Priority: September 08,1982

Maximum Diversion Rate: 45.00 CFS
Maximum Diversion Volume: 32,600.0 AF

It is hereby certified that TED S SORENSON And/Or SORENSON ENGINEERING
5203 S 11 E
IDAHO FALLS ID 83404 have complied with the terms and conditions of the permit, issued pursuant to Application for Permit dated September 08, 1982; and have submitted Proof of Beneficial Use on September 22, 1989. An examination indicates that the works have a diversion capacity of 79 cfs of water from:

SOURCE
BIRCH CREEK **Tributary:** SINKS

and a water right has been established as follows:

BENEFICIAL USE	PERIOD OF USE	DIVERSION RATE	ANNUAL DIVERSION VOLUME
POWER	01/01 to 12/31	45.00 CFS	32,600.0 AF

LOCATION OF POINT OF DIVERSION:
BIRCH CREEK L5 SE¼SW¼ Sec. 34, Twp 09N, Rge 31E, B.M., CLARK County

PLACE OF USE: POWER

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
08N 31E 14			X														

CONDITIONS OF APPROVAL

1. Use of water under this right shall be non-consumptive.
2. This right does not constitute Idaho Public Utilities Commission or Federal Energy Regulatory Commission approval that may be required.
3. Use of water under this water right will be regulated by the watermaster of State Water District No. 32D.
4. A measuring device and lockable controlling works of a type acceptable to the Department shall be permanently installed and maintained as part of the diverting works. A second measuring device shall be maintained near the end of the feeder ditch so that the amount of water lost in the feeder ditch can be determined.
5. The rights for the use of water confirmed in this license shall be junior and subordinate to all rights for the use of water other than hydropower, within the State of Idaho that are initiated later in time than the priority of this right and shall not give rise to any right or claim against any future rights for the use of water, other than hydropower, within the State of Idaho initiated later in time than the priority of this right.

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State of Idaho
Department of Water Resources

Water Right License

WATER RIGHT NO. 32-07128

6. The diversion and use of water for hydropower purposes under this license is subject to review by the Director after the date of expiration of license 7194-001 issued by the Federal Energy Regulatory Commission. Upon appropriate findings relative to the interest of the public, the Director may cancel all or any part of the use authorized herein and may revise, delete or add conditions under which the right may be exercised.

7. Right 32-07136 is also diverted through the point of diversion described above.

8. The water user shall maintain the pond and irrigation system that utilizes 0.11 cfs of public water, described in the BLMs Finding of No Significant Impact and Decision/Rationale, EA Number ID-030-9-46 (January 11, 1990).

9. Provisions shall be made to return the water to Birch Creek at the end of the first 1 1/2 mile of feeder ditch to assure that the section of feeder ditch will not be dewatered if the generator malfunctions or icing occurs or any other event necessitates that the water not be conveyed to the generator.

10. The first 1 1/2 miles of ditch must be maintained and operated in a manner that supports a fishery as described in the report entitled Feasibility of Developing a Trout Population in the Proposed Birch Creek Hydroelectric Project Feeder Ditch written by J.S. Griffith, PhD, and found in the official record of application for this water right.

11. Right holder shall maintain a gate in the hydropower diversion sufficient both to control and measure the flows through the hydropower diversion and to allow the entire flow of Birch Creek to flow through the hydropower diversion in the natural channel of Birch Creek.

12. The feeder canal shall be maintained in a manner that will reduce the amount of seepage loss by at least 11% of the flow at the point of diversion.

This license is issued pursuant to the provisions of Section 42-219, Idaho Code. The water right confirmed by this license is subject to all prior water rights and shall be used in accordance with Idaho law and applicable rules of the Department of Water Resources.

Signed and sealed this 24th day of October, 2001.

Acting for KARL J. DREHER
Director

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OCT 12 2001

State of Idaho
Department of Water Resources

APPLICATION FOR AMENDMENT

(For Licensing Purposes)

WATER RIGHT NO. 32-07128

Date of Priority: September 08,1982

Maximum Diversion Rate: 45.00 CFS
Maximum Diversion Volume: 32,600.0 AF

Comes now TED S SORENSON And/Or SORENSON ENGINEERING
5203 S 11 E
IDAHO FALLS ID 83404 and represents to the Director of the Idaho Department of Water Resources that he is the owner and holder of Permit to Appropriate the Public Waters of the State of Idaho No. 32-07128, and requests that the permit be changed as follows:

Source: BIRCH CREEK **Tributary:** SINKS

BENEFICIAL USE	PERIOD OF USE	RATE OF DIVERSION	ANNUAL VOLUME
POWER	01/01 to 12/31	45.00 CFS	32,600.0 AF

LOCATION OF POINT(S) OF DIVERSION:
BIRCH CREEK L5 SE¼SW¼ Sec. 34, Twp 09N, Rge 31E, B.M., CLARK County

PLACE OF USE: POWER

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
08N 31E 14			X														

Permit holder asserts that no one will be injured by such change and that such change will be made at permit holder's own risk. Signed this 08 day of October, 2001.

(Signature)

MICROFILMED
OCT 12 2001

State of Idaho
Department of Water Resources

APPLICATION FOR AMENDMENT

(For Licensing Purposes)
WATER RIGHT NO. 32-07128

FOR DEPARTMENT USE ONLY

Preliminary check by Lw Fee = 50.00 Receipted by jm #C055546 Date 8/14/2001

ACTION OF THE DEPARTMENT OF WATER RESOURCES

I, Karl J. Dreher, of the Department of Water Resources hereby approve the above Application for Amendment for Permit No. 32-07128 with the following:

CONDITIONS OF APPROVAL

1. Use of water under this right shall be non-consumptive.

2. This right does not constitute Idaho Public Utilities Commission or Federal Energy Regulatory Commission approval that may be required.

3. Use of water under this water right will be regulated by the watermaster of State Water District No. 32D.

4. A measuring device and lockable controlling works of a type acceptable to the Department shall be permanently installed and maintained as part of the diverting works. A second measuring device shall be maintained near the end of the feeder ditch so that the amount of water lost in the feeder ditch can be determined.

5. The rights for the use of water confirmed in this license shall be junior and subordinate to all rights for the use of water other than hydropower, within the State of Idaho that are initiated later in time than the priority of this right and shall not give rise to any right or claim against any future rights for the use of water, other than hydropower, within the State of Idaho initiated later in time than the priority of this right.

6. The diversion and use of water for hydropower purposes under this license is subject to review by the Director after the date of expiration of license 7194-001 issued by the Federal Energy Regulatory Commission. Upon appropriate findings relative to the interest of the public, the Director may cancel all or any part of the use authorized herein and may revise, delete or add conditions under which the right may be exercised.

7. Right 32-07136 is also diverted through the point of diversion described above.

8. The water user shall maintain the pond and irrigation system that utilizes 0.11 cfs of public water, described in the BLMs Finding of No Significant Impact and Decision/Rationale, EA Number ID-030-9-46 (January 11, 1990).

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9. Provisions shall be made to return the water to Birch Creek at the end of the first 1 1/2 mile of feeder ditch to assure that the section of feeder ditch will not be dewatered if the generator malfunctions or icing occurs or any other event necessitates that the water not be conveyed to the generator.

10. The first 1 1/2 miles of ditch must be maintained and operated in a manner that supports a fishery as described in the report entitled Feasibility of Developing a Trout Population in the Proposed Birch Creek Hydroelectric Project Feeder Ditch written by J.S. Griffith, PhD, and found in the official record of application for this water right.

11. Right holder shall maintain a gate in the hydropower diversion sufficient both to control and measure the flows through the hydropower diversion and to allow the entire flow of Birch Creek to flow through the hydropower diversion in the natural channel of Birch Creek.

12. The feeder canal shall be maintained in a manner that will reduce the amount of seepage loss by at least 11% of the flow at the point of diversion.

Witness my hand this 24TH day of October, 2001.

Acting for KARL J. DREHER
Director

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Form 217
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Dept. of Water Resources

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES

PROOF OF BENEFICIAL USE

For Office Use Only
Fee Received _____
Date _____
Receipt # _____
Received by _____
Reviewed by _____
Sent to region _____

The Idaho Department of Water Resources will consider this form as a statement that the permit holder(s) has completed all development that will occur under this permit and that water has been applied according to the provisions of the permit for the beneficial use(s) described below. This form must be accompanied by a license examination fee or a completed field examination report prepared by a certified water right examiner who has been appointed by the department.

Permit No. 32-7128 & 32-7136

Name(s) of Permit Holder: Birch Power Company

Post Office Address: 2988 Tipperany, Idaho Falls, ID 83401

Telephone No. (208) 522-8069 (208) 529-2469

Source of Water: Birch Creek

Extent of Use:

Domestic _____ (number of households) Stockwater _____ (number and type of stock)

Irrigation _____ (acres) Other/Remark Power Generation

Total rate and/or volume for which proof is submitted 75 cfs _____ acre-feet

Show the date water was first diverted and beneficially used under this permit: April 5, 1987

Measuring Device: Required? X Yes __ No Fee enclosed $_____
Installed? X Yes __ No (See License Examination Fee Schedule)

Flow Measurement Port: Required? __ Yes __ No
Installed? __ Yes __ No

Person to contact to accompany the Department representative during the field examination:

Ted S. Sorenson, P.E. (208) 522-8069
(Name) (Telephone Number)

550 Linden, Idaho Falls, ID 83401
(Address)

The above information is my true statement of the extent to which the above numbered permit has been developed and I relinquish any undeveloped portion of the permit to the state of Idaho.

9/18/89
Date

Signature of Permit Holder (and title, if appropriate)

MICROFILMED
JAN 0 8 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Boise, ID 83706 - P.O. Box 83720, Boise, ID 83720-0098
Phone: (208) 327-7900 Fax: (208) 327-7866 Web Site: www.idwr.state.id.us

DIRK KEMPTHORNE
Governor

KARL J. DREHER
Director

December 11, 2001

TED S SORENSON
5203 S 11 E
IDAHO FALLS ID 83404

RE: License Nos. 32-7136 and 32-7128

Dear Mr. Sorenson:

The Department of Water Resources has issued the enclosed Water Right License confirming that a water right has been established in accordance permit 32-7136. Please be sure to thoroughly review the conditions of approval and remarks listed on your license.

The license is a **"preliminary order"** issued by the Department pursuant to section 67-5243, Idaho Code. It can and will become a final order without further action by the Department unless a party petitions for reconsideration or files an exception and/or brief within fourteen (14) days of the service date as described in the enclosed information sheet about preliminary orders.

A copy of your approved amendment of permit for right 32-7136 is also enclosed.

The Department has also issued the enclosed amended Water Right License for water right 32-7128. The amendment was necessary to add condition no. 8 to the license. The condition was added to the permit 32-7128 by order on December 5, 2000, but it was inadvertently omitted from the license. The amended license is an **"amended final order"** pursuant to Sections 67-5246 or 67-5247, *Idaho Code*, and Rule 760 of the Department's Rules of Procedure. An informational sheet that explains how to respond to final orders is enclosed.

In preparing your licenses, the Department considered your request to retain the old subordination condition from your permits rather than imposing the new subordination condition used by the Department since the adoption of Section 42-203B(6), *Idaho Code*. It is the Department's position, however, that the new condition embodies the intent of the legislation, and that the Department has the authority to subordinate licenses issued for hydropower purposes, even if the permit was issued prior to July 1, 1985. Therefore, to comply with the intent of the legislation, the Department issued your licenses with the new subordination condition. If an application is filed to appropriate water upstream from your diversion for a use other than hydropower, you

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DEC 12 2001

still have the opportunity to protest the application under the criteria set forth in 42-203A(5), *Idaho Code*, including the local public interest criteria.

Please note that water right owners are required to report any change of water right ownership and/or mailing address to the Department within 120 days of the change. Failure to report these changes could result in a $100 late filing fee. Contact any office of the Department or visit the Department's homepage on the Internet to obtain the proper forms and instructions.

If you have any questions, please contact me at 208-327-7946.

Sincerely,

Shelley W. Keen
Water Rights Supervisor

Enclosures

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DEC 1 2 2001

CERTIFICATE OF MAILING

I hereby certify that on December 11, 2001 I mailed a true and correct copy, postage prepaid, of the foregoing PRELIMINARY ORDER(Approved License 32-7136) and the foregoing AMENDED FINAL ORDER (Amended License 32-7128) to the person(s) listed below:

RE: WATER RIGHT NOS. 32-7136 and 32-7128

TED S SORENSON
5203 S 11 E
IDAHO FALLS ID 83404

Kari Lynn Townsend
Secretary

MICROFILMED
DEC 12 2001

EXPLANATORY INFORMATION TO ACCOMPANY A PRELIMINARY ORDER

The accompanying order or approved document is a "**Preliminary Order**" issued by the department pursuant to section 67-5243, Idaho Code. It can and will become a final order without further action of the Department of Water Resources (department) unless a party petitions for reconsideration, files an exception and brief, or requests a hearing as further described below:

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a preliminary order with the department within fourteen (14) days of the service date of this order. The department will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See Section 67-5243(3) Idaho Code.

EXCEPTIONS AND BRIEFS

Within fourteen (14) days after (a) the service date of a preliminary order, (b) the service date of a denial of a petition for reconsideration from this preliminary order, or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration from this preliminary order, any party may in writing support or take exceptions to any part of a preliminary order and may file briefs in support of the party's position on any issue in the proceeding with the Director. Otherwise, this preliminary order will become a final order of the agency.

REQUEST FOR HEARING

Unless a right to a hearing before the department or the Idaho Water Resource Board (Board) is otherwise provided by statute, any person aggrieved by any final decision, determination, order or action of the Director of the department and who has not previously been afforded an opportunity for a hearing on the matter may request a hearing pursuant to section 42-1701A(3), Idaho Code. A written petition contesting the action of the Director and requesting a hearing shall be filed within fifteen (15) days after receipt of the denial or conditional approval.

ORAL ARGUMENT

If the Director grants a petition to review the preliminary order, the Director shall allow all parties an opportunity to file briefs in support of or taking exceptions to the preliminary order and may schedule oral argument in the matter before issuing a final order. If oral arguments are to be heard, the Director will within a reasonable time period notify each party of the place, date and hour for the argument of the case. Unless the Director orders otherwise, all oral arguments will be heard in Boise, Idaho.

CERTIFICATE OF SERVICE

All exceptions, briefs, requests for oral argument and any other matters filed with the Director in connection with the preliminary order shall be served on all other parties to the proceedings in accordance with IDAPA Rules 37.01.01302 and 37.01.01303 (Rules of Procedure 302 and 303).

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DEC 12 2001

FINAL ORDER

The Director will issue a final order within fifty-six (56) days of receipt of the written briefs, oral argument or response to briefs, whichever is later, unless waived by the parties or for good cause shown. The Director may remand the matter for further evidentiary hearings if further factual development of the record is necessary before issuing a final order. The department will serve a copy of the final order on all parties of record.

Section 67-5246(5), Idaho Code, provides as follows:

> Unless a different date is stated in a final order, the order is effective fourteen (14) days after its issuance if a party has not filed a petition for reconsideration. If a party has filed a petition for reconsideration with the agency head, the final order becomes effective when:
>
> (a) the petition for reconsideration is disposed of; or
> (b) the petition is deemed denied because the agency head did not dispose of the petition within twenty-one (21) days.

APPEAL OF FINAL ORDER TO DISTRICT COURT

Pursuant to sections 67-5270 and 67-5272, Idaho Code, if this preliminary order becomes final, any party aggrieved by the final order or orders previously issued in this case may appeal the final order and all previously issued orders in this case to district court by filing a petition in the district court of the county in which:

i. A hearing was held,
ii. The final agency action was taken,
iii. The party seeking review of the order resides, or
iv. The real property or personal property that was the subject of the agency action is located.

The appeal must be filed within twenty-eight (28) days of this preliminary order becoming final. See section 67-5273, Idaho Code. The filing of an appeal to district court does not itself stay the effectiveness or enforcement of the order under appeal.

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DEC 12 2001

Responding To Final Orders Issued By The Idaho Department Of Water Resources

The accompanying order is a **Final Order** issued by the Idaho Department of Water Resources (department) pursuant to section 67-5246 or 67-5247, Idaho Code.

Section 67-5246 provides as follows:

(1) If the presiding officer is the agency head, the presiding officer shall issue a final order.

(2) If the presiding officer issued a recommended order, the agency head shall issue a final order following review of that recommended order.

(3) If the presiding officer issued a preliminary order, that order becomes a final order unless it is reviewed as required in section 67-5245, Idaho Code. If the preliminary order is reviewed, the agency head shall issue a final order.

(4) Unless otherwise provided by statute or rule, any party may file a petition for reconsideration of any order issued by the agency head within fourteen (14) days of the issuance of that order. The agency head shall issue a written order disposing of the petition. The petition is deemed denied if the agency head does not dispose of it within twenty-one (21) days after the filing of the petition.

(5) Unless a different date is stated in a final order, the order is effective fourteen (14) days after its issuance if a party has not filed a petition for reconsideration. If a party has filed a petition for reconsideration with the agency head, the final order becomes effective when:

(a) the petition for reconsideration is disposed of; or

(b) the petition is deemed denied because the agency head did not dispose of the petition within twenty-one (21) days.

(6) A party may not be required to comply with a final order unless the party has been served with or has actual knowledge of the order. If the order is mailed to the last known address of a party, the service is deemed to be sufficient.

(7) A non-party shall not be required to comply with a final order unless the agency has made the order available for public inspection or the nonparty has actual knowledge of the order.

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DEC 12 2001

(8) The provisions of this section do not preclude an agency from taking immediate action to protect the public interest in accordance with the provisions of section 67-5247, Idaho Code.

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a final order with the department within fourteen (14) days of the service date of this order. The department will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See section 67-5243(3) Idaho Code.

APPEAL OF FINAL ORDER TO DISTRICT COURT

Pursuant to sections 67-5270 and 67-5272, Idaho Code, any party aggrieved by a final order or orders previously issued in a matter before the department may appeal the final order and all previously issued orders in the matter to district court by filing a petition in the district court of the county in which:

i. A hearing was held,
ii. The final agency action was taken,
iii. The party seeking review of the order resides, or
iv. The real property or personal property that was the subject of the agency action is located.

The appeal must be filed within twenty-eight (28) days a) of the service of the final order, b) of an order denying petition for reconsideration, or c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration, whichever is later. See section 67-5273, Idaho Code. The filing of an appeal to district court does not itself stay the effectiveness or enforcement of the order under appeal.

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DEC 12 2001

RECEIVED
DEC - 7 2001
Department of Water Resources

SORENSON ENGINEERING
5203 South 11th East
Idaho Falls, Idaho 83404

Phone: 208-522-8069
Fax: 208-522-8223
E-Mail: ted@tsorenson.net

December 5, 2001

Shelly W. Keen
Kay Walker
IDWR
P.O. Box 83720
Boise, ID 83720-0098

SUBJECT: License #32-7128

Dear Shelly and Kay:

Pursuant to my telecom with Kay Walker today and Shelly Keen several weeks ago here is the signed Amendment.

I continue to have a problem with condition #5, subordination. In Mr. Keen's letter of October 26, 2001 he suggested I review the specific authority for the clause enacted in 1985 (Section 42-203B). I have reviewed the statute. The statute is for "permit issued after July 1, 1985". My permit was issued March 27, 1985. Therefore, it should not be subject to the legislation. My main objection runs to the "no claim for future use". The original permit stated I was entitled to saved water which has evolved to condition 8. Part of my BLM agreement is that if the ponds are not maintained, then I have to release 5 cts. Therefore, I continue to feel that condition 9 of the original permit should be used.

Very Truly Yours,

Ted S. Sorenson, P,.E.

Enc.
TSS/ptj

Word\2001lts\KeenWalker.ltr

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DEC 1 2 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Boise, ID 83706 - P.O. Box 83720, Boise, ID 83720-0098
Phone: (208) 327-7900 Fax: (208) 327-7866 Web Site: www.idwr.state.id.us

DIRK KEMPTHORNE
Governor

KARL J. DREHER
Director

October 26, 2001

TED S SORENSON
5203 S 11 E
IDAHO FALLS ID 83404

RE: License No. 32-7128 - Issuance of License

Dear Water Right Holder(s):

The Department of Water Resources has issued the enclosed Water Right License confirming that a water right has been established in accordance with your permit. The license is a PRELIMINARY ORDER issued by the Department pursuant to Section 67-5243, *Idaho Code*. It can and will become a final order without further action by the Department unless a party petitions for reconsideration or files an exception and/or brief within fourteen (14) days of the service date as described in the enclosed information sheet.

A copy of the approved Application for Amendment is also enclosed.

Please be sure to thoroughly review the conditions of approval and remarks listed on your license. The revised subordination condition, no. 5 on your license, is now routinely used in permitting and licensing. It is actually somewhat less inclusive than the older version used on your permit, which was issued in 1985. Unlike the older version, the newer version does not subordinate the hydropower permit to new upstream hydropower diversions or to new uses outside Idaho. It also does not include the concept that operation of the power facility cannot interfere with downstream earlier or later priority irrigation rights by surging or otherwise disrupting flow to these rights.

If you believe that the condition originally attached to your permit does not subordinate your rights to future upstream consumptive uses, please note that IDWR was given specific authority in 1985 to include subordination conditions in permits and licenses (Section 42-203B, *Idaho Code*). IDWR policy is and has been to include a subordination condition like the one on your license on every permit and license issued.

Please note that water right owners are required to report any change of water right ownership and/or mailing address to the Department within 120 days of the change. Failure to report these changes could result in a $100 late filing fee. Contact any office of the Department or visit the Department's homepage on the Internet to obtain the

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NOV 13 2001

proper forms and instructions.

If you have any questions, please contact me at 208-327-7946.

Sincerely,

Shelley W. Keen
Water Rights Supervisor

SWK:klt

Enclosure(s)

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NOV 13 2001

CERTIFICATE OF MAILING

I hereby certify that on October 26, 2001 I mailed a true and correct copy, postage prepaid, of the foregoing PRELIMINARY ORDER (Approved License) to the person(s) listed below:

RE: WATER RIGHT NO. 32-7128

TED S SORENSON
5203 S 11 E
IDAHO FALLS ID 83404

Kari Lynn Townsend
Secretary

MICROFILMED
NOV 1 3 2001

EXPLANATORY INFORMATION TO ACCOMPANY A PRELIMINARY ORDER

The accompanying order or approved document is a **"Preliminary Order"** issued by the department pursuant to section 67-5243, Idaho Code. It can and will become a final order without further action of the Department of Water Resources (department) unless a party petitions for reconsideration, files an exception and brief, or requests a hearing as further described below:

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a preliminary order with the department within fourteen (14) days of the service date of this order. The department will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See Section 67-5243(3) Idaho Code.

EXCEPTIONS AND BRIEFS

Within fourteen (14) days after (a) the service date of a preliminary order, (b) the service date of a denial of a petition for reconsideration from this preliminary order, or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration from this preliminary order, any party may in writing support or take exceptions to any part of a preliminary order and may file briefs in support of the party's position on any issue in the proceeding with the Director. Otherwise, this preliminary order will become a final order of the agency.

REQUEST FOR HEARING

Unless a right to a hearing before the department or the Idaho Water Resource Board (Board) is otherwise provided by statute, any person aggrieved by any final decision, determination, order or action of the Director of the department and who has not previously been afforded an opportunity for a hearing on the matter may request a hearing pursuant to section 42-1701A(3), Idaho Code. A written petition contesting the action of the Director and requesting a hearing shall be filed within fifteen (15) days after receipt of the denial or conditional approval.

ORAL ARGUMENT

If the Director grants a petition to review the preliminary order, the Director shall allow all parties an opportunity to file briefs in support of or taking exceptions to the preliminary order and may schedule oral argument in the matter before issuing a final order. If oral arguments are to be heard, the Director will within a reasonable time period notify each party of the place, date and hour for the argument of the case. Unless the Director orders otherwise, all oral arguments will be heard in Boise, Idaho.

CERTIFICATE OF SERVICE

All exceptions, briefs, requests for oral argument and any other matters filed with the Director in connection with the preliminary order shall be served on all other parties to the proceedings in accordance with IDAPA Rules 37.01.01302 and 37.01.01303 (Rules of Procedure 302 and 303).

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NOV 13 2001

FINAL ORDER

The Director will issue a final order within fifty-six (56) days of receipt of the written briefs, oral argument or response to briefs, whichever is later, unless waived by the parties or for good cause shown. The Director may remand the matter for further evidentiary hearings if further factual development of the record is necessary before issuing a final order. The department will serve a copy of the final order on all parties of record.

Section 67-5246(5), Idaho Code, provides as follows:

> Unless a different date is stated in a final order, the order is effective fourteen (14) days after its issuance if a party has not filed a petition for reconsideration. If a party has filed a petition for reconsideration with the agency head, the final order becomes effective when:
>
> (a) the petition for reconsideration is disposed of; or
> (b) the petition is deemed denied because the agency head did not dispose of the petition within twenty-one (21) days.

APPEAL OF FINAL ORDER TO DISTRICT COURT

Pursuant to sections 67-5270 and 67-5272, Idaho Code, if this preliminary order becomes final, any party aggrieved by the final order or orders previously issued in this case may appeal the final order and all previously issued orders in this case to district court by filing a petition in the district court of the county in which:

i. A hearing was held,
ii. The final agency action was taken,
iii. The party seeking review of the order resides, or
iv. The real property or personal property that was the subject of the agency action is located.

The appeal must be filed within twenty-eight (28) days of this preliminary order becoming final. See section 67-5273, Idaho Code. The filing of an appeal to district court does not itself stay the effectiveness or enforcement of the order under appeal.

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NOV 13 2001

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OCT 12 2001
Department of Water Resources

BIRCH POWER COMPANY
5203 SOUTH 11TH EAST
IDAHO FALLS, IDAHO 83404
208-522-8069 FAX 208-522-8223
E-mail: ted@tsorenson.net

MEMORANDUM

TO: Kay Walker **DATE:** 10/5/2001
Idaho Dept of Water Resources
P.O. Box 83720
Boise Idaho ~~83706~~ 83720-0098

FROM: Ted J. Sorenson P.E.

SUBJECT:
Water Rights 32-07128 + 32-07136

REMARKS:
I apologize for delay in responding.
Here are the signed amendments.
I continue to object to language
of subordination condition #5.
It is much more restrictive than
the original subordination condition
(#5 on Modified Memorandum Decision
Order dated March 27, 1985). This
amounts to new conditions
"after the fact" could and should
due process. Why not use the original
language?

SIGNED:

cc:

MICROFILMED
OCT 16 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Boise, ID 83706 - P.O. Box 83720, Boise, ID 83720-0098
Phone: (208) 327-7900 Fax: (208) 327-7866 Web Site: www.idwr.state.id.us

DIRK KEMPTHORNE
Governor

KARL J. DREHER
Director

October 2, 2001

TED S SORENSON
5203 S 11 E
IDAHO FALLS ID 83404

RE: Water Right Permits 32-07128

Dear Permit Holder(s):

I previously forwarded to you an Application for Amendment so that you could amend your permit to depict your water right as it has been actually developed. I have not yet received the amendment. If I do not receive it within 14 days, I will assume you no longer have any interest in the permit and cancellation proceedings will begin.

Enclosed for your convenience is another amendment form. Please note that the $50.00 filing fee for this amendment has been paid. If you have any questions regarding this matter, please call me at 208-327-7944.

Sincerely,

Kay Walker

KAY WALKER
Sr. Water Resource Agent

KW:klt

Enclosure

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SEP 13 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Boise, ID 83706 - P.O. Box 83720, Boise, ID 83720-0098
Phone: (208) 327-7900 Fax: (208) 327-7866 Web Site: www.idwr.state.id.us

DIRK KEMPTHORNE
Governor

KARL J. DREHER
Director

August 23, 2001

TED S SORENSON
5203 S 11 E
IDAHO FALLS ID 83404

RE: Permit Nos. 32-07128 and 32-07136

Dear Mr. Sorenson:

We are in receipt of your letter dated August 7, 2001, regarding the proposed licenses and the amendment filing fees in the amount of $100.00. Enclosed is Departmental Receipt No. C055546. We did not receive the signed amendment forms that needed to accompany the filing fees. I have enclosed revised amendment forms for your signature and submittal.

The amendment forms have been revised to recommend the maximum allowable diversion volume for the rates of diversion under these permits. Please be advised that I have revised my recommendations, however, they are subject to change upon administrative review of the proposed licenses. For Permit 32-07128, I have proposed an amount of 32,600.0 acre feet per year and for Permit 32-07136, proposed 21,700.0 acre feet per year. These revised recommended volumes are based on the permitted diversion rates, multiplied by 1.9835 for 365 days a year. We cannot recommend any more volume, than these amounts, for these rights.

In regard to the subordination condition (No. 5) on the amendment forms, please be advised that your permits did contain a subordination condition when approved. The condition was listed under number 9 on the Modified Memorandum Decision and Order dated March 27, 1985. That condition has been revised over time to reflect the current policy of the State of Idaho.

Please sign the revised licensing amendment forms and return them to this office, within 30 days of the date of this letter. If you have any questions in regard to this matter, please do not hesitate to contact me at (208)327-7944.

Sincerely,

Kay Walker

KAY WALKER
Sr. Water Resource Agent

Enclosures

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NOV 13 2001

Sorenson Engineering, P.A.
5203 South 11th East
Idaho Falls, Idaho 83404

Phone: (208) 522-8069
Fax: (208) 522-8223
e-mail: ted@tsorenson.net

RECEIVED

AUG 14 2001

Department of Water Resources

August 7, 2001

Kay Walker
IDWR
P.O. Box 83770
Boise, ID 83720-0098

RE: Water Right Permit #32-07128
Water Right Permit #32-07136

Per your letters of July 18, 200, here is the $100.00 filing fee. The proposed permit has two areas I request modification in.

1. Annual Volume should be:

32-7128	32,580 A.F.
32-7136	25,340 A.F.
	57,920 A.F. Total

The maximum year experienced to date was 51,050 Acre Feet. The plant economics were based upon 1982-83 at 53,120 Acre Feet. I request a total of 57,920 A.F.

2. Condition 5 was not included in the original permit or the recent amendment. Therefore, it should not be included now.

Please advise.

Very Truly Yours,

Ted S. Sorenson, P.E.

TSS/ptj

C:\My Documents\Word Perfect\Sorenson Eng\Walker.ltr.wpd

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NOV 13 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Boise, ID 83706 - P.O. Box 83720, Boise, ID 83720-0098
Phone: (208) 327-7900 Fax: (208) 327-7866 Web Site: www.idwr.state.id.us

DIRK KEMPTHORNE
Governor

KARL J. DREHER
Director

July 18, 2001

TED S SORENSON &/or SORENSON ENGINEERING
5203 S 11 E
IDAHO FALLS ID 83404

RE: Water Right Permit No. 32-07128

Dear Permit Holder(s):

The Department of Water Resources is reviewing the permit referenced above prior to issuing a water right license. By issuing a license, the Department confirms the extent of development that has been established in compliance with the terms of the permit. The examiner who verified your water use reported that certain elements of the permit have been developed differently than described on your permit. Changes that do not increase the authorized use of water under the permit can be requested and approved in accordance with Section 42-211, Idaho Code. Before a license can be issued, your permit must be amended to depict your water use as it was actually developed.

Based on the examiner's report, the following elements were developed differently than described on your permit:

__✓__ **Point(s) of Diversion**

__✓__ **Place(s) of Use**

The enclosed Application for Amendment form depicts the elements of the water right as they will appear on the license when it is issued. Please review the amendment form carefully. If you concur with the information presented, please sign the form and return it with the $50.00 filing fee within 14 days.

If you have any questions, please call me at 208-327-7944.

Sincerely,

KAY WALKER
Sr. Water Resource Agent

Enclosure

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NOV 13 2001

Birch Power Co.

5203 South 11th East
Idaho Falls, Idaho 83404
Tel 208-522-8069
fax 208-522-8223
e-mail: ted@tsorenson.net

June 15, 2001

Kay Walker, Senior Water Resource Agent
State of Idaho Department of Water Resources
1301 North Orchard Street
P. O. Box 83720
Boise, ID 83720

RECEIVED
JUN 20 2001
Department of Water Resources

Re: Permit Nos. 32-07128 and 32-07136

Dear Ms. Walker:

This letter is written pursuant to your letter of June 12, 2001. I apologize for not answering your April 24, 2001 letter sooner.

1. Here is evidence of compliance with the conditions of condition no. 2, page 18 of the Recommended Decision and Order. This has to do with "The User shall develop and maintain the pond ...." Attached is a letter dated November, 2000, from the Bureau of Land Management documenting compliance with this condition.

2. Condition number 3, page 19 . "Applicant shall build and maintain a gate in the hydropower division..." Attached please find a copy of the "as built" drawings showing the location of this gate and the location of the weir. Please note that some confusion has arisen because this control gate is downstream in the channel approximately 1.5 miles. The gate is located in this position at the request of the Idaho Department of Fish and Game. This ensures that the first mile and a half of the channel, which was developed successfully for fisheries, is not dewatered. The headgate is able to shut off the water and return the entire flow to Birch Creek. The return is in the bypass channel. A ten foot sharp crested weir is located just downstream of this structure as shown on the attached drawings.

Trusting this to be of value.

Very truly yours,

Ted S. Sorenson, P.E.

C:\My Documents\WORD\Birchpow\Walker061501.ltr.doc

MICROFILMED
NOV 13 2001

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Upper Snake River Districts
Idaho Falls Field Office
1405 Hollipark Drive
Idaho Falls, Idaho 83401-2100

In Reply Refer To:
6700

November 27, 2000

Birch Power Co.
5203 South 11th East
Idaho Falls, Idaho 83404

Dear Mr. Sorenson:

I have reviewed your 2000 monitoring report for the "Alternative Flow Mitigation" for the Birch Creek Hydropower Project and concur that the 2000 operation was in compliance with the Environmental Assessment (ID-030-9-46) and is acceptable to the Bureau of Land Management for this calendar year. The installation of the water screen in 1996 appears to have solved our nozzle fouling problem as the system operated without a hitch during the field season. Maintaining a good, constant water surface elevation in the ponds kept the plantations fully saturated producing good plant growth and vigor. There was no significant drying out of the plantations as experienced in the past during periodic mechanical failures (i.e. line clogging). The growth on the woody vegetation was excellent in 1999 and 2000. We finally appear to be meeting the mitigation objectives for the project in the replacement of shrub canopy lost on lower Birch Creek from the hydropond downstream to the old Reno Ditch diversion.

If you have any questions or suggestions for improving the project, please contact me at 208-524-7528.

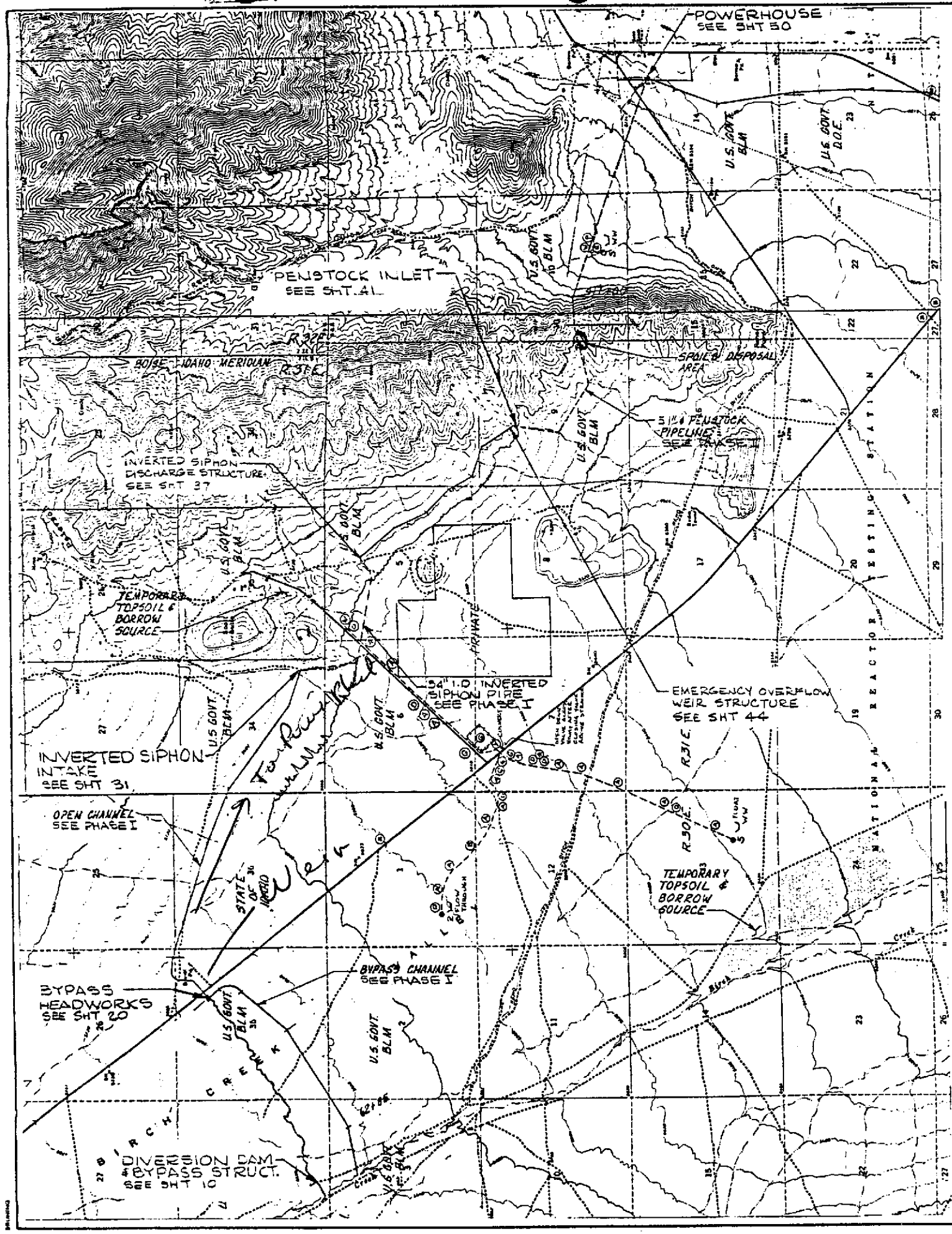
Thank you for your diligent effort and cooperation in making this riparian mitigation project a success. Keep up the good work.

Sincerely yours

Patrick K. Koelsch

Patrick K. Koelsch
Fishery Biologist
Idaho Falls Field Office

MICROFILMED
NOV 13 2001



LEGEND

- (A) AIR VENT
- (D) DRAIN
- TROUGH
- (G) GATE VALVE
- (Y) GATE, Y STRAINER, & FLOW REDUCER IN CULVERT
- (W) WATER INLET FROM HYDRO
- W/W WILDLIFE WATER
- (P) PRESSURE REDUCING VALVE W/ Y STRAINER, GATE VALVE, & AIR VENT
- (R) FLOW CONTROL VALVE

SITE PLAN
PHASE II

N

2000 1000 0 2000

SCALE IN FEET

MICROFILMED
NOV 13 2001

RECORD DRAWING

REVISIONS		
ADDED EMERGENCY OVERFLOW WEIR & ASSOC. SHEETS, REVISED SHEET 3, SHEET 4, SHEET 5, ADDED BLM MATERIAL REQUIREMENTS	A	
NLF	B	

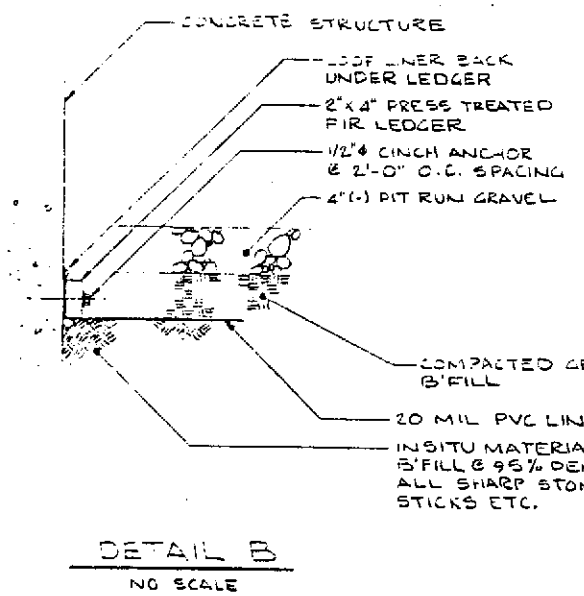
DATE SEPT 8, 1986
DESIGN SPG
DRAWN
APPROVED
TRACED Sharon 9-8-86

BIRCH CREEK HYDROELECTRIC FACILITY PHASE II

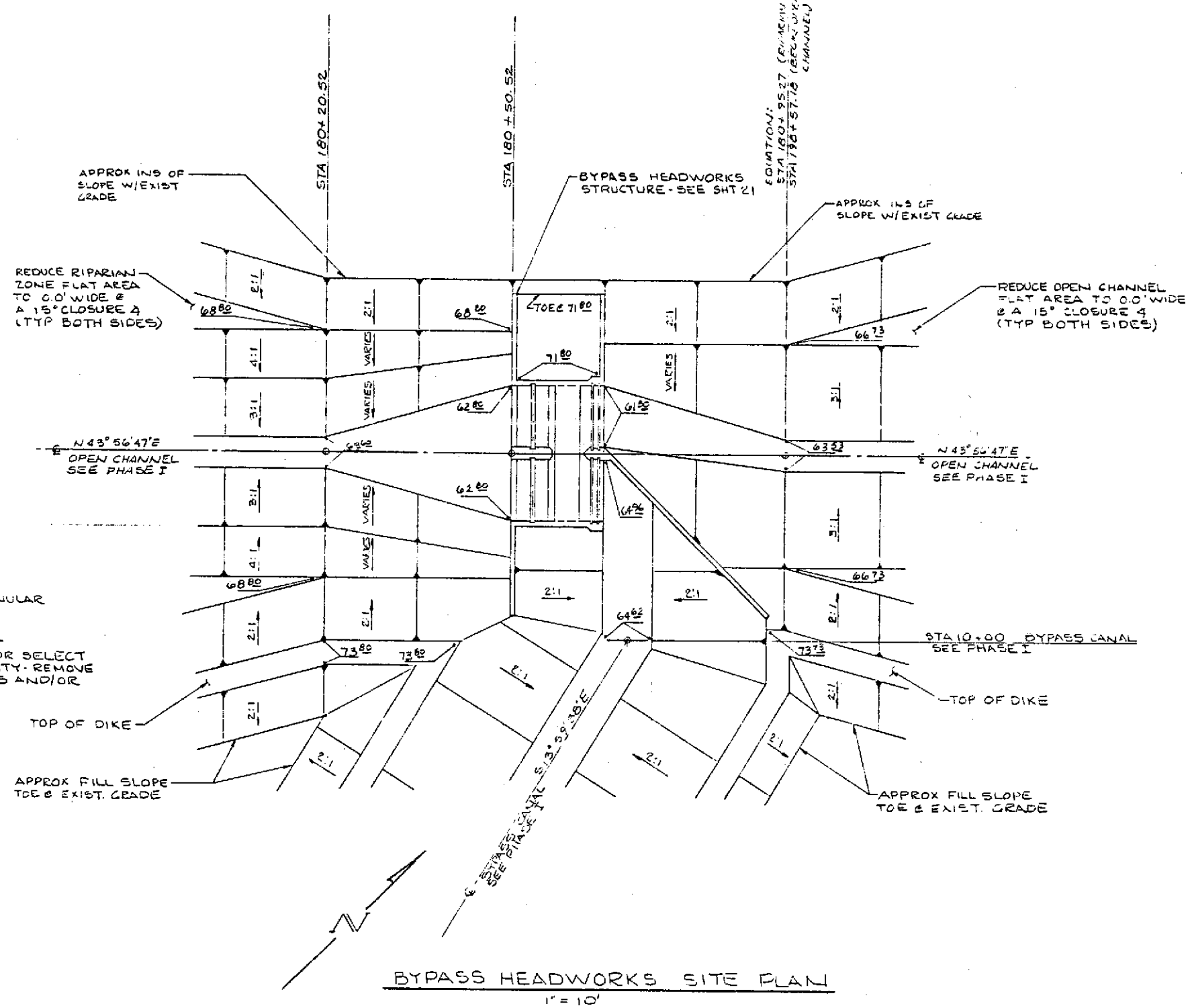
SITE PLAN

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

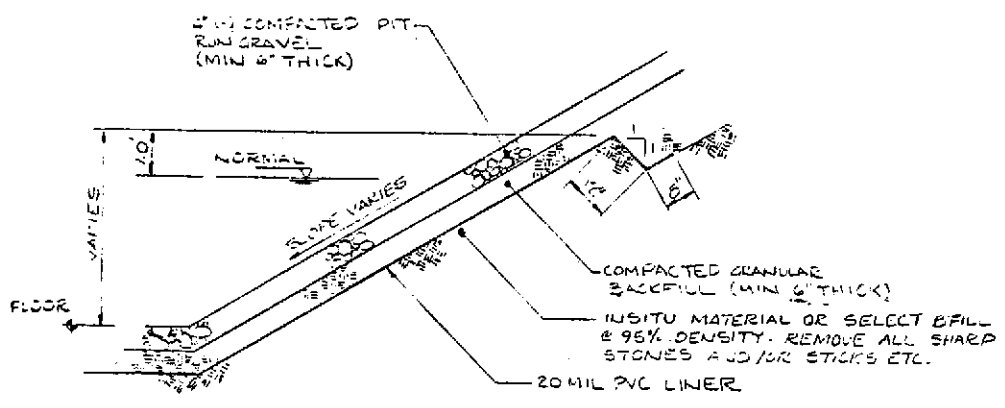
SCALE 1" = 1000'
DRAWING NO. 86H342A
SHEET NO. 2



DETAIL B
NO SCALE



BYPASS HEADWORKS SITE PLAN
1" = 10'



DETAIL A
1/2" = 1'-0"

NOTES:

1. SEE PHASE I DRAWING D86-13423 SHT 8 FOR RIPARIAN ZONE, OPEN CHANNEL, & BYPASS CANAL TYPICAL CROSS SECTIONS.
2. INSTALL 20 MIL PVC LINER IN OPEN CHANNEL. TERMINATE ALL AROUND AT 4.2 FT ABOVE CHANNEL FLOOR ELEV SHOWN. SEE DETAIL A FOR TYP TERMINATION. TERMINATE LINER AROUND CONCRETE STRUCTURE PER DETAIL B.

RECORD DRAWING

REVISIONS
A — COVERED STRUCTURE 6.7 FEET

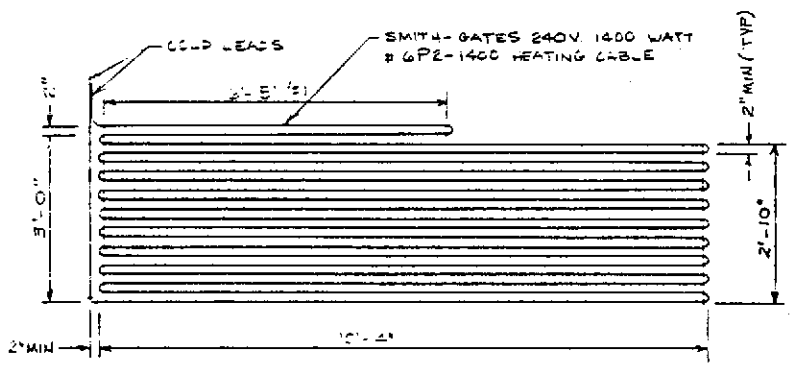
DATE SEPT 5 1986
DRAWN LHB
CHECKED
APPROVED
ENGINEER
DATE SEP 5 86

BIRCH CREEK HYDROELECTRIC FACILITY PHASE II

BYPASS HEADWORKS SITE PLAN

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

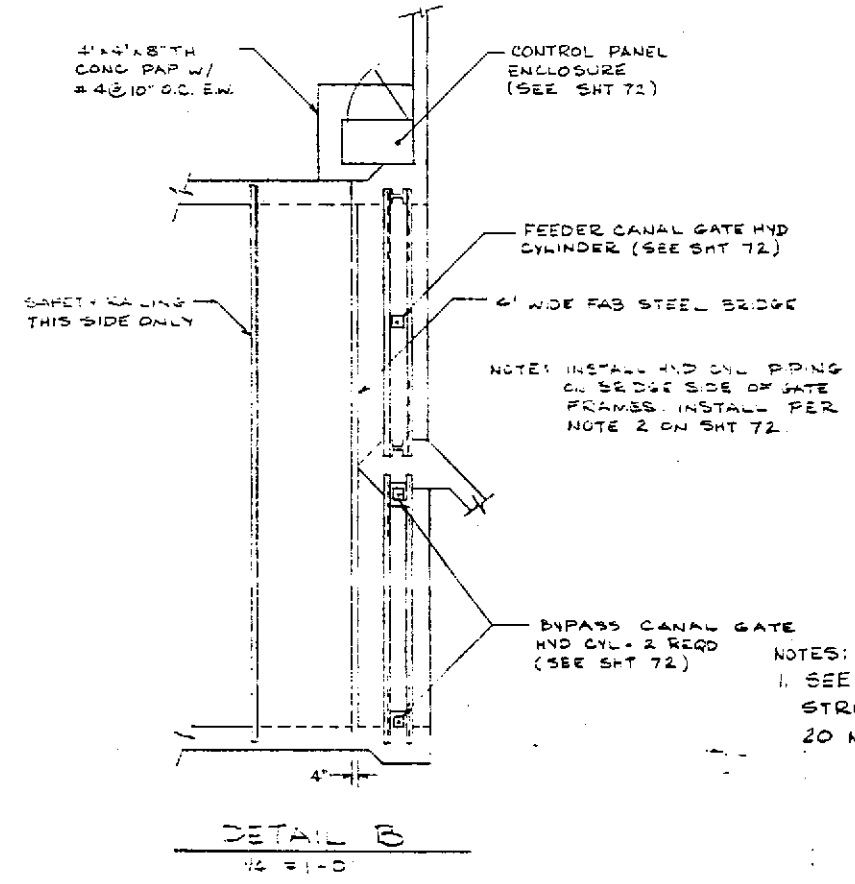
SCALE NOTED
DRAWING NO. D86-13424
SHEET NO. 20



APPROX. LAYOUT FOR A 203 LF CABLE INSTALL ON 16 GA x 2" O.C. VINYL COATED WIRE USING NYLON TIES.

DETAIL C SHT 24

NO SCALE

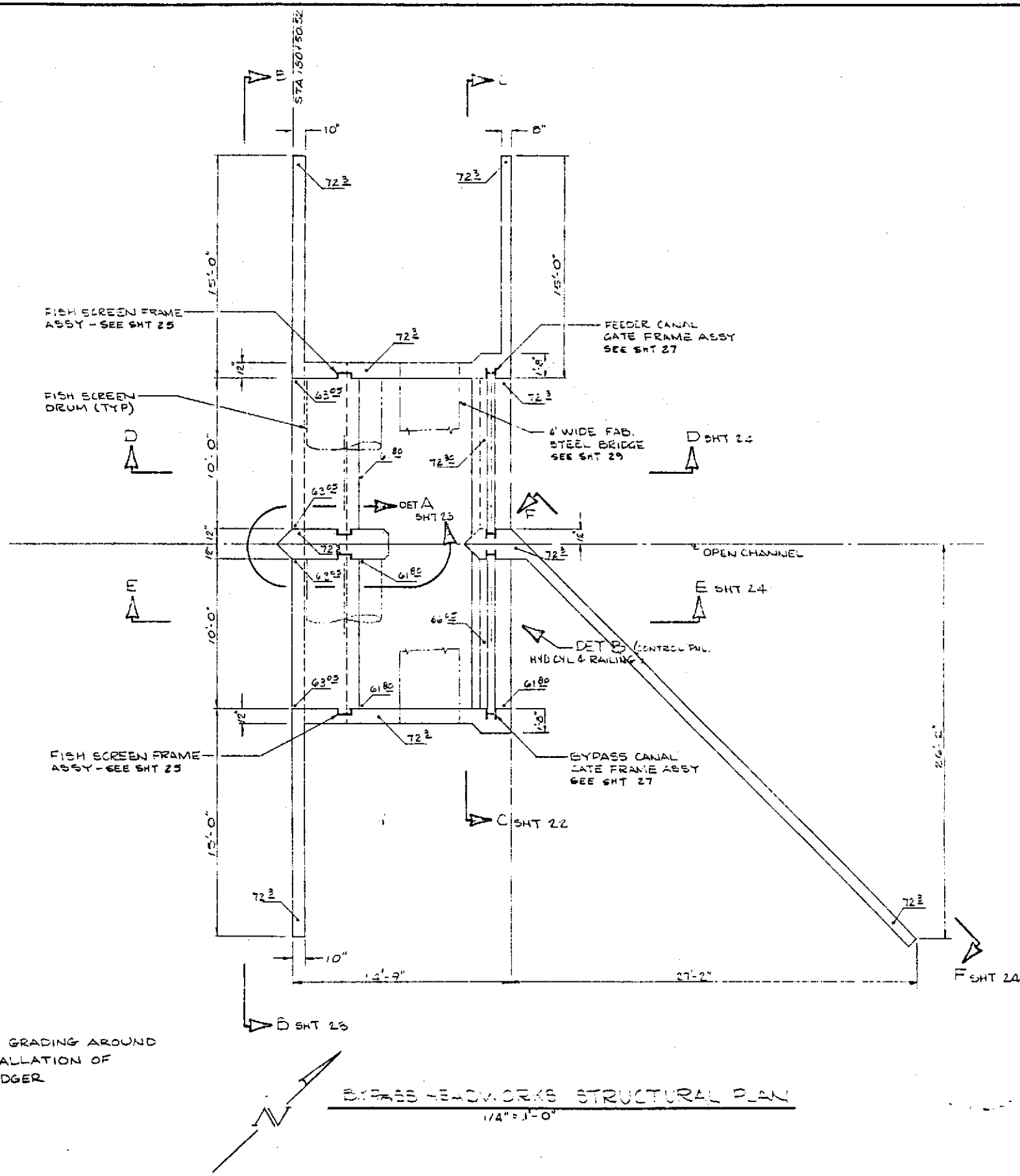


DETAIL B

1/2 = 1'-0"

NOTES:

1. SEE SHT. 20 FOR FINISH GRADING AROUND STRUCTURE AND INSTALLATION OF 20 MIL PVC ATTACH LEDGER



BYPASS HEADWORKS STRUCTURAL PLAN

1/4" = 1'-0"

REVISIONS			
A	ADJUSTED ELEVS		
B	ADDED DETAIL C		
	ADDED DETAIL B		

DATE 6 OCT 81/86
DRAWN CWE
CHECKED
APPROVED
ENGINEER
SUPERVISOR

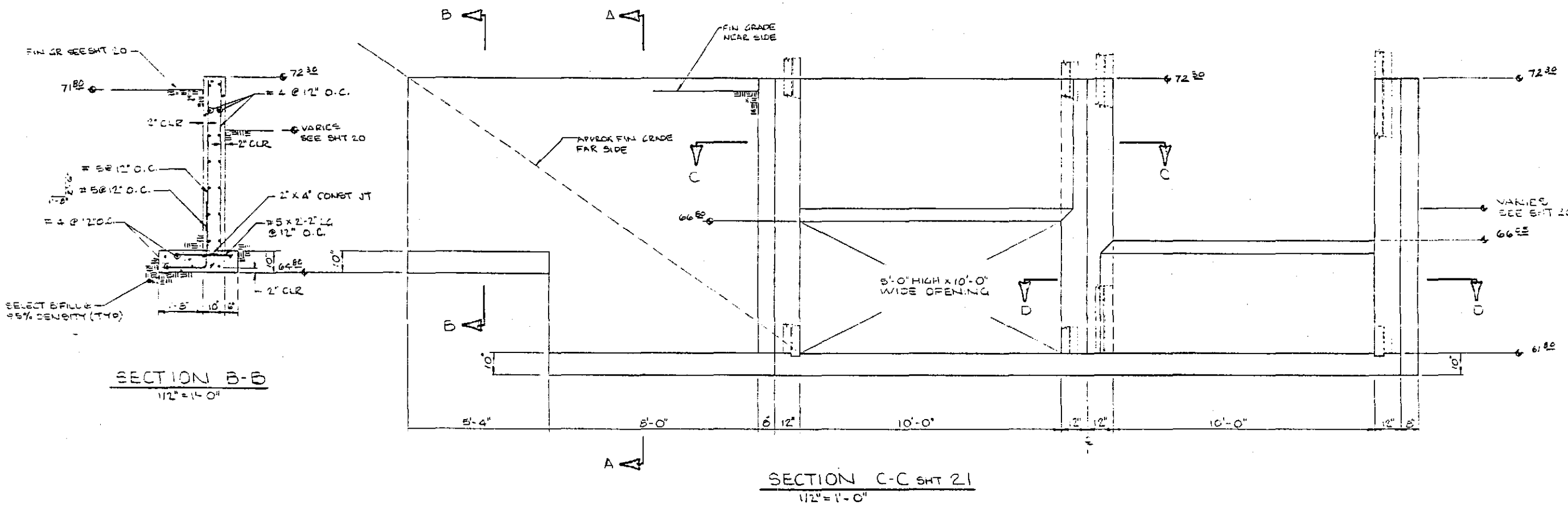
BIRCH CREEK
HYDROELECTRIC FACILITY
PHASE II

BYPASS HEADWORKS
STRUCTURAL PLAN

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

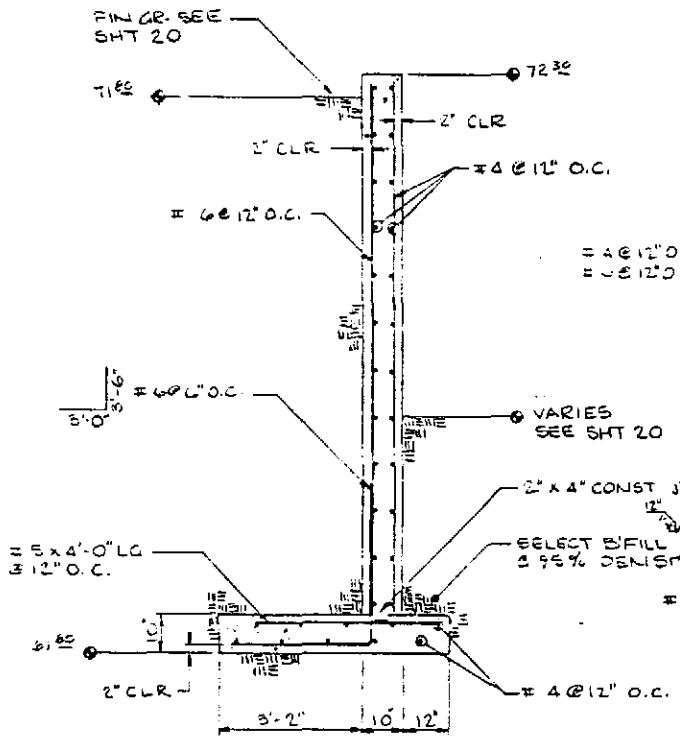
SCALE NOTED
DRAWING NO. 8613424
SHEET NO. 21

RECORD DRAWING

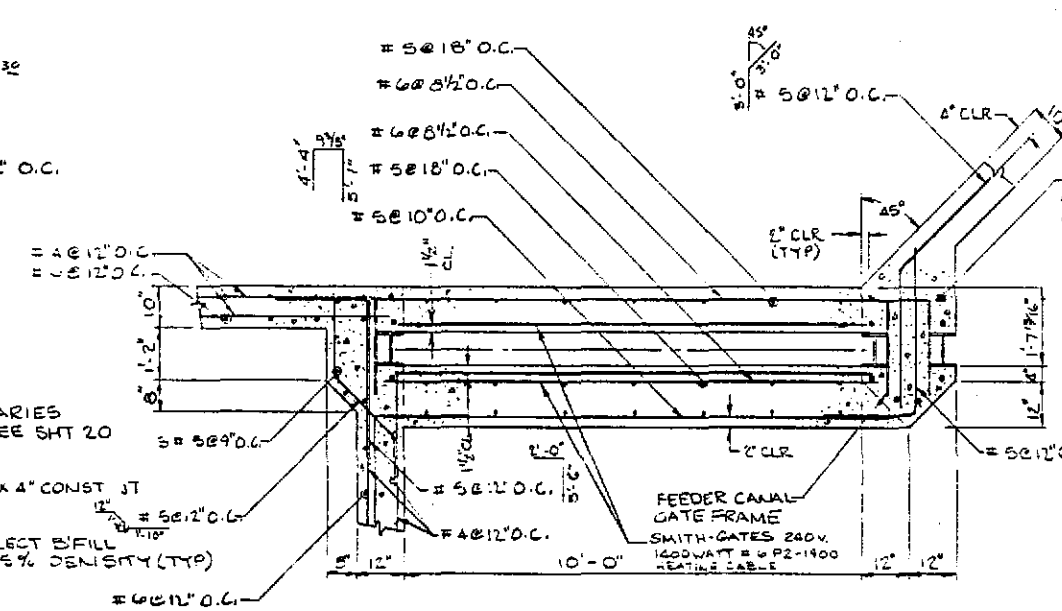


SECTION C-C SHT 21
1/2" = 1'-0"

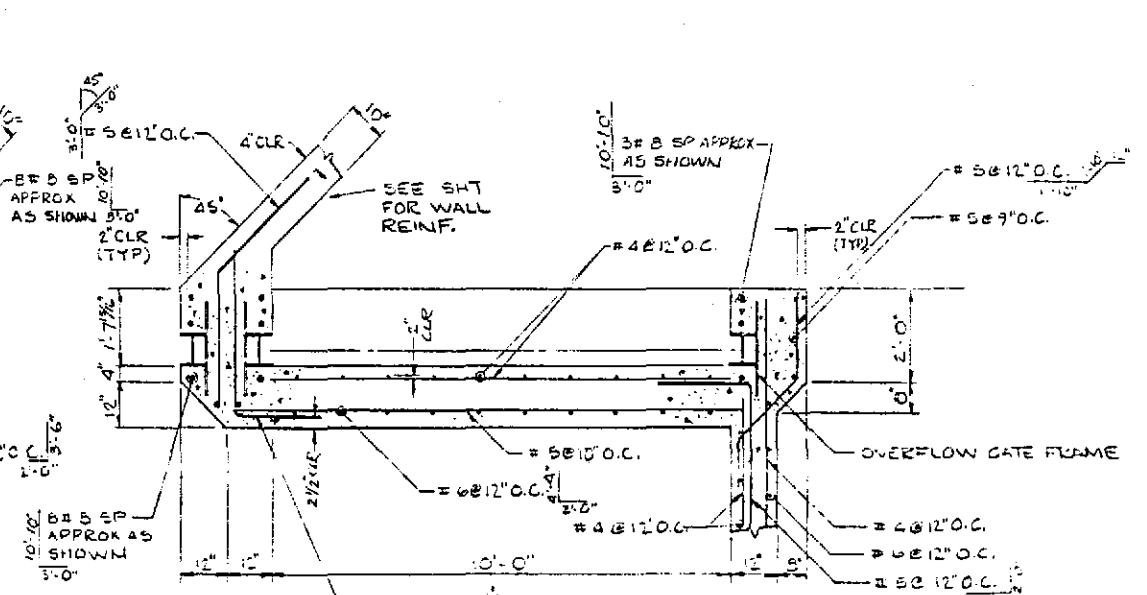
SECTION B-B
1/2" = 1'-0"



SECTION A-A
1/2" = 1'-0"



SECTION C-C
1/2" = 1'-0"



SECTION D-D
1/2" = 1'-0"

REVISIONS
A
B

DATE SEPT 5, 1986
DRAWN SB
CHECKED
APPROVED
ENGINEER 9-8-86

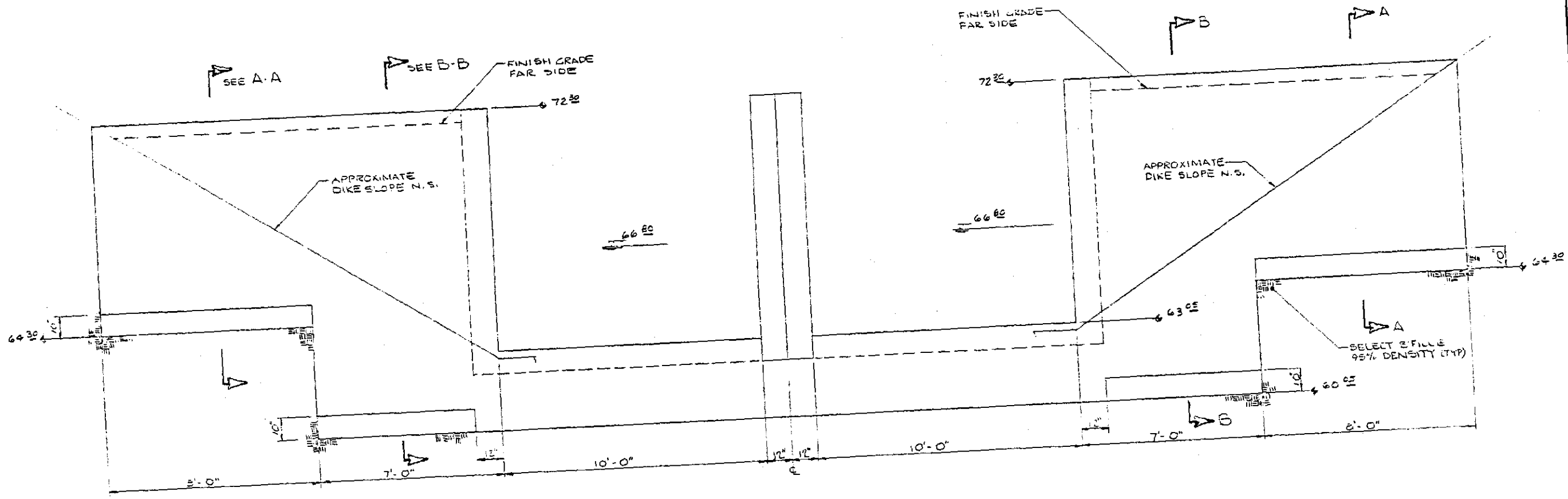
BIRCH CREEK HYDROELECTRIC FACILITY PHASE II

BYPASS HEADWORKS STRUCTURAL DETAILS

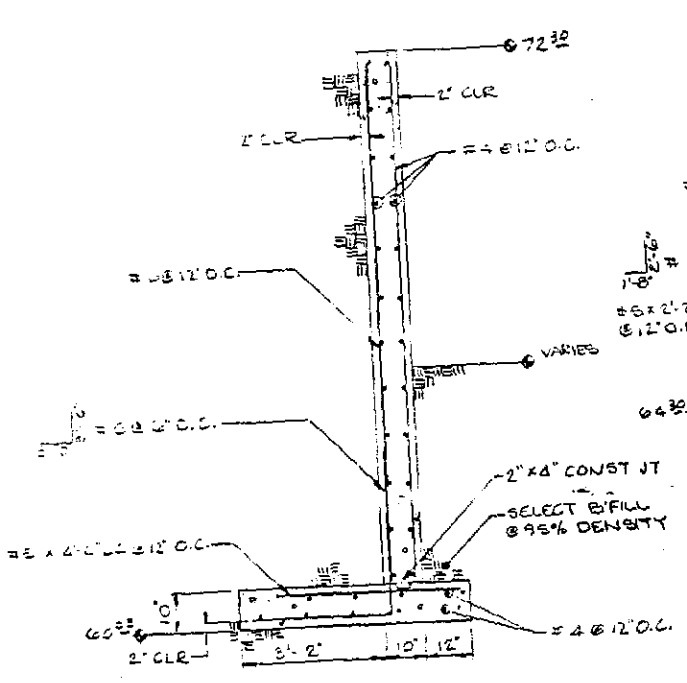
SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

SCALE NOTED
DRAWING NO. D 86-13424
SHEET NO. 22

RECORD DRAWING

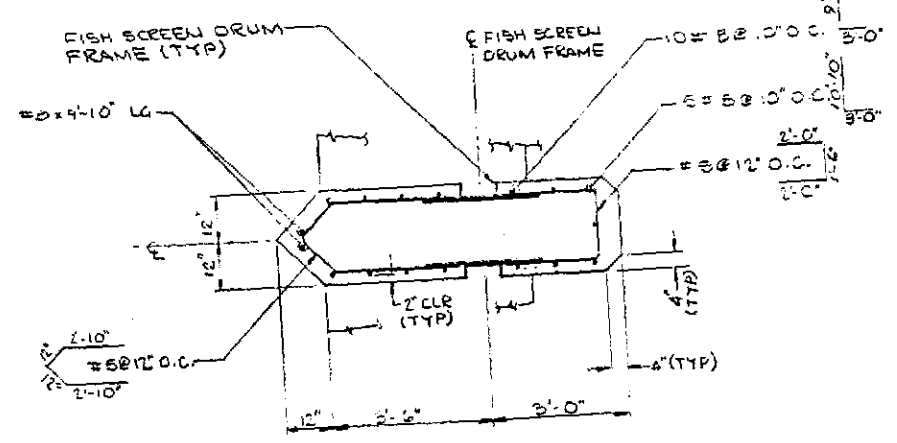


SECTION B-B SHT 21
1/2" = 1'-0"

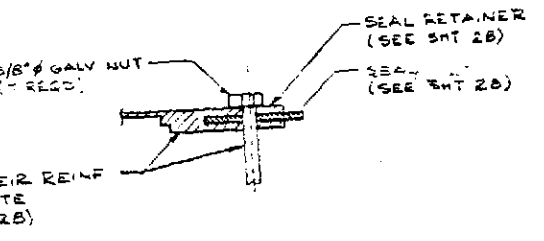


SECTION A-A
1/2" = 1'-0"

SECTION B-B



DETAIL A SHT 21
1/2" = 1'-0"



DETAIL C SHT 24
3" = 1'-0"

RECORD DRAWING

REVISIONS

A	ADJUSTED ELEVS	
B	ADDED DETAIL C	

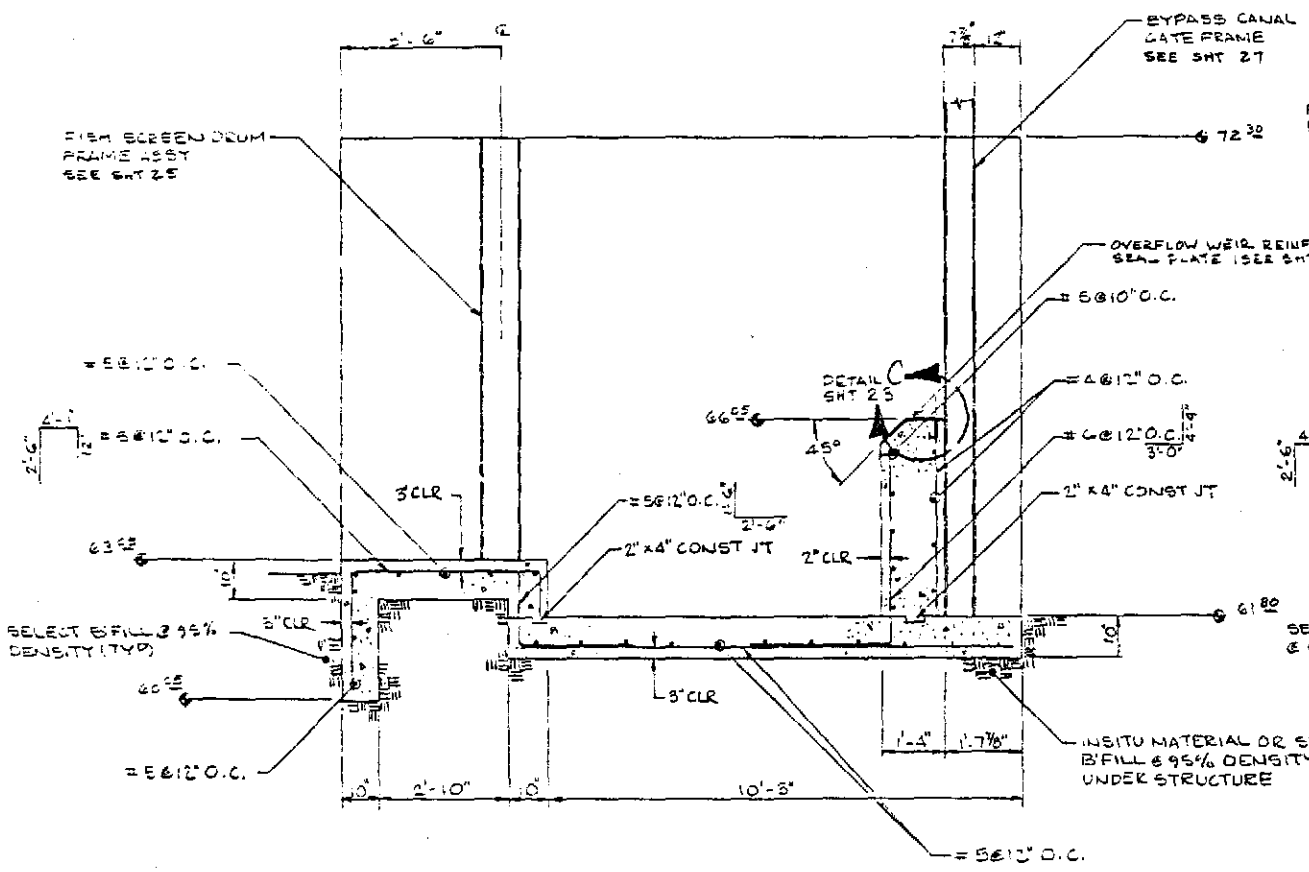
DATE SEPT 5, 1986
DRAWN SJB
CHECKED
APPROVED
ENGINEER'S SIGNATURE & DATE

BIRCH CREEK HYDROELECTRIC FACILITY PHASE II

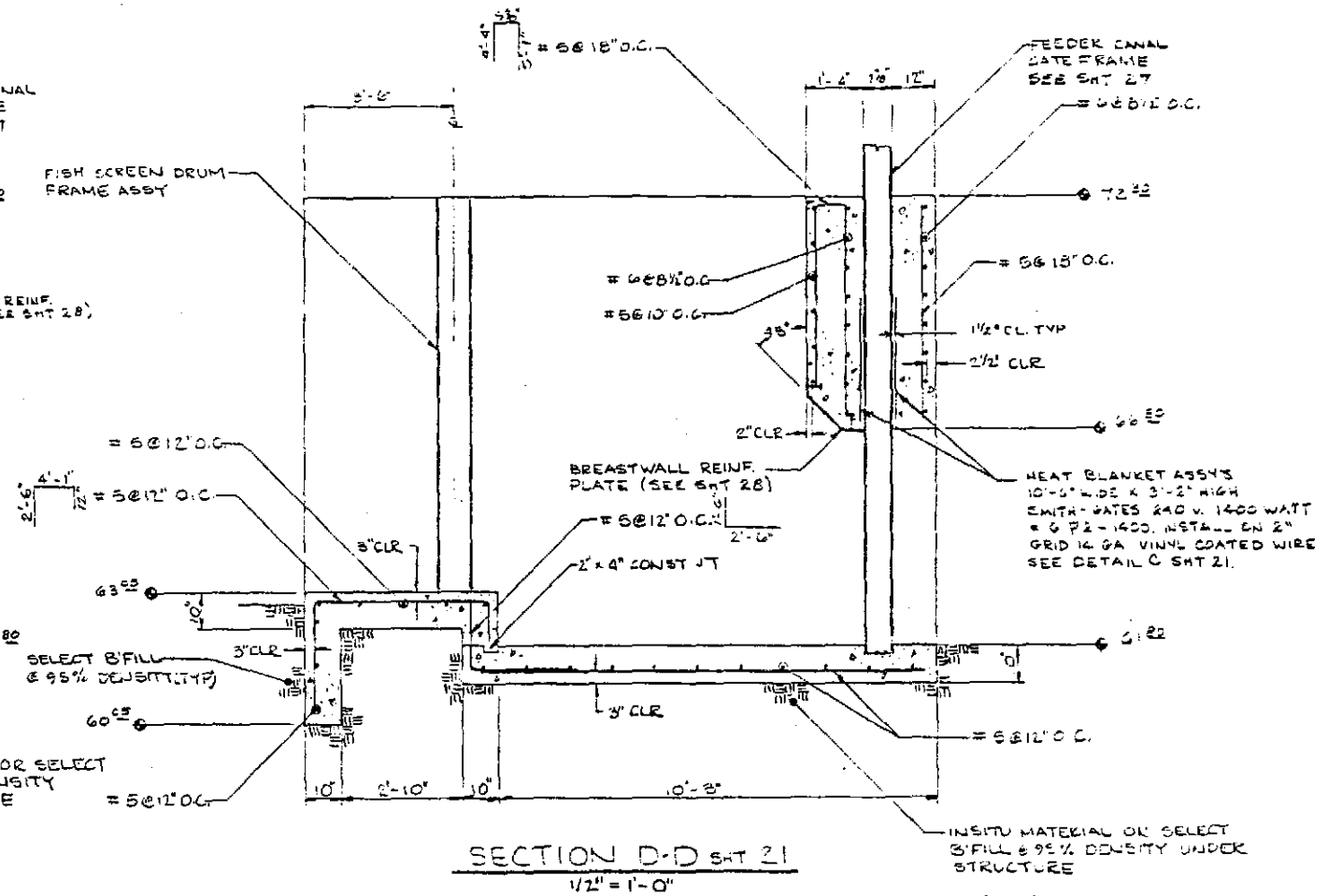
BYPASS HEADWORKS STRUCTURAL DETAILS

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

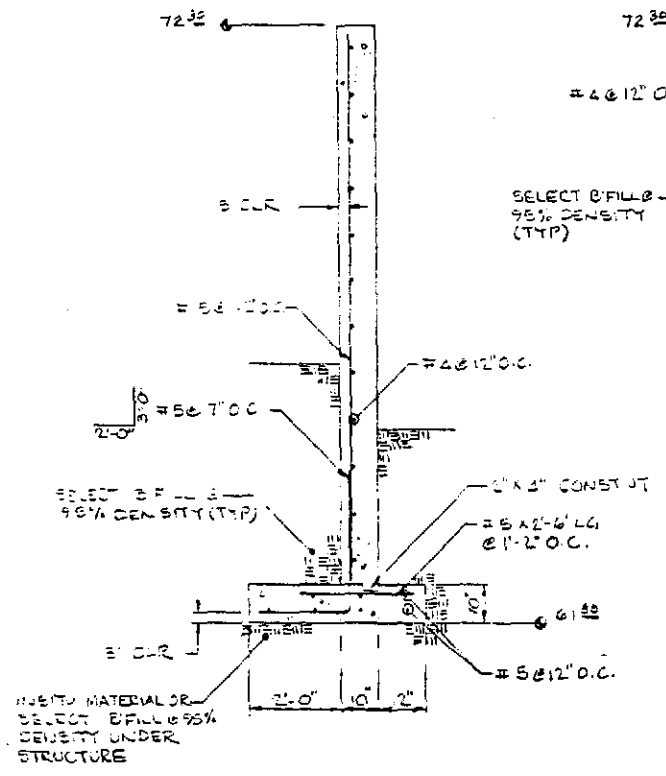
SCALE NOTED
DRAWING NO. DAC/3424
SHEET NO. 23



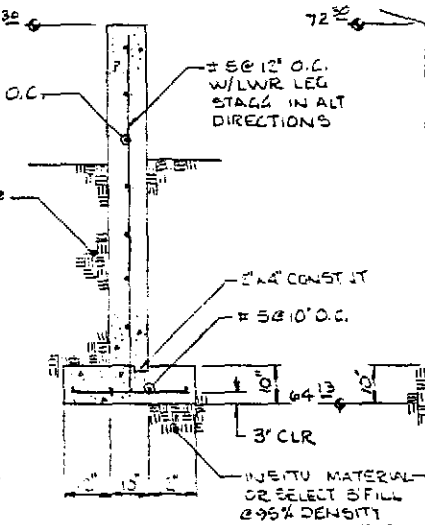
SECTION E-E SHT 21
1/2" = 1'-0"



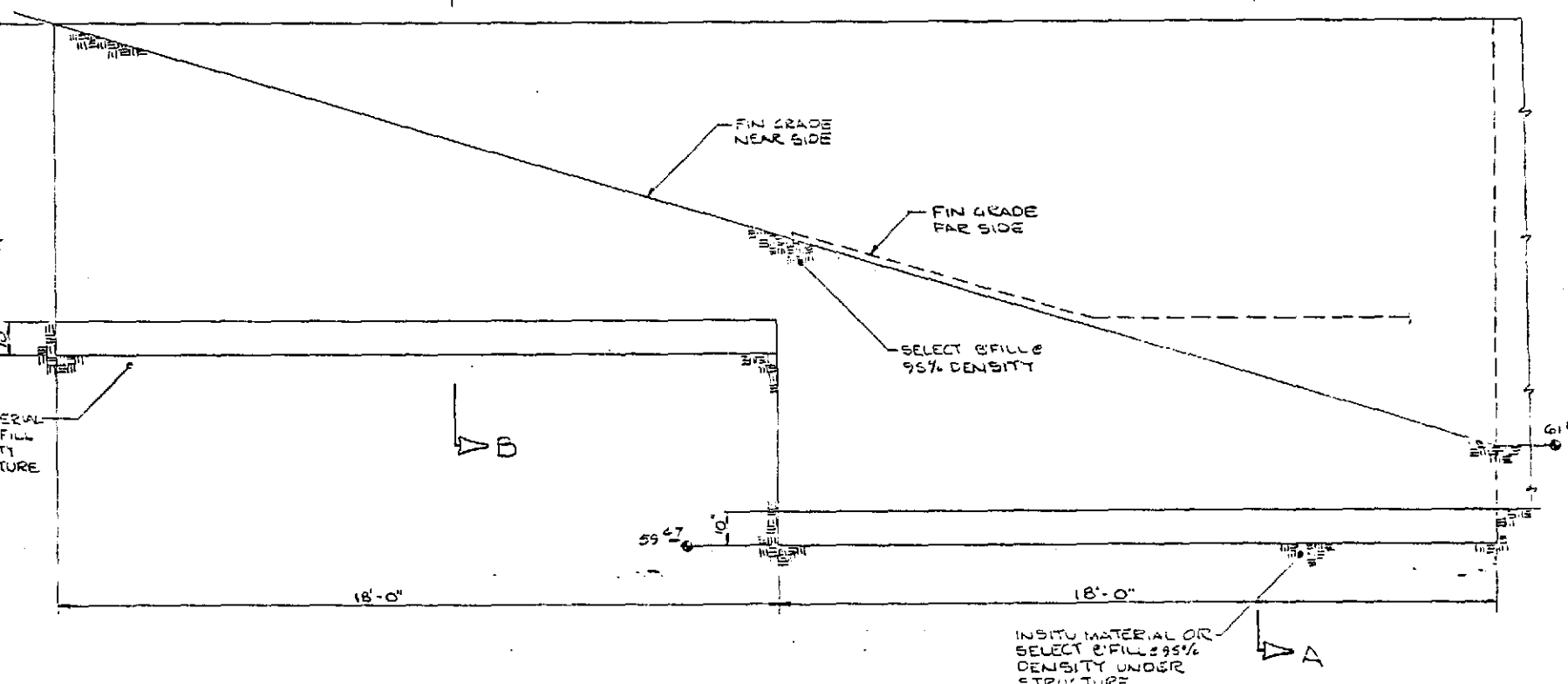
SECTION D-D SHT 21
1/2" = 1'-0"



SECTION A-A
1/2" = 1'-0"



SECTION B-B
1/2" = 1'-0"



SECTION F-F SHT 21
1/2" = 1'-0"

RECORD DRAWING

REVISIONS

A	4-24-96	LOWER SPILLWAY CREST 0.20 FEET
B	4-24-96	PLACED OVERFLOW WEIR SEAL PLATE SEE E-E
		HEAT BLANKET DESIGNATION DETAIL SECTION

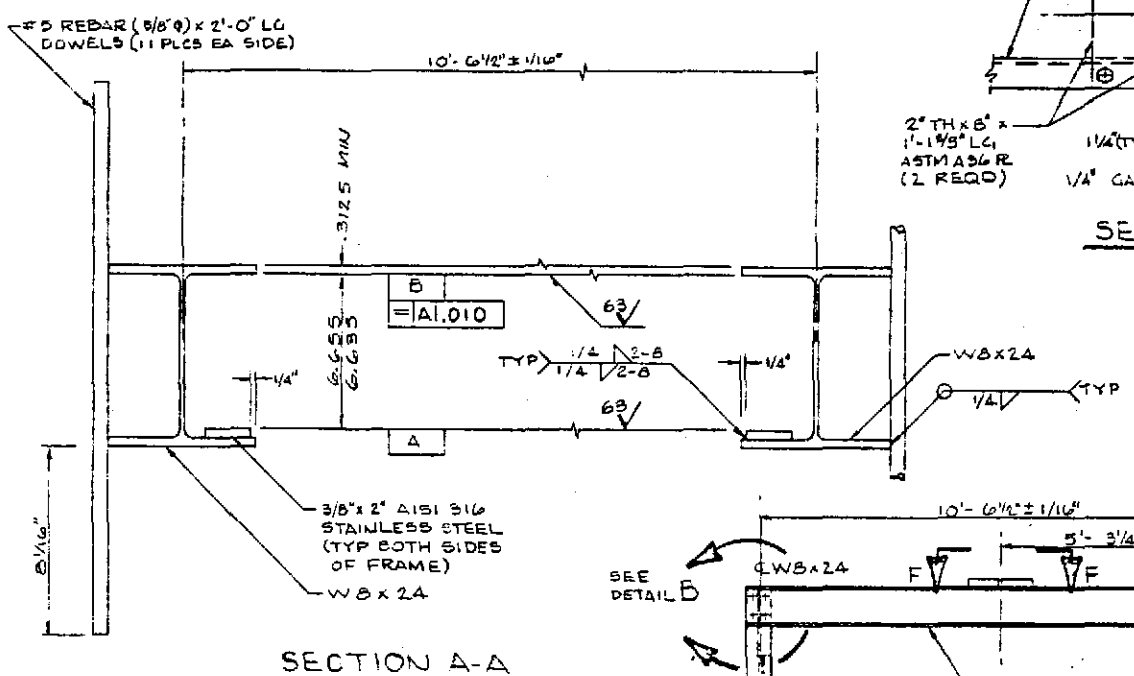
DATE 5-07-1996
DRAWN DRB
CHECKED
APPROVED
ENGINEER
PROJECT 1176

BIRCH CREEK HYDROELECTRIC FACILITY PHASE II

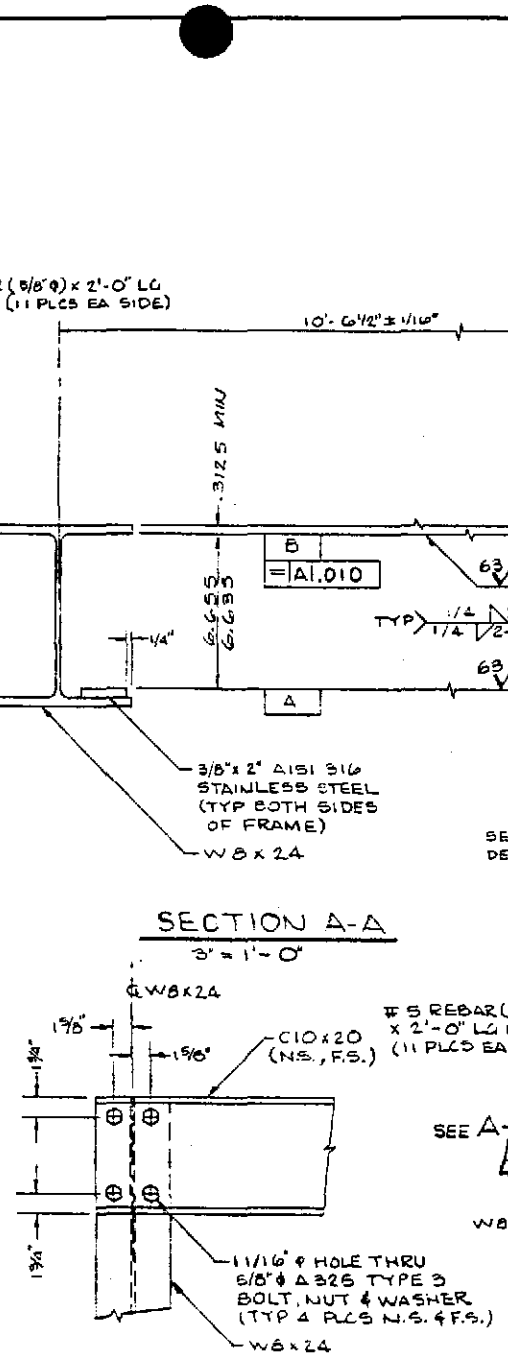
BYPASS HEADWORKS STRUCTURAL DETAILS

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

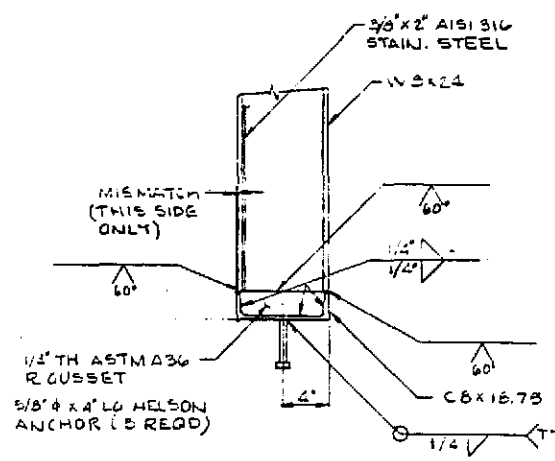
SCALE NOTED
DRAWING NO. DR6-13424
SHEET NO. 24



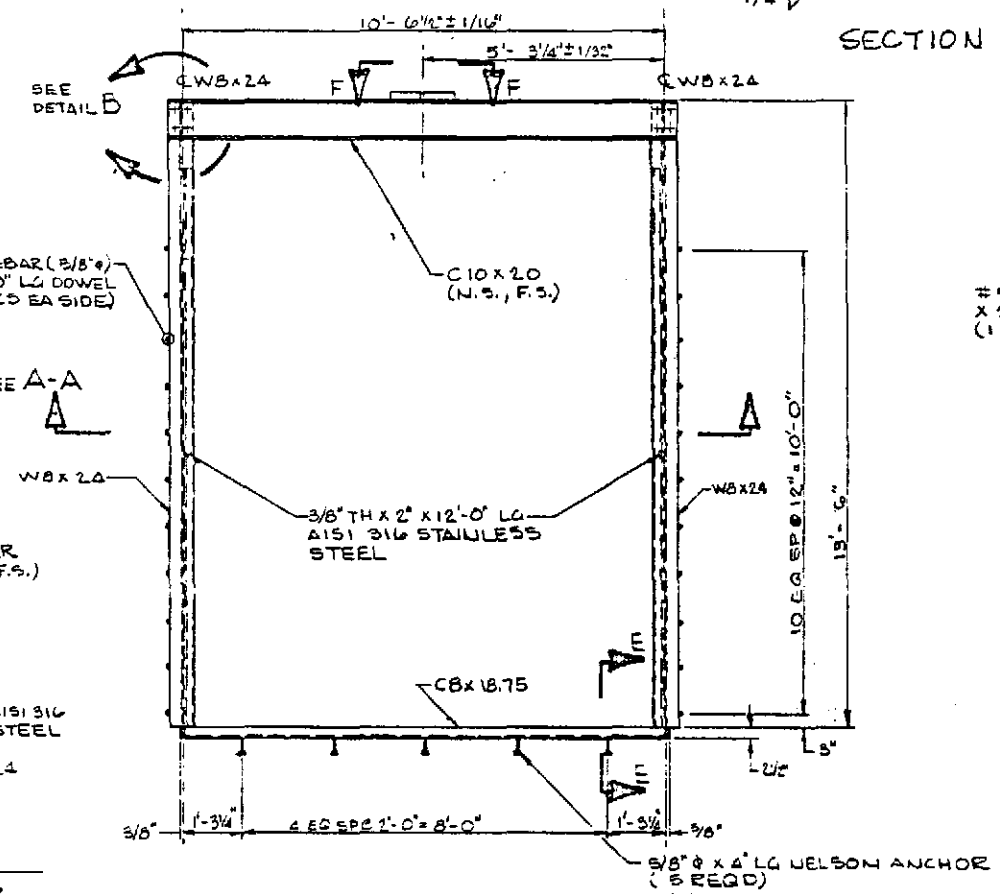
SECTION A-A
3" = 1'-0"



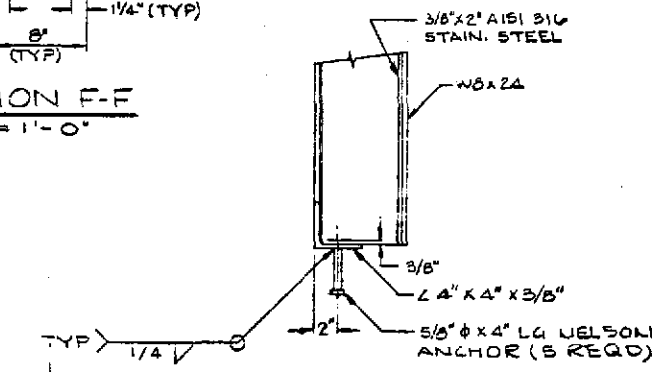
DETAIL B (TYP BOTH SIDES OF FRAME)
1 1/2" = 1'-0"



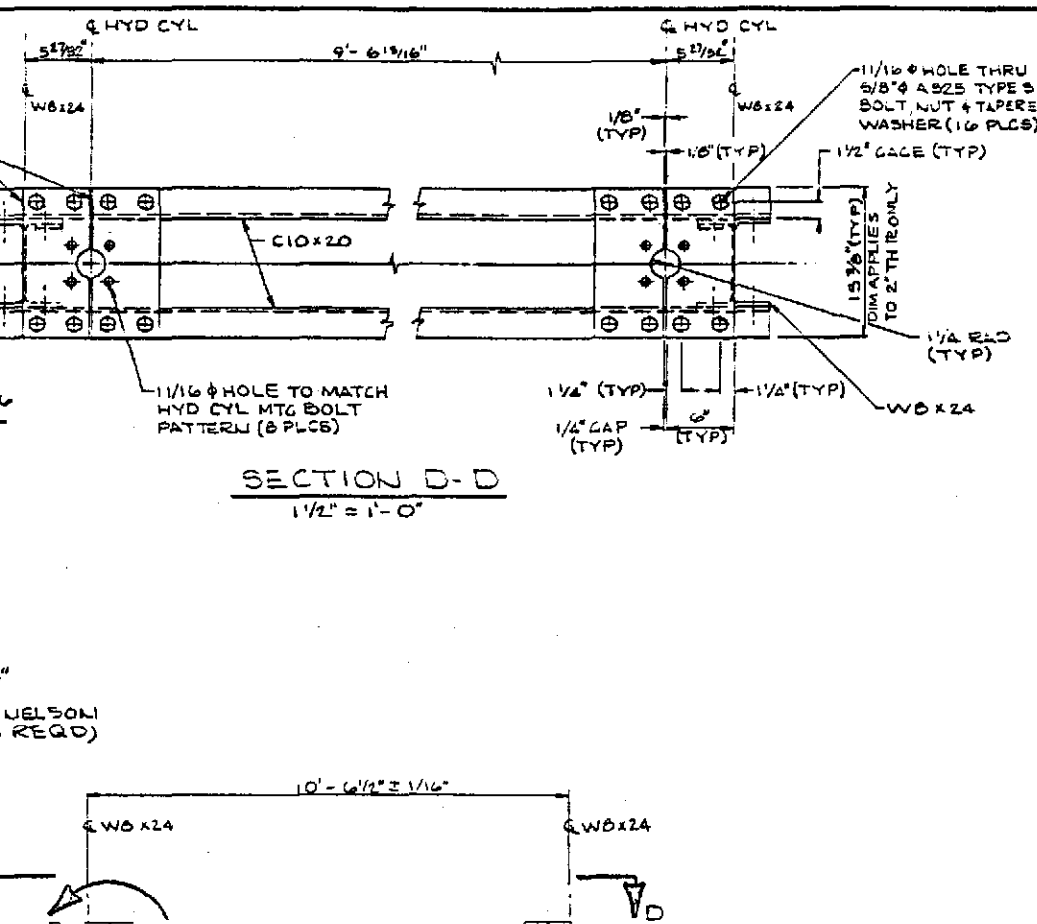
SECTION E-E (TYP BOTH SIDES OF FRAME)
1 1/2" = 1'-0"



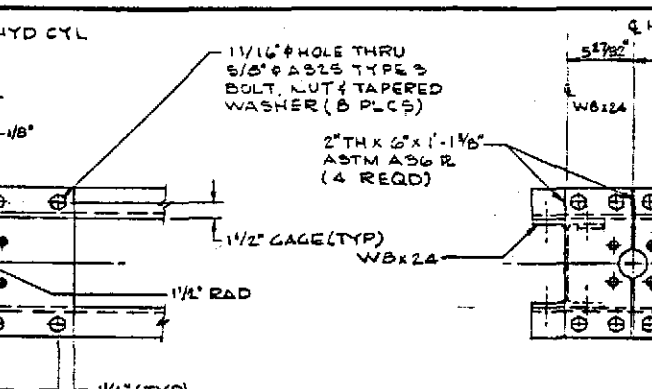
FEEDER CANAL GATE FRAME (1 REQD)
1 1/2" = 1'-0" FINISH PER NOTE 1.



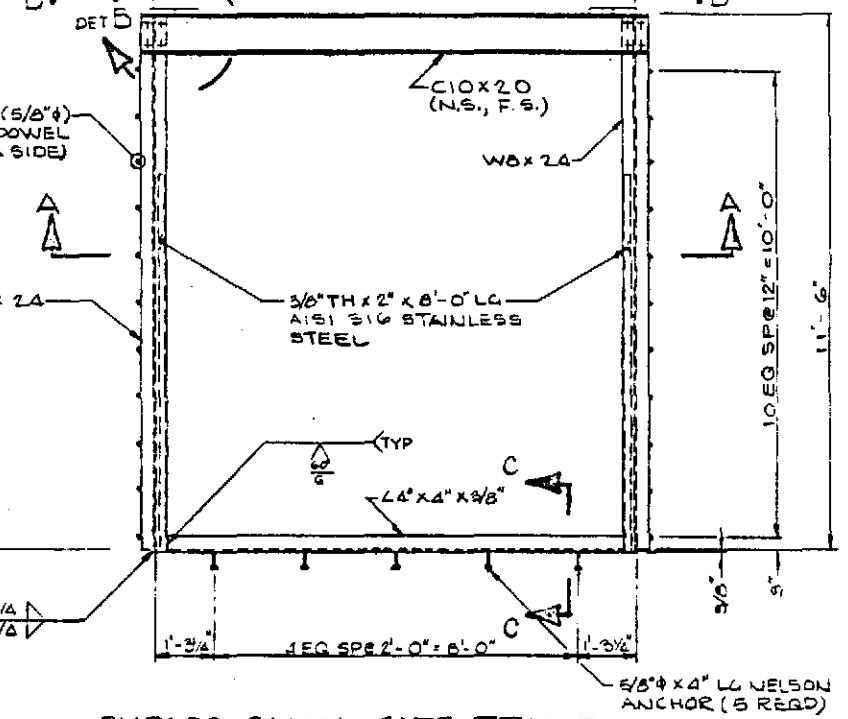
SECTION C-C



SECTION D-D
1 1/2" = 1'-0"



SECTION F-F
1 1/2" = 1'-0"



BYPASS CANAL GATE FRAME (1 REQD)
1 1/2" = 1'-0" FINISH PER NOTE 1.

NOTES:

1. FINISH COMPLETED ASSYS PER SYSTEM "B" IN THE SPECIFICATIONS EXCEPT APPLY 2 FINISH COATS. TOTAL DFT SHALL BE 10 MILS MIN. OMIT FINISH FROM STAINLESS STEEL MACHINED SURFACE.
2. REMOVE CAMBER AND SWEEP FROM "AS ROLLED" STEEL SHAPES SUCH THAT 1/16" MAX CAN BE MEASURED AT ANY LOCATION BETWEEN ENDS.
3. INSTALLATION CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND/OR BLOCKING TO PREVENT BOWING, WARPING AND TWISTING OF FRAME ASSY.

RECORD DRAWING

REVISIONS
NO. BY DESCRIPTION DATE
1 PAT SWISS GATE TRUNNEL ANGLE DIRECTION 10-4-86

DATE 10-4-86
DRAWN S/PB
CHECKED
APPROVED
ENGINEER 10-4-86

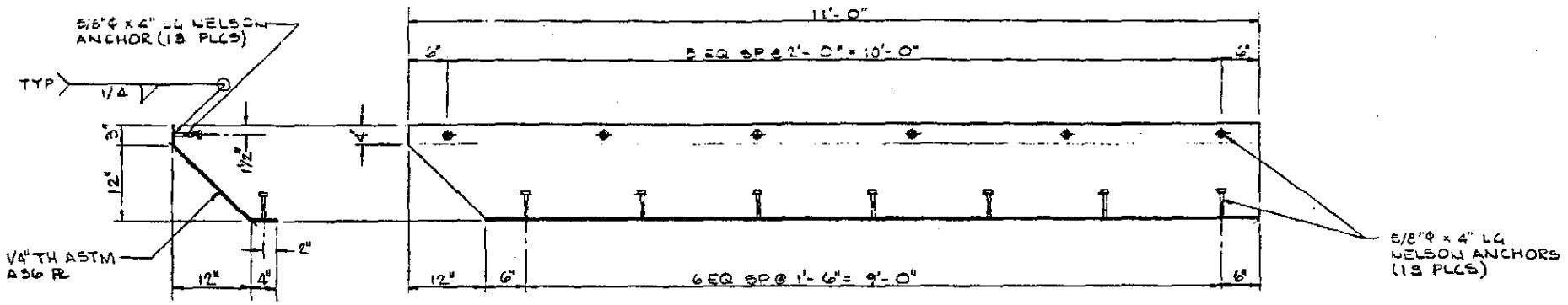
BIRCH CREEK HYDROELECTRIC FACILITY PHASE II

BYPASS HEADWORKS FABRICATED DETAILS

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

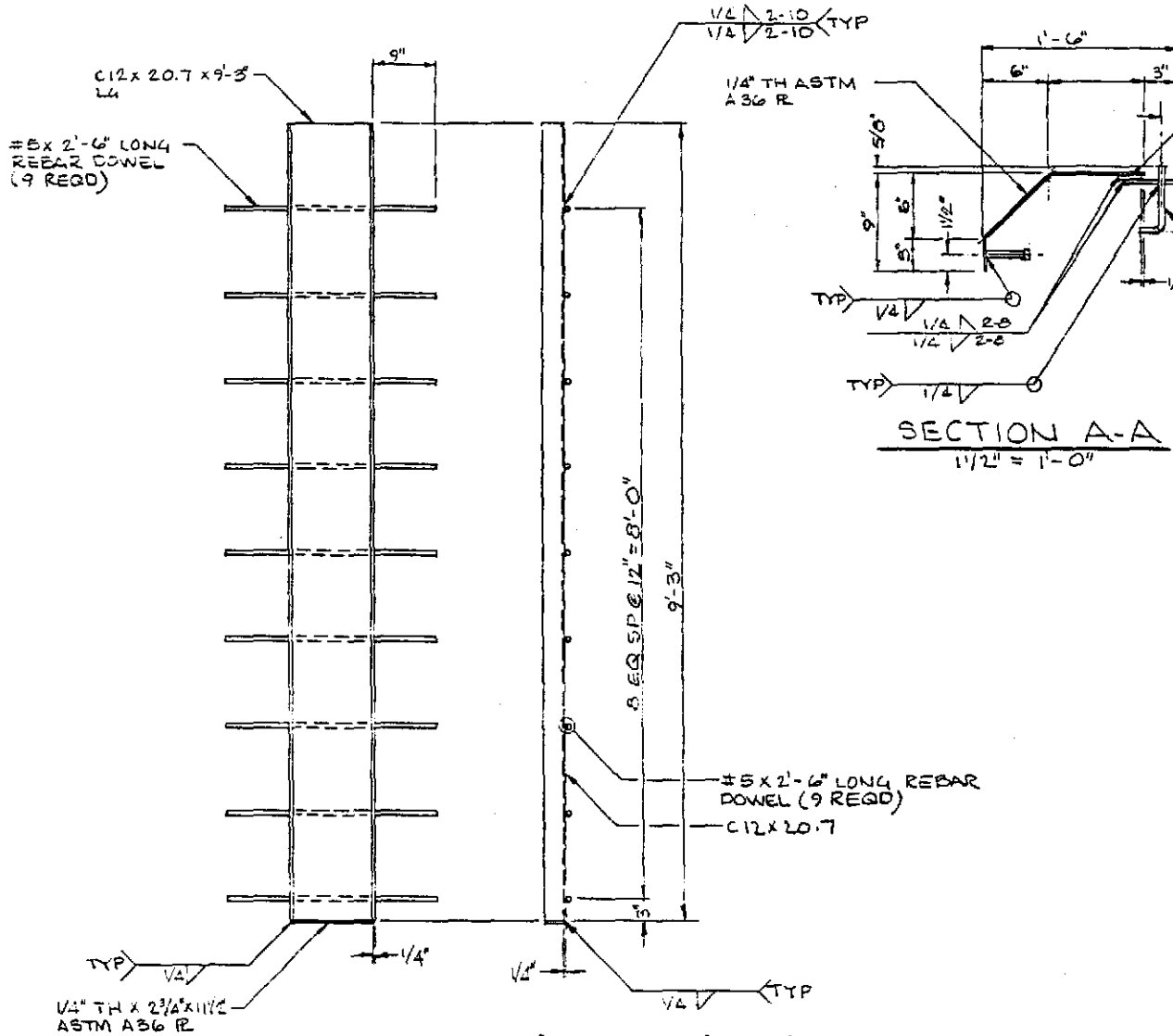
REGISTERED PROFESSIONAL ENGINEER 3488 STATE OF IDAHO

SCALE NOTED
DRAWING NO. D86-13424
SHEET NO. 27



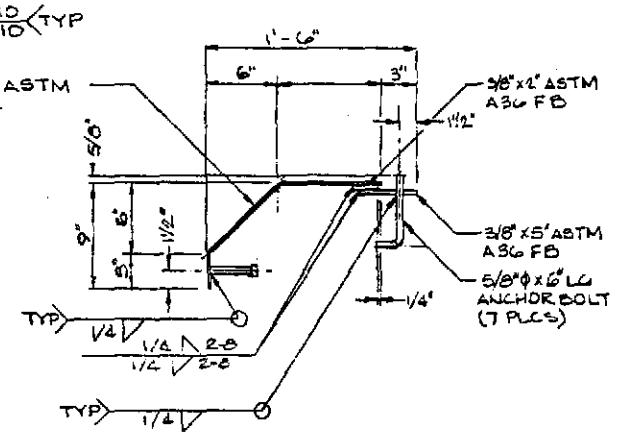
BREASTWALL REINFORCING PLATE (1 REQD)

1"=1'-0" FINISH: HOT DIP GALV - DO NOT QUENCH



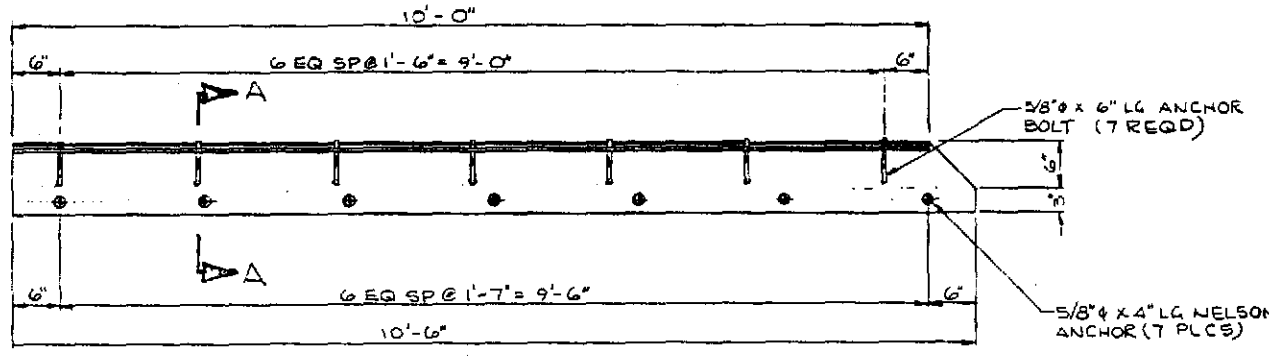
FISHSCREEN SLIDE RAIL (4 REQD)

1"=1'-0" FINISH: HOT DIP GALV-DO NOT QUENCH



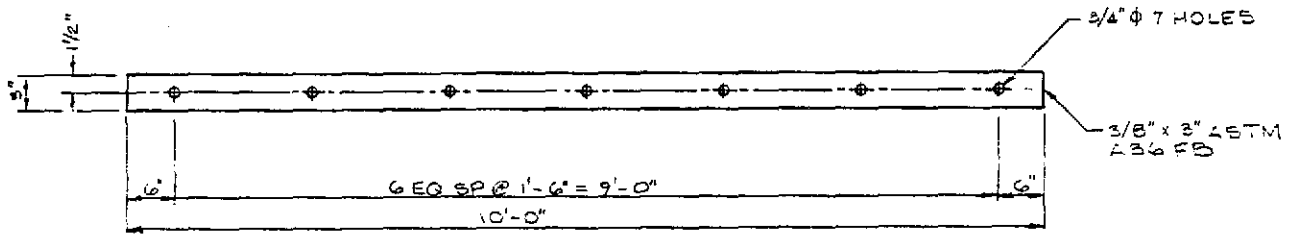
SECTION A-A

1½" = 1'-0"



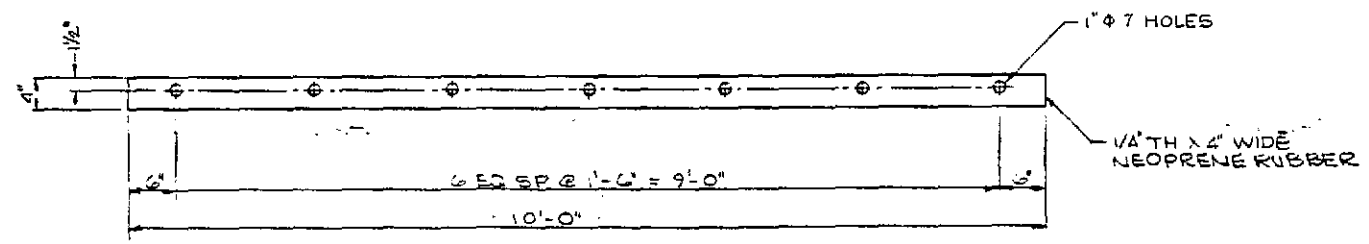
OVERFLOW WEIR REINFORCING/SEAL PLATE (1 REQD)

1"=1'-0" FINISH: HOT DIP GALV - DO NOT QUENCH



SEAL RETAINER (1 REQD)

1"=1'-0" FINISH: HOT DIP GALV - DO NOT QUENCH



SEAL (1 REQD)

REVISIONS

DATE 10-6-96
DRAWN SPB
CHECKED
APPROVED
ENGINEER EXPIRES 10-96

BIRCH CREEK HYDROELECTRIC FACILITY PHASE II

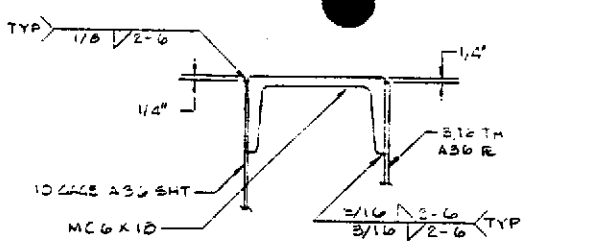
BYPASS HEADWORKS FABRICATED DETAILS

REGISTERED PROFESSIONAL ENGINEER 8458 STATE OF IDAHO U.S.A.

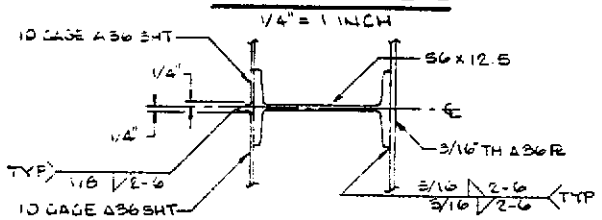
SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

SCALE NOTED
DRAWING NO. D86-13424
SHEET NO. 28

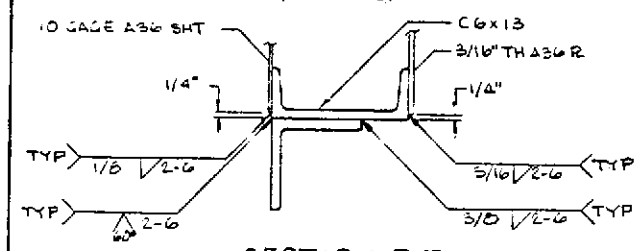
RECORD DRAWING



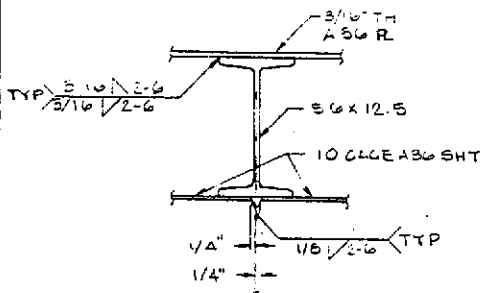
SECTION C-C
1/4" = 1 INCH



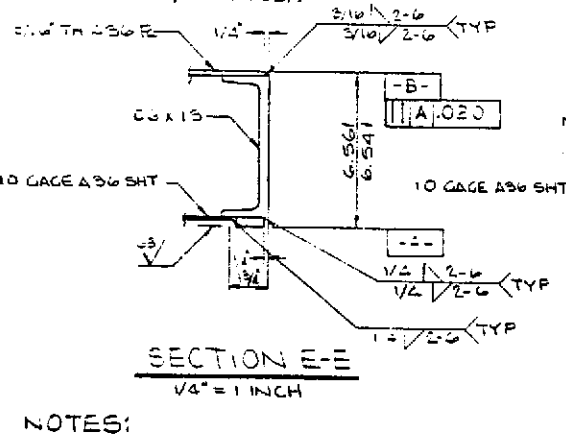
EECTION D-D
1/4" = 1 INCH



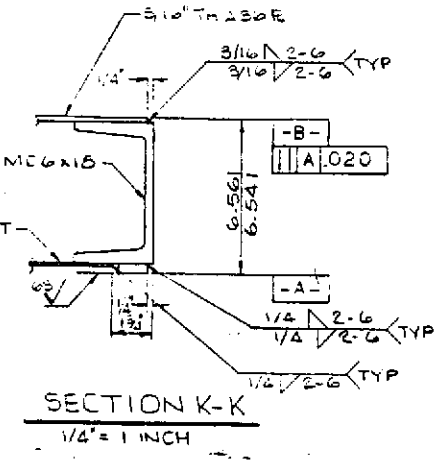
SECTION F-F
1/4" = 1 INCH



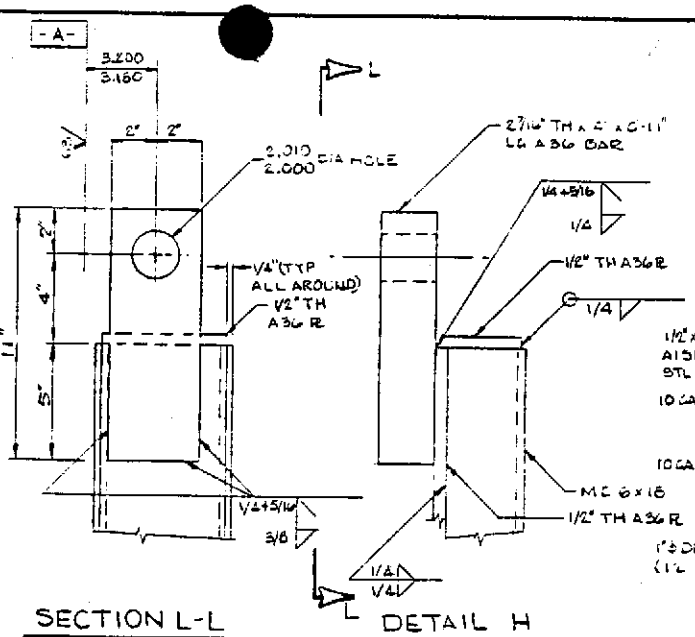
SECTION J-J
1/4" = 1 INCH



SECTION E-E
1/4" = 1 INCH

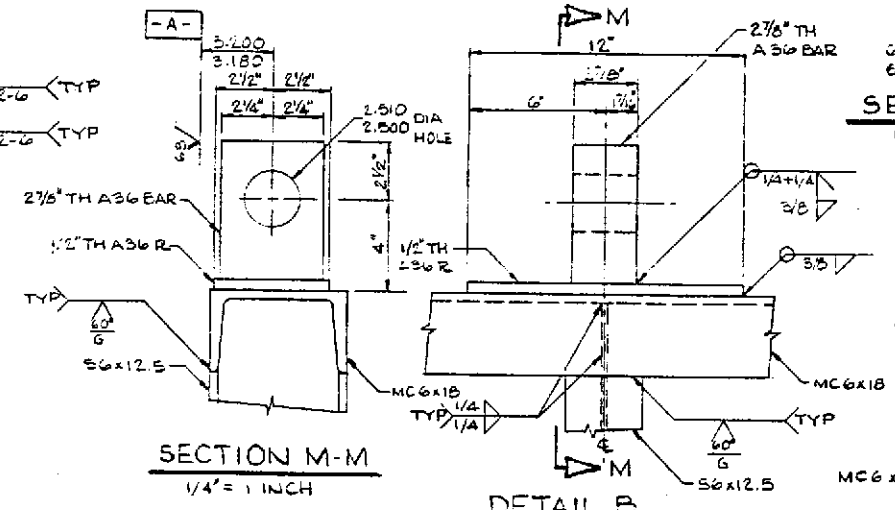


SECTION K-K
1/4" = 1 INCH



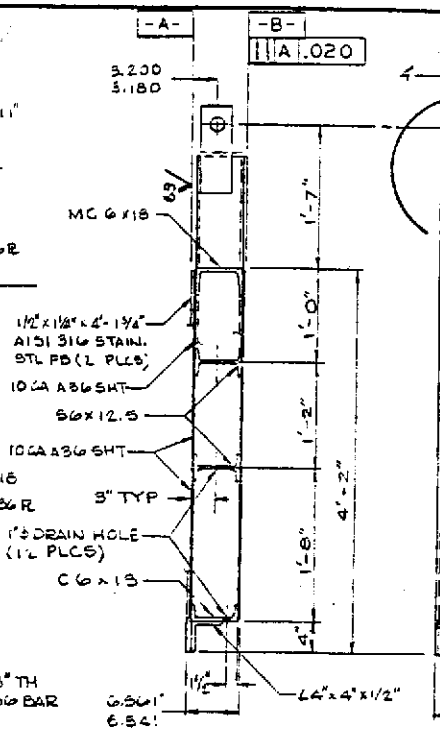
SECTION L-L
1/4" = 1 INCH

DETAIL H
1/4" = 1 INCH

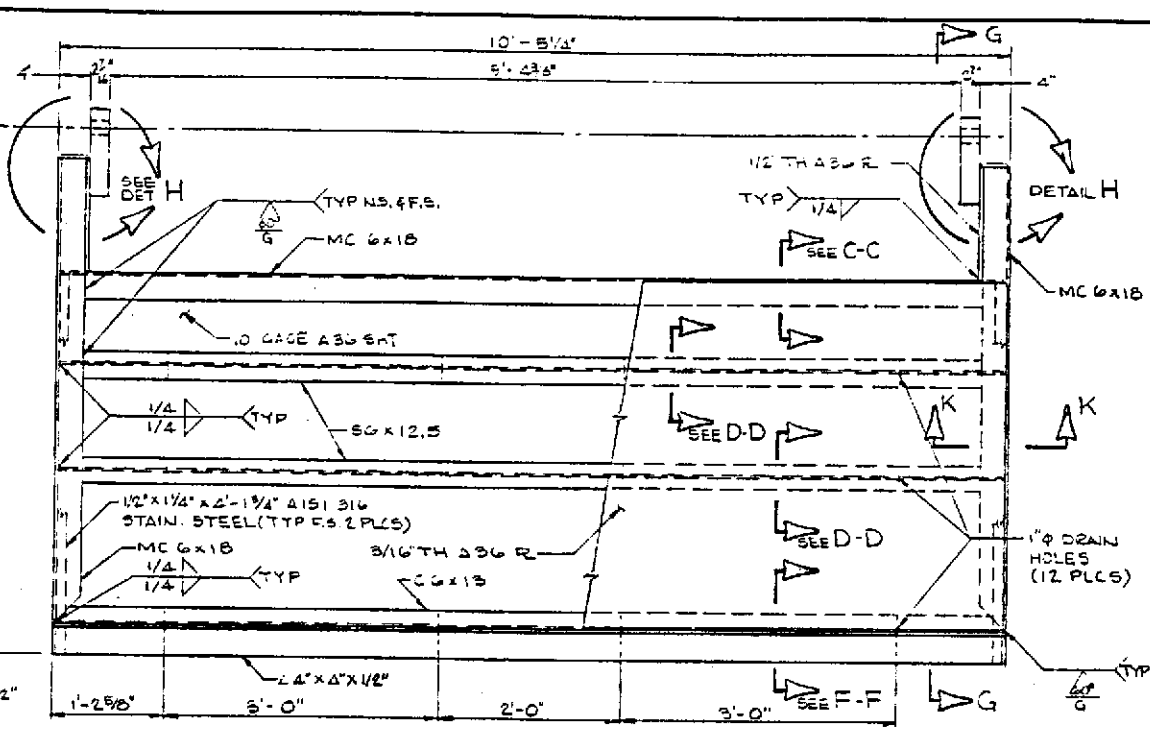


SECTION M-M
1/4" = 1 INCH

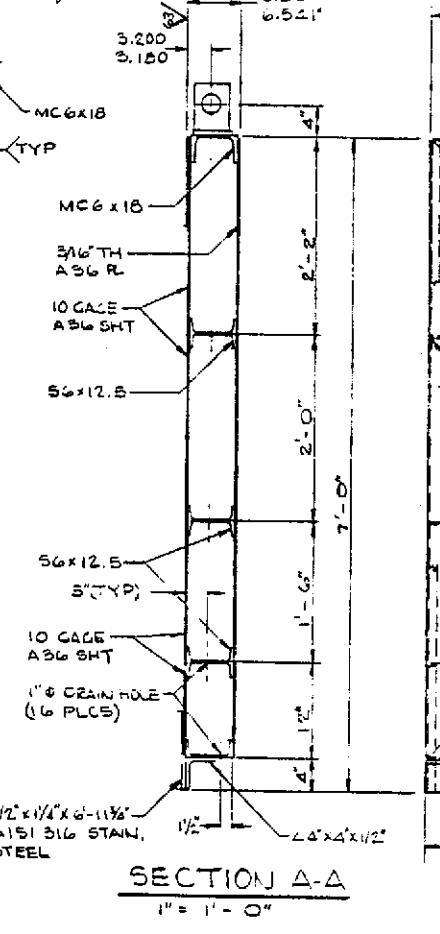
DETAIL B
1/4" = 1 INCH



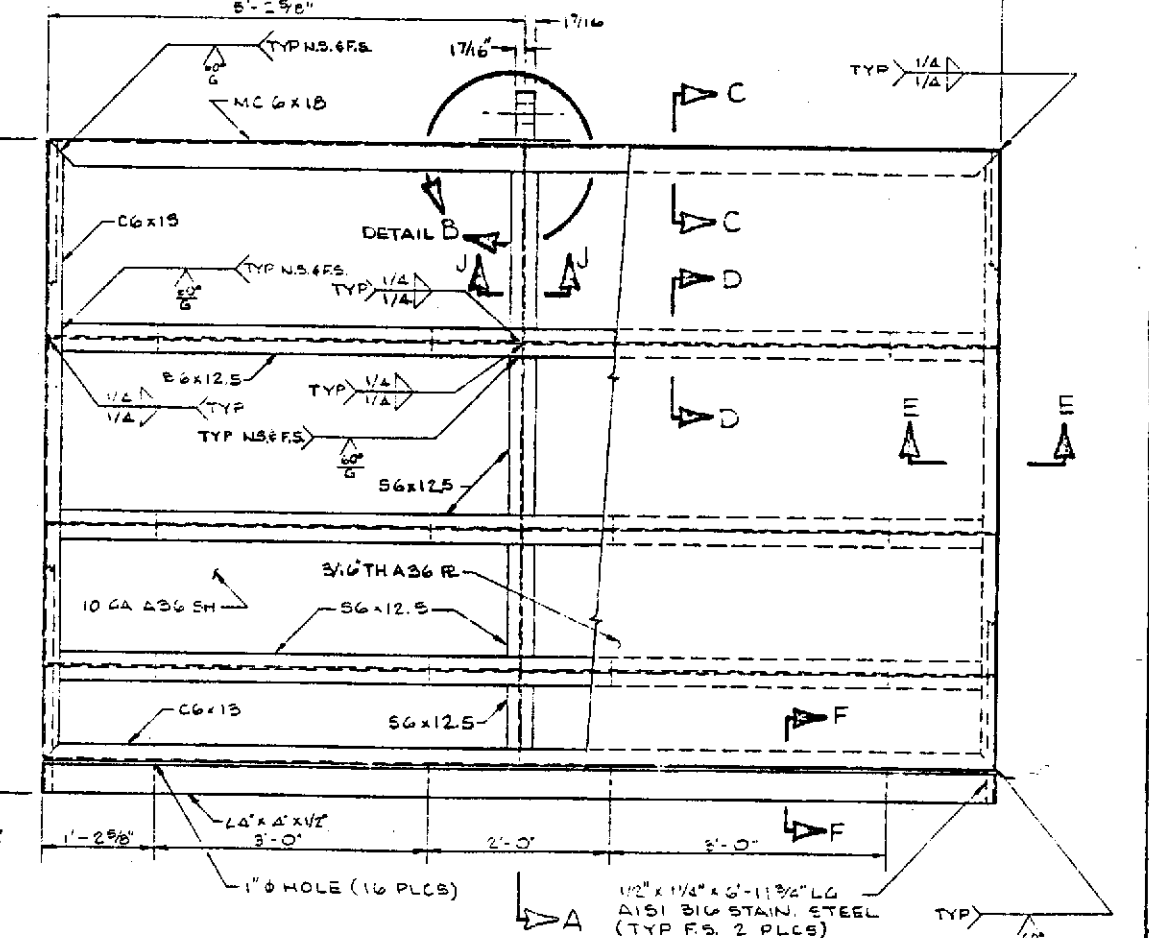
SECTION G-G
1"=1'-0"



BYPASS CANAL GATE (1 REQD)
1"=1'-0" FINISH PER NOTE 1



SECTION A-A
1" = 1'-0"



FEEDER CANAL GATE (1 REQD)
1"=1'-0" FINISH PER NOTE 1

NOTES:

1. FINISH COMPLETED ASST'S PER SYSTEM "B" IN THE SPECIFICATIONS EXCEPT APPLY 2 FINISH COATS. TOTAL DFT SHALL BE 10 MILS MIN. OMIT FINISH FROM STAINLESS STEEL MACHINED SURFACES.
2. REMOVE CAMBER AND SWEEP FROM "AS ROLLED" STEEL SHAPES SUCH THAT 1/16" MAX. CAN BE MEASURED AT ANY LOCATION BETWEEN ENDS

RECORD DRAWING

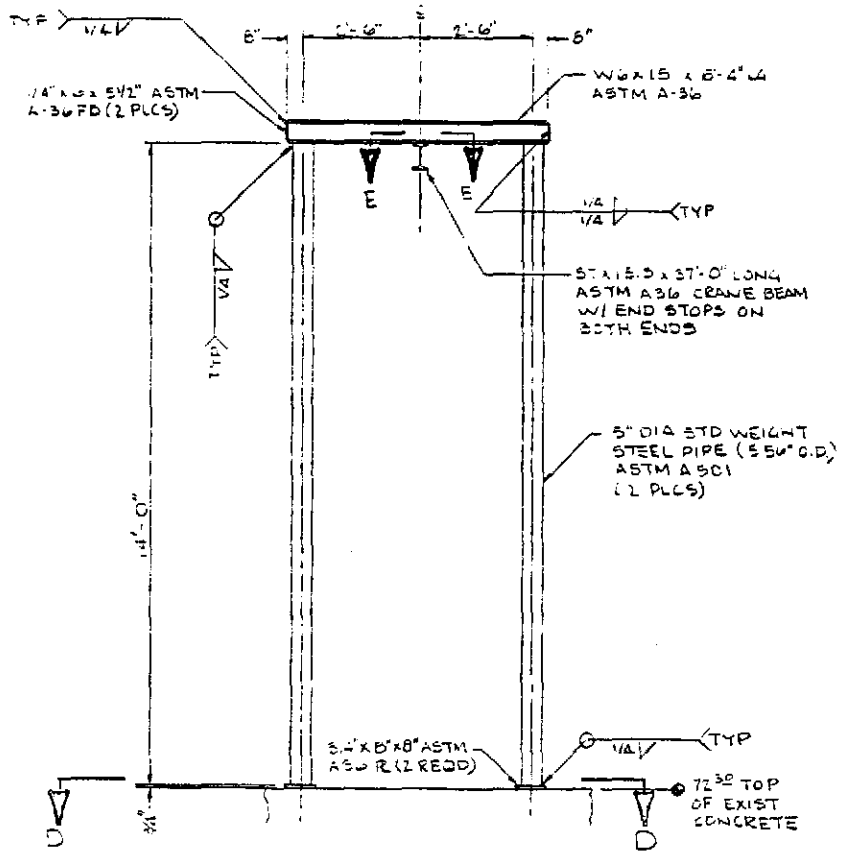
REVISIONS

DATE 10-9-86
DRAWN SAS
CHECKED
APPROVED
ENGINEER

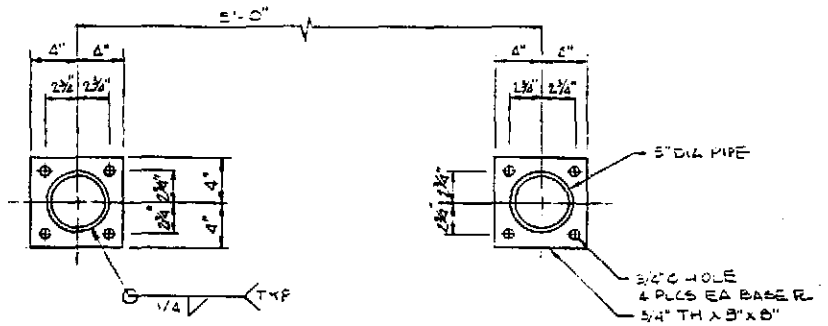
BIRCH CREEK HYDROELECTRIC FACILITY PHASE II
BYPASS HEADWORKS FABRICATED DETAILS

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

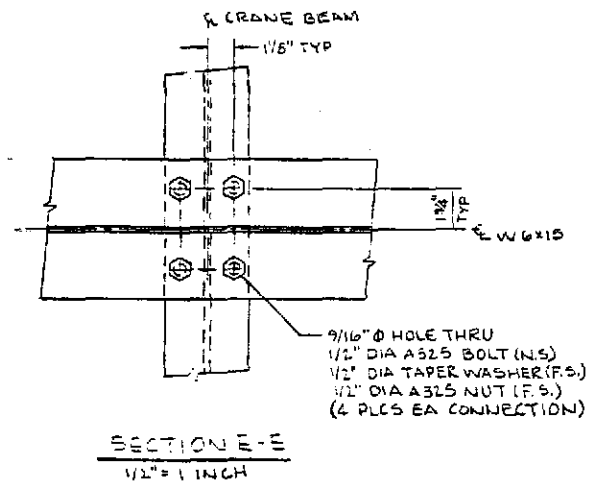
SCALE NOTED
DRAWING NO. DB6-19424
SHEET NO. 29



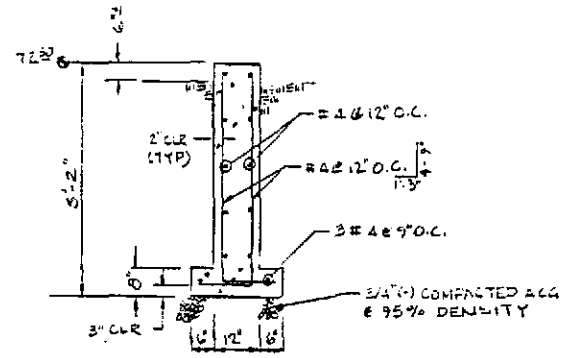
SECTION A-A
1/2" = 1'-0"



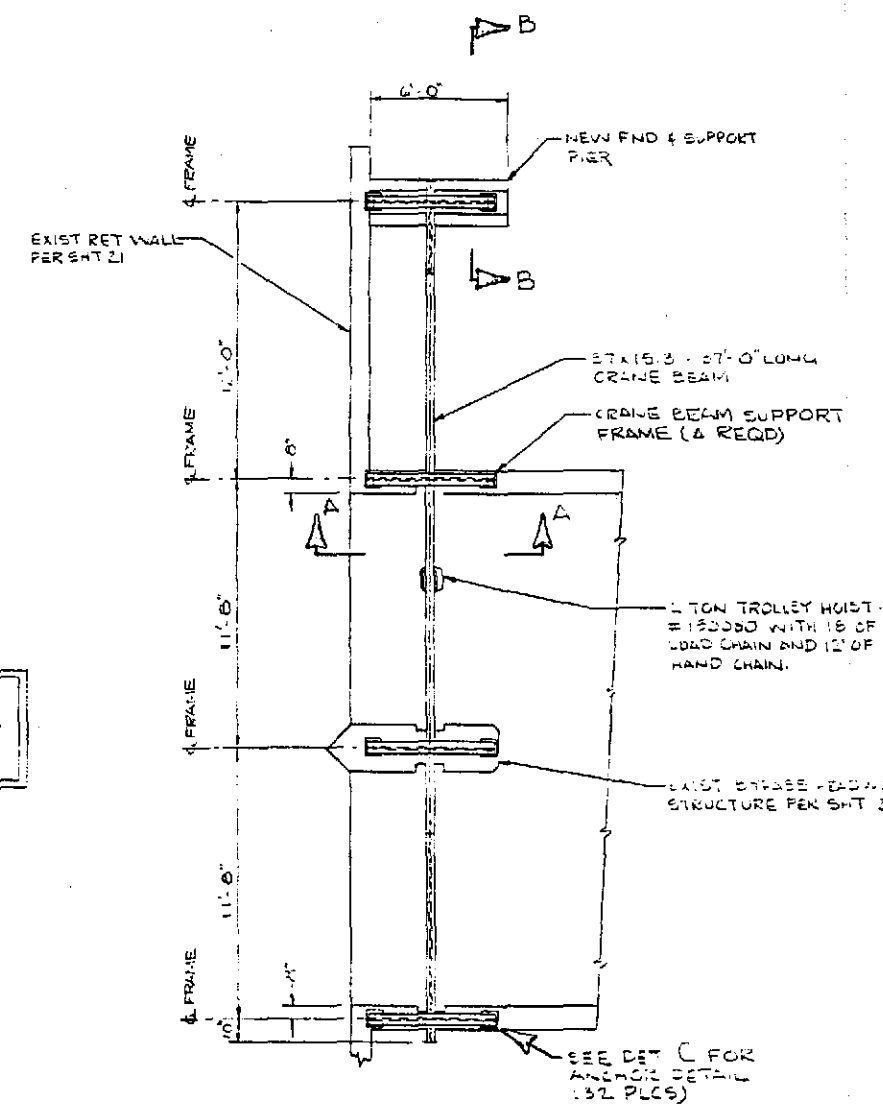
SECTION D-D
1/2" = 1'-0"



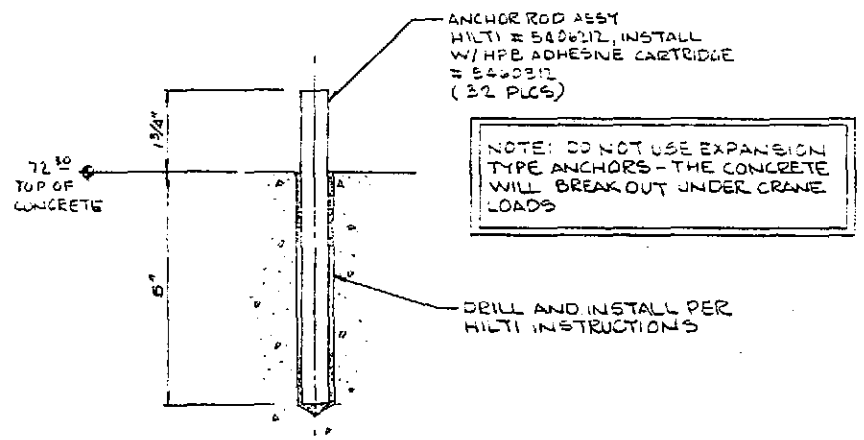
SECTION E-E
1/2" = 1 INCH



SECTION B-B
1/2" = 1'-0"



PLAN
BYPASS HEADWORKS
1/4" = 1'-0"



DETAIL C
(TYP 32 PLCS - LOC TO MATCH HOLES IN FRAME BASE PLATES)

REVISIONS

DATE: JAN 23, 1986
DRAWN:
CHECKED:
APPROVED:
ENGINEER:

BIRCH CREEK HYDROELECTRIC FACILITY PHASE II

FISH SCREEN CRANE SYSTEM

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

SCALE: NOTED
DRAWING NO.: D86-13424
SHEET NO.: 30

RECORD DRAWING

BRUNING

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Boise, ID 83706 - P.O. Box 83720, Boise, ID 83720-0098
Phone: (208) 327-7900 Fax: (208) 327-7866 Web Site: www.idwr.state.id.us

DIRK KEMPTHORNE
Governor
KARL J. DREHER
Director

June 12, 2001

TED S SORENSON
5203 S 11 E
IDAHO FALLS ID 83404

RE: Permit Nos. 32-07128 and 32-07136

Dear Mr. Sorenson:

I sent you a letter on April 24, 2001, requesting documentation that you have complied with the conditions of approval described in the Recommended Decision and Order approving applications for amendment dated September 10, 1998. As of this date, I have not received a response to my letter. Enclosed, for your convenience, is a copy of my April 24th letter.

Please submit any documentation you may have in regard to the compliance with the conditions within the next 30 (thirty) days so we can complete our review of these permits. The documentation could be in the form of pictures or a statement from the watermaster that you have complied with the conditions. If we don't receive a response from you, within the 30-day period, we will assume you are no longer interested in pursuing the permits and will recommend they be voided.

If you have any questions in regard to this matter, please do not hesitate to contact me at (208)327-7944.

Sincerely,

Kay Walker

KAY WALKER
Sr. Water Resource Agent

Enclosure

MICROFILMED
NOV 13 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Boise, ID 83706 - P.O. Box 83720, Boise, ID 83720-0098
Phone: (208) 327-7900 Fax: (208) 327-7866 Web Site: www.idwr.state.id.us

DIRK KEMPTHORNE
Governor

KARL J. DREHER
Director

April 24, 2001

TED S SORENSON
5203 S 11 E
IDAHO FALLS ID 83404

RE: Permit Nos. 32-07128 and 32-07136

Dear Mr. Sorenson:

We are in the final stages of reviewing the above referenced permits for licensing purposes and find we need more information in regard to the compliance with the conditions of approval. Pursuant to our telephone conversation last week, enclosed you will find copies of the permits and the Recommended Decision and Order issued pursuant to the Amendment approved September 10, 1998.

We cannot tell, from our files, if you have complied with the conditions applied to your permits in the Recommended Decision and Order approving the application for amendment. You can see these conditions on pages 18 and 19 of the Order, which I have flagged, for your convenience. Please submit any documentation that you may have to show that you have complied with these conditions at your earliest convenience. We will withhold any further processing towards licensing these permits until we have received your documentation.

If you have any questions in regard to this matter, please do not hesitate to contact me at (208)327-7944.

Sincerely,

Kay Walker

KAY WALKER
Sr. Water Resource Agent

Enclosures

MICRO
NOV

tape V86

LICENSE REVIEW CHECKLIST

Permit No 32-07128 Date: 4-12-2001 Reviewer: Kay Walker

Change/OK

Name/Address change address per recent correspondence

Source
Point of Diversion: OK change

Does change clarify original intended source? If no, void permit.
Change (P39/P49) Add (P45/P44) Feds (P40)

W32 (multiple in 1/4/1/4)
W36 (overlap)
W59 (subdivision description)

Place of Use change

Change (P41/P49) Add (P41/P44) Feds (P43)

W60 (subdivision description)
W27 (ppu acre limit)

Overlaps: Right(s): 32-7136 at p/d & p/u
File reviewed____ Profile reports printed_____

P/D & P/U amend (P37) Feds (P48)

Rate of Diversion:

Permitted rate 45 cfs
Fee Limit N/A cfs
Measured 70. cfs
Theoretical _____ cfs

Recommended Total Diversion Rate 45.

Season of Use per new Standards

Water Uses OK Change (P46)

Irrigation ____ cfs ____ af
Stockwater ____ cfs ____ af
Domestic ____ cfs ____ af
Power 45 cfs ~~1000~~ af 32600.
____ cfs ____ af
Total ____ cfs ____ af

Irrigation - overlap(R58-R61, **R62-R65, R66-R69)**
supp. Gw (WB7/065/104)
overlap spec combined rts (W35)
<1 acre (W31)
Domestic (W01/wb5/070/071/075)
Power (W42 or W43/025/027/R22 or R23)
Fish (042)
Fire (077)
Water Quality (081/R07)
Payette ~~(W22/047/27A)~~
Stockwater for US (R37)

Volume Determination
45 cfs x 1.9835 x 365 days = 32578 af (vs) 32600. acres x _____ (FHR) = _____ af

Remarks: W36 (32-07136)

Additional Conditions yes Watermaster Control 32D
yes GW Measurement/Measuring Device
____ Other
~~Trust~~ R55 – remove 051)
~~Non-trust~~ (048/049)

GW Dist? _____
Water Msmt. Dist? _____
Crit. GWMA? _____
GWMA? _____
Government Lots? yes at P/D per aerial view

Advance Priority? ____ ~~yes~~ / ~~no~~ If yes, explain why below.

SRBA Claim? NO –

Adjust memo ____

Amend Letters _____ **P87, S06** **Second Amendment Notice** _____ **S06**

$$75 \overline{)32000\ \text{AFA}} = 426.7 \text{ cfs} \times 45 = 19200.$$

$$\frac{\times 30 = 12800}{75 \checkmark} \qquad \frac{12800}{32000} \checkmark$$

Post-it® Fax Note 7671	Date 4/18 # of pages ▶ 9
To Kelly Walker	From Janet
Co./Dept.	Co. PUC
Phone #	Phone #
Fax #	Fax #

Approved per Commission Order No. 19451 (Case No. U-1009-154) with Amended Appendix C.

Myrna J. Walters
Commission Secretary

POWER PURCHASE AGREEMENT

BETWEEN

BIRCH CREEK POWER COMPANY, INC.

AND

UTAH POWER & LIGHT COMPANY

THIS AGREEMENT is entered into this 21 day of August, 1984, by and between Birch Creek Power Company, Inc. hereinafter referred to as "Seller," organized and existing under the laws of the state of Idaho and UTAH POWER & LIGHT Company hereinafter referred to as "Buyer", a corporation organized and existing under the laws of the State of Utah. Seller and Buyer are sometimes referred to hereinafter collectively as "Parties" and individually as "Party".

WITNESSETH:

WHEREAS, Seller agrees to construct, own, operate and maintain a hydro-electric power plant with a capacity of 2,800 kilowatts, hereinafter referred to as Facility*; and

WHEREAS, Seller wishes to sell to Buyer and Buyer wishes to purchase all electric energy from the Facility.

*Initial capitalization of words and phrases other than proper names indicates that these terms are defined in Appendix A hereof.

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APR 13 2001

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter set forth, the parties agree as follows:

ARTICLE I

TERM OF AGREEMENT

Subject to the terms and conditions hereof, this Agreement shall be binding upon execution and shall remain in effect for a term of thirty-five (35) years from the date energy is first delivered by Seller to Buyer. It is anticipated that testing of the Facility and in-service generation will commence in late 1985 or early 1986.

ARTICLE II

SALE OF POWER

A. Seller agrees to sell and deliver and Buyer agrees to purchase and accept all energy generated from the subject Facility in accordance with Appendix A.

B. Seller's proposed Facility shall be located at T8N, R31E, Section 14 in Clark County, Idaho, and shall provide energy as set forth herein.

ARTICLE III

PURCHASE PRICE AND METHOD OF PAYMENT

A. Buyer shall pay Seller, for energy delivered at the point specified herein, the sum of:

1. A fixed rate of 40.49 mills per kilowatt-hour, reflecting a 1985 scheduled in-service date and a thirty-five (35) year term as

MICROFILMED NOV 13 2001

shown in Appendix B. This rate shall not change due to a delay in completion of construction nor shall it be subject to escalation.

2. A variable rate of 14.0 mills per kilowatt-hour, updated annually and approved by the Idaho Public Utilities Commission, as specified in Appendix B, to reflect the current average price of coal to Buyer with the base at 1984 being 14.0 mills per kilowatt-hour.

B. The kilowatt-hours for which Buyer shall be obligated to purchase shall be the kilowatt-hours measured on Buyer's meters located on the low voltage side of Buyer's transformers.

C. Buyer's obligation to pay Seller for energy furnished to Buyer shall commence on the date Seller first delivers energy to Buyer from the Facility.

ARTICLE IV

APPENDICES

This Agreement includes Appendices A, B, C, D, E, and F all of which are attached hereto and incorporated herein by reference.

ARTICLE V

NOTICES

All written notices shall be addressed as follows:

To Buyer: Corporate Secretary
Utah Power & Light Company
P.O. Box 899
Salt Lake City, UT 84110

with copy to Customer Service Manager listed below.

MICROFILMED
NOV 13 2001

Inquiries concerning meter readings, billings, etc., should be addressed to:

Customer Service Manager
Utah Power & Light Company
P.O. Box 130
25 East Main Street
Rexburg, ID 83440

To Seller:

Birch Power Co.
Attention: Mr. Ted S. Sorenson, President
550 Linden Drive
Idaho Falls, ID 83401

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the first date hereinabove set forth.

ATTEST:

SELLER:
BIRCH POWER COMPANY

By:

ATTEST:

BUYER:
UTAH POWER & LIGHT COMPANY

By:
Vice President

°(C14:10)
8-03-84

MICROFILMED
SEP 13 1984

APPROVED PER COMMISSION ORDER NO. 24253, CASE NO. UPL-E-89-11.

Myrna J. Walters
MYRNA J. WALTERS
COMMISSION SECRETARY

AMENDMENT TO

POWER PURCHASE AGREEMENT

BETWEEN

BIRCH CREEK POWER COMPANY, INC.

AND

UTAH POWER & LIGHT COMPANY

This Amendment to Power Purchase Agreement is entered into this 20 day of January, 1992, by and between Birch Creek Power Company, Inc. ("Seller") and Utah Power & Light Company ("Buyer") with respect to the Power Purchase Agreement between Seller and Buyer dated August 21, 1984 ("Power Purchase Agreement").

A. Pursuant to the Power Purchase Agreement, Seller agreed to construct, own, operate and maintain a hydro-electric power plant and sell the electrical energy from the Facility to Buyer, and Buyer agreed to purchase the electric energy from the Facility.

B. A dispute has arisen over the calculation of the variable energy rate to be paid by Buyer to Seller for energy delivered pursuant to the Power Purchase Agreement.

C. The Parties wish to resolve their dispute over the variable energy rate by amending the Power Purchase Agreement as specified herein.

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter set forth, the Parties agree as follows:

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NOV 13 2001

1. Definitions. The terms used in this Amendment to Power Purchase Agreement shall have the same meaning as specified in the Power Purchase Agreement, including all Appendices.

2. Appendix B. The Variable Energy Rate portion of Appendix B to the Power Purchase Agreement is hereby amended in its entirety to read as set forth in the Restated Appendix B which is attached hereto and incorporated herein by reference.

IN WITNESS WHEREOF, the Parties have executed this Amendment to Power Purchase Agreement as of the date hereinabove set forth.

SELLER:
BIRCH CREEK POWER COMPANY, INC.

By _____

BUYER:
UTAH POWER & LIGHT COMPANY

By _____

RECEIVED
FEB 13 2002

RESTATED APPENDIX B

SCHEDULE OF ENERGY PURCHASED RATES

Fixed Energy Rates

Scheduled Commencement of Service	Term of Agreement (Years)							
	4	6	10	15	20	25	30	35
1984-$/kW-Yr	106	115	133	161	188	215	241	266
-Mills/kWh[1]	16	18	20	25	29	33	37	40.49

The fixed energy rate figure shall not be subject to escalation.

Variable Energy Rate

(Mills/kWh)

1984 14.00

1. Through June 30, 1992, the variable energy rate shall remain 14 mills per kWh.

2. Effective July 1, 1992 and continuing through June 30, 2003, the variable energy rate shall be 14 mills per kWh, which represents Buyer's estimated levelized variable fuel and operation and maintenance (O&M) cost during that time period.

3. Beginning July 1, 2003 and continuing throughout the Term of the Power Purchase Agreement, including any extensions, the variable energy rate shall be calculated in accordance with the following methodology:

(a) The variable energy rate shall be the sum of Buyer's fuel cost and variable O&M cost.

(b) Buyer's fuel cost shall be the average cost of fuel consumed in Buyer's Utah Division coal-fired generating stations, specifically the Carbon, Hale, Naughton, Huntington and Hunter generating plants. If any of the specified plants does not operate as a coal-fired power plant in any calendar year, such plant shall be excluded from the calculation of the average cost of fuel. The average cost of fuel shall be calculated using data reported in Buyer's FERC Form 1. For 1990, Buyer's fuel costs are reported at pages 402-403, lines

[1] Based on a 75 percent capacity factor.

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APR 18 2001

12 and 21 of the FERC Form 1. In the event that the FERC Form 1 ceases to include the cost of fuel or net generation data, comparable data based upon Buyer's normal accounting practices shall be used.

(c) Buyer's variable O&M cost shall be calculated using the methodology adopted by the Idaho Public Utilities Commission in Order No. 23738 for determining the variable avoided O&M cost of the Surrogate Avoidable Resource, excluding the State of Montana generation tax and the line loss adjustment. For example, Buyer's variable O&M cost for 1990 would be $1.089 per MWh (based on Colstrip 1989 costs) and for 1991 would be $1.401 per MWh (based on Colstrip 1990 costs).

(d) The variable energy rate shall be updated annually effective July 1 of each year based upon Buyer's fuel cost and variable O&M cost for the preceding calendar year. The adjustment to the variable energy rate may be up or down. Buyer shall notify Seller and the Idaho Public Utilities Commission of the updated variable energy rate on or before July 1 of each year.

MICRO - LAC
NOV 13 2001

PACIFIC POWER UTAH POWER

Pacific Power
920 S.W. Sixth Avenue
Portland, Oregon 97204
(503) 464-5000
Fax: (503) 464-5209

PACIFICORP
ELECTRIC OPERATIONS

January 29, 1992

Mr. Peter J. Richardson
Davis Wright Tremaine
702 West Idaho St., Ste. 700
Boise, ID 83702

Dear Mr. Richardson:

You have asked for a clarification of the method for calculating the average cost of fuel consumed in Utah Power's coal-fired generating stations, under paragraph 3(b) of the Restated Appendix B to the Power Purchase Agreements.

The average cost of fuel is calculated by dividing the total cost of fuel for the appropriate generating plants by the net power generation of such plants, all as reported in PacifiCorp's FERC Form 1. Net power generation is identified in the FERC Form 1 as "Net Generation, Exclusive of Plant Use--kWh."

Very truly yours,

/s/ GMM

Gail M. Miller
Resource Acquisitions

sf

bc: John Erickson-2100 OUC, Jim Fell-2700 SIC, Maurene Bishop

MICROFILMED
MAY 13 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098
Phone: (208) 327-7900 FAX: (208) 327-7866

January 23, 2001

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

Ted S. Sorensen
Sorensen Engineering
5203 South 11th East
Idaho Falls, ID 83404

RE: Licensing of Permits 32-07128 and 32-07136

Dear Mr. Sorensen:

This morning I received your request for licensing of water appropriation permits 32-07128 and 32-07136. Now that the deadline for seeking district court review of the order approving your amendment has passed without word of an appeal, we will begin reviewing the files to determine if water right licenses can be issued. Due to the volume of documentation associated with these permits, it may take several days, possibly up to a few weeks, to thoroughly review the files.

If you have any questions, please contact me at 208-327-7946.

Sincerely,

Shelley W. Keen

Shelley Walter Keen
Water Rights Supervisor

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NOV 13 2001

S:\SKeen\NAMELTRS\sorensen3207128.doc

RECEIVED
JAN 22 2001
Department of Water Resources

Sorenson Engineering
5203 South 11th East
Idaho Falls, Idaho 83404

Phone: (208) 522-8069
Fax: (208) 522-8223
e-mail: sorenson@ida.net

January 18, 2001

Glen Saxton, P.E. Chief
Water Allocation Bureau
State of Idaho Department of Water Resources
P.O. Box 83720
Boise, ID 83720-0098

RE: Application for Permit 32-07128 and 32-07136

Dear Mr. Saxton:

On December 15, 2000 you issued the final order for the amendment for these permits. The Proof of Beneficial Use was filed in 1989. The final issuance of the license has never occurred. It is my opinion that it was held pending resolution of this amendment. In that the amendment has now been resolved, I am wondering if the final issuance of the license for these two permits can now occur. I would appreciate it if you could please advise.

Very Truly Yours,

Ted S. Sorenson

TSS/ptj

C:\My Documents\Word Perfect\Ted's Letters\SAxton3.ltr.wpd

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JAN 2 2 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720 - (208) 327-7900

CECIL D. ANDRUS
GOVERNOR
R. KEITH HIGGINSON
DIRECTOR

December 13, 1989

Cecil Thomas
Box 868
Homedale, ID 83628

RE: Field Examination for Permits Nos. 32-7128 and 32-7136

Dear Mr. Thomas:

I have reviewed the information supplementing your earlier submitted field examination for permits nos. 32-7128 and 32-7136. I find that you have responded to each of the concerns which I originally raised.

Again, I appreciate the thoroughness with which you prepared your field examination.

Sincerely,

Gary Spackman

GARY SPACKMAN, Manager
Water Right Permits Section

GS:js

cc. Eastern Region

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JAN 0 8 2001

MEMORANDUM

TO: File Nos. 32-7128 and 32-7136 in the Name of Ted S. Sorenson: Birch Creek Hydro Power Project
FROM: Gary Spackman Gary
DATE: December 7, 1989

Idaho Code § 42-203B requires that the Department set a term of years for water right licenses. The Department is required to review the P.U.C. policy, the term of the power sales contract, the term of the FERC license, and downstream water users.

The FERC license has been issued for a period of fifty (50) years. This license exceeds the time period allowed by P.U.C. It probably also exceeds the present period that purchasers of power will sign a contract. Last of all, there are no downstream users, other than the users to whom Ted Sorenson delivers water after it discharges from his power plant.

I recommend that the term of the license for 32-7128 and 32-7136 be the term of the FERC license, or fifty (50) years.

MICROFILMED

JAN 0 8 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720 -(208) 327-7900

CECIL D. ANDRUS
GOVERNOR
R. KEITH HIGGINSON
DIRECTOR

December 6, 1989

TED S. SORENSON
DBA SORENSON ENGINEERING
550 LINDEN DR.
IDAHO FALLS, ID 834010000

RE: PERMIT NO. 32-07128

Dear Permit Holder(s):

The above referenced water right is in the process of being licensed. However, before a license can be issued, your permit must be amended to correspond with the findings of the Department's field examiner.

The enclosed application for amendment contains information that will be included on the license when it is issued. Please review carefully and if you concur, sign the amendment and return with the $20.00 filing fee within 30 days.

If you do not concur with these findings or if you have any questions, please contact us within the 30-day period.

Sincerely,

JIM JOHNSON
Water Rights Supervisor

JJ:sc

Enclosure

MICROFILMED
JAN 08 2001

December 6, 1989

TED S. SORENSON
DBA SORENSON ENGINEERING
550 LINDEN DR.
IDAHO FALLS, ID 834010000

RE: PERMIT NO. 32-07128

Dear Permit Holder(s):

The above referenced water right is in the process of being licensed. However, before a license can be issued, your permit must be amended to correspond with the findings of the Department's field examiner.

The enclosed application for amendment contains information that will be included on the license when it is issued. Please review carefully and if you concur, sign the amendment and return with the $20.00 filing fee within 30 days.

If you do not concur with these findings or if you have any questions, please contact us within the 30-day period.

Sincerely,

JIM JOHNSON
Water Rights Supervisor

JJ:sc

Enclosure

MICROFILMED

JAN 08 2001

MEMORANDUM

TO: SHARLA

FROM: ROXANNE MCCARTHY

RE: ADDITIONAL CONDITIONS/REMARKS FOR 32-7128

DATE: 5-DEC-1989

==========

4. <<R39>>

5. <<R04>> 32-D, Birch Creek

6. Eleven percent of the flow of Birch Creek at the diversion to the feeder ditch, or 5 cubic feet per second, whichever is least, shall be allowed to flow past the feeder canal diversion in the natural channel of Birch Creek.

7. The feeder canal shall be maintained in a manner that will reduce the amount of seepage loss by at least 11% of the flow at the point of diversion.

8. The first 1 1\2 miles of ditch must be maintained and operated in a manner that supports a fishery as shown in Applicant's Exhibit No. 6.

9. This project shall be operated in a manner that will not conflict or interfere with future diversion of water for irrigation or other beneficial consumption.

10. <<R23>>

11. The diversion and use of water under this license is subject to review by the Director on the date(s) of expiration of any license issued by the Federal Energy Regulatory Commission. Upon appropriate findings relative to the interest of the public, the Director may cancel all or any part of the use authorized herein and may revise, delete or add conditions under which the right may be exercised.

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JAN 0 8 2001

Cecil A. Thomas
Consulting Hydrologist, Civil Engineer, Land Surveyor
Idaho License No. 645
Box 868
Homedale, Idaho 83628

November 8, 1989

RECEIVED
NOV 14 1989
Department of Water Resources

State of Idaho Department of Water Resources
1301 North Orchard
Boise, Idaho 83720

RE: Permits No. 32-7136 and 32-7128
Adequacy of field examination

Attn, Gary Spackman

Dear Gary,

The following comments seem appropriate in answer to your Memorandum of November 2, 1989.

Ted Sorenson informs me that the reason that there is an apparent gain in the system between the measuring devices at Highway 28 and the discharge from the power plant is because of diurnal variations in the streamflow. This could be verified by reading the gages at both ends of the system several times daily and comparing the several discharges assuming an 8-hour or other time lag. Ted informs me further that the reason there was no water being released below the diversion when I was there was that they were conducting a seepage test on the channel upstream with a professional engineer on that date, which I can verify as I saw them in the field.

I did not mean to infer that the gage was not properly installed on the bridge at Highway 28. I thought there was a change in datum of the staff gage or a velocity of approach on the weir or some other effect which adversely affected the determination of the loss in the delivery system. A discharge measurement in the canal below the measuring device and several gage readings as above would give clues to the difficulty.

Mr. Shenton, likewise may have closed the bypass because of the investigation in which he was participating.

Regarding the volume to be authorized I believe 32000 acre feet is lower than can be utilized on some years under the present permit. For example, the record of discharge at 8-mile road which is 1.3 miles upstream from the present diversion and has been operated by U.S.G.S. shows discharge during high years to be at least 69 cfs at the gaging site. Reducing this 5 cfs for bypass and 4.5 cfs for loss in the channel leaves an average flow of 59.5 cfs or 59.5 X1.9835X365=43,000 acre feet, practically all of which would

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JAN 0 8 2001

be below 75 cfs, the permitted maximum.
I can verify the basis of this estimate from my files if you wish the data. A total of 85 months of data were collected most of them during summer in the period June 1967 to December 1987. The data are published in the annual reports of U.S.G.S.
This is believed to be better substantuated than previous estimates. Ted is now negotiating purchase of some of the diversion rights upstream, which would further increase summer flows within the presently allowed limits.

Sincerely, Cecil A Thomas

Cecil A. Thomas, P.E.

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JAN 08 2001

MEMORANDUM

TO: File Nos. 32-7136 and 32-7128; Birch Creek Power Project, Ted Sorenson
FROM: Gary Spackman Gary
DATE: November 2, 1989

RE: Adequacy of the Field Examination

On August 8, 1989, I mailed a letter to Cecil Thomas requesting additional information about the Birch Creek Hydropower Project.

The major concern expressed in my letter was compliance with two conditions of the Memorandum Decision issued by the Director. I believe both of the conditions are related. The first condition required installation of measuring devices to determine the loss in the delivery system. The second condition required a diversion bypass flow equal to the lesser of: (1) 11% of the flow of Birch Creek; (2) the amount of water saved by the new ditch; or (3) five cubic feet per second. The field examination did not address these conditions.

Cecil Thomas represented to me that a measuring weir is installed near the highway approximately 8,000 feet below the diversion from the creek. Two more measuring weirs are located below the bifurcation to the Reno and the D & D Ditch.

Cecil Thomas represented that the upper measuring weir is not installed properly. It is also installed a mile and one half downstream from the actual diversion, and would not determine losses in the first 8,000 feet.

It appears to me that the condition requiring a measuring device is only for the purpose of determining how much water should bypass the diversion structure. If the upper weir is not installed correctly, the measuring devices cannot be used to determine the amount of water saved. I propose that Ted Sorenson be required to bypass the lesser of 11% of the flow of Birch Creek or 5 cfs.

Cecil Thomas also told me that Don Shenton is not requiring that the water bypass the diversion structure. Mr. Shenton should be instructed that the water must bypass the diversion structure.

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Cecil Thomas represented to me that the water is being diverted year round except when Ted Sorenson has problems with icing.

Cecil Thomas stated in a letter that the point of diversion should be changed to the point of diversion located in the SE1/4SW1/4, Section 34, T9N, R30E, B.M. This is a change from the point of diversion authorized in the permit and the permit must be amended.

Ted Sorenson has indicated that the maximum amount of water diverted through the power plant is 79 cfs. The total combined rate of diversion for the two permits is 75 cfs. Therefore the flow rate should be limited to 75 cfs.

The annual volume authorized to be diverted through the power plant should be 32,000 acre-feet.

With the above information, these permits are ready to prepare for licensing.

cc. Cecil Thomas

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SORENSON ENGINEERING
CONSULTING ENGINEER
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401
208-522-8069
FAX 208-522-8223

RECEIVED
SEP 22 1989
Department of Water Resources

September 18, 1989

Gary Spackman
Idaho Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83705

RE: BIRCH CREEK PERMIT #32-7128 AND 32-7136

Dear Mr. Spackman:

Pursuant to your letter of 8/8/89 to Cecil Thomas, here is a signed proof of beneficial use as requested.

Very truly yours,

Ted S. Sorenson, P.E.
Project Engineer

enclosure

cc: Cecil Thomas, w/enclosures

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JAN 08 2001

Form 219
6/86

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

BENEFICIAL USE FIELD REPORT

RECEIVED
FEB 15 1989
Department of Water Resources

A. GENERAL INFORMATION

Permit No. 32-07128, 32-07136

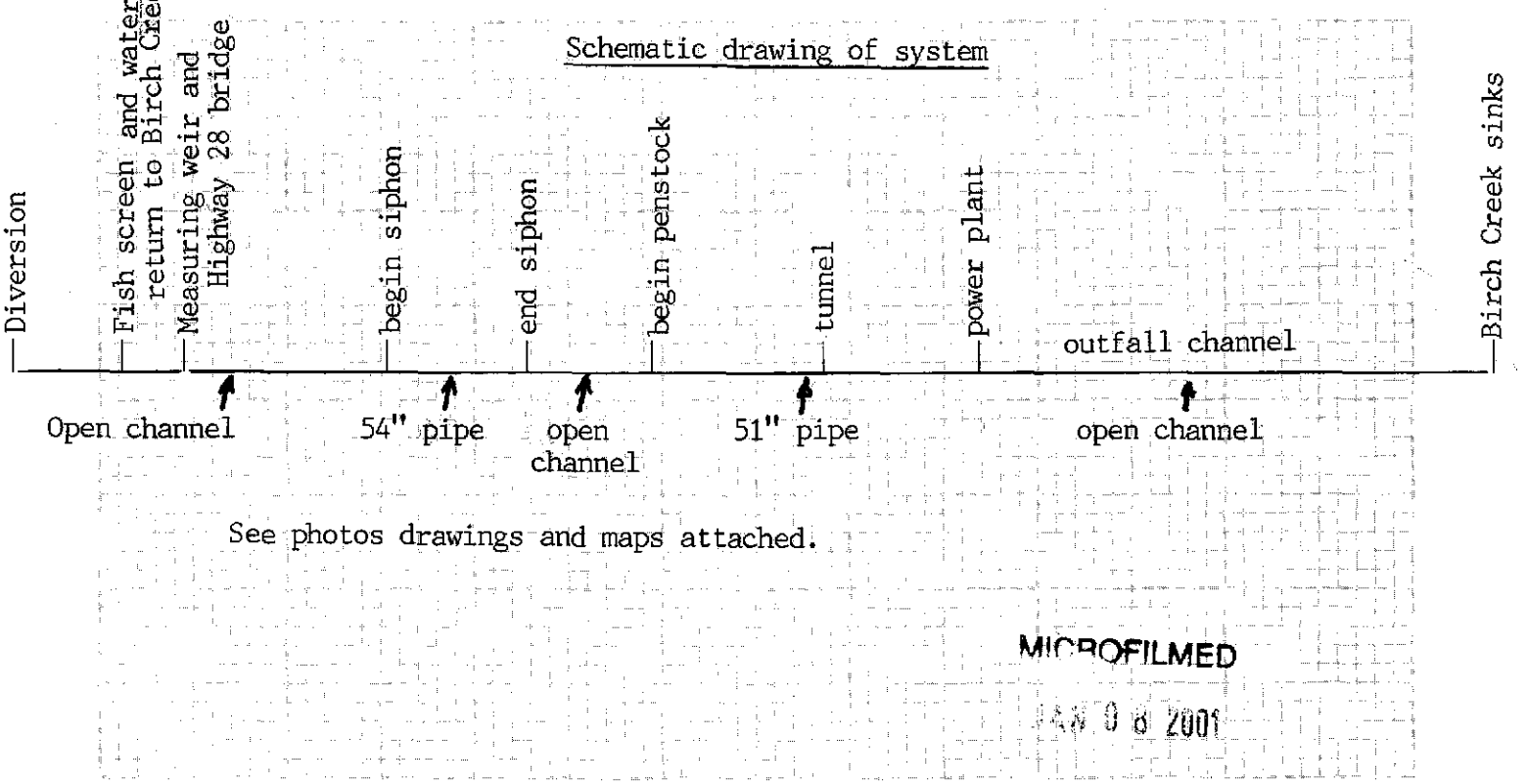
1. Owner: Ted Sorenson — Phone No. (208) 522-8069
   Current Address: 550 Linden Drive, Idaho Falls, Idaho 83401
2. Accompanied by: Cecil A. Thomas — EXAM. DATE: July 19, 1988
   Address: 3775 N Locust Grove, Meridian, Idaho 83642 — Phone No. (208) 888-3087
   Relationship to Permit Holder: Water rights examiner
3. Source: Birch Creek tributary to: Birch Creek sinks

B. OVERLAP REVIEW

1. Other water rights with same place of use: None
   ☐ Copies Attached
2. Other water rights with same point of diversion: 32-04062, 32-04062, 32-00061D, 32-00070A, 32-00043, 32-02045, 32-02057, 32-00065
   ☐ Copies Attached ☐ Copies of Field Exam's Attached

C. SYSTEM DESCRIPTION

1. **Diversion System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe i.d. as applicable. ☐ Alternative diagram attached



See photos drawings and maps attached.

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Approximate
Scale: 1" = 2 miles.

2. ☐ Copy of U.S.G.S. Quadrangle Attached
   Showing location(s) of point(s) of diversion and place(s) of use (required).
   ☐ Aerial Photo Attached
   (required for irrigation of 10 acres or more).
   ☐ Photo of Diversion and System Attached
   (required for all but single household domestic groundwater, and stockwater.

System Description (continued)

3. **Narrative:** Description (As operating at time of measurement. Indicate pressure, number of sprinklers, etc.)

Flow in Birch Creek is diverted into the new canal of Birch Creek Power Company one mile upstream from the abandonned heading of Reno ditch. The diversion is accomplished with a gate and flashboards and a low earthen dike. Discharge and stage varies in a very narrow range because the stream is springfed. See picture 2. A fish screen is installed 1.2 miles below the diversion, and a channel is provided for wasting flows into the Birch Creek channel from the canal below the fish screen to maintain flow in this part of the fishery when the powerplant shuts down.A 10 foot long rectangular weir is installed at the down-stream end of the bridge 1.6 miles below the head of the diversion. (See pictures).

☒ See Remarks on page 4 for continuation

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Generator	Ideal	2700KW	335203	4160 V	900RPM
Turbine	Gilkes 1986	3557 BHP	56318	489 ft. head	Max. discharge 57cfs

**Code to correspond with No. on map and aerial photo*

5. **Point(s) of Diversion:**

Ident. No.	Gov't. Lot	¼	¼	¼	Sec.	Twp.	Rge.	County	Method of Determination/Remarks
			SE	SW	34	9N	31E	Clark	Survey by Dennis Jones Registered
									Land Surveyor, State of Idaho

6. **Place(s) of Use:** Indicate Method of Determination Survey by Dennis Jones

Twp.	Rge.	Sec.	NE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	Totals
8N	31E	14	SW																	

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Do not use this space

Do not use this space

D. FLOW MEASUREMENTS

☐ Additional Data Sheets Attached

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Rectangular weir	10 feet	long	sharp crested	(see picture)		

2. **Measurements:**

Observed gage height 0.88 feet on weir at 5:45 pm on July 19, 1988

Discharge = $KLH^{3/2}$ = 3.4X 10X0.$88^{3/2}$ = 28.1 cfs

Observed gage height 0.90 feet on July 20, 1988, at 9:30 am.

Discharge = 3.4 X 10 X $0.90^{3/2}$ = 29.0 cfs

E. FLOW CALCULATIONS

☐ Additional Computation Sheets Attached

1. Measured Method: Sharp crested weir computation.

2. Alternate Method for Checking Purposes:

F. PUMP EFFICIENCY DATA (Optional)

Discharge Pressure: _____ psi x 2.31 = _____ ft (1); Dynamic pumping level: _____ ft (2)

Total Head: (1) + (2) = _____ (3) ; Flow rate: _____ cfs (4)

Water HP: (3) x (4) ÷ 8.8 = _____ (5)

Meter Input KW: 3.6 x _____ KH x _____ CTR or _____ MULT x _____ PTR x _____ N/ _____ T = _____ (6)

Meter Input HP: (6) x 1.34 = _____ (7)

Panel Input KW: _____ Ave PF x _____ Ave Volts x _____ Ave Ampsx .001732 = _____ (6)

Panel Input HP: (6) x 1.34 = _____ (7) Efficiency: (5)/(7) x 100 = _____ %

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$V_{I.R.}$ = (Acres Irrigated) x (Irrigation Requirement) = _____

$V_{D.R.}$ = [Diversion Rate (cfs)] x (Days in Irrigation Season) x 1.9835 = _____

V = Smaller of $V_{I.R.}$ and $V_{D.R.}$ = _____

2. Volume Calculations for Other Uses:

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JAN 0 3 2001

H. REMARKS AND OVERLAP REVIEW ANALYSIS

The open channel continues 4.1 miles from the diversion where the flow enters a siphon of 54" pipe 1.1 mile long which spans a swale on the route. The discharge then enters an earth channel a mile long, then enters the penstock which is a 51" pipe 1.7 miles long. A tunnel carries the penstock through a mountain near the upper end. Head on the turbine is ~~479 feet.~~

The open channel sections are lined with 20 mil PVC fiber to minimize losses. The flow from the tailrace is divided to the various irrigation and other rights by the trifurcation. See pictures 11 and 12. During non-irrigation periods the flow is carried in the outfall channel from the tailrace to the Birch Creek sinks. See map attached.

I. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use From	Period of Use To	Rate of Diversion Q (cfs)	Annual Volume V (afa)
On the basis of 85 months of daily records of discharge in Birch Creek at 8-mile Canyon Road and 77 months of daily records at Blue Dome Inn (~~few winter records~~) ~~I estimate~~ during years of relatively high flows the diversion will average 52 cfs or a total of 37,600 acre feet per year. The discharge within the regulations will range from the allowable diversion of 75 cfs during some freshet seasons to zero discharge during long sustained extremely cold periods such as 1989, when all flow freezes off.				
		Totals:		

2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☐ None

☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

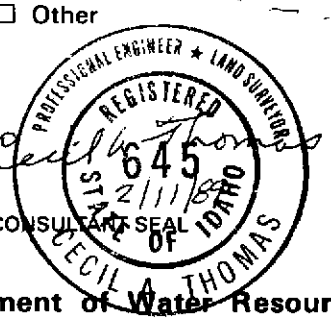
J. AUTHENTICATION

Field Examiner's Name: Cecil A. Thomas

Signature: Cecil A Thomas

Certification Date: Feb. 11, 1989

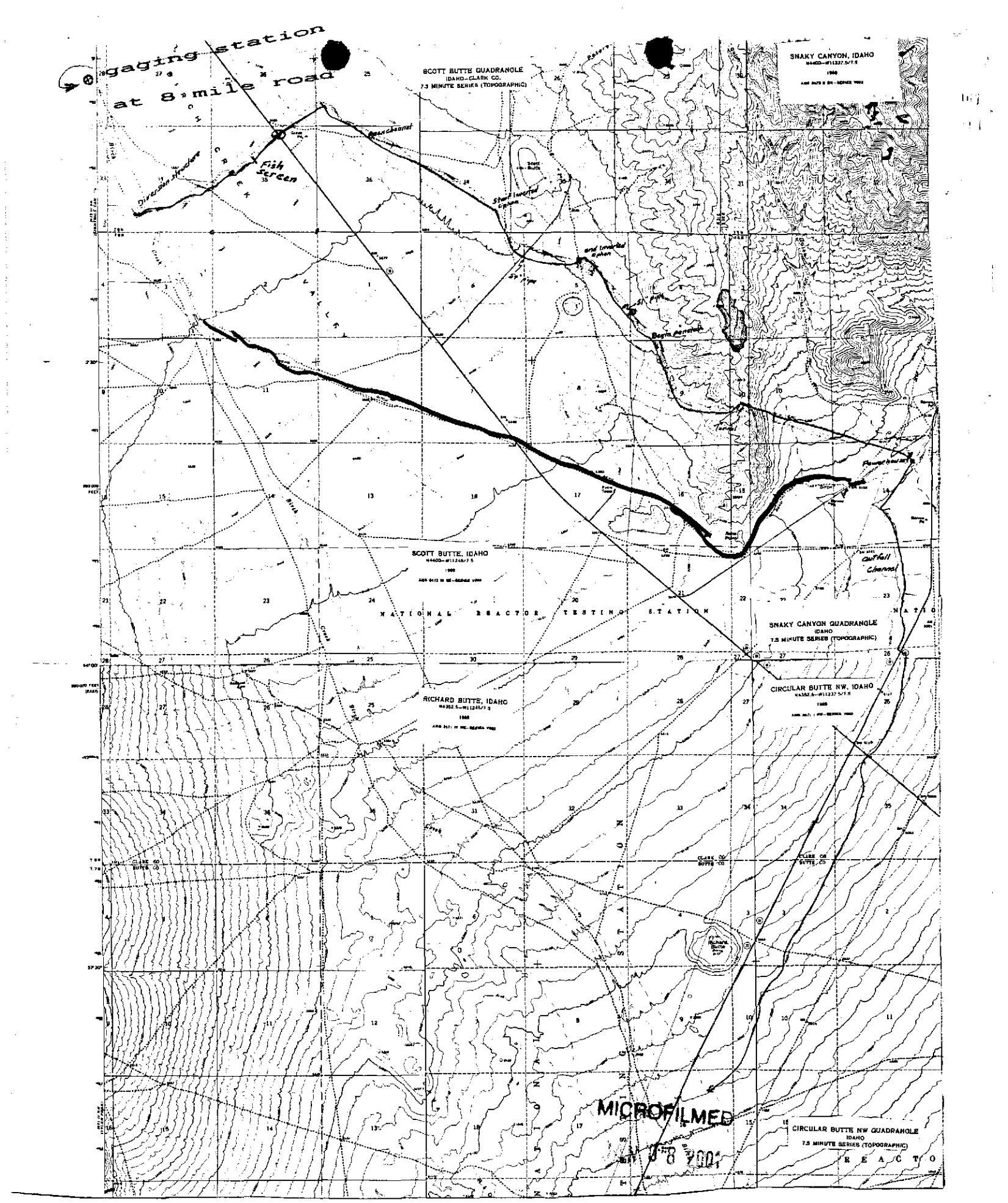
Field Report Preparation Date: Feb. 11, 1989



CONSULTANT SEAL

K. Licensing recommendation shall be prepared by an Idaho Department of Water Resources employee on a computer printout attached hereto.

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JAN 03 2001



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NOV 08 2004

TOPOGRAPHIC MAP SHOWING ROUTE OF BIRCH CREEK DIVERSION AND OUTFALL

Other: 32040C2 Dept of Int
32-07128 Sorenson
32-07136

Form 219
6/86

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

BENEFICIAL USE FIELD REPORT

73-07106

A. GENERAL INFORMATION

Permit No. 32-7128, 32-7136

1. Owner: Ted Sorenson Phone No. (208) 522-8069
   Current Address: 550 Linden Drive, Idaho Falls, Idaho 83401
2. Accompanied by: Cecil A. Thomas, P.E. EXAM. DATE: Feb. 2, 1988
   Address: 3775 N. Locust Grove, Meridian, Id. 83642 Phone No. (208) 888-3087
   Relationship to Permit Holder: Consulting Engineer
3. Source: Birch Creek tributary to Snake Plain Aquifer at Birch Creek sinks

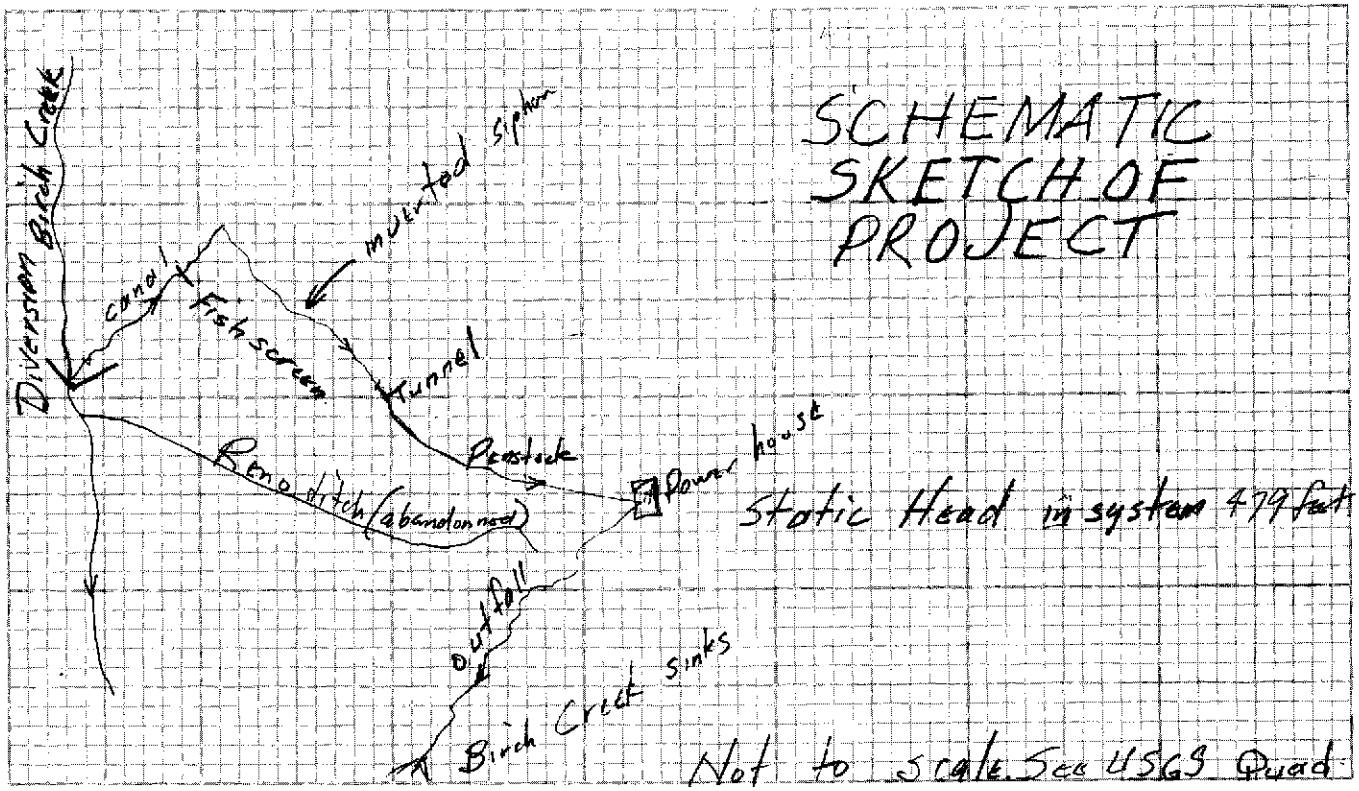
B. OVERLAP REVIEW

1. Other water rights with same place of use: None except for fishery rights at head of canal and some riparian and esthetic right in and along canal. ☐ Copies Attached
2. Other water rights with same point of diversion: From the diversion to the tailrace the diversion system replaces the Reno ditch. Nos.?? ☐ Copies Attached ☐ Copies of Field Exam's Attached

C. SYSTEM DESCRIPTION

32040C2

1. **Diversion System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe i.d. as applicable. ☑ Alternative diagram attached



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Scale: 1" = _____.

2. ☑ Copy of U.S.G.S. Quadrangle Attached Showing location(s) of point(s) of diversion and place(s) of use (required).
   ☐ Aerial Photo Attached (required for irrigation of 10 acres or more).
   ☑ Photos of Diversion and System Attached (required for all but single household domestic groundwater, and stockwater.

JAN 08 2001

System Description (continued)

3. **Narrative:** Description (As operating at time of measurement. Indicate pressure, number of sprinklers, etc.) (See photos)

Flow is diverted from Birch Creek by a diversion structure, into a trapezoidal channel lined with heavy P.V.C. fabric, through a 54" inverted siphon 6,000 feet long, to the penstock 51" in diameter and 15,600 feet long. 600 feet of penstock is in a tunnel. Outfall channel to Birch Creek sinks, 35,000 feet long, carries flow from power plant to sinks during non irrigation season. Photos of significant features of the project are attached.

☐ See Remarks on page 4 for continuation

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Turbine ~~Pump~~ Make	Pump Serial No. or Discharge Size
Name Plate	Gilkes 1984	3557	#56318		75 cfs, 900 RPM
		Static head		479 feet	
Name Plate	Ideal	2700KW	#335203	Generator	(4160 V) 900 RPM
	(Potential at	100% eff = 3,040	Kw at 75 cfs)		

**Code to correspond with No. on map and aerial photo*

5. **Point(s) of Diversion:**

Ident. No.	Gov't. Lot	¼	¼	¼	Sec.	Twp.	Rge.	County	Method of Determination/Remarks
						9N	30E	Clark	U.S.G.S. topo - Scott Butte Quad
									See photos
Diversion Dam and pond									
		SE	SW		34	9N	30E		

6. **Place(s) of Use:** power plant in NE¼ NE¼ Sec. 14, 8N 31E Indicate Method of Determination U.S.G.S. map and Engineer Surveys

Twp.	Rge.	Sec.	NE¼				NW¼				SW¼				SE¼				Totals
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	
							Sec. 14,												

40.54

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JAN 0 8 2001

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D. FLOW MEASUREMENTS

☐ Additional Data Sheets Attached

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date

2. **Measurements:**
Records available for June 1967 to September 1981; March 1984 to September 1985 (no winter records) at site 1 mile above diversion. Mr. Sorenson has installed a [illegible] at Highway 28 crossing of diversion canal. Outfall from generator measured by a rotor measuring device. Measuring device at downstream end of Feeder ditch

E. FLOW CALCULATIONS

☐ Additional Computation Sheets Attached

1. Measured Method:
Long term mean of diversion estimated at 62 cfs from above records.
2. Alternate Method for Checking Purposes:

F. PUMP EFFICIENCY DATA (Optional) NA

Discharge Pressure: _____ psi x 2.31 = _____ ft (1); Dynamic pumping level: _____ ft (2)
Total Head: (1) + (2) = _____ (3) ; Flow rate: _____ cfs (4)

Water HP: (3) x (4) ÷ 8.8 = _____ (5)
Meter Input KW: 3.6 x _____ KH x _____ CTR or _____ MULT x _____ PTR x _____ N/ _____ T = _____ (6)
Meter Input HP: (6) x 1.34 = _____ (7)
Panel Input KW: _____ Ave PF x _____ Ave Volts x _____ Ave Ampsx .001732 = _____ (6)
Panel Input HP: (6) x 1.34 = _____ (7) Efficiency: (5)/(7) x 100 = _____ %

G. VOLUME CALCULATIONS

1. Volume Calculations for ~~Irrigation~~ power development:

$V_{I.R.}$ = (Acres Irrigated) x (Irrigation Requirement) = _____

$V_{D.R.}$ = [Diversion Rate (cfs)] x (Days in Irrigation Season) x 1.9835 = _____

V = Smaller of $V_{I.R.}$ and $V_{D.R.}$ = _____

2. Volume Calculations for Other Uses: Diversion of 62 cfs - 5 cfs bypass = 57 x 365 x 1.9835 = 41,300 acre feet per year.

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JAN 0 8 2001

H. REMARKS AND OVERLAP REVIEW ANALYSIS

I. RECOMMENDATIONS

1. **Recommended Amounts**

Beneficial Use	Period of Use From	Period of Use To	Rate of Diversion Q (cfs)	Annual Volume V (afa)
		Totals:		

2. **Recommended Amendments**

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☐ None

☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

J. AUTHENTICATION

Field Examiner's Name Cecil A Thomas

Signature Cecil A Thomas

Certification Date

Field Report Preparation Date

CONSULTANT SEAL

K. Licensing recommendation shall be prepared by an Idaho Department of Water Resources employee on a computer printout attached hereto.

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JAN 08 2001

ADDENDUM TO SHOW COMPLIANCE WITH CONDITIONS OF APPROVAL BY BIRCH CREEK POWER COMPANY

5,1,6

The methods of compliance with the conditions of approval are summarized as follows:

1. Deliveries of water to fill prior water rights above the point of diversion are supervised by the watermaster. Flow past the diversion is measured with a 30" sharp crested weir.

2. A 10 foot long sharp crested weir is installed at the downstream side of the box-type concrete bridge on Highway 28, 1.5 miles down the feeder ditch from the point of diversion. The power plant operators observe the staff gage daily and the observed gage heights are on file at Sorenson Engineering Co. The losses in the feeder ditch were determined by the watermaster, Don Shendon, to be from 1 to 3 cfs, whereas the Reno ditch lost 16 cfs. These measurements are also in the files of Sorenson Engineering Co.

3, 4, 5. See above.

6. Fishery was viable with nice 12-15 inch trout visible from banks on July 20, 1988.

7. Water can be released at the downstream side of the fish screen. See pictures.

9. Discharge is also measured at the tailrace by an 8 foot long sharp crested weir in the D.D. ditch and another 8 foot long weir will be installed in the Reno ditch.

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DATE	FLOW (CFS)	FLUME TEMP (°C)	BATTERY	OIL LEVEL GEN BRG	OIL LEVEL G.E.N.	TRASH P-STOCK	TRASH SIPHON	BYPASS HDWORKS	MIN. FLOW STREET	USGS GAGE	OPERATION	COMMENTS
7-1	No1 26 No2 26	+40+84	✓	—	—	—	—	—	—	1.04	WATER	34.6 CFS
7-2	25 25	+-+96	✓	✓	✓	✓	✓	✓		1.03	Hydro	34.1 CFS
7-3	25 26	+52+94	✓	✓	✓	✓	✓	✓	✓	1.00	Hydro	32-6 CFS
7-4	No1 - 18 No2 - 19	+58+86	—	—	—	—	—	—	✓	.90	WATER	27.9 CFS
7-5	No1 18 No2 19	+60+84	—	—	—	—	—	—	—	.87	WATER	26-6 CFS
7-6	No1 21 No2 20	+58+78	✓	—	—	—	—	✓	—	.91	WATER	28-4 CFS
7-7	No1 20 No2 20	+60+82	✓	—	—	—	—	—	—	.92	WATER	28-8 CFS
7-8	No1 21 No2 20	+58+88	✓	—	✓	—	—	✓	—	.93	WATER	29-8
7-9	1- 22 2- 22	+54+94	✓	—	✓	✓	✓	✓	✓	.91	Hydro	28.4CFS
7-10	1- 28 2- 23	+-+94									Hydro	
7-10	No1 24 No2 24	+48-+80	✓	—	—	—	—	—	—	1.01	WATER	33.1 CFS
7-11	No1 -15 No2 18	+60+90	✓	—	✓	✓	—	+	✓	1.02	WATER	33.6 CFS
7-12	No1 17 No2 14	+58+80	✓	—	—	—	—	-	—	.91-	WATER	28.4 CFS
7-13	No1 -28 No2 21	+60+94	✓	—	—	—	—	—	—	.98	WATER	31.7 CFS
7-14	No1 20 No2 19	+58+90	✓	✓	✓	✓	✓	✓	✓	.93	WATER	29.3 CFS Started — Checked at 1137 Am Checked Hillsboro Station
7-15	No1 20 No2 19	+58+92	—	—	—	—	—	—	—	.90	WATER	27.9 CFS 9 Am the pump and Turbine everything seems
7-16	No1 20 No2 17	+56+86	✓	—	✓	—	—	✓	—	.87	WATER	26-6 CFS OKay
7-17	No1 20 No2 18	+60+90	✓	—	—	—	✓	—	—	.88	WATER	27. CFS
7-18	No1 18 No2 19	+56+80	✓	—	—	—	✓	✓	✓	.90	WATER	27.9 CFS
7-19	No1 18 No2 20	+58+78	✓	—	—	✓	✓	✓	✓	.90	WATER	27.9 CFS
7-20	No1 19 No2 20	+54+88	✓	—	—	—	✓	—	—	.88	WATER	27.0 CFS
7-21	No1 -19 No2 20	+56+98	✓	✓	—	—	✓	✓	✓	.90	WATER	27.9 CFS
7-22	No1 -19 No2 -20	+60+84	✓	✓	✓	✓	✓	✓	✓	.88	WATER	27.0 CFS
7-23	1- 19 2- 20	+62+96	—	—	—	—	—	—	✓	.90	Hydro	27.9 CFS
7-24	No1 20 No2 19	+60+89	✓	—	✓	✓	✓	—	—	.89	WATER	27.5 CFS
7-25	No1 19 No2 17	+60+90	✓	—	—	✓	—	—	—	.99	WATER	27.5 CFS
7-26	No1 21 No2 19	+58+88	✓	✓	✓	—	✓	✓	✓	.86	WATER	26-1 CFS
7-27	No1 - 20 No2 - 19	+60+92	✓	✓	✓	✓	—	—	—	.87	WATER	26.6 CFS
7-28	No1 21 No2 19	+54+90	✓	✓	✓	✓	✓	—	—	.93	WATER	29-3 CFS off from 1135 PM Back on line 1440 PM
7-29	No1-21 No2 19	+58+92	✓	✓	—	—	—	✓	✓	.93	WATER	29.3 CFS
7-30	1- 21 2- 20	+56+88	✓	✓	✓					.92	WATER	28.8 CFS
7:31	No1 48 No2 0	+60+100	✓	—	✓	✓	✓	✓		.91	WATER	28.4 CFS

BIRCH CREEK HYDROELECTRIC FACILITY MONTH July YEAR 1988

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JAN 08 2001

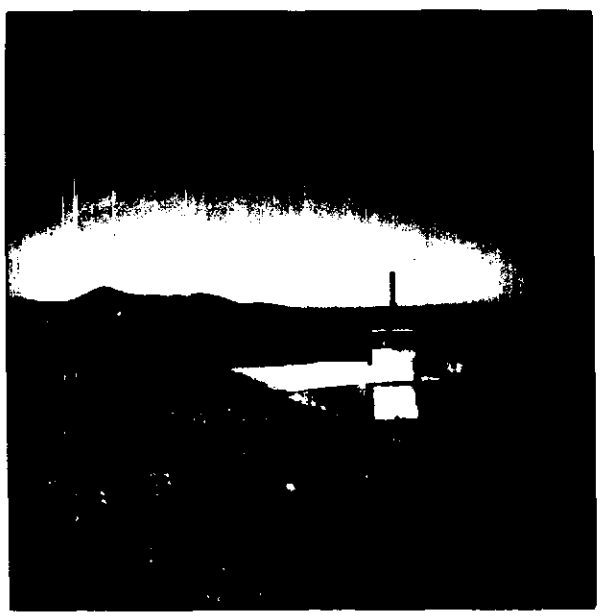
SAMPLE OF FLOW RECORDS FOR FEEDER DITCH OF BIRCH CREEK POWER COMPANY



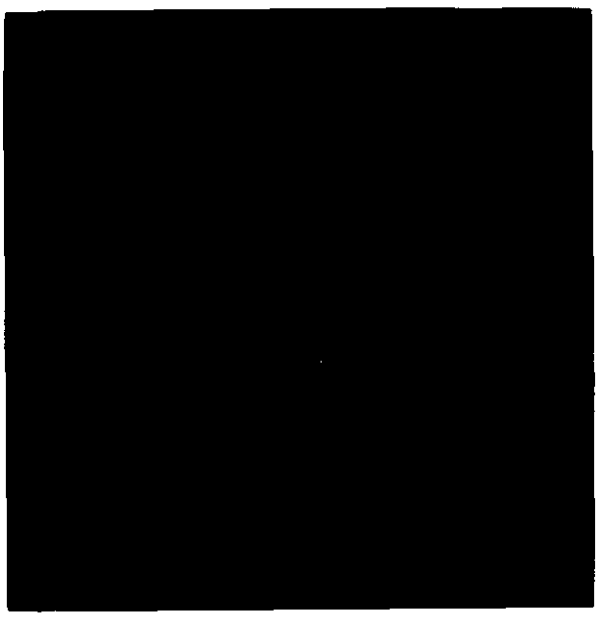
Hwy 28, bridge and weir with the fish screen in the background



Typical canal section downstream from Hwy 28



Head of siphon



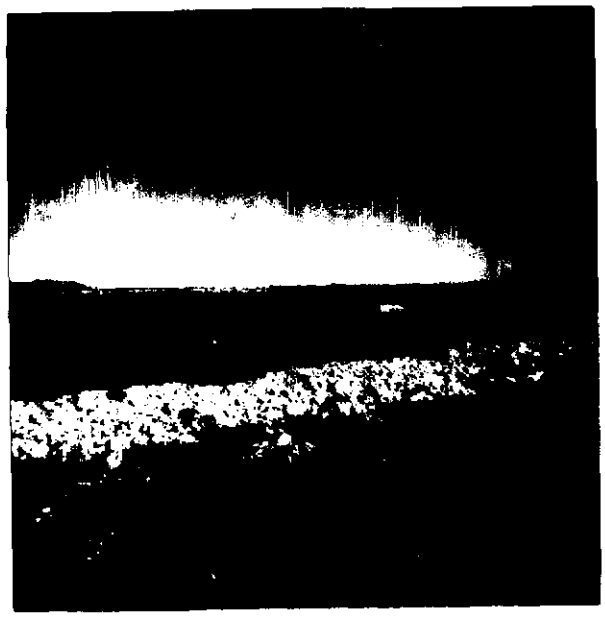
Route of tunnel

Pictures of diversion works of Birch Creek Power Company Project

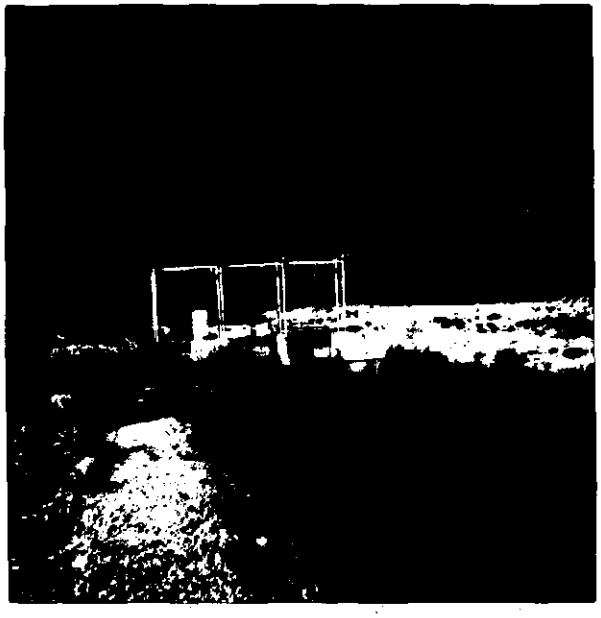
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View easterly six miles from diversion to tunnel portal



Diversion dam and pool



Fish screen and wasteway above Hwy 28



10 foot weir at Hwy 28 bridge

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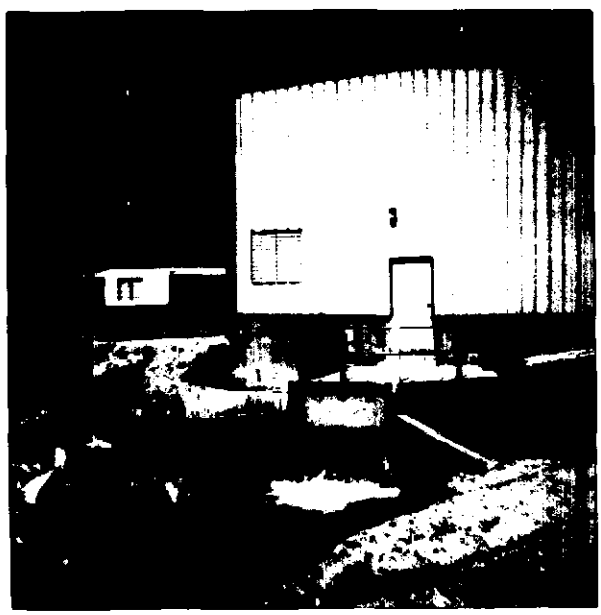
Pictures near upper end of Birch Creek Power Company Project



Head of pen stock



Penstock line from powerhouse to tunnel



Trifurcation below powerhouse



Another view of the trifurcation

Pictures of penstock, powerhouse, tailrace, and trifurcation of Birch Creek Power Company

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January 31, 1989

RECEIVED
FEB 15 1989
Department of Water Resources

State of Idaho
Department of Water Resources
1301 North Orchard Street
Boise, Idaho 83720

In conformance with Rules and Regulations of Beneficial Use Examinations, I submit this affidavit that Cecil A. Thomas is authorized to represent me as the field examiner for Permit 32-7128 on Birch Creek .

Sincerely,

Ted Sorenson, Owner

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BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR AMENDMENT OF PERMIT NOS. 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON DBA SORENSON ENGINEERING	**AMENDED PRELIMINARY ORDER DENYING EXCEPTIONS AND APPROVING AMENDMENT**

FINDINGS OF FACT

1. On March 27, 1985, the Department of Water Resources ("Department") issued Permit No. 32-07128 ("permit") in the name of Birch Power Company as follows:

Source:	Birch Creek
Priority:	September 8, 1982
Rate of diversion:	45 cubic feet per second ("cfs")
Point of diversion:	NE1/4NW1/4 Section 3, T8N, R30E, B.M., Clark County
Use:	Power production
Season of use:	year-round
Place of use:	NE1/4NE1/4 Section 17, T8N, R31E, B.M.,
Conditions of approval:	Several including the requirement to leave 11% of the flow of Birch Creek or 5 cfs, whichever is smaller to flow past the feeder canal diversion and to remain in the natural channel of Birch Creek

2. On March 27, 1985, the Department also issued Permit No. 32-07136 ("permit") in the name of Birch Power Company as follows:

Source:	Birch Creek
Priority:	January 3, 1984
Rate of diversion:	30 cubic feet per second ("cfs")
Point of diversion:	NE1/4NW1/4 Section 3, T8N, R30E, B.M., Clark County
Use:	Power production
Season of use:	year-round
Place of use:	NE1/4NE1/4 Section 17, T8N, R31E, B.M.
Conditions of approval:	Several including the requirement to leave 11% of the flow of Birch Creek or 5 cfs, whichever is smaller to flow past the feeder canal diversion and to remain in the natural channel of Birch Creek.

3. On August 21, 1986, Birch Power Company assigned the permits to Ted S. Sorenson, DBA Sorenson Engineering ("permit holder").

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4. On February 15, 1989, the permit holder submitted proof of beneficial use of water to the Department together with a completed beneficial use field report for each permit.

5. On May 1, 1990, the permit holder submitted an application for amendment ("application") of each permit. The amendment proposed to remove the requirement to bypass 5 cfs or 11% of the flow of Birch Creek down the old Birch Creek channel. The application was protested by D&D Enterprises c/o George C. Peterson, Mac and Betty Wagoner c/o Breck Barton, and Elda H. Wilding c/o Jerry Rigby ("protestants"). LaVar and Louise Newman (intervenor") c/o Blair Grover were allowed to intervene in the matter. The protest of Elda H. Wilding was subsequently dismissed.

6. On May 18, 1998, a hearing officer for the Department conducted a hearing in the contested matter and on September 10, 1998 issued a Recommended Decision and Order approving the application with certain conditions.

7. On September 28, 1998, protestants LaVar Newman and D&D Enterprises filed petitions for reconsideration with the hearing officer, which petitions were denied on October 19, 1998 by the hearing officer.

8. On October 26, 1998, protestant LaVar Newman filed exceptions to the Recommended Decision and Order and on October 28, 1998, protestant D&D Enterprises also filed exceptions to the Recommended Decision and Order.

9. On January 19, 1999, the applicant, protestants and intervenor entered into a Settlement Agreement prior to the issuance of a Final Order by the Director. In the Settlement Agreement, protestants withdrew their protests based on certain stipulated actions of the various parties.

CONCLUSIONS OF LAW

1. Section 42-211, Idaho Code, authorizes the Director of the Department to approve amendments of existing permits.

2. The application will not result in the diversion of more water than originally permitted.

3. The application will not adversely affect the rights of others, if the approval is adequately conditioned.

4. The Department should approve the application with certain conditions.

ORDER

IT IS THEREFORE HEREBY ORDERED as follows:

1. Protestant LaVar Newman's Exceptions filed on October 26, 1998 to the Recommended Decision and Order are **DENIED**.

2. D&D Enterprise, Inc's Exceptions filed on October 28, 1998 to the Recommended Decision and Order are **DENIED**.

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IT IF FURTHER HEREBY ORDERED that Application for Amendment of Permit Nos. 32-07128 and 32-07136 in the name of Ted S. Sorenson, DBA Sorenson Engineering is **APPROVED** subject to the following conditions:

1. Condition of Approval 4 on the original permits is rescinded.

2. A new Condition of Approval 4 shall apply to the permits as follows:

   4. The permit holder shall develop and maintain the pond and irrigation system that utilizes 0.11 cfs of water, described in the Bureau of Land Management's "Findings of No Significant Impact and Decision/Rationale," EA Number ID-030-9-46 (January 11, 1990) including but not limited to:

   - 6 to 8 ponds below the hydropower diversion that create 2.46 acres of riparian habitat.

   Or, in the alternative,

3. A new Condition of Approval 14 shall apply to the permits as follows:

   14. If the permit holder does not comply with Condition of Approval 4 in this Preliminary Order, the permit holder shall forthwith build and maintain a gate in the hydropower diversion located in NE1/4NW1/4 Section 3, T8N, R30E, B.M. and shall allow 11% of the flow of Birch Creek or 5 cfs, whichever is smaller to flow past the feeder canal diversion on Birch Creek, said water to remain in the natural channel of Birch Creek.

Dated this 5th day of December, 2000.

L. GLEN SAXTON, Chief
Water Allocation Bureau

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JAN 08 2001

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 5th day of December, 2000, the above and foregoing document was served upon the following by placing a copy of the same in the United States Mail, postage prepaid and properly addressed to the following:

Kent W. Foster, Esq.
HOLDEN KIDWELL HAHN
& CRAPO PLLC
P.O. Box 50130
Idaho Falls, ID 83405

George C. Petersen, Jr. Esq.
PETERSEN MOSS OLSEN
MEACHAM & CARR
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Blair Grover, Esq.
GROVER & ARCHIBALD
P.O. Box 36
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Breck H. Barton, Esq.
BRECK BARTON & ASSOC. PA
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Rexburg, ID 83440

Ronald D. Carlson
Eastern Regional Manager
Idaho Department of Water
Resources
900 N. Skyline Dr., Ste A
Idaho Falls, ID 83402 -1718

Deborah J. Gibson
Administrative Assistant
Water Allocation Bureau

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JAN 08 2001

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR AMENDMENT OF PERMIT NOS. 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON DBA SORENSON ENGINEERING	**PRELIMINARY ORDER DENYING EXCEPTIONS AND APPROVING AMENDMENT**

FINDINGS OF FACT

1. On March 27, 1985, the Department of Water Resources ("Department") issued Permit No. 32-07128 ("permit") in the name of Birch Power Company as follows:

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Use:	Power production
Season of use:	year-round
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9. On January 19, 1999, the applicant, protestants and intervenor entered into a Settlement Agreement prior to the issuance of a Final Order by the Director. In the Settlement Agreement, protestants withdrew their protests based on certain stipulated actions of the various parties.

CONCLUSIONS OF LAW

1. Section 42-211, Idaho Code, authorizes the Director of the Department to approve amendments of existing permits.

2. The application will not result in the diversion of more water than originally permitted.

3. The application will not adversely affect the rights of others, if the approval is adequately conditioned.

4. The Department should approve the application with certain conditions.

ORDER

IT IS THEREFORE HEREBY ORDERED as follows:

1. Protestant LaVar Newman's Exceptions filed on October 28, 1998 to the Recommended Decision and Order are **DENIED**.

2. D&D Enterprise, Inc's Exceptions filed on October 28, 1998 to the Recommended Decision and Order are **DENIED**.

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IT IF FURTHER HEREBY ORDERED that Application for Amendment of Permit Nos. 32-07128 and 32-07136 in the name of Ted S. Sorenson, DBA Sorenson Engineering is **APPROVED** subject to the following conditions:

1. Condition of Approval 4 on the original permits is rescinded.

2. A new Condition of Approval 4 shall apply to the permits as follows:

   4. The permit holder shall develop and maintain the pond and irrigation system that utilizes 0.11 cfs of water, described in the Bureau of Land Management's "Findings of No significant Impact and Decision/Rationale," EA Number ID-030-9-46 (January 11, 1990) including but not limited to:

   - 6 to 8 ponds below the hydropower diversion that create 2 acres of riparian habitat, and

   - A 1000 foot drip irrigation system that supports 0.46 acres of riparian habitat.

   Or, in the alternative,

3. A new Condition of Approval 14 shall apply to the permits as follows:

   14. If the permit holder does not comply with Condition of Approval 4 in this Preliminary Order, the permit holder shall forthwith build and maintain a gate in the hydropower diversion located in NE1/4NW1/4 Section 3, T8N, R30E, B.M. and shall allow 11% of the flow of Birch Creek or 5 cfs, whichever is smaller to flow past the feeder canal diversion on Birch Creek, said water to remain in the natural channel of Birch Creek.

Dated this 3rd day of November, 2000.

L. GLEN SAXTON, Chief
Water Allocation Bureau

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 3rd day of November, 2000, the above and foregoing document was served upon the following by placing a copy of the same in the United States Mail, postage prepaid and properly addressed to the following:

Kent W. Foster, Esq.
HOLDEN KIDWELL HAHN
& CRAPO PLLC
P.O. Box 50130
Idaho Falls, ID 83405

George C. Petersen, Jr. Esq.
PETERSEN MOSS OLSEN
MEACHAM & CARR
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Blair Grover, Esq.
GROVER & ARCHIBALD
P.O. Box 36
Rigby, ID 83442

Breck H. Barton, Esq.
BRECK BARTON & ASSOC. PA
P.O. Box 100
Rexburg, ID 83440

Ronald D. Carlson
Eastern Regional Manager
Idaho Department of Water
Resources
900 N. Skyline Dr., Ste A
Idaho Falls, ID 83402 -1718

Deborah J. Gibson
Administrative Assistant
Water Allocation Bureau

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JAN 0 8 2001

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON d/b/a SORENSON ENGINEERING	**ORDER ON PETITIONS FOR RECONSIDERATION**

INTRODUCTION

Protestants Lavar Newman and D&D Enterprises, Inc. on September 28, 1998, filed with the Idaho Department of Water Resources ("IDWR") *Petitions for Reconsideration* of IDWR's *Recommended Decision and Order* dated September 10, 1998. Both parties argue substantially the same position—that the decision in this matter should be withdrawn pending IDWR's decision regarding Application for Permit No. 32-07252.

DISCUSSION

This matter comes before the IDWR on an Application for Amendment of a Permit filed by Ted S. Sorenson d/b/a Sorenson Engineering concerning Permits to Appropriate the Public Waters of the State of Idaho Nos. 32-7128 and 32-7136 (the "Applications"). The Applications were considered by IDWR pursuant to the standards in I.C. § 42-211.

IDWR consolidated its proceedings on the Applications with its determination of Application for Permit No. 32-07252 because they both "related to appropriation of water allegedly saved by the development of the Applicant's hydropower facility." *Prehearing Order* dated February 10, 1998. Application for Permit No. 32-07252, however, will be

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determined by IDWR pursuant to the standards in I. C. § 42-203A(5), which are distinct from the standards set forth in I.C. § 42-211 and which do not completely overlap.

Because of these distinct statutory standards, these matters must be determined by IDWR separately, even if the factual record upon which each is determined is consolidated. The parties have provided a factual record that demonstrates that uncontested facts exist in this matter upon which IDWR may properly issue the *Recommended Decision and Order*. The parties should determine whether they wish to challenge the *Recommended Decision and Order* based upon the applicable statutory standard and the factual record, and not based upon their reaction to a separate decision that will be issued in the future on a different statutory standard.

ORDER

Based upon the foregoing discussion, the Petitions for Reconsideration are DENIED.

DATED this 19th day of October, 1998.

PETER R. ANDERSON
Deputy Attorney General
Hearing Officer

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JAN 0 8 2001

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 19th day of October, 1998, I mailed a true and correct copy of the foregoing **ORDER ON PETITIONS FOR RECONSIDERATION** on the following persons listed below by U.S. mail, postage prepaid and addressed as follows:

Norman C. Young
Idaho Dept. of Water Resources
1301 N. Orchard Street
Boise, ID 83706

Kent W. Foster, Esq.
HOLDEN KIDWELL HAHN & CRAPO PLLC
P.O. Box 50130
Idaho Falls, ID 83405

George C. Petersen, Jr., Esq.
PETERSEN MOSS OLSEN
MEACHAM & CARR
485 "E" Street
Idaho Falls, ID 83402

Ronald D. Carlson
Eastern Regional Manager
Idaho Dept. of Water
Resources
900 N. Skyline Dr.
Idaho Falls, ID 83402

Blair J. Grover, Esq.
GROVER & ARCHIBALD
P.O. Box 36
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Breck H. Barton, Esq.
BRECK BARTON &
ASSOC., PA
P.O. Box 100
Rexburg, ID 83440

Deborah Drew-Ellis
Legal Secretary

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JAN 0 8 2001

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON d/b/a SORENSON ENGINEERING	**RECOMMENDED DECISION AND ORDER**

STANDARD FOR DECISION

This matter comes before the Idaho Department of Water Resources ("IDWR") on an *Application for Amendment of a Permit* filed by Ted S. Sorenson d/b/a Sorenson Engineering concerning *Permits to Appropriate the Public Waters of the State of Idaho Nos.* 32-7128 and 32-7136 (the "Application). The Application is filed pursuant to I.C. § 42-211, which provides, in part, that:

> Whenever a permit has been issued pursuant to the provisions of this act, and the permit holder desires to change the place, period, or nature of the intended use, or make other substantial changes in the method of diversion or proposed use or uses of the water, he shall file an application for amendment upon forms to be furnished by the department of water resources together with the statutory fee for filing and recording same, and upon receipt thereof it shall be the duty of the department of water resources to examine same and if approval thereof would not result in the diversion and use of more water than originally permitted and if the rights of others will not be adversely affected thereby, the director of the department of water resources shall approve said application and return an approved copy to the permit holder. The director of the department of water resources shall give such notice to other affected water users as he deems appropriate and may grant the amendment, in whole or in part or upon conditions, or may deny same. Notice of partial approval or conditions or denial of an amendment shall be forwarded to the applicant by certified mail and shall be subject to judicial review as hereafter provided. The priority of the right

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established pursuant to a permit which has been amended under these provisions shall date from the date of the original application for permit, provided the permit holder has complied with other provisions of this act.

(Emphasis added).

IDWR may resolve this case based upon written evidence pursuant to Idaho Code § 67-5241, which provides, in part, that:

> *(1) Unless prohibited by other provisions of law:*
>
> *(b) any part of the evidence in a contested case may be received in written form if doing so will expedite the case without substantially prejudicing the interests of any party;*

All parties to this action have submitted motions for summary judgment requesting that this case may be decided upon undisputed evidence shown by the written record.

The Idaho Department of Water Resources (IDWR), having examined the Application and the written record, makes the following findings of fact and conclusions of law:

FINDINGS OF FACT

I. Evidence Considered.

1. IDWR considered the following evidence in making the substantive findings of facts:

- Water Right Permit No. 32-07128.
- Water Right Permit No. 32-07136.
- The Application, with attachments.

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- The hearing transcript from the April 5, 1984, hearing on Applications for Permit Nos. 32-07128 and 32-07136.
- The exhibits introduced at the April 5, 1984, hearing on Applications for Permit Nos. 32-07128 and 32-07136.
- The record and decision in D &D Enterprises, Inc. v. Dunn, 7th Judicial District, Bonneville County Case No. 33072, the appeal regarding Applications for Permit Nos. 32-07128 and 32-07136.
- *Finding of No Significant Impact and Decision/Rationale*, EA Number ID-030-9-46 (January 11, 1990). The first page of this document was attached to the Affidavits of Ted S. Sorenson, described below. The entire document is contained in the files of Permit Nos. 32-07128 and 32-07136 with IDWR and IDWR takes official notice of it.
- The tapes of the telephonic hearing held on May 4, 1998, and the hearing on May 18, 1998.
- Affidavit of Blair Grover dated April 14, 1998.
- Affidavit of Ted S. Sorenson in Support of Motion for Summary Judgment and in Opposition to Protestants' Motions dated April 27, 1998.
- Affidavit of C.E. Brockway in Support of Motion for Summary Judgment and in Opposition to Protestants' Motion dated April 27, 1998.

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- Amended Affidavit of Ted S. Sorenson in Support of Motion for Summary Judgment and in Opposition to Protestants' Motions dated May 8, 1998.
- Amended Affidavit of C.E. Brockway in Support of Motion for Summary Judgment and in Opposition to Protestants' Motion dated May 11, 1998.
- Affidavit of James DeMourdaunt dated May 15, 1998.
- Affidavit of Lavar Newman in Opposition to Applicant's Motion for Summary Judgment dated May 15, 1998.

II. Physical Setting.

2. Birch Creek is a small, shallow, fast-moving stream that flows in a southeasterly direction from Gilmore Summit through Birch Creek Valley, between the Lemhi Mountains to the West and the continental divide to the East. The stream flows adjacent to State Highway 28 for several miles between low foothill bluffs. At the south end of the valley the Creek at one time flowed out onto the northern Snake River Plain into what is called the Sinks. There the Creek disappeared into the ground and the water entered the Snake River Plain aquifer.

3. The Birch Creek Valley has been used for farming and ranching for more than a century. The water of Birch Creek being used to irrigate lands that lie in close proximity to the Creek. Cattle drink from the Creek from the northern end of the valley south to the area of the sinks. Birch Creek is also used heavily by campers and fishermen partially because of the ease of access to the Creek and because picnic and camping areas have been developed along it. Historically, during most

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of the year all of the water of Birch Creek has been diverted for irrigation and stock water purposes into a ditch know as the "old Reno Ditch" before it flowed into the Sinks.

4. The riparian ecosystem along lower Birch Creek consists of riparian shrub habitat, including willows, birch, woods rose, and current, with shrubs, grasses and forbs; low sagebrush habitat, including low sagebrush and Wyoming big sagebrush, with grasses and upland species; and herbaceous riparian habitat, including grasses, sedges, rushes, and bluegrass. Species that utilize the Birch Creek riparian habitat include: mallards, black-crowned night herons, belted kingfishers, pronghorn antelope, sage grouse, and mourning dove.

III. The Hydropower Permits

5. Water Right Permit No. 32-7128 issued to Birch Power Company on March 27, 1985, for 45 cfs of water from Birch Creek for power production. The priority date of permit no. 32-7128 is September 8, 1982. This permit was subsequently assigned to Ted S. Sorenson d/b/a Sorenson Engineering.

6. Water Right Permit No. 32-7136 issued to Birch Power Company on March 27, 1985, for 30 cfs of water from Birch Creek for power production. The priority date of permit no. 32-7136 is January 3, 1984. This permit was subsequently assigned to Ted S. Sorenson d/b/a Sorenson Engineering.

7. Water Right Permits No. 32-7128 and 32-7136 (the "Permits") were issued for a hydropower project that would divert virtually all of Birch Creek into a power

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canal, or "feeder ditch," approximately one mile north of the diversion point of the old Reno Ditch that historically diverted all of Birch Creek.

8. The hydropower project runs water through the canal approximately six miles, until it passes through the turbines at the Applicant's hydropower plant. Below the plant the water can be directed to the water users who previously used the old Reno Ditch or directed back into the Birch Creek Sinks. The stretch of Birch Creek between the new power diversion downstream to the old Reno Ditch has been de-watered by the project, subject to the conditions that are the subject of this Decision.

9. The power canal trends to the east/southeast from the hydropower diversion on Birch Creek. Approximately the first mile of the canal has the appearance of a natural stream. It is lined with willows, shrubs and grass. Rather than flowing in a straight line the ditch is constructed with meanders and other structures to create fish habitat.

10. Protests were filed to the original application for Permit No. 32-7128 by the United States, Department of the Interior, Bureau of Land Management; Idaho Department of Fish and Game; C. A. Wagoner; William Simmons; and Ben Wilding. D&D Enterprises, Inc. ("D&D") intervened and filed a protest.

11. Protests were filed to the original application for Permit No. 32-7136 by the United States, Department of the Interior, Bureau of Land Management; Idaho Department of Fish and Game; and the watermaster of Water District 32-D, Ben Wilding.

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12. The protests to the permit applications were heard at a combined hearing on April 5, 1984. IDWR issued its decision on March 26, 1985. *In the Matter of Applications for Permit Nos. 32-7128 and 32-7136 In the Name of Birch Power Company*, Modified Memorandum Decision and Order (March 27, 1985)(the "Permit Decision").

13. IDWR made the following findings of fact in the Permit Decision:

> *15) Existing habitat will be lost along that portion of the Reno Ditch and Birch Creek where dewatering is expected to occur. The existing riparian habitat is mainly willows and other brushy plants along Birch Creek and grasses and few woody plants along the Reno Ditch.*
>
> *16) The fishery existing in Birch Creek below the proposed point of diversion will be eliminated. A maintenance flow of 5 cubic feet per second bypassing the proposed point of diversion is not sufficient to maintain a fishery, but would be sufficient to provide stockwater and maintain a riparian zone along the 3000 feet of Birch Creek being dewatered.*
>
> *17) The first 1 1/2 miles of the feeder ditch is being designed to support a riparian zone and create a fishery habitat where the population density of trout should equal the fishery existing in Birch Creek below the proposed diversion. A continuous flow of water must be maintained in that section of the feeder ditch to assure a fishery.*
>
> *18) A grazing allotment administered by the BLM has used for many years, the Reno Ditch and Birch Creek below the proposed point of diversion for the watering of 4,000 sheep from April 1 to June 30. The proposed feeder ditch is also located within this grazing allotment.*
>
> *19) Under a trailing allotment administered by the BLM, 450 head of cattle have watered along the 1 1/2 miles of Birch Creek below the proposed point of diversion between November 1 and February 1.*

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Permit Decision at 7-8.

14. IDWR reached the following conclusions of law in the Permit Decision:

> *1) The water that will be saved by sealing the feeder ditch is new water that has never been available for use by the Reno Ditch irrigators, therefore, the existing irrigation rights will not be injured if the water being saved is used to provide water for livestock and to protect the public interest by preserving the riparian habitat along the natural stream channel of Birch Creek. The person who saves the water is entitled to the benefit of the water with his right to the saved water being prior to the right of the other parties.* Reno v. Richards, *32 Idaho 1,6,13 (1918) and* Basinger v. Taylor, *36 Idaho 591, 596-597, 599 (1922).*
>
> * * *
>
> *3) The adverse impacts to riparian habitat caused by the appropriation and diversion of water from the 3,000 feet of stream will be sufficiently mitigated by the establishment of 1 1/2 miles of riparian zone plus the riparian vegetation that will naturally occur in the remaining length of the feeder ditch and the riparian vegetation that will be maintained by the flow left in the natural channel.*
>
> * * *
>
> *5) Stockwatering use from Birch Creek predates diversion and use of water under the two Birch Power Company applications.*
>
> *6) Water rights established for instream livestock use on the 3,000 feet of Birch Creek above the Reno Ditch diversion must be satisfied.*
>
> * * *
>
> *8) The diversion of water under these permits when conditioned to protect the existing irrigation and stockwater rights and to mitigate the riparian, fish and wildlife values, is in the public interest.*

Permit Decision at 8-9.

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15. Based upon these findings and conclusions both permit no 32-7128 and 32-7136 were conditioned by IDWR as follows:

> *4) Eleven percent of the flow of Birch Creek at the diversion to the feeder ditch, the amount of water saved by the new ditch, or 5 cubic feet per second whichever is the least, shall be allowed to flow past the feeder canal diversion in the natural channel of Birch Creek. The amount of water saved shall be computed by subtracting the amount of water being lost in the new feeder ditch which can be measured, from the amount that would have been lost in the 3,000 feet of stream channel and the Reno Ditch, which is 22% (0.22) of the water flowing in the stream at the new point of diversion.*
>
> *5) The feeder canal shall be constructed and maintained in a manner that will reduce the amount of seepage loss by at least 11% of the flow at the proposed point of diversion.*

Permit Decision at 10.

16. Of the protestants to the original permit applications, only D&D Enterprises, Inc. ("D&D") appealed the Permit Decision to district court. *D&D Enterprises, Inc. v. Dunn*, Bonneville County Case No. 33072. D&D appealed condition 4, which required the Applicant to bypass a portion of the water saved by the hydropower project past the Applicant's diversion structure (the "bypass flow"). D&D argued that "any water which is saved from loss by seepage through the use of a new channel should be made available to fill the decreed water rights of the irrigators of Birch Creek." Appellant's Brief at 7. The district court rejected D&D's argument and upheld IDWR's decision. *Memorandum Decision* and *Memorandum Decision Addendum, D&D Enterprises, Inc. v. Dunn*, Bonneville County Case No. 33072 (June 26, 1986 and October 8, 1986). The district court stated:

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> Thus Birch Power saves the water - - by permit the Director allows the water to be used for power purposes - - this appropriation to power use is an appropriation in trust - - the public is the beneficiary of the trust. Birch Power becomes the vehicle through whom the appropriated water traverses from the D&D to the public.

Memorandum Decision Addendum, at 5 (emphasis added).

17. The purpose of the bypass flow requirement was to protect the riparian habitat along Birch Creek below the hydropower diversion and to protect livestock watering rights out of Birch Creek below the hydropower diversion. This bypassed flow was to remain in the natural channel of Birch Creek.

18. The interaction of Conditions 4 and 5 in the Permits provided that the bypass flow would be the lesser of 11% of the flow in Birch Creek or 5 cfs. The Permits allowed the Applicant to divert a maximum of 75 cfs at the hydropower diversion after the necessary flows were bypassed. The Applicant was given no permit to divert more than 75 cfs, whether or not the Applicant complied with the bypass flow conditions.

19. The Applicant bypassed up to 5 cfs after receiving the Permits as required by the bypass flow conditions, but has not consistently complied with these conditions and is not currently in compliance with the bypass flow conditions. When 5 cfs has been bypassed through the hydropower diversion the water flowed in the stream channel for approximately 1400-2600 feet before it percolated into the substrate fan. This bypass flow would maintain only about 1.64 acres of riparian habitat.

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IV. The Pond Proposal.

20. As an alternative to the bypass flow the Applicant proposed and developed a pond, trough and irrigation system that utilizes 0.11 cfs of water, described in the Bureau of Land Management's *Finding of No Significant Impact and Decision/Rationale*, EA Number ID-030-9-46 (January 11, 1990) (the "pond proposal"), including but not limited to:

- 6 to 8 ponds below the hydropower diversion that create 2 acres of riparian habitat developed with 6,000 feet of buried water pipeline.
- A 1,000 foot drip irrigation system that supports 0.46 acres of riparian habitat.
- 1.25 miles of livestock fencing.
- One livestock watering facility.

21. The pond proposal has been accepted as an acceptable replacement for the riparian habitat lost along Birch Creek resulting from the development of the hydropower diversion by the Federal Energy Regulatory Commission: *Order Modifying Minimum Flow Required by Article 404, Approving Riparian Habitat Mitigation Plan and Deleting Article 405*, Project No. 7194-009 (June 15, 1990); the United States Department of the Interior, Bureau of Land Management: *Finding of No Significant Impact and Decision/Rationale*, EA Number ID-030-9-46 (January 11, 1990); and the State of Idaho Department of Fish and Game: *Letter from Tracey*

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Trent, Chief, Bureau of Program Coordination, Idaho Fish & Game (March 12, 1990).

22. The pond proposal supports 2.46 acres of riparian habitat, compared with the 1.64 acres of riparian habitat supported by the bypass flow conditions in the Permits.

V. The Application for the Pond Proposal.

23. On May 1, 1990 IDWR received the *Application for Amendment of a Permit* filed by Ted S. Sorenson d/b/a Sorenson Engineering concerning *Permits to Appropriate the Public Waters of the State of Idaho Nos.* 32-7128 and 32-7136 (the "Application"). The Application requested a change in water right permit nos. 32-7128 and 32-7136 as follows:

> Permittee requests removal of the condition of approval of Permits Nos. 32-7128 and 32-7136 requiring a bypass of 5 cfs or 11% of the stream flow. The enclosed letter from Idaho Department of Fish and Game and the letter with attached environmental assessment and decision from the United States Bureau of Land Managment explain the agreement which has been reached between Mr. Sorenson and such agencies and describe the proposed alternative minimum stream flow mitigation plan as well.

24. The Application was published in the Idaho Falls Post Register for two consecutive weeks, from August 16 to August 23, 1990. The Application was published in the Twin Falls Times-News for two consecutive weeks, from August 2 to August 9, 1990. Four protests were filed with IDWR, but several of them were subsequently withdrawn.

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25. D & D Enterprises, Inc filed a protest to the Application with IDWR on August 31, 1990, listing 10 specific arguments, generally alleging that:

a. The Application would be detrimental to other water users of Birch Creek;

b. The Applicant has not demonstrated the feasibility or the wherewithal to construct and maintain the pond development that was proposed to replace the bypass flow condition;

c. The permit should be conditioned on the application of the previously bypassed water to fill decreed, but unsatisfied, water rights;

d. The Application does not provide adequate guidance or measuring devices to administer the proposed pond development; and

e. The Application does not compare present maintenance flows with the amount required under the proposed pond development.

26. Elda H. Wilding filed a protest to the Application with IDWR on August 31, 1990, which was consistent with the protest filed by D & D Enterprises. On April 29, 1997, attorney Jerry R. Rigby informed IDWR that the interests of the Wildings had been conveyed to LaVar and Louise Newman. The protest of Elda H. Wilding was dismissed on May 23, 1997.

27. On May 16, 1997, Lavar and Louise Newman filed the *Motion of Lavar Newman and Louise Newman, His Wife, to Intervene*. This Motion was granted in the *Order Granting Intervention to Lavar and Louise Newman* issued on June 19,

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1997. The Newmans participated pursuant to the *Protest of Elda H. Wilding* filed on August 31, 1990. The Newmans are successors-in-interest to Ben and Elda Wilding.

28. Woodie Land and Livestock filed a protest to the Application with IDWR on August 31, 1990, stating "Consideration of stock water." Woodie Land and Livestock subsequently withdrew its protest on July 7, 1991.

29. Mac and Betty Wagoner filed a protest to the Application with IDWR on September 4, 1990, alleging "that the amendment of said water rights to provide 5 cfs or 11 percent of the flow of Birch Creek may constitute an enlargement of use of said water right and may result in harm to Mac and Betty Wagoner." The Wagoners did not participate in this matter or pursue their protest pursuant to a Memorandum of Agreement entered into by them with the Applicant in *Sorenson et. al. v. Wagoner*, Seventh Judicial District Court, Clark County Case No. 2-462.

30. A motion for summary judgment dated August 12, 1997, under the caption of the Application, was filed by the Newmans with IDWR. A review of that Motion reveals that the caption was a mistake, and the Motion relates to a related transfer application filed by the Applicant. The Motion does not relate to this Application.

31. A pre-hearing conference on Application was conducted on September 10, 1997. As a result of the pre-hearing conference this matter was stayed on November 10, 1997, to provide for mediation between the parties. Subsequently, the mediator reported to IDWR that the mediation was not successful. A *Pre-Hearing Order*

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was issued on February 10, 1998, and an *Amended Pre-Hearing Order* was issued April 15th, 1998. Pursuant to that Order, timely Motions for Summary Judgment were filed by the Newmans and D&D Enterprises, with supporting affidavits. Protestant Newman's Motion for Summary Judgment dealt with the ownership of saved water. It did not raise the specific issues related to approval or disapproval of the Applications. Likewise, the Motion By Protestant D&D Enterprises, Inc. for Summary Judgment related to the "rights" in any saved water or the priority date to be assigned such rights, if any, in a consolidated matter. A telephonic hearing on these motions was held on May 4, 1998, with all parties appearing through counsel.

32. The Applicant filed a Cross-Motion for Summary Judgment dated April 28, 1998. Rather than striking the Cross-Motion, IDWR issued a *Second Amended Prehearing Order* allowing the Protestants an opportunity to file responses to the Applicant's Cross-Motion. Based upon the *Memorandum in Support of Applicant's Motion for Summary Judgment and in Opposition to Protestants' Motions for Summary Judgment*, the Applicant is apparently arguing that reduction in the bypass requirement in the Permits should be granted to the Applicant to use for irrigation. A hearing was held on May 18, 1998, on the Cross-Motion, with all parties appearing through counsel. No party raised any disputed facts, other than questions regarding ownership of the bypass flows.

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33. Any Conclusion of Law which is deemed to be a Finding of Fact is adopted as a Finding of Fact. From these Findings of Fact, IDWR comes to these

CONCLUSIONS OF LAW

1. Findings of fact 1 – 33 are undisputed.

2. The Application will not result in the diversion and use of more water than originally permitted. The original bypass flow conditions established a base line that determined when water was available to the Applicant for the hydropower use, based upon the local public interest. At all times under the Permits the Applicant had the ability to divert and use up to a maximum of 75 cfs, if available. The limit of 75 cfs is not changed by the proposed Amendment.

3. The rights of others will not be adversely affected by the Application. The water that was bypassed pursuant to original Condition 4 was public water that was left in the stream channel to maintain riparian habitat. The bypassed water did not "belong" to any appropriator. Downstream livestock watering rights, if any exist, will not be affected by the Application. If those water rights are senior to the Permits, they can assert their senior priority against the Permits. Junior water rights simply are not protected under the prior appropriation system. The hydropower diversion must be constructed in such a way as to allow for the release of water through the hydropower diversion for senior, downstream stock watering purposes.

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4. A demonstration of the feasibility or the wherewithal to construct and maintain the pond development is not a requirement of I.C. § 42-211. In any event, the Application is not speculative. The pond proposal has been constructed and maintained by the Applicant.

5. The Application will not conflict with the local public interest so long as the Applicant constructs and maintains the Pond proposal, or upon failing to do so, bypasses 5 cfs of water past the hydropower diversion. The primary purpose of the bypass condition in the original Permits was to protect the riparian habitat along the Birch Creek channel below the hydropower diversion. The original bypass flows were only sufficient to maintain 1.64 acres of such habitat. The pond proposal will maintain 2.46 acres of riparian habitat, but will require long term maintenance and operation. In the event that such maintenance does not occur, bypassing 5 cfs past the hydropower diversion will maintain at least a portion of the riparian habitat provided by the pond system. Further, at all times when the flow of Birch Creek is in excess of both the 0.11 cfs of public water used in the pond system and the 75 cfs that may be diverted by the Applicant, all such excess flows must be allowed to flow down the Birch Creek channel through the hydropower diversion, unless diverted for other authorized water uses. The hydropower diversion must be constructed to allow for the release of such flows. Because the size of such excess flows cannot be predicted, the release structure or gate in the point of diversion should be constructed both to allow the entire flow of

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Birch Creek to flow in the natural channel. In order to enforce the conditions placed on the Permits the gate needs to allow the watermaster to control and measure the flow through the hydropower diversion.

6. Any Finding of Fact that is deemed to be a Conclusion of Law is adopted as a Conclusion of Law. Based upon these Conclusions of Law, IDWR issues the following

ORDER

THE STATE OF IDAHO, DEPARTMENT OF WATER RESOURCES ORDERS that the Application for Amendment of Permit Nos. 32-7128 and 32-7136 be APPROVED subject to the following conditions:

1. Condition of Approval 4 on the original Permits is withdrawn.

2. A new Condition of Approval 4 shall apply to the Permits as follows:

> *4. The water user shall develop and maintain the pond and irrigation system that utilizes 0.11 cubic feet per second of public water, described in the Bureau of Land Management's "Finding of No Significant Impact and Decision/Rationale," EA Number ID-030-9-46 (January 11, 1990), including but not limited to:*
>
> *•6 to 8 ponds below the hydropower diversion that create 2 acres of riparian habitat, and*
>
> *•A 1,000 foot drip irrigation system that supports 0.46 acres of riparian habitat.*

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Or, in the alternative, 5 cubic feet per second shall be allowed to flow past the feeder canal diversion in the natural channel of Birch Creek.

3. A new Condition of Approval 14 shall apply to the Permits as follows:

14. Applicant shall build and maintain a gate in the hydropower diversion sufficient both to control and measure the flows through the hydropower diversion and to allow the entire flow of Birch Creek to flow through the hydropower diversion in the natural channel of Birch Creek.

DATED this 10th day of September, 1998.

PETER R. ANDERSON
Deputy Attorney General
Hearing Officer

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 11th day of September, 1998, I mailed a true and correct copy of the foregoing **RECOMMENDED DECISION AND ORDER** on the following persons listed below by U.S. mail, postage prepaid and addressed as follows:

Norman C. Young
Idaho Dept. of Water Resources
1301 N. Orchard Street
Boise, ID 83706

Kent W. Foster, Esq.
HOLDEN KIDWELL HAHN & CRAPO PLLC
P.O. Box 50130
Idaho Falls, ID 83405

George C. Petersen, Jr., Esq.
PETERSEN MOSS OLSEN
MEACHAM & CARR
485 "E" Street
Idaho Falls, ID 83402

Ronald D. Carlson
Eastern Regional Manager
Idaho Dept. of Water
Resources
900 N. Skyline Dr.
Idaho Falls, ID 83402

Blair J. Grover, Esq.
GROVER & ARCHIBALD
P.O. Box 36
Rigby, ID 83442

Breck H. Barton, Esq.
BRECK BARTON &
ASSOC., PA
P.O. Box 100
Rexburg, ID 83440

Deborah Drew-Ellis
Legal Secretary

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JAN 0 8 2001

IDAHO DEPARTMENT OF WATER RESOURCES
11:00 AM HEARING
May 18, 1998

NAME	REPRESENTING	ADDRESS
Kent N. Foster	Applicant	RO. Box 50150, Idaho Falls 83405
Blair Newman	Newman	Box 36 Rigby, Id. 83442
Thomas Tidwell	D & D	485 E. St Idaho Falls
Wm Charles Farr	D & D	" "

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JAN 0 8 2001

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON d/b/a SORENSON ENGINEERING and IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-07252 (formerly No. 31-07646) IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.	)	**SECOND AMENDED PREHEARING ORDER**

The parties, having stipulated to a delay in the schedule applicable to these proceedings,

IT IS HEREBY ORDERED that the following amended schedule shall apply to these proceedings. Documents to be filed with the Department and served on the parties must be filed and served in accordance with the rules of the Department on or before the day listed.

May 15, 1998 - Parties shall file responses to the Cross Motion for Summary Judgment.

May 18, 1998 - 11:00 a.m. - 12:00 p.m. Hearing on the Cross Motion for Summary Judgment.

At the conclusion of the hearing on May 18, 1998, a schedule will be developed with the parties for the remainder of the litigation in this matter.

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DATED this 5th day of May, 1998.

PETER R. ANDERSON
Hearing Officer

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 5th day of May, 1998, I faxed and mailed a true and correct copy of the foregoing **SECOND AMENDED PREHEARING ORDER** on the following persons listed below by using the listed fax number and by U.S. mail, postage prepaid and addressed as follows:

Norman C. Young
Idaho Dept. of Water Resources
1301 N. Orchard St.
Boise, ID 83706

Ronald D. Carlson
Eastern Regional Manager
Idaho Dept. of Water Resources
900 N. Skyline Dr.
Idaho Falls, ID 83402
Fax: (208)525-7177

Kent W. Foster, Esq.
HOLDEN KIDWELL HAHN
& CRAPO PLLC
P.O. Box 50130
Idaho Falls, ID 83405
Fax: (208)523-9518

Blair J. Grover, Esq.
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George Petersen, Esq.
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Fax: (208)524-3391

Breck H. Barton, Esq.
BRECK BARTON & ASSOC., PA
P.O. Box 100
Rexburg, ID 83440
Fax: (208)356-4882

Deborah Drew-Ellis
Legal Secretary

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BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF THE AMENDED APPLICATION FOR TRANSFER NO. 3553 OF WATER RIGHTS NOS. 32-00090, 32-00093 32-00068, 32-00061C, 32-00091, 32-00101, 32-00102, 32-00073, 32-00085, 32-00077 32-00086, 32-00078, 32-00087, and 32-00079 IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.	)	**CONTINUED NOTICE OF HEARING**
and	)	
IN THE MATTER OF APPLICATION FOR EXTENSION OF TIME TO AVOID FORFEITURE OF WATER RIGHT NO. 32-00101 IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.	)	

Notice is hereby given that the continued hearing in these matters will be held commencing on May 18, 1998, beginning at 9:30 a.m. at the Department of Environmental Quality Conference Room, located at 900 N. Skyline Dr., Idaho Falls, Idaho.

At the hearing commencing on May 18, 1998, the parties should be prepared for:

1. The testimony of Jack Barraclough;

2. Applicant's rebuttal testimony.

The hearing will be conducted in accordance with the provisions of Chapters 2 and 17, Title 42 and Chapter 52, Title 67, Idaho Code.

If you plan to offer exhibits for the record, note that IDAPA Rule of Procedure

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37.01.01606 requires that you provide a copy of exhibits to each party and to the presiding officer.

The hearing will be conducted in a facility which meets the accessability requirements of the Americans With Disabilities Act. If you require special accommodations in order to attend, participate in or understand the hearing, please advise the hearing officer within ten (10) days prior to the hearing.

DATED this 5th day of May, 1998.

Peter R. Anderson

PETER R. ANDERSON
Hearing Officer

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 5th day of May, 1998, I faxed and mailed a true and correct copy of the foregoing **CONTINUED NOTICE OF HEARING** on the following persons listed below by using the listed fax number and by U.S. mail, postage prepaid and addressed as follows:

Norman C. Young
Idaho Dept. of Water Resources
1301 N. Orchard St.
Boise, ID 83706

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Eastern Regional Manager
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Fax: (208)525-7177

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Breck H. Barton, Esq.
BRECK BARTON & ASSOC., PA
P.O. Box 100
Rexburg, ID 83440
Fax: (208)356-4882

Deborah Drew-Ellis

Deborah Drew-Ellis
Legal Secretary

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GROVER & ARCHIBALD
PO BOX 36
RIGBY ID 83442

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Sorenson 32-07128

4a. Article Number
7099322000055178835 4

4b. Service Type

☐ Registered	☑ Certified
☐ Express Mail	☐ Insured
☐ Return Receipt for Merchandise	☐ COD

7. Date of Delivery
12-7-00

5. Received By: *(Print Name)*
R Jones Archibald

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DEPARTMENT OF WATER RESOURCES
1301 N. ORCHARD ST.
BOISE, ID 83706-2237

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Department of Water Resources



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BRECK H BARTON ESQ
BRECK BARTON & ASSOC PLLC
PO BOX 100
REXBURG ID 83440

Sorenson 32-07128

4a. Article Number

70993220000551788361

4b. Service Type

☐ Registered ☑ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

5. Received By: *(Print Name)*

Diana Flores

8. Addressee's Address *(Only if requested and fee is paid)*

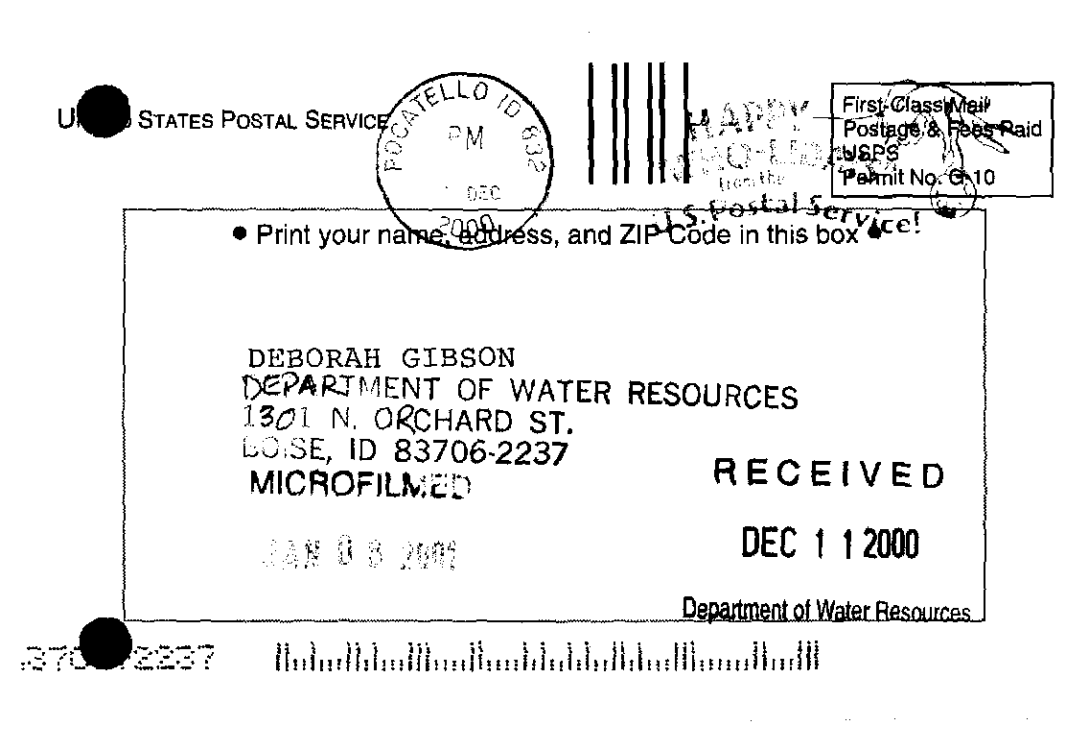
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DEPARTMENT OF WATER RESOURCES
1301 N. ORCHARD ST.
BOISE, ID 83706-2237
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2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

KENT W FOSTER ESQ
HOLDEN KIDWELL HAHN &
CRAPO PLLC
PO BOX 50130
IDAHO FALLS ID 8340

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Sorenson 32-07128

4a. Article Number

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4b. Service Type

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X Doug Croft

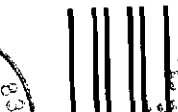
PS Form **3811**, December 1994

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DEBORAH GIBSON
DEPARTMENT OF WATER RESOURCES
[illegible] N. ORCHARD ST.
BOISE, ID 83706-2237

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Department of Water Resources

37[illegible]1680

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- Print your name and address on the reverse of this form so that we can return this card to you.
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GEORGE C PETERSEN JR ESQ
PETERSEN MOSS OLSEN
MEACHAM & CARR
485 "E" STREET
IDAHO FALLS ID 83

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Sorenson 32-07128

4a. Article Number
7099322000551788347

4b. Service Type

☐ Registered	☑ Certified
☐ Express Mail	☐ Insured
☐ Return Receipt for Merchandise	☐ COD

7. Date of Delivery
12/7/00

5. Received By: *(Print Name)*
Amy Kelsey

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PS Form **3811,** December 1994

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Department of Water Resources

DEBORAH GIBSON
DEPARTMENT OF WATER RESOURCES
1301 N. ORCHARD ST.
BOISE, ID 83706-2237

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JAN 0 8 2001

37[redacted]1620

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098
Phone: (208) 327-7900 FAX: (208) 327-7866

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

December 5, 2000

Re: Application for Permit No. 32-07128 and 32-07136, in the name of Ted Sorenson, dba Sorenson Engineering

Dear Interested Parties:

The Department of Water Resources (department) has issued the enclosed **Amended Preliminary Order Denying Exceptions and Approving Amendment** pursuant to section 67-5243, Idaho Code. **It can and will become a final order without further action of the Department unless a party petitions for reconsideration or files an exception and/or brief as described in the enclosed information sheet.**

Please note that water right owners are required to report any change of water right ownership and/or change of mailing address to the department within 120 days of the change. Failure to report these changes could result in a $100 late filing fee. Contact any office of the department or visit our homepage on the Internet to obtain the proper reporting form.

If you have any questions, please call me at (208)327-7953.

Sincerely,

Deborah J. Gibson

Deborah J. Gibson
Administrative Assistant
Water Allocation Bureau

Enclosures
Cc: Regional Office (w/enclosures)

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DEC 08 2000

CERTIFICATE OF SERVICE

All exceptions, briefs, requests for oral argument and any other matters filed with the Director in connection with the preliminary order shall be served on all other parties to the proceedings in accordance with Rules of Procedure 302 and 303.

FINAL ORDER

The Department will issue a final order within fifty-six (56) days of receipt of the written briefs, oral argument or response to briefs, whichever is later, unless waived by the parties or for good cause shown. The Director may remand the matter for further evidentiary hearings if further factual development of the record is necessary before issuing a final order. The department will serve a copy of the final order on all parties of record.

Section 67-5246(5), Idaho Code, provides as follows:

> Unless a different date is stated in a final order, the order is effective fourteen (14) days after its issuance if a party has not filed a petition for reconsideration. If a party has filed a petition for reconsideration with the agency head, the final order becomes effective when:
>
> (a) the petition for reconsideration is disposed of; or
> (b) the petition is deemed denied because the agency head did not dispose of the petition within twenty-one (21) days.

APPEAL OF FINAL ORDER TO DISTRICT COURT

Pursuant to sections 67-5270 and 67-5272, Idaho Code, if this preliminary order becomes final, any party aggrieved by the final order or orders previously issued in this case may appeal the final order and all previously issued orders in this case to district court by filing a petition in the district court of the county in which:

i. A hearing was held,
ii. The final agency action was taken,
iii. The party seeking review of the order resides, or
iv. The real property or personal property that was the subject of the agency action is located.

The appeal must be filed within twenty-eight (28) days of this preliminary order becoming final. See section 67-5273, Idaho Code. The filing of an appeal to district court does not itself stay the effectiveness or enforcement of the order under appeal.

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Responding To Preliminary Orders Issued By The Idaho Department Of Water Resources

The accompanying order is a **Preliminary Order** issued by the Idaho Department of Water Resources (department) pursuant to section 67-5243, Idaho Code. **It can and will become a final order without further action of the department unless a party petitions for reconsideration within fourteen (14) days after issuance as further described below:**

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a preliminary order with the hearing officer within fourteen (14) days of the service date of this order. The hearing officer will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See section 67-5243(3) Idaho Code.

EXCEPTIONS AND BRIEFS

Within fourteen (14) days after (a) the service date of a preliminary order, (b) the service date of a denial of a petition for reconsideration from this preliminary order, or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration from this preliminary order, any party may in writing support or take exceptions to any part of a preliminary order and may file briefs in support of the party's position on any issue in the proceeding to the Director. Otherwise, this preliminary order will become a final order of the agency.

If any party appeals or takes exceptions to this preliminary order, opposing parties shall have fourteen (14) days to respond to any party's appeal. Written briefs in support of or taking exceptions to the preliminary order shall be filed with the Director. The Director retains the right to review the preliminary order on his own motion.

ORAL ARGUMENT

If the Director grants a petition to review the preliminary order, the Director shall allow all parties an opportunity to file briefs in support of or taking exceptions to the preliminary order and may schedule oral argument in the matter before issuing a final order. If oral arguments are to be heard, the Director will within a reasonable time period notify each party of the place, date and hour for the argument of the case. Unless the Director orders otherwise, all oral arguments will be heard in Boise, Idaho.

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7099 3220 0005 5178 8361

Article Sent To: Brock H. Barton Esq.

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Total Postage & Fees	$

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Name (Please Print Clearly) (To be completed by mailer): Brock Barton & Assoc PA
Street, Apt. No.; or PO Box No.: PO Box 100
City, State, ZIP+4: Rexburg Id 83440

PS Form 3800, July 1999 — See Reverse for Instructions

U.S. Postal Service
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Article Sent To: Kent W Foster Esq

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Name (Please Print Clearly) (To be completed by mailer): Holden Kidwell Hahn et al
Street, Apt. No.; or PO Box No.: PO Box 50130
City, State, ZIP+4: Idaho Falls Id 83405

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Article Sent To: George C Petersen Jr Esq

Postage	$
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Return Receipt Fee (Endorsement Required)	
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Total Postage & Fees	$

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Name (Please Print Clearly) (To be completed by mailer): Petersen Moss, Olsen, etal
Street, Apt. No.; or PO Box No.: 485 "E" St.
City, State, ZIP+4: Id. Falls Id. 83402

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Article Sent To: Blair Grover Esq

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here: 12/5/00 dg

Name (Please Print Clearly) (To be completed by mailer): Grover & Archibald
Street, Apt. No.; or PO Box No.: PO Box 36
City, State, ZIP+4: Rigby Id 83442

PS Form 3800, July 1999 — See Reverse for Instructions

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December 5, 2000

Copies of all Orders must be forwarded to:

IDWR NORTHERN - Bob Haynes

SOUTHERN - Allen Merritt

EASTERN - Ron Carlson / Skip Jones

WESTERN - Gary Spackman

SALMON OFFICE - Bob Foster

Legal Division - Phil Rassier

Adjudication Bureau - Dave Tuthill

Information Officer - Dick Larsen

Water Allocation Bureau - Glen Saxton

Water Distribution Section - Tim Luke

Water Permits Section - Jeff Peppersack / Shelley Keen

Administration - Norm Young

Planning - Bill Graham

AG's Office - David Barber (Only regarding Payette River, aka Basin 65)

One copy is routed to:

Darla Block
Sharla Curtis
Pam Skaggs
Kay Walker
Kari Lynn Townsend
Vault

Cindy Hodges
Jane Tallman
Burke Scholer
Dayna Ball

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DEC 0 4 2000
Department of Water Resources

Sorenson Engineering
5203 South 11th East
Idaho Falls, Idaho 83404
Phone: (208) 522-8069
Fax: (208) 522-8223
e-mail: sorenson@ida.net

November 30, 2000

Glenn Saxton, P.E. Chief
Water Allocation Bureau
State of Idaho
Department of Water Resources
1301 North Orchard Street
P.O. Box 83720
Boise, Id 83720-0098

RE: Preliminary Order Permits No. 32-07128 and No. 32-07136

Dear Mr. Saxton:

This letter responds to your letter of November 20, 2000 requesting appropriate documentation from the Bureau of Land Management. Enclosed please find a copy of the original EA No. ID-03-9-46 with areas highlighted concerning the "drip system".The drip system was installed in an attempt to keep alive mature birch trees in the old river channel. The attempt was recognized prior to starting as experimental. Therefore, provision was made to increase the pond area if the drip system didn't work. I have installed the increased pond area.

Yearly, I prepare a Monitoring Report and submit to the Bureau of Land Management for use in approval of compliance of EA-030-9-46. Attached is a copy of the 2000 Monitoring Report submitted to the Bureau of Land Management. Also Attached, is a copy of the letter dated November 27, 2000 from Mr. Pat Koelsch of the Bureau of Land Management documenting compliance with the EA. In the Monitoring Report I have highlighted the areas concerning the drip system. The current drip system is not maintaining the mature birch trees but is merely keeping some growth at the base alive. The Monitoring Report also documents that we have already increased the size of the ponds to a total area in excess of 2.46

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acres. I Trust this to provide sufficient documentation. If additional information is needed please let me know.

Very Truly Yours,

Ted S. Sorenson, P.E.

TSS/ptj
Encs.
c: Kent Foster
George C. Peterson
Blair Grover
Breck Barton
Ronald D. Carlson

C:\My Documents\Word Perfect\Ted's Letters\Saxton.ltr.wpd

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JAN 0 8 2001

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Upper Snake River Districts
Idaho Falls Field Office
1405 Hollipark Drive
Idaho Falls, Idaho 83401-2100

In Reply Refer To:
6700

November 27, 2000

Birch Power Co.
5203 South 11th East
Idaho Falls, Idaho 83404

Dear Mr. Sorenson:

I have reviewed your 2000 monitoring report for the "Alternative Flow Mitigation" for the Birch Creek Hydropower Project and concur that the 2000 operation was in compliance with the Environmental Assessment (ID-030-9-46) and is acceptable to the Bureau of Land Management for this calendar year. The installation of the water screen in 1996 appears to have solved our nozzle fouling problem as the system operated without a hitch during the field season. Maintaining a good, constant water surface elevation in the ponds kept the plantations fully saturated producing good plant growth and vigor. There was no significant drying out of the plantations as experienced in the past during periodic mechanical failures (i.e. line clogging). The growth on the woody vegetation was excellent in 1999 and 2000. We finally appear to be meeting the mitigation objectives for the project in the replacement of shrub canopy lost on lower Birch Creek from the hydropond downstream to the old Reno Ditch diversion.

If you have any questions or suggestions for improving the project, please contact me at 208-524-7528.

Thank you for your diligent effort and cooperation in making this riparian mitigation project a success. Keep up the good work.

Sincerely yours

Patrick K. Koelsch

Patrick K. Koelsch
Fishery Biologist
Idaho Falls Field Office

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT
IDAHO FALLS DISTRICT OFFICE
940 LINCOLN ROAD
IDAHO FALLS, IDAHO 83401

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

I-1609.1
Amendea

February 21, 1990

Ted Sorenson
Sorenson Engineering
550 Linden Dr.
Idaho Falls, Idaho 83401

Dear Mr. Sorenson,

Enclosed is the environmental assessment for the proposed alternative minimum flow mitigation associated with the Birch Creek Hydro Project. The proposal has been reviewed by the Region 6 Idaho Fish and Game Department Office, but as of this date we have not received written comments from them.

Based on this assessment the proposal appears to be a viable project that would result in long term improvement of the riparian/wetland complexes in Lower Birch Creek. Our concurrence with the project is provided in the attached Decision/Rationale Statement.

As we have discussed the mitigation work will be constructed on BLM administered land and will be considered BLM property. Therefore a Right-of-Way will not be required. Maintenance will remain the responsibility of Birch Power as per the attached decision statement.

We will plan on working with you during the final on the ground design and construction phases.

Sincerely,

Lofty Cook

Lofty Cook
Area Manager
Big Butte Resource Area

attachment

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JAN 0 8 2001

FINDING OF NO SIGNIFICANT IMPACT

AND

DECISION/RATIONALE

EA Number: ID-030-9-46
EA Name: Lower Birch Creek Mitigation

Environmental Compliance:

The environmental document has been analyzed and a finding of no significant impact has resulted. Therefore, it is concluded that the proposed action would not significantly affect the quality of the human environment. Preparation of an environmental impact statement pursuant to Section 102(2)(c) of the National Environmental Policy Act of 1969 is not required to proceed with the proposed action.

Decision and Rationale:

I have received the environmental assessment and have determined that the proposed action would provide improved mitigation for Lower Birch Creek. Based on this review and my personal knowledge of the area, my decision is to accept the proposed action with the following stipulations:

1. Birch Power Company will obtain written concurrence or authorization from FERC, Idaho Department of Fish and Game, and Idaho Department of Water Resources prior to taking any action on this proposal.

2. The 5 cfs minimum flow will continue to be delivered to Lower Birch Creek until the mitigation pond system (2.0 acres) and drip system (0.46 acre) is in place and operational.

3. The drip system will be monitored and if determined to be in adequate to maintain the existing birch trees (within 600 feet below the diversion) an additional 0.46 acres of riparian pond system will be developed by Birch Power).

4. Birch Power will be responsible for construction, operation, and maintenance of the mitigation development.

5. Should the mitigation proposed fail to provide adequate aquatic/riparian habitat (as specified in proposal) due to improper design and construction or lack of necessary maintenance, the minimum flow requirement will be reinstated.

Approved By: Lee K. Cook
Area Manager

11 Jan 90
Date

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A. Purpose and Need

The Birch Creek Hydro Power project was constructed in late 1986. The development involved diverting Birch Creek proper from its original channel at a point about 5000* feet above the existing diversion. Water was then routed through a system of open canals and a buried penstock to the turbine at Reno Point. As a result of this action approximately 5000* feet of lower Birch Creek was dewatered (see EA ID-030-5-340).

As partial mitigation for the potential loss of riparian vegetation, wildlife habitat, and livestock water, Birch Power Company was required by FERC License No. 7194.001, Article 404, and BLM right-of-way I-19684 to discharge from the Birch Creek project a continuous flow of 5 CFS or 11 percent of the flow of Birch Creek (whichever is less) to the old Birch Creek channel immediately below the diversion. This requirement was based on the assumption that specified flows would be sufficient to provide stockwater and at least temporarily maintain the riparian system in the dewatered segment of Birch Creek below the hydro diversion to the Reno Ditch. In addition, it was anticipated that riparian vegetation would increase for about one mile below the Reno diversion.

After three years of project operation and a detailed evaluation of maintenance flows (Jensen, 1988), it has become apparent that this quantity of water delivered through the old channel system will not preserve riparian habitat in the dewatered segment. Water flows during the three summer periods have only reached a short distance (1400-2600 feet) below the hydro diversion before sinking into the substrate. This is resulting in a loss of riparian vegetation and unreliable livestock water.

In view of this situation, it was felt that an alternative course of action would result in more effective mitigation of the resources of lower Birch Creek. This environmental assessment addresses that proposal.

B. Description of the Proposed Action and Alternatives

1. Proposed Action

The proposed action consists of eliminating the 3-5 CFS (1347-2245 gpm) minimum flow down the segment of lower Birch Creek below the hydro diversion. In lieu of this requirement, Birch Power Company would provide funds and water in the amount necessary to develop and maintain 2.46** acres of aquatic/riprian habitat. (Map 1)

The major components of the plan are installation of approximately 6000 feet of buried water pipeline, construction of six to eight pond/riparian systems (2.0 acres), development of approximately 1000 feet of drip irrigation system (0.46 acres), construction of approximately 1 1/4 miles of fence and development of one livestock watering facility (Figure 1).

* The distance was calculated at 3,500' in EA ID-030-5-340. The more recent study by Jenson 1988, was based on a distance of 5,000'. This latter figure will be used for consistency in this EA.
** Based on a replacement and loss ratio of 1.5 to 1.0.

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Map 1

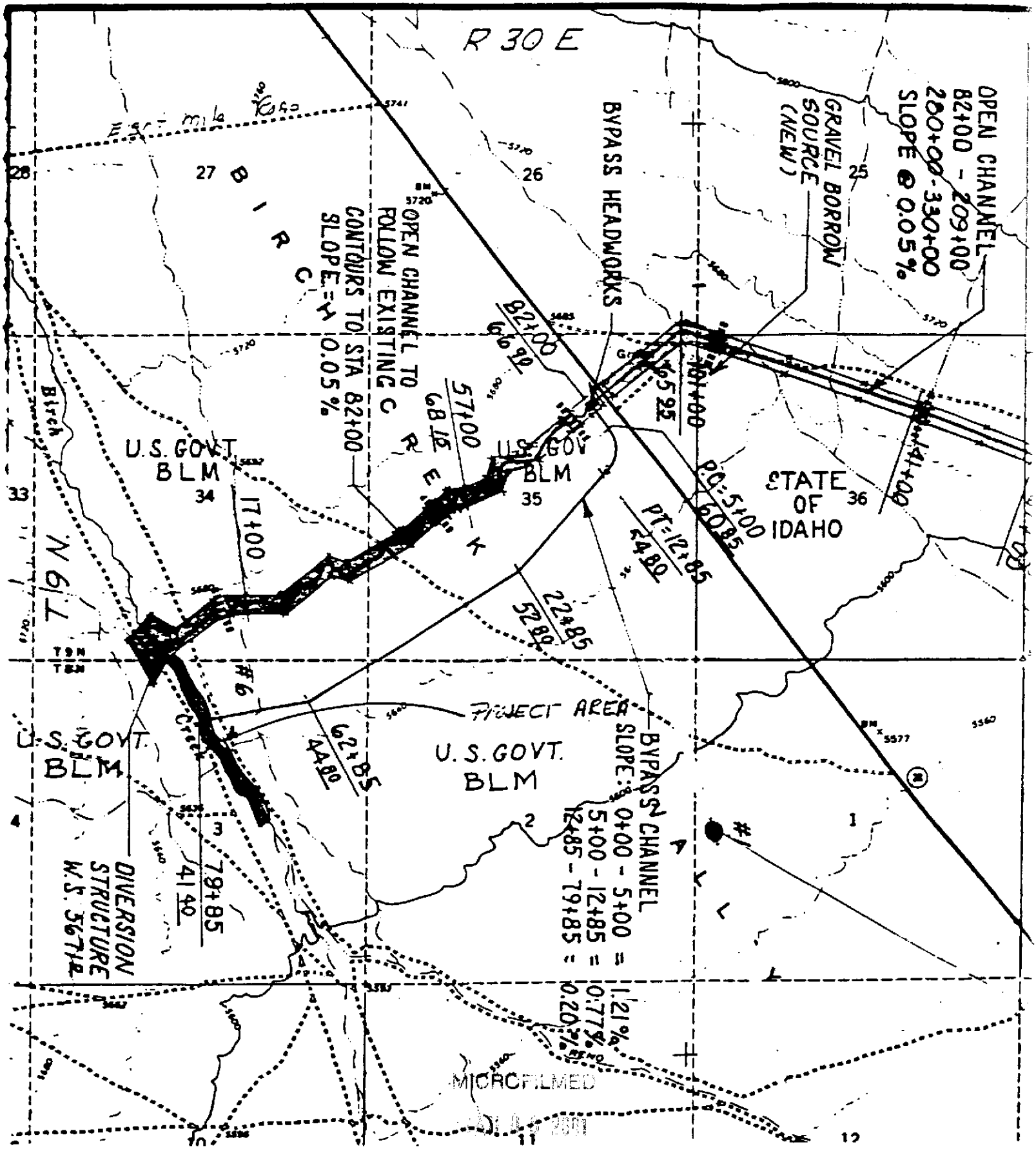
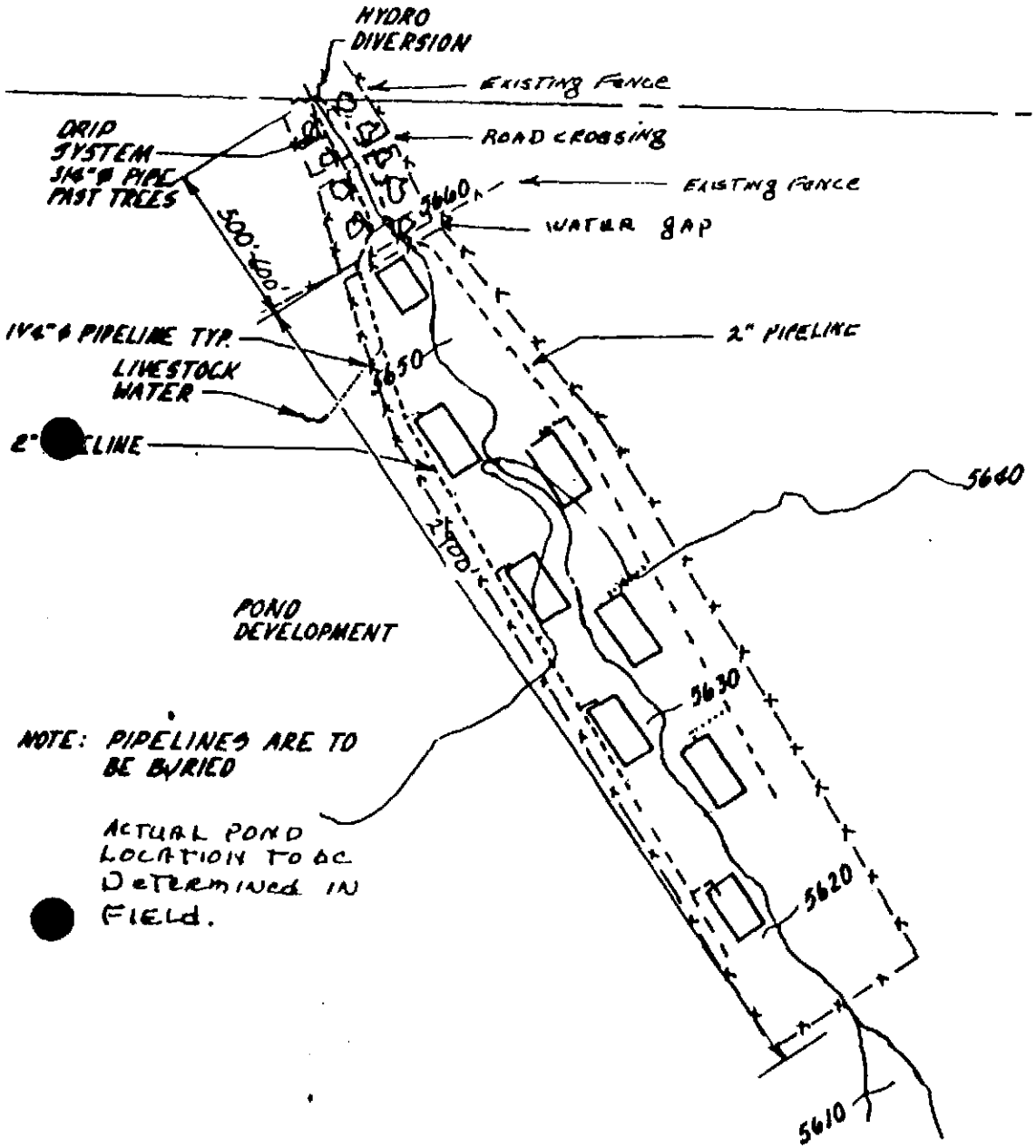
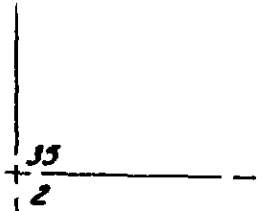

R 30 E
OPEN CHANNEL
82+00 - 209+00
260+00 - 330+00
SLOPE @ 0.05%
GRAVEL BORROW SOURCE (NEW)
BYPASS HEADWORKS
OPEN CHANNEL TO FOLLOW EXISTING C
CONTOURS TO STA 82+00
SLOPE = 0.05%
82+00
66 92
57+00
68 15
17+00
U.S. GOVT BLM
34
35
36
STATE OF IDAHO
P.C. 5+00
60 85
P.T. 12+85
48 80
22+85
52 89
62+85
48 80
78+85
41 40
PROJECT AREA
U.S. GOVT. BLM
DIVERSION STRUCTURE W.S. 56712
BYPASS CHANNEL SLOPE:
0+00 - 5+00 = 1.21%
5+00 - 12+85 = 10.77%
12+85 - 79+85 = 0.20%
#1
#6
N 6 L
T 9 N
T 8 E
Birch
Creek
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Figure 1





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BIRCH CREEK POND RIPARIAN LAYOUT

1" = 400'

a. The pipeline system will be designed to deliver water from the hydro diversion pond to the various components of the mitigation plan. The pipe will be laid using a crawler tractor with a ripper and pipe laying attachment to minimize the amount of surface disturbance.

b. The six to eight pond/riparian systems will be located adjacent to the existing stream channel and lined with PVC liner to prevent seepage loss. The pond configuration and back filling sequence is designed to provide suitable conditions for the development of aquatic and riparian habitat (Figure 2). A variety of adapted species will be planted to ensure rapid development of the system. Species to be seeded in the shallow water zone will include sedges, rushes, and bullrushes. The saturated upland soil will be planted to Black Birch, aspen, willow, and various grasses and forbs. The objective is to create vegetation complexes similar to pre-existing habitat types on Lower Birch Creek.

It is estimated that a lined system 50' X 200' will require a continuous flow of 1.5 gallon per minute to compensate for evaporation/ transpiration losses during the spring/summer/fall period. To provide water circulation and prevent salt build up. A flow of 2-3 gpm will be discharged into the pond system.

Construction will involve excavation of the pond area, placing the liner, and back-filling over the liner with the appropriate type and depth of substrate material. The water inflow pipe will be installed during initial construction. Any overflow waters will be piped to adjacent riparian areas or Birch Trees. The entire pond complex will be fenced to exclude livestock use. The fence will be designed to allow for antelope passage.

c. The proposed drip system will be developed to try and maintain a portion of the existing mature Birch. The Drip System will be state of the art using the most feasible design to accomplish the objectives. If the drip system does not prove to be effective an additional 0.46 ac of pond system will be developed.

d. One livestock watering facility will be constructed (Figure 1). It will consist of a standard five trough development.

e. At a minimum, 2.46 acres of aquatic/riparian habitat will be developed. This quantity represents 0.82 acres more than the amount of riparian habitat that would be sustained under the current maintenance flow requirement. (2.46 - 1.64 (acreage maintained under m.m. flow) = 0.82 acre)

f. The pond system will extend as near as possible to the existing Reno Ditch Diverson Point. Actual location of ponds will depend on site condition and excavation opportunities.

g. Diversion of the excess minimum flow water into the hydro canal system would take place after the new riparian system is in place and operational.

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BIRCH POWER CO.
5203 South 11th East
Idaho Falls, Idaho 83404
Phone: (208) 522-8069
Fax: (208) 522-8223
e-mail: sorenson@ida.net

November 9, 2000

Mr. Joe Kraayenbrink
c/o Pat Koelsch
Bureau of Land Management
U.S. Department of the Interior
1405 Hillipark Drive
Idaho Falls, ID 83401-2100

Re: ~~1998~~ 2000 BIRCH CREEK MONITORING REPORT FERC NO. 7194 BLM RIGHT-OF-WAY 16984, ALTERNATIVE MINIMUM FLOW MITIGATION FOR CALENDAR YEAR 2000 IN ACCORDANCE WITH EA ID-030-9-46 DATED FEBRUARY 21, 1999

Gentlemen:

Enclosed is a copy of the 2000 Monitoring Report together with photographs. If everything looks okay with you, I would appreciate receiving a letter stating that the alternative minimum flow mitigation is in compliance with EA and is acceptable to you for this calendar year.

If you have any suggestions for improvements to the project, please let me know. Thank you (and Pat Koelsch) for your help and cooperation.

Very Truly Yours,

Ted S. Sorenson, P.E.
Project Owner

TSS/ptj
Enc.

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JAN 3 0 2001

MONITORING REPORT

November 2000

RE: BIRCH CREEK HYDRO, FERC NO. 7194, BLM Right-of-way 16984 Monitoring Report, Alternative Minimum Flow Mitigation for Calendar Year 2000

The following is an assessment of the compliance with the requirements of the BLM, Environmental Assessment (EA), dated February 21, 1990, EA Number: ID-030-9-46.

1. Pipeline system to deliver water from the diversion pond to the various components. Pipeline system which consists of a sic-inch pipeline the entire length of the project together with 1 1/4" feed to each of the seven ponds is in place and continues to function adequately. A new improved screen was placed over the inlet structure in 1996. Also, a cylindrical filter was placed in the pipeline to eliminate any debris greater than 1/32-inch in diameter in 1996. This system virtually eliminated any plugging of the nozzle water supply to the ponds throughout 1996, 1997 and 1998.

2. Six to eight pond riparian systems with a total of 2.0 acres. The seven pond riparian systems have an actual measured acreage as follows:

	Actual Acres
Pond #1	0.35
#2	0.37
#3	0.40
#4	0.30
#5	0.45
#6	0.38
#7	0.43
Total	2.68 acres

The required minimum acres under the EA is 2.0 acres.

Each system is in place and each system has a feed system to deliver continuous flow of approximately 7 gallons per minute to each pond. Problems were experienced in late 1994 with plugging of the water feed line at the isolation valve. In 1995, free flow nozzles were sized and installed. They are functioning well. Problems with nozzle plugging due to vandalism and/or natural plugging were encountered in the Spring of 1996. Improvements to the screening have alleviated these problems. The fence around the entire area is in place and continues to function properly.

Trees and shrubs were planted in the riparian areas in the fall of 1990 and the spring of 1991 in accordance with the EA. The following is a listing of the trees planted:

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SPECIES	NUMBER
Quaking Aspen Populus Tremuloides	158
Water Birch Betula Occidentalis	21
Alder Alnus Incana	21
Yellow Willow Salix Rigida	80
Coyote Willow Salix Exiqua	20
Red-Osier Dogwood Cornus Stolonifera	30
Shrubby Cinqfoil Portentilla Fruticosa	20
Swamp Birch Betula Pumula	15
Aspen	18
Ferment Poplar	6
Dogwood	36
Shrubby Cinqufoil	24

Additional plantings in the spring of 1992 included:

Cottonwoods	50
River Birch	50
Willow	50

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Additional plantings in 1995 included:

Golden Willow	25
Chokecherry	50
Cottonwoods	20
Dogwoods	50
Alder	50
River Birch	150

Additional plantings in 1996 included:

Golden Willow	20
River Birch	30

Additional plantings in 1997 included:

Golden Willow	15
Chokecherry	15

Additional Poplar plantings were planned for 1999 in the overflow areas of the ponds.

The additional plantings in 1997 were made to enhance the vegetation. Volunteer River Birch continue to grow in Ponds 5, 6 and 7. This is the only place on Birch Creek to be observed by BLM. In 1996 water levels in Ponds #1, #2, #3, and #4 were raised to soak water to the upper end of the "riparian areas". This has worked well in 1997 and 1998.

3. Drip System. The emitters were removed and a continuous stream to wet the area was implemented in 1992. The Birch trees with dead tops are growing from below, but not regeneration. The drip system and the pond overflow system is currently maintaining an area of approximately 0.2 acres. The drip system will be allowed to continue running as in the past year. The new screens installed in 1996 have improved the water flow in the drip system.

4. Install livestock water and facility with five troughs. This is installed and operational.

5. Maintain a minimum of 2.46 acres of aquatic riparian habitat. The pond/riparian area is

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2.68 acres. The drip system area is 0.3 to 0.5 acres. Therefore, the total area is approximately 2.88 acres which is well above the 2.46 acres required. The EA called for additional pond/riparian area above 2.0 acres if the "experimental" drip system maintained less than 0.46 acres. This has already been accomplished.

6. Extend the pond system as near as possible to the old Reno ditch diversion point. This has been accomplished.

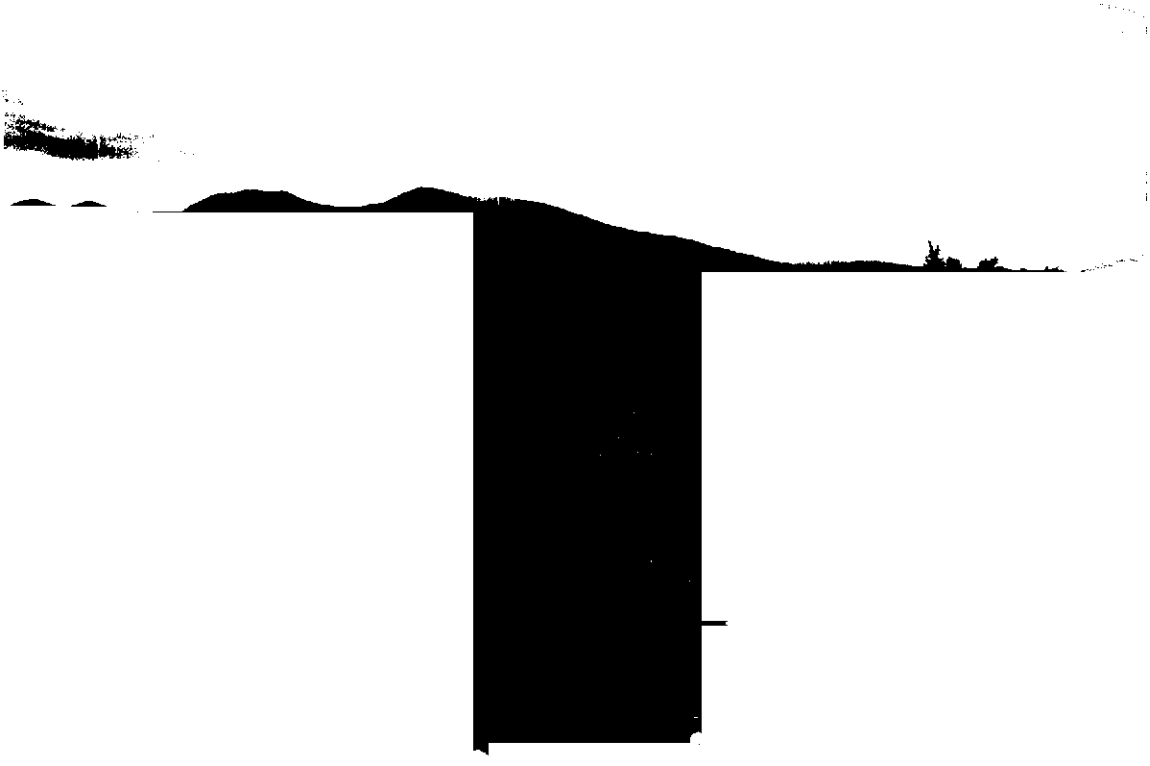
7. Diversion of excess minimum flow into the hydro canal would take place after the riparian system is in place and operational. This has been accomplished.

8. All areas disturbed during construction to be recontoured, retopsoiled and seeded to adapted species. This has been accomplished. Reseeding at Pond #2 disturbance will be accomplished this fall.

Conclusion

The mitigation is in compliance with the original EA report.

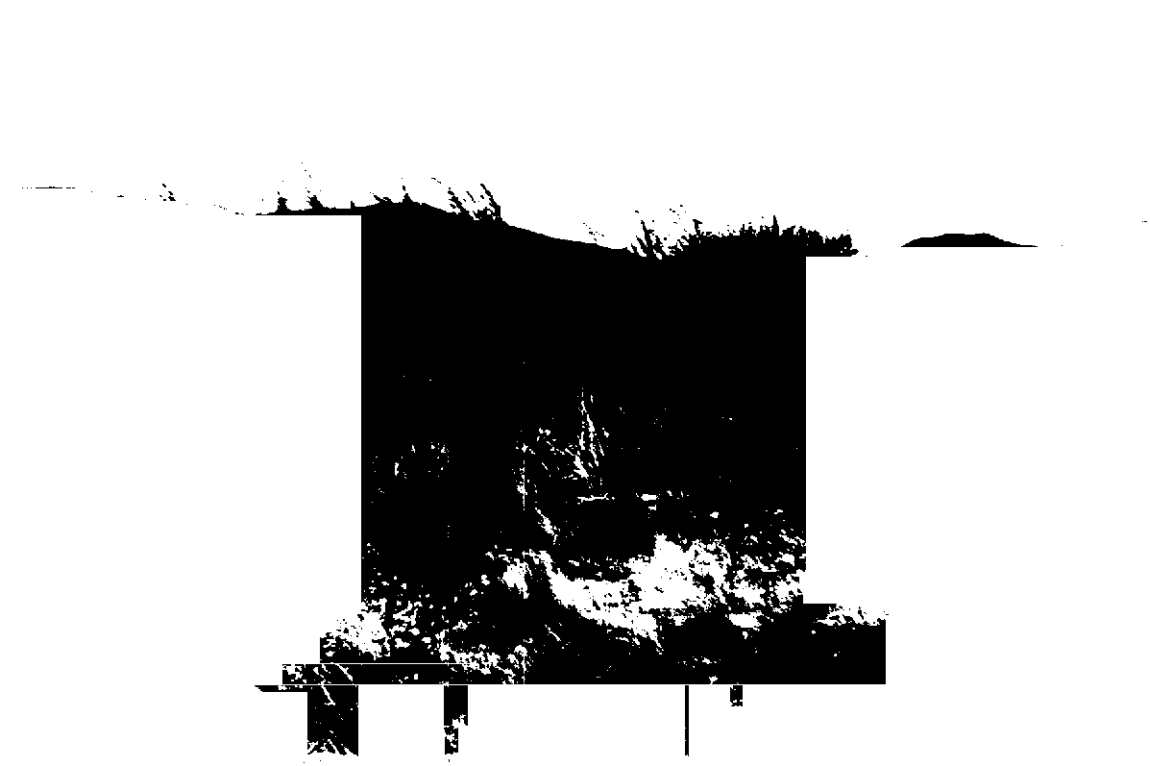
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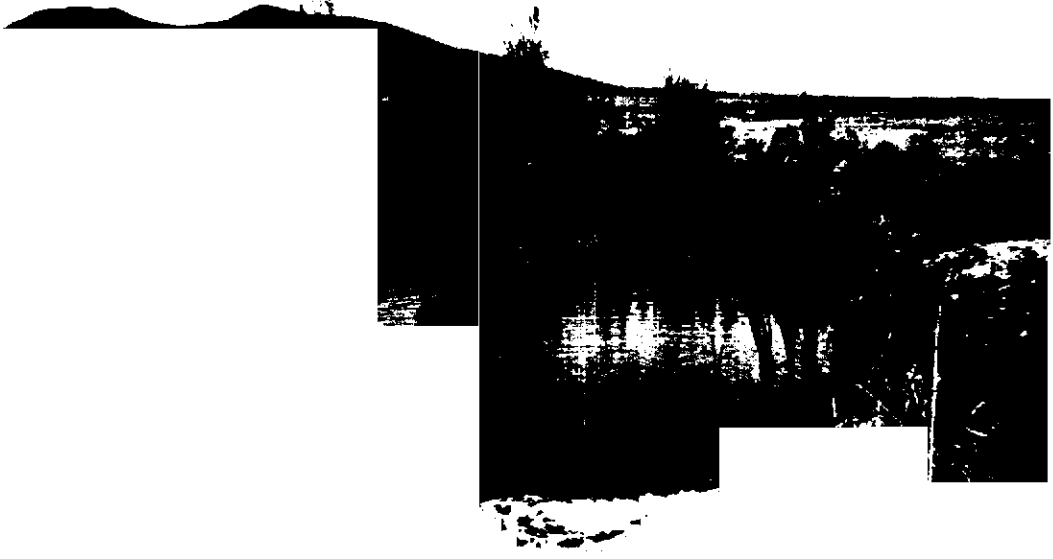






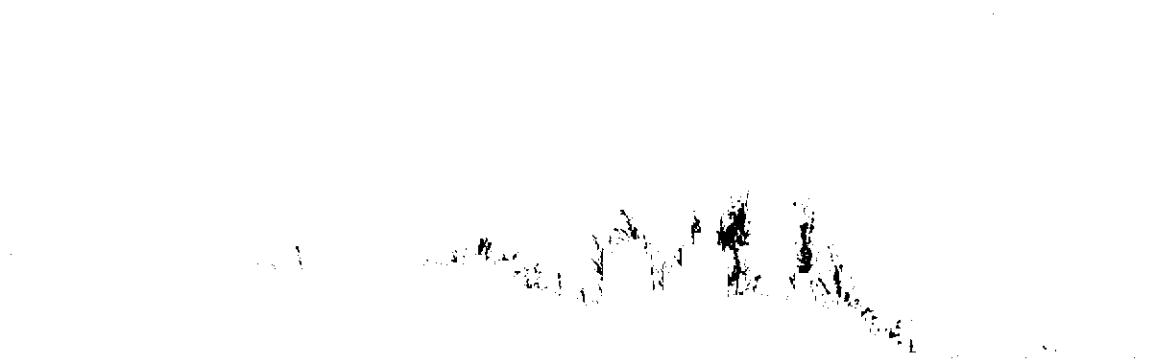


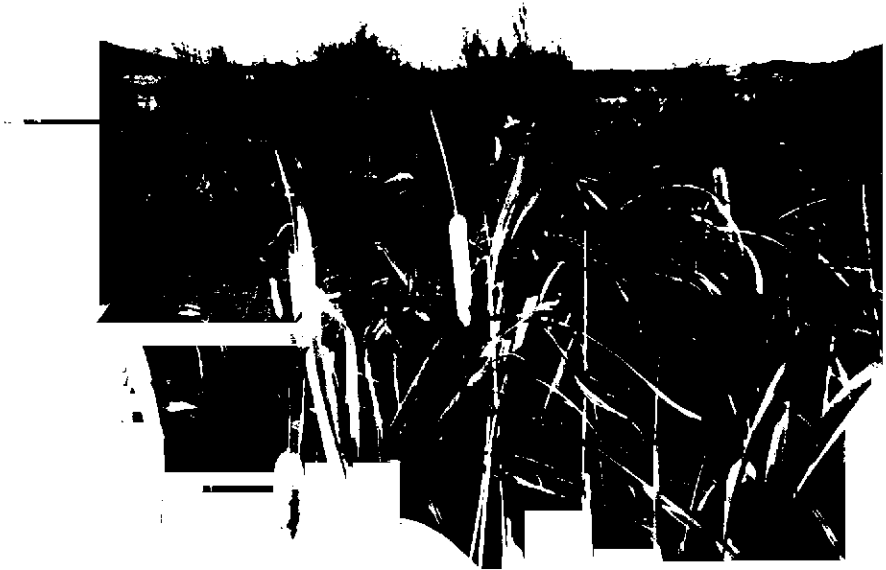












State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098
Phone: (208) 327-7900 FAX: (208) 327-7866

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

November 20, 2000

Kent W. Foster
HOLDEN KIDWELL HAHN
& CRAPO PLLC
P.O. Box 50130
Idaho Falls, ID 83405

RE: PRELIMINARY ORDER - PERMIT NOS. 32-07128 AND 32-07136

Dear Mr. Foster:

On November 17, 2000, Ted S. Sorenson filed a Petition for Reconsideration ("petition") in connection with the above referenced Preliminary Order issued by the Department on November 3, 2000. The letter shows that Mr. Sorenson sent a copy of the petition to you and to the other parties in the matter.

Please provide to me appropriate documentation from the Bureau of Land Management to support Mr. Sorenson's statements that the apparent change to the requirements of EA Number ID-030-9-46 by Mr. Sorenson is satisfactory with the BLM. The change, as I understand the petition, is that Mr. Sorenson has constructed an additional 0.46 acres of pond area and has abandoned the drip irrigation system that was intended to support 0.46 acres of riparian habitat.

If you have questions, please feel free to contact me.

Sincerely,

L. GLEN SAXTON, P.E.
Chief, Water Allocation Bureau

c: George C. Peterson
Blair Grover
Breck H. Barton
Ronald D. Carlson

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RECEIVED
NOV 17 2000
Department of Water Resources

Sorenson Engineering, P.A.
5203 South 11th East
Idaho Falls, Idaho 83404

Phone: (208) 522-8069
Fax: (208) 522-8223
e-mail: sorenson@ida.net

November 9, 2000

L. Glen Saxton, Chief
Water Allocation Bureau
Idaho Dept. of Water Resources
900 N. Skyline Drive, Suite A
Idaho Falls, ID 83402-1718

Re: Petition For Reconsideration, In the matter of applications for amendment of Permits No. 32-07128 and 32-07136 in the name of Ted S. Sorenson, dba, Sorenson Engineering

Dear Mr. Saxton:

This Petition For Reconsideration is based upon new condition of approval No. 4.

The permit holder shall develop and maintain the pond and irrigation system that utilizes .011 cfs of water described in the Bureau of Land Management's "Findings of No Significant Impact and Decision/Rationale." EA Number ID-030-9-46. (January 11, 1990) includling but not limited to:

- *6 to 8 ponds below the hydropower diversion that create **2** acres of riparian habitat, and*
- *A 1000 foot drip irrigation system that supports **0.46** acres of riparian habitat.*

The EA considered the drip irrigation system an experiment and if the experiment did not work than we were to make up the area with the ponds. The drip irrigation system has not worked, therefore, we have made it up with the ponds, therefore, I ask reconsideration to modify the new condition as condition 4 as follows:

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The permit holder shall develop and maintain the pond and irrigation system that utilizes 0.11 cfs of water described in the Bureau of Land Management's "Findings of No Significatn Impact and Decision/Rationale," EA Number ID-030-9-46 (January 11, 1990) including but not limited to:

- *6 to 8 ponds below the hydropower diversion that creates **2.46** acres of riparian habitat.*

Your consideration in this matter is sincerely appreciated.

Very Truly Yours,

Ted S. Sorenson, P.E.

TSS/ptj
c: Kent W. Foster, Esq.
George C. Petersen, Jr, Esq.
Blair Grover, Esq.
Breck H. Barton, Esq.
Ronald D. Carlson

C:\My Documents\Word Perfect\Sorenson Eng\Sacton1.ltr.wpd

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November 3, 2000

Copies of all Orders must be forwarded to:

IDWR NORTHERN - Bob Haynes

SOUTHERN - Allen Merritt

EASTERN - Ron Carlson / Skip Jones

WESTERN - Gary Spackman

SALMON OFFICE - Bob Foster

Legal Division - Phil Rassier

Adjudication Bureau - Dave Tuthill

Information Officer - Dick Larsen

Water Allocation Bureau - Glen Saxton

Water Distribution Section - Tim Luke

Water Permits Section - Jeff Peppersack / Shelley Keen

Administration - Norm Young

Planning - Bill Graham

AG's Office - David Barber (Only regarding Payette River, aka Basin 65)

One copy is routed to:

Darla Block
Sharla Curtis
Pam Skaggs
Kay Walker
Kari Lynn Townsend
Vault
Cindy Hodges
Jane Tallman
Burke Scholer
Dayna Ball

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State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098
Phone: (208) 327-7900 FAX: (208) 327-7866

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

November 3, 2000

Re: Application for Amendment of Permit Nos. 32-07128 and 32-07136, in the name of Ted Sorenson, dba Sorenson Engineering

Dear Interested Parties:

The Department of Water Resources (department) has issued the enclosed **Preliminary Order** pursuant to section 67-5243, Idaho Code. **It can and will become a final order without further action of the Department unless a party petitions for reconsideration or files an exception and/or brief as described in the enclosed information sheet.**

Please note that water right owners are required to report any change of water right ownership and/or change of mailing address to the department within 120 days of the change. Failure to report these changes could result in a $100 late filing fee. Contact any office of the department or visit our homepage on the Internet to obtain the proper reporting form.

If you have any questions, please call me at (208)327-7953.

Sincerely,

Deborah J. Gibson

Deborah J. Gibson
Administrative Assistant
Water Allocation Bureau

Enclosures
Cc: Regional Office (w/enclosures)

MORTGAGED

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION)
FOR AMENDMENT OF PERMIT NOS.)
32-07128 AND 32-07136 IN THE NAME)
OF TED SORENSON DBA SORENSON)
ENGINEERING)
_____)

PRELIMINARY ORDER DENYING EXCEPTIONS AND APPROVING AMENDMENT

FINDINGS OF FACT

1. On March 27, 1985, the Department of Water Resources ("Department") issued Permit No. 32-07128 ("permit") in the name of Birch Power Company as follows:

Source:	Birch Creek
Priority:	September 8, 1982
Rate of diversion:	45 cubic feet per second ("cfs")
Point of diversion:	NE1/4NW1/4 Section 3, T8N, R30E, B.M., Clark County
Use:	Power production
Season of use:	year-round
Place of use:	NE1/4NE1/4 Section 17, T8N, R31E, B.M.,
Conditions of approval:	Several including the requirement to leave 11% of the flow of Birch Creek or 5 cfs, whichever is smaller to flow past the feeder canal diversion and to remain in the natural channel of Birch Creek

2. On March 27, 1985, the Department also issued Permit No. 32-07136 ("permit") in the name of Birch Power Company as follows:

Source:	Birch Creek
Priority:	January 3, 1984
Rate of diversion:	30 cubic feet per second ("cfs")
Point of diversion:	NE1/4NW1/4 Section 3, T8N, R30E, B.M., Clark County
Use:	Power production
Season of use:	year-round
Place of use:	NE1/4NE1/4 Section 17, T8N, R31E, B.M.
Conditions of approval:	Several including the requirement to leave 11% of the flow of Birch Creek or 5 cfs, whichever is smaller to flow past the feeder canal diversion and to remain in the natural channel of Birch Creek.

3. On August 21, 1986, Birch Power Company assigned the permits to Ted S. Sorenson, DBA Sorenson Engineering ("permit holder").

4. On February 15, 1989, the permit holder submitted proof of beneficial use of water to the Department together with a completed beneficial use field report for each permit.

5. On May 1, 1990, the permit holder submitted an application for amendment ("application") of each permit. The amendment proposed to remove the requirement to bypass 5 cfs or 11% of the flow of Birch Creek down the old Birch Creek channel. The application was protested by D&D Enterprises c/o George C. Peterson, Mac and Betty Wagoner c/o Breck Barton, and Elda H. Wilding c/o Jerry Rigby ("protestants"). LaVar and Louise Newman (intervenor") c/o Blair Grover were allowed to intervene in the matter. The protest of Elda H. Wilding was subsequently dismissed.

6. On May 18, 1998, a hearing officer for the Department conducted a hearing in the contested matter and on September 10, 1998 issued a Recommended Decision and Order approving the application with certain conditions.

7. On September 28, 1998, protestants LaVar Newman and D&D Enterprises filed petitions for reconsideration with the hearing officer, which petitions were denied on October 19, 1998 by the hearing officer.

8. On October 26, 1998, protestant LaVar Newman filed exceptions to the Recommended Decision and Order and on October 28, 1998, protestant D&D Enterprises also filed exceptions to the Recommended Decision and Order.

9. On January 19, 1999, the applicant, protestants and intervenor entered into a Settlement Agreement prior to the issuance of a Final Order by the Director. In the Settlement Agreement, protestants withdrew their protests based on certain stipulated actions of the various parties.

CONCLUSIONS OF LAW

1. Section 42-211, Idaho Code, authorizes the Director of the Department to approve amendments of existing permits.

2. The application will not result in the diversion of more water than originally permitted.

3. The application will not adversely affect the rights of others, if the approval is adequately conditioned.

4. The Department should approve the application with certain conditions.

ORDER

IT IS THEREFORE HEREBY ORDERED as follows:

1. Protestant LaVar Newman's Exceptions filed on October 28, 1998 to the Recommended Decision and Order are **DENIED**.

2. D&D Enterprise, Inc's Exceptions filed on October 28, 1998 to the Recommended Decision and Order are **DENIED**.

IT IF FURTHER HEREBY ORDERED that Application for Amendment of Permit Nos. 32-07128 and 32-07136 in the name of Ted S. Sorenson, DBA Sorenson Engineering is **APPROVED** subject to the following conditions:

1. Condition of Approval 4 on the original permits is rescinded.

2. A new Condition of Approval 4 shall apply to the permits as follows:

   4. The permit holder shall develop and maintain the pond and irrigation system that utilizes 0.11 cfs of water, described in the Bureau of Land Management's "Findings of No significant Impact and Decision/Rationale," EA Number ID-030-9-46 (January 11, 1990) including but not limited to:

   - 6 to 8 ponds below the hydropower diversion that create 2 acres of riparian habitat, and

   - A 1000 foot drip irrigation system that supports 0.46 acres of riparian habitat.

   Or, in the alternative,

3. A new Condition of Approval 14 shall apply to the permits as follows:

   14. If the permit holder does not comply with Condition of Approval 4 in this Preliminary Order, the permit holder shall forthwith build and maintain a gate in the hydropower diversion located in NE1/4NW1/4 Section 3, T8N, R30E, B.M. and shall allow 11% of the flow of Birch Creek or 5 cfs, whichever is smaller to flow past the feeder canal diversion on Birch Creek, said water to remain in the natural channel of Birch Creek.

Dated this 3rd day of November, 2000.

L. GLEN SAXTON, Chief
Water Allocation Bureau

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 3rd day of November, 2000, the above and foregoing document was served upon the following by placing a copy of the same in the United States Mail, postage prepaid and properly addressed to the following:

Kent W. Foster, Esq.
HOLDEN KIDWELL HAHN
& CRAPO PLLC
P.O. Box 50130
Idaho Falls, ID 83405

George C. Petersen, Jr. Esq.
PETERSEN MOSS OLSEN
MEACHAM & CARR
485 "E" Street
Idaho Falls, ID 83402

Blair Grover, Esq.
GROVER & ARCHIBALD
P.O. Box 36
Rigby, ID 83442

Breck H. Barton, Esq.
BRECK BARTON & ASSOC. PA
P.O. Box 100
Rexburg, ID 83440

Ronald D. Carlson
Eastern Regional Manager
Idaho Department of Water
Resources
900 N. Skyline Dr., Ste A
Idaho Falls, ID 83402 -1718

Deborah J. Gibson

Deborah J. Gibson
Administrative Assistant
Water Allocation Bureau

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State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098
Phone: (208) 327-7900 FAX: (208) 327-7866

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

November 3, 2000

Re: Application for Amendment of Permit Nos. 32-07128 and 32-07136, in the name of Ted Sorenson, dba Sorenson Engineering

Dear Interested Parties:

The Department of Water Resources (department) has issued the enclosed **Preliminary Order** pursuant to section 67-5243, Idaho Code. **It can and will become a final order without further action of the Department unless a party petitions for reconsideration or files an exception and/or brief as described in the enclosed information sheet.**

Please note that water right owners are required to report any change of water right ownership and/or change of mailing address to the department within 120 days of the change. Failure to report these changes could result in a $100 late filing fee. Contact any office of the department or visit our homepage on the Internet to obtain the proper reporting form.

If you have any questions, please call me at (208)327-7953.

Sincerely,

Deborah J. Gibson

Deborah J. Gibson
Administrative Assistant
Water Allocation Bureau

Enclosures
Cc: Regional Office (w/enclosures)

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UNITED STATES POSTAL SERVICE
POCATELLO ID 832
PM
05 NOV
First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10
• Print your name, address, and ZIP Code in this box •
DEBORAH GIBSON
DEPARTMENT OF WATER RESOURCES
N. ORCHARD ST.
ID 83706-2237
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RECEIVED
NOV 0 9 2005
Department of Water Resources

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

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- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "*Return Receipt Requested*" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

BRECK H BARTON
BRECK BARTON & ASSOCIATES
PO BOX 100
REXBURG ID 83440

32-07128 (Ted Sorenson)

4a. Article Number

7099322000055178217

4b. Service Type

- ☑ Registered
- ☑ Certified
- ☐ Express Mail
- ☐ Insured
- ☐ Return Receipt for Merchandise
- ☐ COD

7. Date of Delivery

11/16/(illegible)

5. Received By: *(Print Name)*

Diana Flores

6. Signature: *(Addressee or Agent)*

X

8. Addressee's Address *(Only if requested and fee is paid)*

PS Form **3811**, December 1994

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Thank you for using Return Receipt Service.

U[redacted] STATES POSTAL SERVICE

First-Class Mail
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Permit No. G-10

• Print your name, address, and ZIP Code in this box •

DEBORAH GIBSON
[redacted]DEPARTMENT OF WATER RESOURCES
[redacted]N. ORCHARD ST.
[redacted], ID 83706-2237

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Department of Water Resources

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GEORGE C PETERSEN JR
PETERSEN MOSS OLSEN
MEACHAM & CARR
485 "E" STREET
IDAHO FALLS ID 83402

32-07128 (Ted Sorenson)

4a. Article Number

P 099322000551788231

4b. Service Type

☐ Registered ☑ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

11/6/00

5. Received By: *(Print Name)*

6. Signature: *(Addressee or Agent)*

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8. Addressee's Address *(Only if requested and fee is paid)*

PS Form **3811**, December 1994

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DEBORAH GIBSON
DEPARTMENT OF WATER RESOURCES
N. ORCHARD ST.
, ID 83706-2237

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I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

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3. Article Addressed to:

BLAIR GROVER ESQ
GROVER & ARCHIBALD
PO BOX 36
RIGBY ID 83442

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32-07128 (Ted Sorenson)

4a. Article Number

7099322000055178822 4

4b. Service Type

☐ Registered ☑ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

11-6-00

5. Received By: *(Print Name)*

R James Archibald

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*

X Jim Archibald

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1... N. ORCHARD ST.
B...E, ID 83706-2237

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- Write "*Return Receipt Requested*" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

KENT W FOSTER
HOLDEN KIDWELL HAHN &
CRAPO PLLC
PO BOX 50130
IDAHO FALLS ID 83405

32-07128 (Ted Sorenson)

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4a. Article Number

7099322000055178824 8

4b. Service Type

- ☐ Registered
- ☑ Certified
- ☐ Express Mail
- ☐ Insured
- ☐ Return Receipt for Merchandise
- ☐ COD

7. Date of Delivery

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*

X Doug Croft

PS Form **3811,** December 1994

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Thank you for using Return Receipt Service.

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CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

Article Sent To: Kent Foster

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

11/3/00
Postmark Here
dg

Name (Please Print Clearly) (To be completed by mailer): Holden Kidwell
Street, Apt. No.; or PO Box No.: P.O. Box 50130
City, State, ZIP+4: Idaho Falls, Id. 83405

PS Form 3800, July 1999 — See Reverse for Instructions

7099 3220 0005 5178 8246

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

Article Sent To: Blair Grover Esq.

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

Name (Please Print Clearly) (To be completed by mailer): Grover & Archibald
Street, Apt. No.; or PO Box No.: P.O. Box 36
City, State, ZIP+4: Preston, Id. 83442

PS Form 3800, July 1999 — See

7099 3220 0005 5178 8224

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

Article Sent To: George C Petersen Jr. Esq.

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

11/3/00
Postmark Here
dg

Name (Please Print Clearly) (To be completed by mailer): Petersen Moss
Street, Apt. No.; or PO Box No.: 485 "E" St.
City, State, ZIP+4: Idaho Falls, Id. 83402

PS Form 3800, July 1999 — See Reverse for Instructions

7099 3220 0005 5178 8231

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance

Article Sent To: Breck N. Barton

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

11/3/00
Postmark Here
dg

Name (Please Print Clearly) (To be completed by mailer): Breck Barton & Assoc.
Street, Apt. No.; or PO Box No.: P.O. Box 100
City, State, ZIP+4: Pocatello, Id. 83440

PS Form 3800, July 1999 — See Reverse for Instructions

7099 3220 0005 5178 8217

Responding To Preliminary Orders Issued By The Idaho Department Of Water Resources

The accompanying order is a **Preliminary Order** issued by the Idaho Department of Water Resources (department) pursuant to section 67-5243, Idaho Code. **It can and will become a final order without further action of the department unless a party petitions for reconsideration within fourteen (14) days after issuance as further described below:**

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a preliminary order with the hearing officer within fourteen (14) days of the service date of this order. The hearing officer will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See section 67-5243(3) Idaho Code.

EXCEPTIONS AND BRIEFS

Within fourteen (14) days after (a) the service date of a preliminary order, (b) the service date of a denial of a petition for reconsideration from this preliminary order, or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration from this preliminary order, any party may in writing support or take exceptions to any part of a preliminary order and may file briefs in support of the party's position on any issue in the proceeding to the Director. Otherwise, this preliminary order will become a final order of the agency.

If any party appeals or takes exceptions to this preliminary order, opposing parties shall have fourteen (14) days to respond to any party's appeal. Written briefs in support of or taking exceptions to the preliminary order shall be filed with the Director. The Director retains the right to review the preliminary order on his own motion.

ORAL ARGUMENT

If the Director grants a petition to review the preliminary order, the Director shall allow all parties an opportunity to file briefs in support of or taking exceptions to the preliminary order and may schedule oral argument in the matter before issuing a final order. If oral arguments are to be heard, the Director will within a reasonable time period notify each party of the place, date and hour for the argument of the case. Unless the Director orders otherwise, all oral arguments will be heard in Boise, Idaho.

MICROFILMED

JAN 0 8 2001

CERTIFICATE OF SERVICE

All exceptions, briefs, requests for oral argument and any other matters filed with the Director in connection with the preliminary order shall be served on all other parties to the proceedings in accordance with Rules of Procedure 302 and 303.

FINAL ORDER

The Department will issue a final order within fifty-six (56) days of receipt of the written briefs, oral argument or response to briefs, whichever is later, unless waived by the parties or for good cause shown. The Director may remand the matter for further evidentiary hearings if further factual development of the record is necessary before issuing a final order. The department will serve a copy of the final order on all parties of record.

Section 67-5246(5), Idaho Code, provides as follows:

> Unless a different date is stated in a final order, the order is effective fourteen (14) days after its issuance if a party has not filed a petition for reconsideration. If a party has filed a petition for reconsideration with the agency head, the final order becomes effective when:
>
> (a) the petition for reconsideration is disposed of; or
> (b) the petition is deemed denied because the agency head did not dispose of the petition within twenty-one (21) days.

APPEAL OF FINAL ORDER TO DISTRICT COURT

Pursuant to sections 67-5270 and 67-5272, Idaho Code, if this preliminary order becomes final, any party aggrieved by the final order or orders previously issued in this case may appeal the final order and all previously issued orders in this case to district court by filing a petition in the district court of the county in which:

i. A hearing was held,
ii. The final agency action was taken,
iii. The party seeking review of the order resides, or
iv. The real property or personal property that was the subject of the agency action is located.

The appeal must be filed within twenty-eight (28) days of this preliminary order becoming final. See section 67-5273, Idaho Code. The filing of an appeal to district court does not itself stay the effectiveness or enforcement of the order under appeal.

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JAN 0 8 2001

APPLICATION FOR AMENDMENT OF PERMITS NO.'S 32-07128 & 32-07136 TED SORENSON D/B/A SORENSON ENGINEERING

RECEIVED
MAY 1 1 2000
Department of Water Resources

05/01/1990	Application filed
08/02/1990	Advertised Statewide
08/09/1990	Date of Protest 08/20/1990
08/16/1990	Advertised in the Post Register
08/23/1990	Date of Protest 09/03/1990

PROTESTS RECEIVED

08/31/1990	D & D ENTERPRISES C/O GEORGE C. PETERSON ATTY.
08/31/1990	MAC & BETTY WAGONER C/O BRECK BARTON
08/31/1990	WOODIE LAND & LIVESTOCK
08/31/1990	ELDA H. WILDING C/O JERRY R. RIGBY ATTY.

MOTION TO INTERVENE

05/15/1997	LAVAR & LOUISE NEWMAN C/O BLAIR GROVER

02/21/1997	PETITION FOR BLANKET DISQUALIFICATION OF IDWR EMPLOYEES / BY KENT FOSTER
03/03/1997	OBJECTION TO PETITION FOR BLANKET DISQUALIFICATION OF IDWR EMPLOYEES FROM D&D ENTERPRISES C/O GEORGE PETERSON
03/10/1997	OBJECTION TO PETITION FOR BLANKET DISQUALIFICATION OF IDWR EMPLOYEES

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JAN 0 8 2001

05/08/1997	SERVICE LIST / KARL J. DREHER
05/15/1997	MOTION OF LAVAR NEWMAN AND LOUISE NEWMAN TO INTERVENE C/O BLAIR GROVER
06/23/1997	ORDER GRANTING INTERVENTION TO LAVAR & LOUISE NEWMAN
08/14/1997	MOTION FOR SUMMARY JUDGEMENT
	MEMORANDUM OF PROTESTANT LAVAR NEWMAN IN SUPPORT OF SUMMARY JUDGMENT

MICROFILMED
JAN 0 8 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098
Phone: (208) 327-7900 FAX: (208) 327-7866

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

April 28, 2000

RECEIVED
MAY 1 1 2000
Department of Water Resources

BIRCH CREEK RANCHES LLC
C/O TED SORENSON
5203 SOUTH 11TH EAST
IDAHO FALLS ID 83404

RE: AMENDMENT OF PERMIT NOS. 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON DBA SORENSON ENGINEERING

Dear Mr. Sorenson:

I have reviewed your letter dated April 7, 2000 to Norman C. Young of this office in which you inquire about the status of the above referenced applications for amendment ("applications"). Since Peter Anderson, the hearing officer in the matter, has left department employment, and since I have not previously been involved in the hearing associated with the applications, it was necessary for me to review the files to determine the next appropriate action.

My review shows the following:

- On September 11, 1998, the hearing officer issued a Recommended Decision and Order to the parties.
- On September 28, 1998, protestants Lavar Newman and D&D Enterprises, Inc. filed petitions for reconsideration ("petitions") with the hearing officer.
- On October 19, 1998, the hearing officer issued an order denying the petitions.
- On October 26, 1998, protestant Lavar Newman filed exceptions to the Recommended Decision and Order.
- On October 28, 2000, protestant D&D Enterprises, Inc. filed exceptions to the Recommended Decision and Order.

The October 28, 1998 filing of exceptions by D&D Enterprises, Inc. appears to be the last action shown in the water right files and has not been responded to by the

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JAN 3 8 2001

department. If this is the case, the exceptions of the protestants are deemed denied by operation of IDAPA 37.01.01720.02.b (Rule of Procedure 720.02.b). The next step then appears to be for the Director to issue a Final Order in the matter.

Please advise me within fourteen (14) days if you believe this matter is now at a different step in the administrative hearing process than the issuance of a Final Order by the Director. If I don't hear from the parties within the 14 day period, I will prepare a Final Order for the Director's review and issuance. I apologize for the delay in this matter which has occurred as a result of Peter Anderson's departure from the department before the matter was completed.

If you have questions, please feel free to contact me.

Sincerely,

L. GLEN SAXTON, Chief
Water Allocation Bureau

c: IDWR - Region
Kent W. Foster
George Petersen
Breck H. Barton
Norman C. Young

MICROFILMED
JAN 0 8 2001

RECEIVED
MAY 10 2000
Department of Water Resources

Sorenson Engineering, P.A.
5203 South 11th East
Idaho Falls, Idaho 83404

Phone: (208) 522-8069
Fax: (208) 522-8223
e-mail: sorenson@ida.net

May 8, 2000

L. Glen Saxton, Chief
Water Allocation Bureau
State of Idaho
Department of Water Resources
1301 North Orchard Street
P.O. Box 83720
Boise, ID 83720-0098

Re: Permits # 32-07128 and 32-07136
Name: Ted Sorenson d/b/a Sorenson Engineering

Dear Mr. Saxton:

Thank you for your letter of April 28, 2000. I agree with your course of action concerning the amendment of the permits.

Please reference new condition of approval 14; "*Applicant shall build and maintain a gate in the hydropower diversion sufficient to both control and measure flows through the hydropower diversion and to allow the entire flow of Birch Creek to flow through the hydropower diversion in the natural channel of Birch Creek.*"

It should be clearly understood the referenced "gate in the hydropower diversion"is the "Bypass Headworks" as shown on Record Drawing D861342 Sheet 2 (copy attached). The first approximately 1.5 mile of the new canal was and is maintained as "natural" fishery reach not to be dewatered.

When the power channel needs dewatered for maintenance, etc., the entire flow is routed back to Birch Creek in the Bypass Channel shown on Record Drawing D861342 Sheet 2 by use of the control gates in the Bypass Headworks.

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The measuring weir ("highway weir") is located about 100 yards downstream of the "Bypass Headworks."

One additional item needs to be taken care of. These permits need to be licensed as a function of proof of beneficial use. We filed the proof of beneficial use in 1988 or 1989. The approved licenses have not been issued. Therefore I would appreciate this being taken care of at this time also.

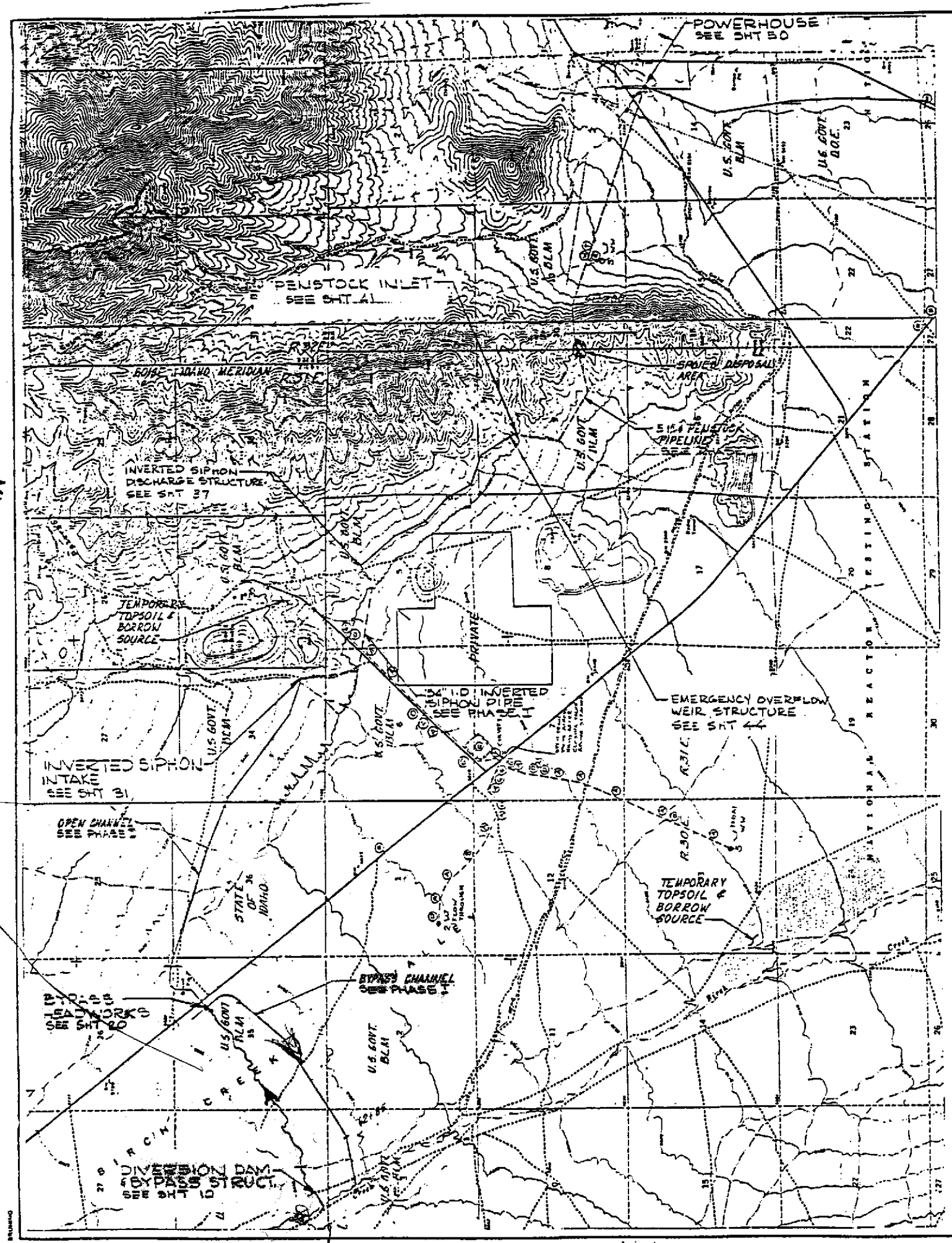
Thank you for your consideration.

Very truly yours,

Ted S. Sorenson, P.E.

TSS/red
Enclosure

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JAN 0 8 2001



LEGEND

- (A) AIR VENT
- (D) DRAIN
- TROUGH
- (G) GATE VALVE
- (Y) GATE, Y STRAINER, & FLOW REDUCER IN CULVERT
- (W) WATER INLET FROM HYDRO
- WW WILDLIFE WATER
- (P) PRESSURE REDUCING VALVE W/ Y STRAINER, GATE VALVE, & AIR VENT
- (R) FLOW CONTROL VALVE

SITE PLAN
PHASE II

N

1000 0 2000

SCALE IN FEET

RECORD DRAWING

REVISIONS		
ADDED EVERGREEN DIVERSION VALVE	A	
UPDATED SHT. DESIGN, ADDED WATER BOX DETAILS	B	

DATE SEPT 6, 1986
DESIGN SRS
DRAWN
CHECKED
APPROVED

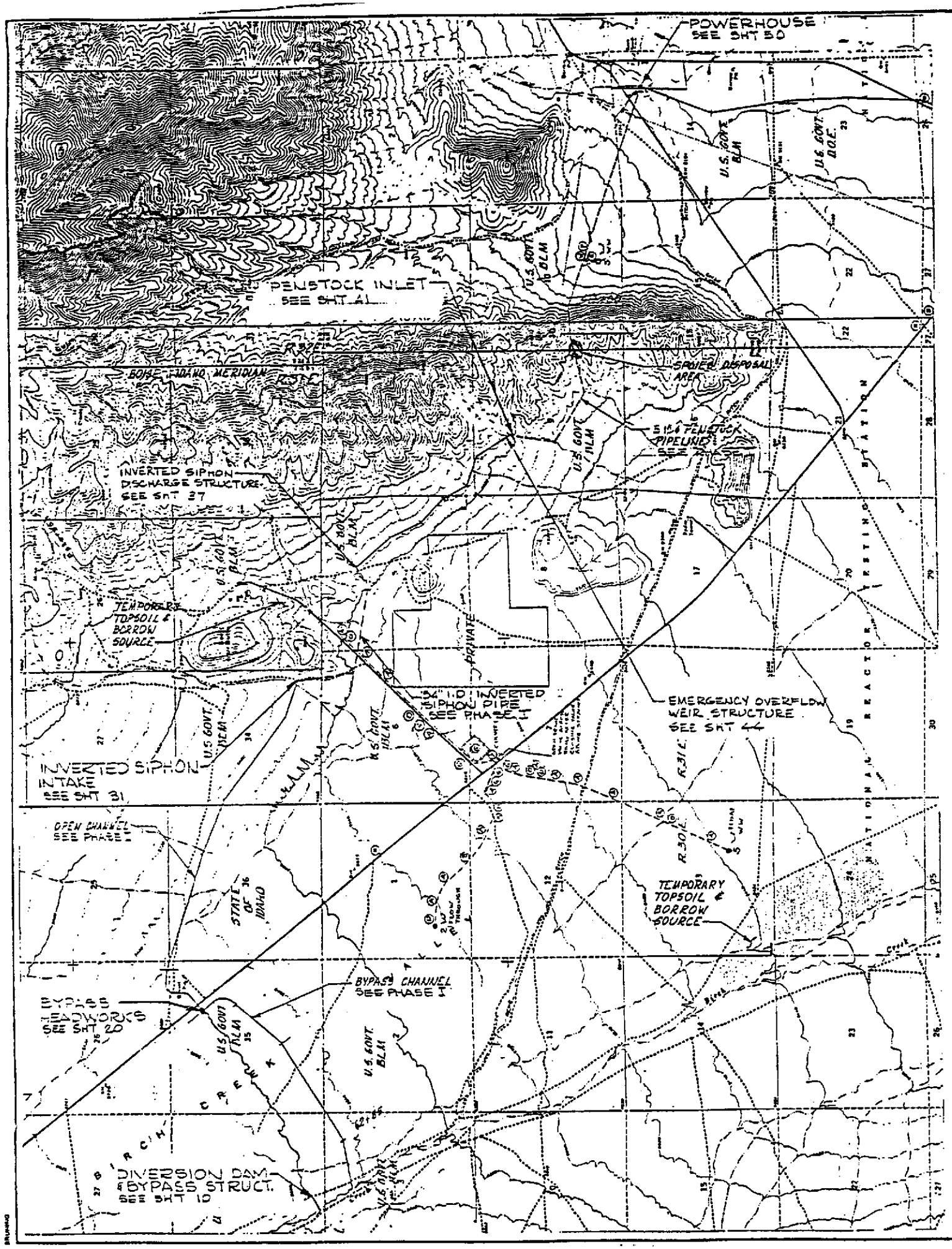
BIRCH CREEK
HYDROELECTRIC FACILITY
PHASE II

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

SCALE NOTED
DRAWING NO. 86434
SHEET NO. 2

MICROFILMED

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JAN 0 8 1987



LEGEND

- (A) AIR VENT
- (D) DRAIN
- TROUGH
- (GV) GATE VALVE
- (Y) GATE, Y STRAINER, & FLOW REDUCER IN CULVERT
- (W) WATER INLET FROM HYDRO
- WW WILDLIFE WATER
- (P) PRESSURE REDUCING VALVE W/ Y STRAINER, GATE VALVE, & AIR VENT
- (P) FLOW CONTROL VALVE

SITE PLAN
PHASE II

N

2000 1000 0 2000
SCALE IN FEET

RECORD DRAWING

REVISIONS		
ADDED EMERGENCY OVERFLOW WEIR STRUCTURE	A	
ADDED NEW UNDERGROUND ELECTRICAL	B	

DATE SEPT 8, 1986
DESIGNED SPB
DRAWN
APPROVED

BIRCH CREEK HYDROELECTRIC FACILITY PHASE II

SORENSON ENGINEERING P.A.
CONSULTING ENGINEERS
IDAHO FALLS, IDAHO

SCALE AS NOTED
DRAWING NO. U86434
SHEET NO. 2

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098
Phone: (208) 327-7900 FAX: (208) 327-7866

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

April 28, 2000

BIRCH CREEK RANCHES LLC
C/O TED SORENSON
5203 SOUTH 11TH EAST
IDAHO FALLS ID 83404

RE: AMENDMENT OF PERMIT NOS. 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON DBA SORENSON ENGINEERING

Dear Mr. Sorenson:

I have reviewed your letter dated April 7, 2000 to Norman C. Young of this office in which you inquire about the status of the above referenced applications for amendment ("applications"). Since Peter Anderson, the hearing officer in the matter, has left department employment, and since I have not previously been involved in the hearing associated with the applications, it was necessary for me to review the files to determine the next appropriate action.

My review shows the following:

- On September 11, 1998, the hearing officer issued a Recommended Decision and Order to the parties.
- On September 28, 1998, protestants Lavar Newman and D&D Enterprises, Inc. filed petitions for reconsideration ("petitions") with the hearing officer.
- On October 19, 1998, the hearing officer issued an order denying the petitions.
- On October 26, 1998, protestant Lavar Newman filed exceptions to the Recommended Decision and Order.
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The October 28, 1998 filing of exceptions by D&D Enterprises, Inc. appears to be the last action shown in the water right files and has not been responded to by the

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department. If this is the case, the exceptions of the protestants are deemed denied by operation of IDAPA 37.01.01720.02.b (Rule of Procedure 720.02.b). The next step then appears to be for the Director to issue a Final Order in the matter.

Please advise me within fourteen (14) days if you believe this matter is now at a different step in the administrative hearing process than the issuance of a Final Order by the Director. If I don't hear from the parties within the 14 day period, I will prepare a Final Order for the Director's review and issuance. I apologize for the delay in this matter which has occurred as a result of Peter Anderson's departure from the department before the matter was completed.

If you have questions, please feel free to contact me.

Sincerely,

L. Glen Saxton

L. GLEN SAXTON, Chief
Water Allocation Bureau

c: IDWR - Region
Kent W. Foster
George Petersen
Breck H. Barton
Norman C. Young

MICROFILMED
JAN 0 8 2001

Birch Creek Ranches, L.L.C.
5203 South 11th East
Idaho Falls, Idaho 83404

Phone: (208) 522-8069
Fax: (208) 522-8223
e-mail: sorenson@ida.net

RECEIVED
APR 26 2000
Department of Water Resources

April 24, 2000

Deborah Drew-Ellis
Administrative Assistant
State of Idaho
Department of Water Resources
1301 North Orchard Street
P.O. Box 83720
Boise, ID 83720-0098

Re: Permit Nos. 32-07128 and 32-07136

Dear Ms. Drew-Ellis:

I received your letter dated April 14, 2000 and am enclosing additional copies of the correspondence which was damaged in the mail.

Thank you for your assistance in this matter.

Very truly yours,

Ted S. Sorenson, P.E.

Enclosure
C:\My Documents\CCWin9\Birch Power Company\Ellis.ltr.wpd

MICROFILMED
MAY 0 9 2000

Birch Creek Ranches, L.L.C.
5203 South 11th East
Idaho Falls, Idaho 83404

Phone: (208) 522-8069
Fax: (208) 522-8223
e-mail: sorenson@ida.net

April 7, 2000

Norm Young
State of Idaho
Department of Water Resources
1301 North Orchard Street
P.O. Box 83720
Boise, ID 83720-0098

Re: Permit Nos. 32-07128 and 32-07136

Dear Mr. Young:

This letter is written to inquire as to the status of the issuance of these permits. I contacted Harold Jones of the Idaho Falls office last fall. Harold informed me that these permits were on your desk and that I should contact you. I would like to inquire as to the status of the final issuance of these permits. I would like to have closure on the Birch Creek matters. Please advise.

Very truly yours,

Ted S. Sorenson, P.E.

Enclosure
C:\My Documents\CCWin9\Birch Power Company\Young.ltr.wpd

MICROFILMED

JAN 0 8 2001

Birch Creek Ranches, L.L.C.
5203 South 11th East
Idaho Falls, Idaho 83404

Phone: (208) 522-8069
Fax: (208) 522-8223
e-mail: sorenson@ida.net

October 4, 1999

Harold Jones
Idaho Department of Water Resources
900 North Skyline Drive
Idaho Falls, Idaho 83402

Re: Licensing and Permit Nos. 32-07128 and 32-07136

Dear Mr. Jones:

This letter is written to request the status of these permits. Mr. Kent Foster of Holden Kidwell Hahn & Crapo sent a letter on July 28, 1999 requesting information on these permits. This letter is written to ask you to please advise us of the status of the licensing of these two permits.

Very truly yours,

Ted S. Sorenson, P.E.

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JAN 0 6 2001

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098
Phone: (208) 327-7900 FAX: (208) 327-7866

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

April 14, 2000

Ted S. Sorenson, P.E.
Birch Creek Ranches, LLC
5203 South 11th East
Idaho Falls, ID 83404

Re: Permits 32-07128 and 32-07136

Dear Mr. Sorenson:

I am enclosing a copy of your April 7, 2000 letter to Norm Young. This office received you letter badly torn and was unable to completely read your request. Please send another copy of the letter, and the attachment, to me. I will forward it to the correct individual for response.

Thank you for your assistance in this matter. If you have any questions, please contact me.

Sincerely,

Deborah Drew-Ellis

Deborah Drew-Ellis
Administrative Assistant
Water Allocation Bureau

Enclosures

MICROFILMED
JAN 0 8 200

Law Offices
HOLL..N, KIDWELL, HAHN & CRAPO, . ' L.C.

FRED J. HAHN
KENT W. FOSTER
ROBERT E. FARNAM
WILLIAM D. FALER
CHARLES A. HOMER
GARY L. MEIKLE
GAYLE A. SORENSON, P.A.
DONALD L. HARRIS
DALE W. STORER
MARIE T. TYLER
ROBERT M. FOLLETT
FREDERICK J. HAHN, III
SHAN D. PERRY

U.S. BANK OF IDAHO BUILDING
330 SHOUP AVENUE, THIRD FLOOR
P.O. BOX 50130
IDAHO FALLS, IDAHO 83405

TELEPHONE (208) 523-0620
FACSIMILE (208) 523-9518
E-MAIL HOLDNLAW@SRV.NET

RECEIVED
APR 2 2 1999
Department of Water Resources

Arthur W. Holden
(1877-1967)
Robert B. Holden
(1911-1971)
Terry L. Crapo
(1939-1982)
William S. Holden
(1903-1988)

April 19, 1999

Mr. Peter R. Anderson, Hearing Officer
Deputy Attorney General
IDAHO DEPARTMENT OF
WATER RESOURCES
1301 North Orchard
Boise, ID 83706-2231

Dear Mr. Anderson:

This letter is to report to you that matters regarding the settlement between Birch Creek Ranches, D&D Enterprises and Lavar Newman are preceding quite well. The new corporation, The Reno Ditch Company, Inc., has been organized, stock has been issued, board members and officers have been elected, and all water rights of the three parties have been deeded to the new canal company. We met last week with Harold Jones, Eric Verner and Paul Meyer of the Idaho Falls office who have kindly sorted through the details of the new transfer application and are correlating the transfer with the SRBA processing. They have been very helpful, and it appears that matters are progressing very well on those items too. Last Friday, Jim DeMordaunt, the secretary of the new canal company, signed the new application for transfer on behalf of the Reno Ditch Company, Inc.

We therefore hereby formally withdraw, on behalf of Birch Creek Ranches, Inc., Application for Transfer No. 3553 and Application for Permit No. 32-07252 (formerly 31-07646). It is our understanding that Chuck Carr and Blair Grover already have or will be formally withdrawing applications 32-7238, 32-7239 and 32-7249 on behalf of D&D Enterprises and Lavar Newman as well. If there are any other loose ends that need to be taken care of, we hope someone will let us know, and we will try to conclude all of these matter?

withdrawn 4-19-99

relinq.

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JAN 0 8 2001

We certainly thank you for all of your assistance and patience throughout this complex matter.

Very truly yours,

Kent W. Foster

c. Harold Jones
Eric Verner
Chuck Carr
Blair Grover

G:\WPDATA\KWF\5568\ANDR0419.LTR.kmc

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JAN 0 8 2001

GEORGE C. PETERSEN, JR.
WM. CHARLES CARR
SCOTT P. ESKELSON
STEPHEN D. HALL

PETERSEN, MOSS, OLSEN, CARR,
ESKELSON & HALL
Attorneys at Law
485 "E" Street
Idaho Falls, Idaho 83402
(208) 523-4650
Fax: (208) 524-3391

DENNIS M. OLSEN
(1930-1985)

REED L. MOSS
Of counsel

January 19, 1999

FAX 208-327-7866

Norman C. Young,
Idaho Department of Water Resources
1301 North Orchard Street
P.O Box 83720
Boise, ID 83720-0098

RECEIVED
JAN 25 1999
Department of Water Resources

Re: Birch Creek and controversy between
Ted Sorenson, D&D Enterprises, Inc.,
and LaVar Newman

Dear Mr. Young:

SETTLEMENT

As I believe you are aware, our clients Ted Sorenson/Birch Creek Ranches, D&D Enterprises, and LaVar Newman (the "parties") have reached a settlement regarding all of their water rights, applications for permits, applications for transfer, and protests, etc. pertaining to Birch Creek. We anticipate that this is good news to the Department. While each side believed that there was evidence and existing law to support their position, they have now recognized that a settlement supported by both the evidence and existing law is in everyone's best interest. Absent such a settlement, they foresee years of expensive litigation all the way to the Supreme Court, with potentially unforeseeable results that may be detrimental not only to all of them but to IDWR and other Idaho water users.

IDWR APPROVAL

Before the parties proceed any further with the implementation of their settlement agreement, they believe it is imperative that this proposed resolution of the entire Birch Creek controversy receive the approval and blessing of the Idaho Department of Water Resources. If the Department cannot give such approval, then this settlement will be in jeopardy.

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If the Department indicates its approval of the settlement and the proposed method of implementation, then this will eliminate any further involvement by either Hearing Officer Peter Anderson or the Department in the sticky issues involved, including factual and legal decisions dealing with incremental vs. proportional losses in a downstream transfer, "saved water" in a private ditch, estoppel, etc. With this settlement approved, the administration of water rights on Birch Creek will become very simple and it will enable the parties to live in peace.

Approval of the settlement agreement by IDWR includes approval of Ted Sorenson's Application for Amendment of Water Right Permit Nos. 32-07128 and 32-07136, which eliminates the 5 cfs bypass in favor of a 0.11 cfs pond and irrigation system and other habitat mitigation. (Approval of this application was recommended by Peter Anderson.)

Department approval of the settlement would also include an indication that the Department will approve the application by a new canal company for transfer of point of diversion and place of use, as outlined below. While we realize that the Department cannot give *formal* approval of the canal company's application for transfer until after such an application has been filed and the appropriate notice has been given, and that there may be protests which theoretically could be filed, we need at least your *informal* approval and your assurance that the Department will support the application, so that we can go ahead with the implementation of the settlement.

Finally, we anticipate that the new canal company which would own essentially all of the water rights to Birch Creek, as described below, would be substituted as the holder of all of the water rights of these parties through the filing of an appropriate notice of change of ownership in the Snake River Basin Adjudication. Our hope is that if the Department approves this settlement, then the recommendation for each of the water rights in the Director's report in the adjudication would be consistent with this approval.

THE SETTLEMENT AGREEMENT

1. The parties recognize that Mac and Betty Wagoner have water rights to 4.0 cfs of Birch Creek water, with the earliest priorities, so they are guaranteed that their irrigation rights will always be delivered. All of the remaining water in Birch Creek belongs to one or the other of the parties. *See Table 1.*

2. The parties agree that the water flowing in Birch Creek and delivered to the parties or their predecessors in interest (and to Mac Wagoner) during the irrigation season has historically been less than the total existing water rights to Birch Creek water (as shown by Table 1); that all the water flowing in Birch Creek during the irrigation season historically has been delivered to and used by the parties (or their predecessors in interest) and Mac Wagoner; that historically, all the water which reached the head of the old Reno Ditch was diverted into

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JAN 0 8 2001

the old Reno Ditch; that efforts were made periodically to reduce the losses in the old Reno Ditch; and that the losses in the old Reno Ditch were not unreasonable.

3. The parties therefore agree that with the exception of the 4.0 cfs of water to be delivered to Mac Wagoner, and 0.11 cfs which shall be diverted for stock ponds and drip irrigation pursuant to Application for Amendment of Water Right Permit Nos. 32-07128 and 32-07136, all of the water in Birch Creek shall be diverted from Birch Creek at the power pond and into the power channel. This remaining water shall run through Ted Sorenson's power plant and shall then be divided between the parties at a splitter gate as follows: 37% to Ted Sorenson, 36.75% to D&D Enterprises, and 26.25% to LaVar Newman.

4. In order to most efficiently handle this agreed-upon split, the parties propose to form a canal company. Each of the parties will deed all of its/his water rights to the canal company. Ted Sorenson will own 37% of the stock in the canal company, D&D will own 36.75% of the stock, and LaVar Newman will own 26.25% of the stock.

5. Ted Sorenson will be responsible for and bear the expense of maintaining everything from the point of diversion of the water from Birch Creek into the power pond until after it passes through the power plant to the splitter gate, in accordance with the applicable requirements of FERC and other relevant governmental agencies. Sorenson agrees to use his best efforts to operate and maintain such facilities so as to maximize the amount of water discharged from the power plant, but makes no guarantees with respect thereto.

6. The parties will continue to maintain the existing lining of Birch Creek above the power pond in the same proportion as previously agreed upon: 50% to Birch Creek Power, 19.1% to Birch Creek Ranches, 17.9% to D&D, and 13.0 % to LaVar Newman.

7. Ted Sorenson will withdraw Application for Permit to Appropriate No. 32-07252 (formerly 31-07646). This is the claim for 17.0 cfs of "saved" water. We believe this withdrawal is supported by the fact that according to the evidence, all of the water that gets to the power plant has been fully appropriated by the parties, *i.e.*, all the water is covered by existing water rights.

8. Ted Sorenson will withdraw Amended Application for Transfer No. 3553. (This is the application to transfer the point of diversion of the water rights which formerly belonged to Bill Simmons to a new point of diversion several miles downstream; and which involved the questions of incremental vs. proportionate loss allocation.) The parties agree to request an interim order from IDWR approving operation in accordance with this settlement agreement immediately and pending the completion of all actions contemplated by this agreement.

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9. D&D and LaVar Newman will withdraw their Application for Delivery of Water Rights Owned by them. This application was filed on about September 29, 1997, and sought to have D&D and Newman's water rights delivered to them at the head of the old Reno Ditch.

10. D&D and LaVar Newman will withdraw their protests to Ted Sorenson's Application for Amendment of Water Right Permit Nos. 32-07128 and 32-07136 and Application for Extension of Time to Avoid Forfeiture of Water Right No. 32-00101 (the Woodie right purchased by Ted Sorenson).

11. The new canal company will own all the water rights to Birch Creek (except Wagoner's 4.0 cfs and the 0.11 cfs habitat flow). These rights total 76.8 cfs, an amount that has never been seen at the power plant during the irrigation season. The canal company will file an application to transfer the point of diversion of all its water rights to the power pond/power channel; and to transfer the place of use of its water to the following locations:

37% of the water to those locations identified in Ted Sorenson's Applications, as follows:

Place of Use: a total of 1200 acres as follows:

220 acres within Section 36, Tp 9 N R 32 EBM, Clark County;

260 acres within Section 31, and 130 acres within Section 32, both in Tp 9 N R 33 EBM, Clark County;

70 acres within Section 1, and 70 acres within Section 2, both in Tp 8 N R 32 EBM, Jefferson County; and

120 acres in Section 5, and 330 acres in Section 6, both in Tp 8 N R 33 EBM, Jefferson County.

36.75% of the water to be applied to D&D's property which has been historically irrigated from the waters of Birch Creek and which is described as follows:

Place of Use: a total of 1920 acres, as follows:

160 acres within Section 12, Tp 8 N R 31 EBM, Clark County;

280 acres within Section 1, 120 acres within Section 2, 240 acres within Section 10, 440 acres within Section 11, 160 acres within

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Section 12, 80 acres within Section 14, and 240 acres within Section 15, all in Tp 8 N R 32 EBM, Jefferson County; and

200 acres within Section 6, Tp 8 N R 33 EBM, Jefferson County.

26.25 % of the water to be applied to LaVar Newman's property which has been historically irrigated from the waters of Birch Creek and which is described as follows:

Place of Use: a total of 1360 acres, as follows:

480 acres within Section 13, and 40 acres within Section 14, Tp 8 N R 31 EBM, Clark County;

360 acres within Section 7, and 320 acres within Section 8, Tp 8 N R 33 EBM, Jefferson County; and

80 acres within Section 10, and 80 acres within Section 15, Tp 8 N R 32 EBM, Jefferson County.

12. Upon conveyance of the parties' water rights to the new canal company, an appropriate notice of change of ownership will be filed so that the SRBA claims may be processed in the name of the canal company and in accordance with the objectives expressed above under the heading "IDWR APPROVAL."

Time is of the essence since we want to get this settlement all wrapped up before anyone changes his mind. Peter Anderson has given Ted Sorenson until January 22, 1999, to respond to his Amended Order on Motions for Summary Judgment but Ted does not plan on making a formal response to that Order because of the agreement which should resolve everything and eliminate the need for any further decisions on these application by either Peter or the department.

If you have any questions, please feel free to call us, either individually or in a conference call (which would be preferable). We look forward to hearing from you, anticipating that you will undoubtedly want to meet with us to discuss this matter. We welcome that opportunity

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Sincerely,

PETERSEN, MOSS, OLSEN, CARR
ESKELSON & HALL

George C. Petersen, Jr.

Wm. Charles Carr

GROVER & ARCHIBALD

Blair Grover

HOLDEN KIDWELL HAHN & CRAPO

Kent Foster

cc: Peter Anderson
Phil Rassier
Ron Carlson
Breck Barton
Jim DeMordaunt
Ted Sorenson
LaVar Newman

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TABLE 1

BIRCH CREEK WATER RIGHTS

Dept.	Owner	Amount	Priority	B.C.R.	D & D	Newman	Wagoner
32-00067	Wagoner	3.20	10 Sep 1882				3.20
32-00090	Wagoner (½ of rt.)	.80	10 May 1886				.80
32-00060A&B	Newm & D&D	3.20	10 May 1883		1.60	1.60	
32-00059A&B	Newm & D&D	6.40	10 May 1884		0.88	5.52	
32-00065	D&D	3.20	10 May 1884		3.20		
32-00080B	Newman & D&D	3.20	10 May 1886		1.60	1.60	
32-00090	B.C.R.(½ of right)	.80	10 May 1886	.80			
32-00093	B.C.R.	1.60	10 May 1886	1.60			
32-00070A	D&D	2.40	19 Aug 1886		2.40		
32-00070B	Newman	0.80	19 Sep 1886			0.80	
32-00068	B.C.R.	3.20	10 May 1887	3.20			
32-00061C	B.C.R.	0.40	10 May 1888	0.40			
32-00061D	D&D	2.80	10 May 1888		2.80		
32-00069	B.C.R.	3.20	10 May 1888	3.20			
32-00089	B.C.R.	2.50	10 May 1888	2.50			
32-00092	B.C.R.	2.50	10 May 1888	2.50			
32-00102	B.C.R.	4.00	10 May 1889	4.00			
32-00091	B.C.R.	0.50	01 May 1901	0.50			
32-00062	Newman	3.20	01 Apr 1904			3.20	
32-00063	D&D	3.20	01 Apr 1904		3.20		
32-00064	D&D	3.20	01 Apr 1907		3.20		
32-00073	B.C.R.	0.20	15 May 1909	0.20			
32-00101	B.C.R.	2.90	04 Jun 1909	2.90			
32-00066A&B	D&D	6.40	05 Jan 1910		6.40		
32-00058	D&D	1.00	01 Apr 1910		1.00		
32-00085	B.C.R.	0.20	10 May 1910	0.20			
32-00077	B.C.R.	0.20	15 May 1910	0.20			
32-00074	D&D	0.14	01 Oct 1910		0.14		
32-00086	B.C.R.	0.20	01 May 1911	0.20			
32-00078	B.C.R.	0.20	15 May 1911	0.20			
32-00087	B.C.R.	0.20	01 May 1912	0.20			
32-00076	D&D	0.80	15 May 1912		0.80		
32-00083	D&D	0.46	15 May 1912		0.46		
32-02043	D&D	6.40	19 Sep 1912		6.40		
32-02045	Newman	6.40	16 Nov 1912			6.40	
32-00079	B.C.R.	0.80	15 May 1913	0.80			
			Total:	**23.6**	**34.08**	**19.42**	**4.0**

Total rights held by B.C.R., D&D, and LaVar Newman = 76.8 cfs out of 80.8 cfs

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GEORGE C. PETERSEN, JR.
WM. CHARLES CARR
SCOTT P. ESKELSON
STEPHEN D. HALL

PETERSEN, MOSS, OLSEN, CARR,
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DENNIS M. OLSEN
(1930-1985)

REED L. MOSS
Of counsel

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JAN 26 1999
Department of Water Resources

January 19, 1999

FAX 208-327-7866

Norman C. Young,
Idaho Department of Water Resources
1301 North Orchard Street
P.O Box 83720
Boise, ID 83720-0098

Re: Birch Creek and controversy between
Ted Sorenson, D&D Enterprises, Inc.,
and LaVar Newman

Dear Mr. Young:

SETTLEMENT

As I believe you are aware, our clients Ted Sorenson/Birch Creek Ranches, D&D Enterprises, and LaVar Newman (the "parties") have reached a settlement regarding all of their water rights, applications for permits, applications for transfer, and protests, etc. pertaining to Birch Creek. We anticipate that this is good news to the Department. While each side believed that there was evidence and existing law to support their position, they have now recognized that a settlement supported by both the evidence and existing law is in everyone's best interest. Absent such a settlement, they foresee years of expensive litigation all the way to the Supreme Court, with potentially unforeseeable results that may be detrimental not only to all of them but to IDWR and other Idaho water users.

IDWR APPROVAL

Before the parties proceed any further with the implementation of their settlement agreement, they believe it is imperative that this proposed resolution of the entire Birch Creek controversy receive the approval and blessing of the Idaho Department of Water Resources. If the Department cannot give such approval, then this settlement will be in jeopardy.

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If the Department indicates its approval of the settlement and the proposed method of implementation, then this will eliminate any further involvement by either Hearing Officer Peter Anderson or the Department in the sticky issues involved, including factual and legal decisions dealing with incremental vs. proportional losses in a downstream transfer, "saved water" in a private ditch, estoppel, etc. With this settlement approved, the administration of water rights on Birch Creek will become very simple and it will enable the parties to live in peace.

Approval of the settlement agreement by IDWR includes approval of Ted Sorenson's Application for Amendment of Water Right Permit Nos. 32-07128 and 32-07136, which eliminates the 5 cfs bypass in favor of a 0.11 cfs pond and irrigation system and other habitat mitigation. (Approval of this application was recommended by Peter Anderson.)

Department approval of the settlement would also include an indication that the Department will approve the application by a new canal company for transfer of point of diversion and place of use, as outlined below. While we realize that the Department cannot give *formal* approval of the canal company's application for transfer until after such an application has been filed and the appropriate notice has been given, and that there may be protests which theoretically could be filed, we need at least your *informal* approval and your assurance that the Department will support the application, so that we can go ahead with the implementation of the settlement.

Finally, we anticipate that the new canal company which would own essentially all of the water rights to Birch Creek, as described below, would be substituted as the holder of all of the water rights of these parties through the filing of an appropriate notice of change of ownership in the Snake River Basin Adjudication. Our hope is that if the Department approves this settlement, then the recommendation for each of the water rights in the Director's report in the adjudication would be consistent with this approval.

THE SETTLEMENT AGREEMENT

1. The parties recognize that Mac and Betty Wagoner have water rights to 4.0 cfs of Birch Creek water, with the earliest priorities, so they are guaranteed that their irrigation rights will always be delivered. All of the remaining water in Birch Creek belongs to one or the other of the parties. *See Table 1.*

2. The parties agree that the water flowing in Birch Creek and delivered to the parties or their predecessors in interest (and to Mac Wagoner) during the irrigation season has historically been less than the total existing water rights to Birch Creek water (as shown by Table 1); that all the water flowing in Birch Creek during the irrigation season historically has been delivered to and used by the parties (or their predecessors in interest) and Mac Wagoner; that historically, all the water which reached the head of the old Reno Ditch was diverted into

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the old Reno Ditch; that efforts were made periodically to reduce the losses in the old Reno Ditch; and that the losses in the old Reno Ditch were not unreasonable.

3. The parties therefore agree that with the exception of the 4.0 cfs of water to be delivered to Mac Wagoner, and 0.11 cfs which shall be diverted for stock ponds and drip irrigation pursuant to Application for Amendment of Water Right Permit Nos. 32-07128 and 32-07136, all of the water in Birch Creek shall be diverted from Birch Creek at the power pond and into the power channel. This remaining water shall run through Ted Sorenson's power plant and shall then be divided between the parties at a splitter gate as follows: 37% to Ted Sorenson, 36.75% to D&D Enterprises, and 26.25% to LaVar Newman.

4. In order to most efficiently handle this agreed-upon split, the parties propose to form a canal company. Each of the parties will deed all of its/his water rights to the canal company. Ted Sorenson will own 37% of the stock in the canal company, D&D will own 36.75% of the stock, and LaVar Newman will own 26.25% of the stock.

5. Ted Sorenson will be responsible for and bear the expense of maintaining everything from the point of diversion of the water from Birch Creek into the power pond until after it passes through the power plant to the splitter gate, in accordance with the applicable requirements of FERC and other relevant governmental agencies. Sorenson agrees to use his best efforts to operate and maintain such facilities so as to maximize the amount of water discharged from the power plant, but makes no guarantees with respect thereto.

6. The parties will continue to maintain the existing lining of Birch Creek above the power pond in the same proportion as previously agreed upon: 50% to Birch Creek Power, 19.1% to Birch Creek Ranches, 17.9% to D&D, and 13.0 % to LaVar Newman.

7. Ted Sorenson will withdraw Application for Permit to Appropriate No. 32-07252 (formerly 31-07646). This is the claim for 17.0 cfs of "saved" water. We believe this withdrawal is supported by the fact that according to the evidence, all of the water that gets to the power plant has been fully appropriated by the parties, *i.e.*, all the water is covered by existing water rights.

8. Ted Sorenson will withdraw Amended Application for Transfer No. 3553. (This is the application to transfer the point of diversion of the water rights which formerly belonged to Bill Simmons to a new point of diversion several miles downstream; and which involved the questions of incremental vs. proportionate loss allocation.) The parties agree to request an interim order from IDWR approving operation in accordance with this settlement agreement immediately and pending the completion of all actions contemplated by this agreement.

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9. D&D and LaVar Newman will withdraw their Application for Delivery of Water Rights Owned by them. This application was filed on about September 29, 1997, and sought to have D&D and Newman's water rights delivered to them at the head of the old Reno Ditch.

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Place of Use: a total of 1200 acres as follows:

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Time is of the essence since we want to get this settlement all wrapped up before anyone changes his mind. Peter Anderson has given Ted Sorenson until January 22, 1999, to respond to his Amended Order on Motions for Summary Judgment but Ted does not plan on making a formal response to that Order because of the agreement which should resolve everything and eliminate the need for any further decisions on these application by either Peter or the department.

If you have any questions, please feel free to call us, either individually or in a conference call (which would be preferable). We look forward to hearing from you, anticipating that you will undoubtedly want to meet with us to discuss this matter. We welcome that opportunity

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Sincerely,

PETERSEN, MOSS, OLSEN, CARR
ESKELSON & HALL

George C. Petersen, Jr.

DHD

Wm. Charles Carr

GROVER & ARCHIBALD

Newman Blair Grover

Sorenson HOLDEN KIDWELL HAHN & CRAPO

Kent Foster

cc: Peter Anderson
Phil Rassier
Ron Carlson
Breck Barton
Jim DeMordaunt
Ted Sorenson
LaVar Newman

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32-07128

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OCT 28 1998
Department of Water Resources

George C. Petersen, Jr., Esq.
Wm. Charles Carr, Esq.
PETERSEN, MOSS, OLSEN,
CARR, ESKELSON & HALL
485 "E" Street
Idaho Falls, Idaho 83402
(208) 523-4650

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME TED SORENSON d/b/a SORENSON ENGINEERING and IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-07252 (formerly No. 31-07646) IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.	**D&D ENTERPRISE, INC'S EXCEPTIONS TO RECOMMENDED DECISION AND ORDER**

EXCEPTION

Protestant D&D Enterprises, Inc., takes exception to the Recommended Decision and Order of the Hearing Officer dated September 10, 1998. This exception is based on the following:

1. The points and issues raised in D&D's Petition for Reconsideration, submitted to the Hearing Officer and dated September 23, 1998, which are adopted herein.

2. The points and issues raised in Protestant Newman's Exceptions to Recommended Decision and Order. D&D joins with Protestant Newman and adopts his exceptions as stated

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therein. Any Final Order should exclude, clarify, or correct statements contained in the Recommended Decision and Order, as set forth in Protestant Newman's Exceptions.

EXPLANATION OF D&D'S POSITION

D&D does not take exception to either the Approval of the Application for Amendment of Permit Nos. 32-7128 and 32-7136, or paragraphs 1 through 3 setting forth the conditions for approval of the Application for Amendment, all as set forth in the Recommended Order. That is, D&D does not take exception to the express language of the Recommended *Order* itself.

D&D does not disagree with the concept of a system of ponds and drip irrigation that utilizes 0.11 cfs of Birch Creek water to provide a total of 2.46 acres of riparian habitat along with provisions for livestock watering ***in lieu of*** requiring that the lesser of 5 cfs or 11% of the flow of Birch Creek at the feeder ditch diversion be bypassed through the diversion and into the old natural channel of Birch Creek below the diversion.

Indeed, when the Applicant originally sought to divert 75 cfs of Birch Creek water through the feeder ditch diversion for the purpose of generating electric power, it was D&D that took the position that there should not be any bypass required and that the flow down the new feeder channel should be maximized.

REQUESTED ACTION

For the reasons previously stated in (1) and (2) above, however, D&D requests that the Director *not now* adopt the Recommended Decision of the Hearing Officer, but rather delay the issuance of any Final Order pertaining to the Application for Amendment until the Director is ready to issue a Final Order on Application for Permit No. 32-07252 (the saved water issue). Such a delay will likely avoid both the need for additional hearings on these exceptions and the need for the Director to prepare two separate and possibly conflicting orders.

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Should the Director decide not to delay the issuance of a Final Order on the Application for Amendment of Water Rights Permit Nos. 32-7128 and 32-7136, however, then (for the reasons listed in Protestant Newman's Exception) the Final Order of the Director should not adopt verbatim all of the Recommended Decision and should make it clear that a modification of the bypass flow requirement is the only thing being done and that nothing said in the Final Order has any implication for, sets any precedent pertaining to, or forecloses any argument on the other issues still to be resolved, including the ultimate issues of the amount and ownership of any saved water, as raised in Application for Permit No. 32-7252 and the motions for summary judgment pertaining thereto.

Respectfully submitted this 23rd day of October, 1998.

PETERSEN, MOSS, OLSEN, CARR
ESKELSON & HALL

Wm. Charles Carr

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CERTIFICATE OF SERVICE

I hereby certify that I am a duly licensed attorney in the State of Idaho, with my office in Idaho Falls, Idaho, and that on the 23rd day of October, 1998, I served a true and correct copy of the foregoing document on the persons listed below by first class mail, with the correct postage thereon, or by causing the same to be delivered as defined by Rule 5(b), I.R.C.P.

Persons Served:	Method of Service
Peter R. Anderson, Esq. Deputy Attorney General 1301 N. Orchard St. Boise, ID 83720-0098	(X) mail ( ) hand ( ) fax
Kent W. Foster, Esq. HOLDEN, KIDWELL, HAHN & CRAPO, P.L.L.C. P.O. Box 50130 Idaho Falls, ID 83405-0130	( ) mail (X) hand ( ) fax
Blair J. Grover, Esq. GROVER & ARCHIBALD 215 Farnsworth Way P.O. Box 36 Rigby, ID 83442-0036	(X) mail ( ) hand ( ) fax
Breck H. Barton, Esq. BRECK BARTON & ASSOC., P.A. P.O. Box 100 Rexburg, ID 83440	(X) mail ( ) hand ( ) fax
Norman C. Young Idaho Dept. of Water Resources 1301 N. Orchard St. Boise, ID 83706	(X) mail ( ) hand ( ) fax
Ronald D. Carlson Eastern Regional Manager Idaho Dept. of Water Resources 900 N. Skyline Dr. Idaho Falls, ID 83402	(X) mail ( ) hand ( ) fax

Wm. Charles Carr

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OCT 2 6 1998
Department of Water Resources

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(208) 745-6653

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON d/b/a SORENSON ENGINEERING	PROTESTANT NEWMAN'S EXCEPTIONS TO RECOMMENDED DECISION AND ORDER

COMES NOW the Protestant, Lavar Newman, and makes the following exceptions to the Recommended Decision and Order of the Hearing Officer dated September 10, 1998:

1. Although all parties submitted Motions for Summary Judgment, the motions specifically sought Summary Judgment on matters not decided. The motions and briefs are directed to ownership of water. The Decision does not address the matters which were subject of the motions.

2. Paragraph III (9) states the first mile of the canal is constructed with meanders and other structures to create fish habitat. The evidence is to the contrary: the first mile is virtually straight and while there are willows and grass on the banks, there is no evidence of structures to create fish habitat.

3. Paragraph III (10) refers to a protest filed by Ben Wilding. Protestant submits the protest was filed by Ben Wilding on behalf of Water District No. 32 and not an individual protest.

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4. Paragraph III (14) 1) states that the water saved has never been available for use by the Reno Ditch irrigators. D&D and Wilding used 600 to 800 cubic yards of bentonite per year which had the effect of reducing seepage losses and consequently any alleged savings. Therefore, the finding that water had never been available for use by the irrigators is contrary to the evidence. Existing irrigation rights will be injured if the water allegedly saved is used to provide water for livestock and to protect the public interest.

Finally, the finding suggests that he who saves the water is entitled to the benefit of the water with his right to the saved water being prior to the right of other parties. Once the amount of saved water is determined, the person or entity entitled to it depends on whether the Applicant is estopped to make that claim.

5. Paragraph III (16) quotes with approval the district court holding that if Birch Creek saves the water, the water is an appropriation in trust, the public is the beneficiary of the trust and Birch Creek power becomes the vehicle to whom the water traverses to the public. Protestant takes exception to that reasoning and legal conclusion.

6. Paragraph III (19) indicates the Applicant has not complied with the conditions of the permit and is not currently in compliance with the bypass flow conditions.

The Decision nonetheless rewards the Applicant for noncompliance by approving the transfer. There is little incentive for water users to comply with IDWR conditions when there is no penalty for noncompliance, and it approves amendments when requested.

7. Paragraph III (32) acknowledges " the Applicant is apparently arguing the reduction in bypass requirements in the Permits should be granted to the Applicant to use for irrigation."

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Protestant also understands that to be Applicant's argument. Unfortunately, the Decision does not address that argument which is the basis for the Motions for Summary Judgment.

The same paragraph indicates there are no disputed facts other than the questions regarding ownership of the bypass flows. As set forth hereinabove, Protestant has indicated some areas of dispute. If "bypass flows" refers to anything other than the 5cfs, there is still a dispute over the number of cfs that have been saved by the power channel

8. Conclusions of Law 3 states the rights of others will not be adversely affected by the Application. That may be true if it is ultimately determined Protestant is entitled to use of the water for irrigation purposes. However, if Applicant is entitled to use of the water for irrigation purposes, it is not correct.

The Conclusion also provides the bypass water did not "belong" to any appropriator. To the extent bentonite reduced the seepage, it was used by the irrigators and part of their decreed rights.

9. The Decision does not address application of collateral estoppel or res judicata effect (if any) of the earlier decision of IDWR and the district court. Protestant is entitled to know whether the hearing examiner's references are in effect either collateral estoppel and/or res judicata so Protestant can preserve Appeal rights on those issues. The Decision should make that clear one way or the other.

Respectfully Submitted this 23 day of October, 1998.

GROVER & ARCHIBALD

BLAIR GROVER

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I am a duly licensed attorney in the State of Idaho, with my office in Rigby, Idaho; that I served a copy of the foregoing document or pleading upon the following person(s) at the addresses below their names either by hand delivering, by facsimile transmission (Fax), or by mailing said document in the United States mail with the correct postage thereon, a true and correct copy thereof this 23 day of October, 1998.

Attorney Served:

Peter R. Anderson (Mail)
Department of Water Resources
1301 North Orchard Street
Boise, ID 83706-2237

Kent W. Foster, Esq. (Mail)
P.O. Box 50130
Idaho Falls, ID 83405

George Petersen, Esq. (Mail)
485 "E" Street
Idaho Falls, ID 83402

Breck H. Barton, Esq. (Mail)
P.O. Box 100
Rexburg, ID 83440

Blair Grover
BLAIR GROVER

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Department of Water Resources

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(208) 745-6653

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136	PROTESTANT NEWMAN'S PETITION FOR RECONSIDERATION

COMES NOW the Intervenor Protestant, Lavar Newman, and hereby petitions for reconsideration of the recommended Order issued by the Idaho Department of Water Resources dated September 10, 1998, mailed September 11, 1998, and received by Protestant September 14, 1998. Said Petition for Reconsideration is for the following reasons:

1. The above captioned matter was combined by agreement of all parties and the hearing officer with Application for Permit No. 32-07252 (formerly No. 31-07646) filed by Birch Creek Ranches, L.L.C. The Motion for Summary Judgment before the hearing examiner deals almost exclusively with issues raised in Application for Permit No. 32-07252. There has not been a factual hearing on the Application for Amendment to Permit Nos. 32-07128, 32-07136, or the Application for Permit No. 32-07252. Whether or not a factual hearing will be required depends on a decision on the pending Motions for Summary Judgment which also resolves Application for Permit No. 32-07136.

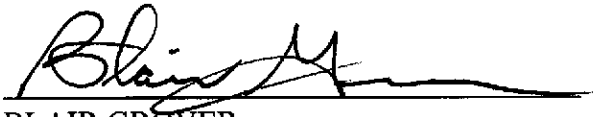
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JAN 0 8 2001

2. Whether or not the Order is acceptable to Protestant Newman depends on Findings, Conclusions and an Order in Application for Permit No. 32-07252. Until there is a decision which includes Application for Permit No. 32-07252, Protestant is not certain whether the Order is acceptable.

3. Protestant takes exception to some of the Findings and Conclusions, but depending on the decision in Application for Permit No. 32-07252, Protestant may decide not to raise or pursue them. Therefore, Protestant's petition the recommended Findings of Fact and Conclusions of Law and Order be withdrawn and submitted along with the Findings of Fact and Conclusions of Law and an Order also dealing with the issues in Application for Permit No. 32-07252. Protestant Newman will then be able to make a completely informed decision about any exceptions to the recommended Decision and Order.

DATED this 24th day of September, 1998.

GROVER & ARCHIBALD



BLAIR GROVER

MICROFILMED

JAN 0 8 2001

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I am a duly licensed attorney in the State of Idaho, with my office in Rigby, Idaho; that I served a copy of the foregoing document or pleading upon the following person(s) at the addresses below their names either by hand delivering, by facsimile transmission (Fax), or by mailing said document in the United States mail with the correct postage thereon, a true and correct copy thereof this 24th day of September, 1998.

Attorney Served:

Peter R. Anderson (Mail)
Department of Water Resources
1301 North Orchard Street
Boise, ID 83706-2237

Kent W. Foster, Esq. (Mail)
P.O. Box 50130
Idaho Falls, ID 83405

George Petersen, Esq. (Mail)
485 "E" Street
Idaho Falls, ID 83402

Breck H. Barton, Esq. (Mail)
P.O. Box 100
Rexburg, ID 83440

BLAIR GROVER

MICROFILMED
JAN 0 8 2001

STATE OF IDAHO

OFFICE OF THE ATTORNEY GENERAL

ALAN G. LANCE

September 10, 1998

RE: In the matter of Application for Amendment of Water Right Permit Nos. 32-07128 and 32-07136 in the name of Ted Sorenson dba Sorenson Engineering

Dear Interested Party:

The accompanying order is a "**recommended order**" issued by the department pursuant to Section 67-5243, Idaho Code. The provisions of this order will not become effective until the Director issues a final order in this matter.

Each party to these proceedings who appeared at the hearing may file a petition for reconsideration, briefs and exceptions to the recommended order and may request oral argument before the Director of the department as further described below:

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a recommended order with the hearing officer issuing the order within fourteen (14) days of the service date of the order. The hearing officer will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See Section 67-5243(3), Idaho Code.

EXCEPTIONS AND BRIEFS

Within twenty-one (21) days after (a) the service date of this recommended order, (b) the service date of a denial of a petition for reconsideration from this recommended order, or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration from this recommended order, any party may in writing support or take exceptions to any part of a recommended order and may file briefs in support of the party's position on any issue in the proceeding. Written briefs in support of or taking exceptions to the recommended order shall be filed with the Director. Opposing parties shall have twenty-one (21) days to respond.

MICROFILMED

JAN 0 8 2001

Natural Resources Division - Water Resources Unit
1301 North Orchard St., Boise Idaho 83706-2237
Telephone: (208) 327-7920; Legal FAX: (208) 327-7866
Adjudication FAX: (208) 327-5400

ORAL ARGUMENT

The Director may schedule oral argument in the matter before issuing a final order. Oral argument on exceptions to a recommended order shall be heard at the discretion of the Director. If oral arguments are to be heard, the Director will, within a reasonable time, notify each party of the place, date and hour for the argument of the case. Unless the Director orders otherwise, all oral arguments will be heard in Boise, Idaho.

CERTIFICATE OF SERVICE

All exceptions, briefs, requests for oral argument and any other matters filed with the Director in connection with the recommended order shall be served on all other parties to these proceedings in accordance with Rules of Procedure 302 and 303.

FINAL ORDER

The Director will issue a final order within fifty-six (56) days of receipt of the written briefs, oral argument or response to briefs, whichever is later, unless waived by the parties or for good cause shown. The agency may remand the matter for further evidentiary hearings if further factual development of the record is necessary before issuing a final order. The department will serve a copy of the final order on all parties of record.

APPEAL OF FINAL ORDER TO DISTRICT COURT

A party aggrieved by a final order of the Director is entitled to judicial review in compliance with sections 67-5271 through 67-5279, Idaho Code.

Sincerely,

Peter R. Anderson

PETER R. ANDERSON
Deputy Attorney General
Hearing Officer

Enclosure

c: IDWR - Eastern Region

MICROFILMED
JAN 08 2007

Law Offices
HOLDEN, KIDWELL, HAHN & CRAPO, P.L.L.C.

FRED J. HAHN
KENT W. FOSTER
ROBERT E. FARNAM
WILLIAM D. FALER
CHARLES A. HOMER
GARY L. MEIKLE
GAYLE A. SORENSON, P.A.
DONALD L. HARRIS, P.A.
DALE W. STORER
MARIE T. TYLER
ROBERT M. FOLLETT
FREDERICK J. HAHN, III
SHAN B. PERRY

U.S. BANK OF IDAHO BUILDING
350 SHOUP AVENUE, THIRD FLOOR
P.O. BOX 50130
IDAHO FALLS, IDAHO 83405

TELEPHONE (208) 523-0620
FACSIMILE (208) 523-9518
E-MAIL HOLDNLAW@SRV.NET

Arthur W. Holden
(1877-1967)
Robert B. Holden
(1911-1971)
Terry L. Crapo
(1939-1982)
William S. Holden
(1907-1988)

FACSIMILE TRANSMITTAL SHEET

DATE: July 31, 1998

TO: Debbie Ellis **FAX #:** 327-7866

FROM: Kent W. Foster's Office **FAX #:** (208) 523-9518

RE: Birch Creek Ranches

ITEM(S) SENT:

Copy of requested FERC document

NO. OF PAGES INCLUDING TRANSMITTAL SHEET: 3

MESSAGE:

ORIGINALS: Sent by Mail ( ) Kept on File (x)

IF YOU DO NOT RECEIVE ALL OF THE PAGES, PLEASE CALL BACK AS SOON AS POSSIBLE (208) 523-0620.

This message is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination or distribution of this communication to other than the intended recipient is strictly prohibited. If you have received this communication in error, please notify us immediately by collect telephone at (208) 523-0620, and return the original message to us at the above address via the U.S. Postal Service. Thank you.

Telecopier Operator

Kjerstin

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002
HKHC,P.L.L.C.
07/31/98 FRI 11:26 FAX 208 523 0219

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Birch Power Company — Project No. 7194-009 Idaho

ORDER MODIFYING MINIMUM FLOW REQUIRED BY ARTICLE 404, APPROVING RIPARIAN HABITAT MITIGATION PLAN AND DELETING ARTICLE 405

(Issued June 15, 1990)

On March 9, 1990, the Birch Power Company, licensee for the Birch Creek Hydroelectric Project, requested that the minimum flow requirement of article 404 be modified. Article 404 requires the licensee to discharge from the project a continuous minimum flow of 5 cubic feet per second (cfs), or 11 percent of the flow of Birch Creek, whichever is less, as measured immediately downstream from the project diversion, for the protection of riparian vegetation and wildlife resources. The licensee now proposes to reduce the minimum flow to the amount necessary to maintain riparian habitat it will develop below the project diversion.

As an alternative to releasing the required 5-cfs minimum flow, the licensee proposes to build and maintain 6 to 8 ponds below the diversion. Approximately 2.46 acres of riparian habitat will be created in association with the ponds. The principal components of the licensee's plan are installing about 6,000 feet of buried water pipeline, constructing 6 to 8 ponds, installing 1,000 feet of drip irrigation system, constructing 1.25 miles of livestock fencing, and developing one livestock water facility.

The licensee proposed the alternative minimum flow and riparian habitat mitigation plan because the current minimum flow discharged into Birch Creek will not preserve a significant portion of the riparian habitat below the project diversion. The bypass flow percolates into an alluvial fan within a short distance from the diversion. This flow will maintain only about 1.64 acres of riparian habitat. By implementing the alternative mitigation plan, about 2.46 acres of riparian habitat will be created and maintained.

The U.S. Fish and Wildlife Service, the Idaho Department of Fish and Game, and the Bureau of Land Management concur with the licensee's proposal to modify article 404 and develop the riparian habitat below the diversion.

The licensee's plan to create and maintain riparian habitat will result in an increase in riparian habitat compared to long-term conditions under the current minimum flow required by article 404. The minimum flow can be reduced to the amount necessary to maintain the planned riparian habitat without causing adverse impacts. Further, by reducing the minimum flow to the amount necessary to maintain the planned riparian habitat, about 2,700 acre-feet of water will be available for power production and irrigation.

After considering the environmental information in the licensee's request for modification of article 404, the staff's independent assessment 1/, and agency comments, the Director finds that the issuance of this order is not a major Federal action significantly affecting the quality of the human environment.

Article 405 requires the licensee to install a streamflow gage below the diversion. Because the streamflow gage will no longer be necessary, article 405 should be deleted from the license.

The Director orders:

(A) The licensee shall implement the Birch Creek Alternative Flow Mitigation Plan filed on March 9, 1990, to create and maintain riparian habitat below the project's diversion.

(B) Article 404 is amended as follows:

"Article 404. Licensee shall discharge from the Birch Creek Project diversion a continuous minimum flow sufficient to maintain the riparian habitat described in its Birch Creek Alternative Flow Mitigation Plan

1/ Environmental Assessment, Plan to Provide Alternative Minimum Flow and Create Riparian Habitat, Birch Creek Hydroelectric Project, FERC No. 7194-009, Idaho, Federal Energy Regulatory Commission, dated June 4, 1990. This document is available in the Commission's public files associated with this proceeding.

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filed on March 9, 1990, and required by paragraph A of this order. This flow may be temporarily modified if required by operating emergencies beyond the control of the licensee and for short periods upon mutual agreement among the licensee, the Idaho Department of Fish and Game, and the United States Bureau of Land Management."

(C) The licensee shall file with the Commission an annual report providing the results of its monitoring and maintenance of the riparian community developed according to the plan required by paragraph A. The report shall include any changes in design or operation of the system necessary to support the amount and quality of riparian vegetation specified by the plan. The licensee's filing shall also include the comments of the Bureau of Land Management, the U.S. Fish and Wildlife Service, and the Idaho Department of Fish and Game on the annual report. The annual reports shall be filed by December 31 of each year beginning in 1991 and continue for 10 years or until directed otherwise by the Commission. The Commission reserves the right to require changes to the mitigation plan required by paragraph A.

(D) Article 405 of the license is deleted.

(E) This order is issued under authority delegated to the Director and is final unless appealed to the Commission under Rule 1902 within 30 days from the date of its issuance.

J. Mark Robinson
Director, Division of Project
Compliance and Administration

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JUL 06 1998

POSTAGE AND FEES PAID
FEDERAL ENERGY
REGULATORY COMMISSION
FERC-351

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

P-7194 SORENSON
TED S. SORENSON
SORENSON ENGINEERS P.A.
2537 CANYON CREST
IDAHO FALLS, ID 83401

07/31/98 FRI 11:27 FAX 208 523 0219 HKHC,P.L.L.C. 003

ACTION REQUIRED

RECEIVED

JUN 2 9 1998

Department of Water Resources

FROM: H.W. Jones - Eastern

TO: Peter Anderson - Boise - Adj group

These are the orginal advertising affidavits for Amending Applic. 32-07128 & 32-07136

MICROFILMED

JAN 0 8 2001

NOTICE OF PROPOSED AMENDING OF WATER PERMIT

NOTICE IS HEREBY GIVEN that TED S. SORENSON d/b/a SORENSON ENGINEERING or BIRCH POWER has applied to the Department of Water Resources to amend hydropower permits as follows:

NO. 32-7128
AMOUNT: 45 CFS
PURPOSE: POWER PRODUCTION
SOURCE: BIRCH CREEK tributary of BIRCH CREEK SINKS TO GROUNDWATER AQUIFIER.
POINT OF DIVERSION: NENW SEC 3 T 8N R 30E, CLARK COUNTY.
The water is used for power generation within the NENE SEC 14 T8N R 31E, B.M.
NO. 32-7136
AMOUNT: 30 CFS
PURPOSE: POWER PRODUCTION
SOURCE: BIRCH CREEK tributary of BIRCH CREEK SINKS TO GROUNDWATER AQUIFIER.
POINT OF DIVERSION: NENW SEC 3 T 8N R 30E, CLARK COUNTY.
The water is used for power generation within the NENE SEC 14 T8N R 31E, B.M.
This amendment is requested to remove a requirement to bypass 5 cfs or 11% of the flow of Birch Creek down the old Birch Creek Channel.
Any protest to the proposed amending of the permits must be filed with the Idaho Department of Water Resources, 150 Shoup Ave., Idaho Falls, ID 83401, on or before August 20, 1990.
PUBLISH: **Thursday**, August 2 & 9, 1990.

Affidavit of Publication № 21240

STATE OF IDAHO }
COUNTY OF TWIN FALLS } ss.

I, Linda Copps McEuen being first duly sworn upon oath, depose and say that I am Busin Clerk of the TIMES-NEWS, published daily, at Twin Falls, Idaho, and do solemnly swear that a copy of the notice of advertisement, as per clipping attached, was published in the regular and entire issue of said newspaper, and not in any supplement thereof, for Two consecutive Weeks, commencing with the issue dated August 2, 1990, and ending with the issue dated August 9, 1990.

And I do further certify that said newspaper is a consolidation, effective February 16, 1942, of the Idaho Evening Times, published theretofore daily except Sunday, and the Twin Falls News, published theretofore daily except Monday, both of which newspapers prior to consolidation had been published under said names in said city and county continuously and uninterruptedly during a period of more than twelve consecutive months, and said TIMES-NEWS, since such consolidation, has been published as a daily newspaper except Saturday, until July 31, 1978, at which time said newspaper began daily publication under said name in said city and county continuously and uninterruptedly.

And I further certify that pursuant to Section 60-108 Idaho Code, Thursday of each week has been designated as the day on which legal notice by law or by order of any court of competent jurisdiction within the state of Idaho, to be published weekly, will be published; and that at the head of the editorial column of said combined newspapers, and in each issue thereof, Thursday is announced as the day on which said legal notices will be published.

STATE OF IDAHO
COUNTY OF TWIN FALLS

On this 10 day of August in the year of 1990, before me, a Notary Public, personally appeared Linda Copps McEuen, known or identified to me to be the person whose name subscribed to the within instrument, and being by me first duly sworn, declared that the statements therein are true, and acknowledged to me that he executed the same.

Irma R. Feltman
Notary Public for Idaho
Residing at Twin Falls County
My commission expires: 5/19/94

MICROFILMED
AUG 28 1990

Proof of Publication
The Post-Register

RECEIVED
AUG 2 - 1990
Department of Water Resources
Eastern District Office

State of Idaho,
County of Bonneville } ss

I, Ted Delezene, first being duly sworn, depose and say: That I am the Foreman of The Post Company, a corporation of Idaho Falls, Bonneville County, Idaho, publishers of The Post-Register, a newspaper of general circulation, published daily, except Saturday, at Idaho Falls, Idaho; said Post-Register being a consolidation of the Idaho Falls Times, established in the year 1890, The Idaho Register, established in the year 1880 and the Idaho Falls Post, established in 1903, such consolidation being made on the 1st day of November, 1931, and each of said newspapers have been published continuously and uninterruptedly, prior to consolidation, for more than seventy-eight (78) weeks and said Post-Register having been published continuously and uninterruptedly from the date of such consolidation, up to and including the last publication of notice hereinafter referred to.

That the notice, of which a copy is hereto attached and made a part of this affidavit, was published in said Post-Register for Two consecutive weeks, first publication having been made on the 16th day of August, 19 90, last publication having been made on the 23rd day of August, 19 90, and that the said notice was published in the regular and entire issue of said paper on the respective dates of publication, and that such notice was published in the newspaper and not in a supplement.

Ted Delezene

Subscribed and sworn to before me, this 24th day of August, 19 90

Cathy Von Bonaten
Notary Public

My commission expires March 5, 19 96

B10

NOTICE OF PROPOSED AMENDING OF WATER PERMIT

NOTICE IS HEREBY GIVEN that TED S. SORENSON d/b/a SORENSON ENGINEERING or BIRCH POWER has applied to the Department of Water Resources to amend hydropower permits as follows:

NO. 32-7128
AMOUNT: 45 CFS
PURPOSE: POWER PRODUCTION
SOURCE: BIRCH CREEK tributary of BIRCH CREEK SINKS TO GROUND-WATER AQUIFER.
POINT OF DIVERSION: NENW SEC 3 T 8N R 30E, CLARK COUNTY
The water is used for power generation within the NENE SEC 14 T8N R 31E, B.M.

NO. 32-7136
AMOUNT: 30 CFS
PURPOSE: POWER PRODUCTION
SOURCE: BIRCH CREEK tributary of BIRCH CREEK SINKS TO GROUND-WATER AQUIFER.
POINT OF DIVERSION: NENW SEC 3 T 8N 30E, CLARK COUNTY
The water is used for power generation within the NENE SEC 14 T8N R 31E, B.M.

This amendment is requested to remove a requirement to bypass 5 cfs or 11% of the flow of Birch Creek down the old Birch Creek Channel.

Any protest to the proposed amending of the permits must be filed with the Idaho Department of Water Resources, 150 Shoup Ave., Idaho Falls, ID 83401, on or before SEPTEMBER 3, 1990.

Published: August 16, 23, 1990

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AUG 3 N 2001

TRIBUNE PUBLISHING COMPANY, INC.
The Lewiston Morning Tribune
– 505 C St., P.O. Box 957
Lewiston, Idaho 83501
(208) 743-9411

Date 080990 INVOICE No. L00204357

Account No. 446600 32-7128

Description 04357NOTIC

Times 2 Lines 29

Tab Lines

$ 32.63

LEGAL ADVERTISING
INVOICE

SOLD TO:

DEPT. OF WATER RESOURCES
150 SHOUP AVE. SUITE 15
IDAHOFALLS
ID 83402

NOTICE: This is an invoice of Purchase made by you. Statement will be rendered the first of the month.
Please Retain This Invoice as Your Statement Will Refer To Invoice by No. Only.

RECEIVED
AUG 13 1990
Department of Water Resources
Eastern District Office

04357

NOTICE OF PROPOSED AMENDING OF WATER PERMIT

NOTICE IS HEREBY GIVEN that TED S. SORENSON d/b/a SORENSON ENGINEERING or BIRCH POWER has applied to the Department of Water Resources to amend hydropower permits as follows:
NO. 32-7128 AMOUNT: 45 CFS PURPOSE: POWER PRODUCTION SOURCE: BIRCH CREEK tributary of BIRCH CREEK SINKS TO GROUNDWATER AQUIFER.
POINT OF DIVERSION: NENW SEC 3 T 8N R 30E, CLARK COUNTY
The water is used for power generation within the NENE SEC 14 T8N R 31E, B.M.

This amendment is requested to remove a requirement to bypass 5 cfs or 11% of the flow of Birch Creek down the old Birch Creek Channel.

Any protest to the proposed amending of the permits must be filed with the Idaho Department of Water Resources, 150 Shoup Ave., Idaho Falls, ID 83401, on or before August 20, 1990.

MICROFILMED
JAN 08 2001

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO, ss.
County of Nez Perce

Sue Baumeister, being duly sworn, deposes and says, I am the Legal Clerk of the Tribune Publishing Company, a corporation organized and existing under and by virtue of the laws of the State of Idaho, publishers of the LEWISTON MORNING TRIBUNE, a newspaper of general circulation published at Lewiston, Nez Perce County, Idaho; That the said Lewiston Morning Tribune is an established paper and has been published regularly and issued regularly at least once a day for more than 21 consecutive years next immediately preceding the first publication of this notice, and has been so published uninterrupted for said period; that the

NOTICE OF PROPOSED AMENDIN

attached hereto and which is made a part of this affidavit was published in the said Lewiston Morning Tribune, 2 time(s). Publication being on 080290, or once a WEEK for 2 consecutive WEEKS, the first publication thereof being on the 080290, and the last publication thereof being on the 080990, and said NOTICE OF PROPOSED AMENDIN was so published in the regular and entire issue of said newspaper and not in a supplement thereof and was so published in every issue and number of the said paper, during the period and times of publication as set forth above.

Sue Baumeister

SUBSCRIBED AND SWORN BEFORE ME THIS THE 10 day of August 1990

Sherol M Lentz

Notary Public in and for the State of Idaho, residing at Lewiston, therein.

The Idaho Statesman

RECEIVED
AUG 13 1990
Dept. of Water Resources
Eastern District Office

P.O. BOX 40, BOISE, IDAHO 83707

LEGAL ADVERTISING INVOICE

Amount Due: 48.36

Account Name	Account Number
Idaho Water Resources - Eastern	100564

Address	City/State	Zip
150 Shoup Ave #15	Idaho Falls, ID	83402

Ordered By	P.O. Number	Rate	Run Dates
R Bodell		nt	August 2, 9, 1990

Identification	Estimated Inches	Real Inches
Proposed Amending of Water Right		

Legal Number: 6201

[1] Number of Affidavits Requested

NOTICE OF PROPOSED AMENDING OF WATER PERMIT

NOTICE IS HEREBY GIVEN that TED S. SORENSON d/b/a SORENSON ENGINEERING or BIRCH POWER has applied to the Department of Water Resources to amend hydropower permits as follows:

NO. 32-7128
AMOUNT: 45 CFS
PURPOSE: Power Production
SOURCE: Birch Creek tributary of Birch Creek Sinks To groundwater aquifer.
POINT OF DIVERSION: NENW Sec 3 T 8N R 30E, Clark County
The water is used for power generation within the NENE Sec 14 T8N R 31E, B.M.

NO. 32-7136
AMOUNT: 30 CFS
PURPOSE: Power Production
SOURCE: Birch Creek tributary of Birch Creek Sinks to groundwater aquifer.
POINT OF DIVERSION: NENW Sec 3 T 8N R 30E, Clark County
The water is used for power generation within the NENE Sec 14 T8N R 31E, B.M.

This amendment is requested to remove a requirement to bypass 5 CFS or 11% of the flow of Birch Creek down the old Birch Creek Channel.

Any protest to the proposed amending of the permits must be filed with the Idaho Department of Water Resources, 150 Shoup Ave., Idaho Falls, ID 83401, on or before August 20, 1990.

Pub. Aug. 2,9, 1990 6201

Julie Day, being duly sworn, deposes and says: That she is the Principal Clerk of The Idaho Statesman, a daily newspaper printed and published at Boise, Ada County, State of Idaho, and having a general circulation therein and which said newspaper has been continuously and uninterruptedly published in said County during a period of twelve consecutive months prior to the first publication of the notice, a copy of which is attached hereto; that said notice was published in The Idaho Statesman in conformity with Section 60-108, Idaho Code as amended, for two consecutive weekly ☐ consecutive daily ☐ single ☐ odd skip insertion(s) beginning with the issue of August 2, 1990 and ending with the issue of August 9, 1990

Julie Day

STATE OF IDAHO)
ss.
COUNTY OF ADA)

On this 9th day of August in the year of 1990, before me, a Notary Public, personally appeared Julie Day, known or identified to me to be the person whose name subscribed to the within instrument, and being by me first duly sworn, declared that the statements therein are true, and acknowledged to me that she executed the same.

Notary Public for Idaho
Residing at Boise, Id.
My commission expires: 12/93

MICROFILMED
JAN 3 0 2001

RECEIVED
MAY 18 1998
Department of Water Resources

Blair Grover
GROVER & ARCHIBALD
215 Farnsworth Way
P.O. Box 36
Rigby, Idaho 83442
(208) 745-6653

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME TED SORENSON d/b/a SORENSON ENGINEERING and IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-07252 (formerly No. 31-07646) IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.,	PROTESTANT NEWMAN'S MEMORANDUM IN OPPOSITION TO APPLICANT'S CROSS MOTION FOR SUMMARY JUDGMENT

A. THE IDAHO DEPARTMENT OF WATER RESOURCES (IDWR) CAN AND SHOULD EMPLOY PRINCIPLES OF EQUITY IN RESOLVING THE ISSUES BEFORE IT.

1. The Idaho Courts, State And Federal Have A Long History Of Applying Equity Principles In Water Cases.

As early as 1930, the Supreme Court affirmed a District Court which had exercised equitable jurisdiction in approving a change in place of use of water:

> "The court was within its equitable jurisdiction in decreeing a change in the place of the use of the water."

First Security Bank v. State, 49 Idaho 741, 745, 291 P.2d 1064 (1930).

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A few years later, in *Hillcrest Irrigation District v. Nampa/Meridian Irrigation District et al.*, 57 Idaho 403, 66 P.2d 115 (1937), a senior appropriator allowed a junior appropriator to divert water claimed by the senior for more than 20 years. In confirming the junior's rights, the court relied on the Equitable Rules of Latches and Estoppel and noted:

> "Long and continuous knowing acquiescence in another's use and enjoyment of a property or privilege may preclude one from subsequently asserting his claim."

p.411.

It also observed, quoting with approval from earlier cases:

> "Courts of equity do not favor antiquated and stale demands and refuse to interfere where there has been gross laches in commencing the proper action or long acquiescence in the assertion of adverse rights."

p.412.

More recently in *Hidden Springs Trout Ranch v. Hagerman Water*, 101 Idaho 677, 619 P.2d 1130 (1980) which is discussed more fully hereafter, the court fully evaluated principles of forfeiture and abandonment, both equitable principles, in determining respective water rights of the parties. The court discussed and relied on those same principles in *Jenkins v. State Department of Water Resources,* 103 Idaho 384, 646 P.2d 1256 (1982).

In *Idaho Farms, Co. v. North Side Canal Co.*, 24 Fed.Supp 189 (D.Id.1938), the Federal Court held where no public interest is advanced by an alleged abandonment of a water right, equity is against the abandonment.

Both the SRBA Court and the Special Masters are exercising equitable principles in the SRBA. For example, in *State v. Hagerman Water Owners, Inc.*, 97.19 ISCR 931 (Feb.1997) it was noted:

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> "The Special Master determined that absent a claim of forfeiture, abandonment, adverse possession, or estoppel, a reduction in beneficial use after a water right vests is not a basis upon which a water right may be reduced."

p.933.

The District Court adopted both the Special Masters recommendations, findings and conclusions without further hearing or argument. While partially reversed on other grounds, there was no indication by the Supreme Court that either the Special Master or the District Court had inappropriately considered the equitable principles of forfeiture, abandonment, adverse possession, or estoppel.

While the question is not the court's power to employ equitable principles, but that of IDWR, the fact the courts can and do so is persuasive IDWR may also do so. Otherwise, water litigants are in the impossible position of one set of legal requirements before IDWR, and an additional set before the courts. In that situation, hearings before IDWR are largely a waste of everyone's time and resources.

In *Jenkins v. State, supra*, IDWR considered the equitable arguments of both abandonment and forfeiture in a transfer proceeding. The court approved of its doing so in part because whether a transfer will injure other rights depends on whether those rights have been abandoned or forfeited. In this application, the director must determine, among other things, whether the applications (a) will reduce the quantity of water under existing rights, or (b) whether the water supply is insufficient for the purposes sought, or (e) whether it will conflict with the local public interest. (Idaho Code § 42-203(A)(5)). The director can hardly determine whether there will be a reduction in the quantity of water under existing rights or whether the water is insufficient for the purposes sought, without

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determining who owns the water applicant seeks to appropriate. To the extent equitable principles of forfeiture, abandonment, estoppel, fraud, and/or others are applicable in resolving those statutory mandates, they must be considered and applied.

B. NEITHER RES JUDICATA, COLLATERAL ESTOPPEL, NOR LAW OF THE CASE, ARE A BAR BECAUSE THERE HAS BEEN NO FINAL DECISION IN ANY PRIOR PROCEEDING.

1. Res judicata, (Claim Preclusion), And/Or Collateral Estoppel (Issue Preclusion) Bar Subsequent Proceedings Where There Has Been A Judgment On The Merits In A Prior Proceeding.

In *Foster v. City of St. Anthony*, 122 Idaho 883, 841 P.2d 413 (1982), cited by applicant as authority, the court quoting from *Andre v. Morrow*, 106 Idaho 455, 680 P.2d 1355 (1984), observed the following:

> "There are two aspects to the doctrine of "res judicata." Under the principle of "res judicata" or claim preclusion, a judgment on the merits in a prior proceeding bars a subsequent lawsuit between the same parties or their privies upon the same cause of action.
>
> The doctrine of collateral estoppel, or issue preclusion, prevents the relitigation of issues actually litigated and decided in another action, even in connection with a different claim or cause of action between the same parties in any subsequent suit." (citing numerous cases) (emphasis supplied).

p.888.

Both doctrines require litigation in a prior or different proceeding. That has simply not occurred. The parties are still litigating amendments to the initial applications, and an original filing consolidated with those amendments. A license has never been issued and the applications have

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never become final. The very fact the applicant seeks to amend the initial applications is conclusive evidence the applicant does not consider them final. Otherwise, the applicant is bound by the initial decision of the court, and that decision is unacceptable to it now. Consequently, it seeks to change that initial decision. Protestant does not understand how the applicant can claim res judicata and collateral estoppel apply while at the same time seeking to amend that decision.

2. There Are Additional Reasons Why The Doctrines Do Not Apply.

a. The Same Parties Are Not Involved.

Applicant was not a party to the dispute over alleged saved water. That dispute was between D&D and the State of Idaho (State). In fact, the applicant did not even file a Memorandum.

Wilding was not a party nor his successor in interest, Newman. The record indicates Wilding was water master and appeared as representative of the water users in the proceeding. However, neither he nor the water users were a party to the appeal.

b. The Litigation Involved A Different Cause Of Action.

The disputed issue was whether the State or the irrigators were entitled to the alleged saved water. The applicant was not claiming it. The State and D&D filed the Briefs and made the arguments. Now, the issue is whether applicant or the irrigators are entitled to the water.

c. The Facts Presented Then, And Those Alleged By The Applicant Now are Quite Different.

Two scenarios for location of the new ditch and power plant were presented in the initial hearing. Neither were used. Instead, the applicant adopted a plan for construction of a significantly longer diversion channel. The savings were estimated to be 9 cfs or 10 cfs, and not 15 cfs to 17 cfs

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as now being claimed. Who can say what Wilding or the water users might have done in a case involving double the estimated water savings?

Finally, different technology was used. The applicant elected to use a liner, rather than a sealer as proposed.

There may have been other differences, but those are significant and substantial.

d. Res Judicata And/Or Collateral Estoppel Could Only Apply To 5 cfs.

If collateral estoppel or res judicata apply, which they do not, they can only apply to 5 cfs because that was the amount in dispute. The decision does not purport to award any other alleged saved water.

e. Applicant Has Waived Claims Of Res Adjudicata And Collateral Estoppel.

Applicant has waived any right to claim res judicata, collateral estoppel or law of the case by the changes from the decision which applicant seeks.

3. The Law Of The Case Has Not Been Established Because The Case Has Not Been Decided.

Protestants are not certain what is meant by applicant's argument of law of the case, because in part, applicant does not apparently recognize law of the case. At most, there was a law of the case established for the initial applications as they were filed. There is certainly no law of the case established for the amended applications nor for the new filing.

C. THERE IS NO "SAVED" WATER IN THE LEGAL SENSE FROM THE OLD RENO DITCH.

1. The Reno Ditch "Seepage" Is Not Water That Can Be Saved By A Third Party.

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"Saved water" as defined in Idaho Water Law, is a term of art with legal rights. One might however save water in a general sense and not be entitled to those rights. That is confusing in these proceedings because saved water is referred to both ways without distinguishing. Recognizing applicant saved water by lining a new ditch is not acknowledging it is "saved water" as a term of art. Everyone appears to agree, however, it is seepage water and in his Modified Memorandum Decision, the hearing examiner Fleenor identified the issue as :

> ". . . whether the water previously lost to seepage should be used to fill the decreed rights of the irrigators of the Reno Ditch or should it be used to provide a minimum flow in the Birch Creek channel downstream from the proposed point of diversion." (p.5).

The State of Idaho in it's Brief argued D&D ". . . is not entitled to the reclaimed seepage water. . ."(p.20); Judge George identified it as ". . . lost by seepage. . ."(Memorandum Decision Addendum p.4); the applicant repeatedly referred to it as bed loss which is the same as seepage (1984 Hearing Transcript, p.18 line 21, p.24 line 15,); applicant's attorney Mr. Rigby also used the term bed loss, (Hearing Transcript p.127 line 18).

Seepage losses following appropriation are not subject to "savings" or appropriation. In *Hidden Springs Trout Ranch v. Hagerman Water Users, Inc.*, 101 Idaho 677, 619 P.2d 1130 (1980), Hagerman Water Users, Inc., (Hagerman) had a 1906 decree. It constructed two ditches to collect water from springs and channel it to its place of use. Through the years, seepage from one of the ditches, created "Spring A" which Hidden Springs Trout Ranch, Inc. (Hidden Springs) diverted and applied to beneficial use. Hagerman put a tube in its ditch to eliminate the seepage which dried up Spring A. Hidden Springs sued and the court held:

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"Hidden Springs also contends that Hagerman never put the water which seeped from the lower ditch to a beneficial use. It argues that the seepage was waste water, and that since the water has been allowed simply to escape back to the creek, it could not be said to have been put to a beneficial use. However, it has long been settled law in Idaho that a senior appropriator of water retains his right to surface waste and seepage water, and may reclaim it, even though such water has been used by a junior appropriator, even for as long as forty years. *Colthorp v. Mountain Home Irr. Dist.*, 66 Idaho 173, 157 P.2d 1005 (1945). In *Cothorp* the senior appropriator used his water to irrigate very porous soil. Approximately 75% of the water returned by seepage to Canyon Creek, from which point it was used by the junior appropriator. After the senior appropriator changed his point of diversion, the seepage ceased. The junior appropriator sued to enforce his claimed right to the seepage water. The trial court's denial of relief to the junior appropriator was affirmed on appeal:

> "It is true, as contended by appellant, and as will have been observed, the right to appropriate seepage water is recognized, still and nevertheless, in construing these sections in *Sebern v. Moore,* 44 [Idaho] 410, 416, 417, 418, 258 P. 176, [178] this court held 'surface waste and seepage water may be appropriated . . . *subject to the right of the owner to cease wasting it, or in good faith to change the place or manner of wasting it, or to recapture it, so long as he applies it to a beneficial use.*' (Emphasis ours)." 66 Idaho at 179, 157 P.2d at 1007.

Hidden Springs acknowledges this general proposition--that a senior appropriator may reclaim "waste water" which until that point had been used by a junior appropriator--but attempts to draw a distinction between different kinds of waste water. According to Hidden Springs, the waste water in *Colthorp* was runoff or seepage which resulted from irrigation. In the present case, however, the water was lost *en transit* before reaching the point of use. As noted by the trial court, this is an ingenious distinction, but no support is found for it in the case law. In fact, case law indicates that the opposite is true; that no distinction is to be drawn between waste water appropriated after it has been put to irrigation use and waste water seeping from irrigation canals. *See Bower v. Big Horn Canal Assoc.*, 77 Wyo. 80, 307 P.2d 593 (1957). Moreover, it would be difficult to establish such a precedent on the basis of public policy. No appropriator of waste water should be able to compel any other appropriator to continue the waste of water which benefits the former. *Crawford v. Inglin*, 44 Idaho 663, 258 P. 541 (1927). While the

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waste of the original appropriator is not to be encouraged, the recognition of a right in a third person to enforce the continuation of waste will not result in more efficient uses of water.

The rule instead has been that some loss of water through seepage or evaporation is considered a prerogative of appropriator, so long as the loss is reasonable. *Glenn Dale Ranches v. Schaub*, 94 Idaho 585, 494 P.2d 1029 (1972). The senior appropriator retains his right to all of the water, including that which is lost through reasonable seepage, and thus may reclaim it, for instance, by improving his transmission system.

Hidden Springs argues in the alternative that the waters forming Spring A were abandoned or forfeited by Hagerman. This Court has frequently stated that "[f]orfeitures are abhorrent and all intendments are to be indulged against a forfeiture." *Application of Boyer,* 73 Idaho 152, 159, 248 P.2d 540, 544 (1952). This Court also stated in *Thompson v. Bingham*, 78 Idaho 305, 302 P.2d 948 (1956), that "as against the original appropriator and owner, an adjoining land owner cannot acquire a prescriptive right to waste or seepage water." *Id.* at 308, 302 P.2d at 949-50.

The parties stipulated to the fact that over the years Hagerman had tried repeatedly to reduce the seepage loss from the open ditch. These efforts culminated in the placement of the steel pipe referred to above. It is clear from the stipulated facts that Hagerman never intended to abandon the water forming Spring A. Absent such intent, no abandonment can be found. *Gilbert v. Smith, supra.*

In order to establish forfeiture, Hidden Springs had to show that the water was not put to a beneficial use for a period of at least five years prior to this suit. Here, the evidence convinced the trial court that the water as a whole was put to a beneficial use. While in a sense it might be said that the seepage water was not being beneficially used by Hagerman, we do not look exclusively to that part which seeped, but to the use made of the water as a whole. So long as that water which arrived at its destination was put to a beneficial use, and so long as the amount of water lost through seepage during the transportation of that water from its place of origin to its place of use was reasonable, it cannot be said that the mere fact of seepage transformed it into water not beneficially used.

pp. 680, 681 and 682.

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The only difference between Silver Springs and the applicant is Silver Springs apparently diverted the seepage water by means of a ditch, while applicant reclaimed it by means of a liner. Applicant submits that is a distinction without any significance. Consequently, applicant does not own the seepage water, it is not available for his use, and he is not entitled to a license for it. On the contrary, it belongs to the appropriators, D&D and Newman, and they are entitled to its use.

Protestant Newman has already submitted arguments with regard to "saved water" used as a term of art in *Reno v. Richards*, *Hill v. Green*, and *Basinger v. Taylor*, which are not repeated here. It is merely noted those cases hold water saved or salvaged prior to diversion and appropriation belong to the entity person saving it. They have no application to seepage losses "in transit" following diversion from natural flowing channels.

2. Applicant Had No Intention Of Claiming The Seepage Water Or Being Paid For The Same.

Applicant argues:

> "None of the statements by Mr. Sorenson, as quoted or testified to by protestants, can possibly be considered as a promise or representation or misrepresentation to the effect that he intended to save the water for the benefit of the protestants, for free."

Memorandum In Support of Applicant's Motion for Summary Judgment p.28.

Apparently, applicant recognizes the statements can certainly be considered as a promise or representation he intended the water for protestants, the only question being whether or not they were to pay for it. There are least four (4) compelling reasons why payment was not expected:

(1) What the applicant wanted: The applicant was seeking a nonconsumptive use for a power plant, and wanted all of the water it could get for that use. Applicant did not construct a new

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ditch and line it so he could save water, but so it could be diverted through his power plant. The seepage water added to exactly what he wanted: water for the turbine. Applicant did not expect to be paid for any incidental benefit that might occur to the irrigators in their reclaiming their seepage waters.

(2) What happened is also compelling. Applicant developed a projected income for the project but did not show anticipated income from either sale or rental of alleged "saved water."[1] Moreover, in more than ten (10) years of operation, applicant has never submitted a billing to protestants for their use of the water, or for the construction costs of the liner. When applicant leased the Simmons' water to D&D, it did not include seepage water. The lease was later modified to include Woody water, but never modified to include the alleged saved water. The applicant did not appeal the Hearing Officer's decision to grant 5 cfs of the seepage water to the public because he did not claim it. He did not file a Memorandum supporting the public's claim, nor a Memorandum in opposition to the claim of the D&D because he did not see it as a dispute over his water.[2]

(3) What the parties said and did not say is significant. Paragraph 10 of Application for Permit 32-7128, applicant states: "Water use is nonconsumptive, all water will be available for present irrigational uses and/or return to Birch Creek. . ." (Emphasized and read by applicant in 1994 hearing, Tr.43 lines 24 and 25).

Applicant Testified:

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[1]It is expected an exhibit will be offered showing the projections.

[2]Applicant argues it is somehow unfair that D&D and Newman receive the water they did not pay for reclaiming. It should first be kept in mind, applicant's objective was to have the water run through the power plant and it did not know if there would be any additional water it could reclaim. It was hardly in a position to seek cost sharing. On the other hand, applicant convinced protestants the lining of Birch Creek would create substantial savings for all their benefit. Protestants shared in the costs although benefits are yet to be realized.

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> "And that reach there is approximately thirteen second feet of bed loss if we allow three cfs in the new ditch this would mean an increase of ten to eleven second feet of water that is available for use of the irrigators, if it belongs to them as their water rights or its available for the use of the Fish and Game to bypass for downstream use, whatever the case may be. I am saying we do not decrease the water supply, that is available, we increase it.

p. 18, lines 20-25; p. 19, lines 1-2.

In that and other statements, there is no indication it would go to irrigators only if they paid for it.

Failure to disclose constitutes fraud. In *Saint Alphonsus Medical Center Inc., v. Krueger*, 124 Idaho 501, 507 and 580, 861 P.2d 71 (App.1992) the court declared:

> "Failure to disclose a fact may constitute fraud if one party owes a duty to another to disclose the fact. *Jones v. Maestas*, 108 Idaho 69, 71-72, 696 P.d. 920, 922-23, (Ct.App.1985). A duty to disclose may arise when (a) a party to a business transaction is in a fiduciary relationship with the other party; or (b) disclosure would be necessary to prevent a partial or ambiguous statement of fact from becoming misleading; or (c) subsequent information has been acquired which a party knows will make a previous representation untrue or misleading; or (d) a party knows a false representation is about to be relied upon; or (e) a party knows the opposing party is about to enter into the transaction under a mistake of fact and because of the relationship between them or the customs of trade or other objective circumstances would reasonably expect a disclosure of the facts. RESTATEMENT, SECOND Torts § 551(2)."

Sections (b) and (e) are relevant here. If applicant expected protestants to pay, disclosure was necessary to prevent the statements made from becoming misleading. Likewise, applicant wanted protestants to sell him land, and if not approve at least go along with the project. He induced sale and cooperation by promising the saved water. Under those circumstances, applicant had a duty to disclose it was theirs only if they paid for it. The appropriate measure of damage is simply to enforce the representations as made, i.e., the irrigators have the use of their reclaimed seepage water.

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(4) Absent a clear agreement for payment, protestants should not be required to pay for water they own. Applicant did not negotiate for payment of the water because he did not know how much there would be, and he had no use for it after it had ran through the turbine. Consequently, he did not propose any terms for payment of any amount.

D. THE AMOUNT OF LOSS IS DISPUTED.

Data showing the seepage loss in the Reno Ditch is very inadequate. Exhibit G attached to Sorenson's Affidavit in Support Applicant's Motion for Summary Judgment, purports to be a flow comparison between data from the USGS for August, 1980, and data from the University of Idaho for August, 1983. Lines 2 and 4 are significant. In 1980, they show the flow at the existing (Reno Ditch) diversion at 42 cfs and in 1983 at 42.07 cfs, a very small difference. However, the flows at the splitter box are 28.7 cfs in 1980 and 30.2 cfs in 1983 a difference of 1.5 cfs. Those measurements show the losses were 1½ cfs greater in August, 1983 than in August, 1980 with virtually the same diversion. Based on those and other measurements, there is simply insufficient data to determine losses in the Reno Ditch throughout the irrigation seasons.

F. THE MORATORIUM ISSUE.

As part of Application 7252 (formerly 7646), applicant proposes mitigation to avoid the impact of the Amended Moratorium Order. Apparently, applicant proposes drying up lands located in Jefferson[3] and Clark Counties located some 25 miles from the splitter gate. As understood by protestants, the location of the proposed use has pumps and wells in place, but the water rights were

[3]The Jefferson County land is in CRP so there actually is no current use of the water.

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conveyed to Larson Farms. Applicant apparently intends to reuse those wells if mitigation is accepted.

Protestants submit:

(1) Mitigation should not be permitted from 25 miles distance.

(2) The Conversation Reserve lands cannot transfer or lease a very substantial part of those lands i.e., water rights, and still retain the CRP payments. The lands were placed in the CRP with water rights appurtenant, so lease or transfer of those water rights should not be permitted as long as the lands remain in CRP.

In any case, additional facts need to be developed on applicant's total acreage and mitigation proposal.

G. CONCLUSION.

State and federal courts have and continue to apply equity in resolving water issues. In *Jenkins v. State*, the court approved IDWR applying the equitable principles of forfeiture and abandonment. In this case, neither IDWR nor the court can approve or deny permits and/or licences without determining who has the right to the seepage water, and that depends on estoppel. It makes little sense for IDWR to ignore estoppel and have it later applied by the court.

Although the initial hearing on the applications occurred in April, 1984, there has never been a final decision on them because of the amendments, nor any decision at all on Application 7252. Consequently, no license has ever been issued. Res judicata and collateral estoppel only bar another suit, or subsequent litigation. Therefore the doctrines have no application here. Moreover, applicant proposes using those doctrines as a shield to protect it from protestants' rights to their seepage water,

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and as a sword to claim that water in spite of the court's award to the public. Applicant is arguing res judicata and collateral estoppel bar protestants but not applicant. Under the circumstances, they do not bar anyone.

The law of the case has not been determined because it is significantly different than the one originally argued. The earlier litigation decisions by the parties involved 5 cfs. Those decisions most likely would have been significantly different had they involved 17 cfs as is now the case. Aside from any other argument, it is fundamentally unfair to hold protestants to decisions made involving 5 cfs when up to 17 cfs is the claim of the current applications.

Hidden Springs Trout Ranch v. Hagerman Water Users, Inc., establishes the legal principle seepage in transit after diversion belongs to the appropriator. Hidden Springs was not entitled to Hagerman's seepage water even though it had diverted and made application of the same. It should make no difference whether that diversion is by a ditch or liner. That is a distinction without legal support.

The application, and the 1984 record promises "saved water" to either the irrigators or the State for the by pass flow. There is no testimony in that record applicant intended to make consumptive use of that water. Applicant must acknowledge the representations were made and now somewhat disingenuineously argues he did not say the irrigators could have the water without paying for it. Under the circumstances, if the applicant honestly expected payment, he had a duty to disclose that to the protestants. His failure to do so is fraud. Damages are simply to enforce the representations as made, i.e., the so-called saved water belongs to the irrigators.

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The water applicant seeks belongs to protestants as their seepage water. Moreover, applicant is estopped from making any claim to it.

There are factual issues regarding the amount of seepage water remaining to be resolved along with factual details of the mitigation.

Respectfully submitted this 15 day of May, 1998.

GROVER & ARCHIBALD

BLAIR GROVER

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I am a duly licensed attorney in the State of Idaho, with my office in Rigby, Idaho; that I served a copy of the foregoing document or pleading upon the following person(s) at the addresses below their names either by hand delivering, by facsimile transmission (Fax), or by mailing said document in the United States mail with the correct postage thereon, a true and correct copy thereof this 15 day of May, 1998.

Attorney Served:

Peter R. Anderson (Mail) & Fax
Department of Water Resources
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Boise, ID 83706-2237

Kent W. Foster, Esq. (Mail) & Fax
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Idaho Falls, ID 83405

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BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME TED SORENSON d/b/a SORENSON ENGINEERING and IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-07252 (formerly No. 31-07646) IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.,	AFFIDAVIT OF LAVAR NEWMAN IN OPPOSITION TO APPLICANT'S MOTION FOR SUMMARY JUDGMENT

STATE OF IDAHO)
)ss
County of Jefferson)

LAVAR NEWMAN, being first duly sworn deposes and states:

1. Ted Sorenson (Sorenson) at one time told affiant he had acquired the right to the 5 cfs originally awarded to the State of Idaho. He did not present any written evidence or orders. He claimed he had spent some $65,000.00 in constructing the ponds, and would consider sharing the 5 cfs for payment of some of the construction costs. There was no specific figure discussed. Affiant

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neither agreed nor disagreed at the time primarily because he did not know whether Sorenson had a right to acquire the 5 cfs, or if in fact he had done so.

It was about that time the parties became involved in the liner project on the creek, and there were no further discussions.

2. Mr. Sorenson convinced affiant and D&D placing a liner in the creek would reduce the bed losses substantially. He said the greatest losses were between 8 Mile and the Hydro Pond, and that is the reason for lining that reach. The result was a significant increase in bed losses, part of which were sustained by affiant. Through the years, the creek has sealed itself and the losses are now about where they were before the lining. Thus, it is difficult to know in any given circumstance how much lining will actually help.

3. As explained at the Transfer Hearing, affiant has placed all of the Wilding property under sprinkler. There is now a mainline which starts at the pond near the splitter gate, proceeds through Upper Reno, then along D&D, to Lower Reno. It begins as a 27 inch line, reduces to 24 inches, then to 22 inches, and finally to 18 inches. Affiant has expended more than a million dollars for the system, but it has dramatically increased the efficiency of use of the water.

With the exception of two stack yards, and a small parcel north of the highway, affiant is only irrigating land which was irrigated by Wilding. As explained, approximately 80 acres was acquired from D&D without the water used there. However, the efficiencies of the sprinkler system have permitted continued irrigation of the same.

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DATED this 15 day of May, 1998.

LAVAR NEWMAN

STATE OF IDAHO)
:ss
County of)

LAVAR NEWMAN, being first duly sworn on oath, deposes and says that he is the above named affiant, has read the foregoing Affidavit, knows the contents thereof, and verily believes the same to be true.

LAVAR NEWMAN

Subscribed and sworn to before me this 15 day of May, 1998.

Notary Public for Idaho
Residing at Rigby
Commission Expires 10/24/97

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I am a duly licensed attorney in the State of Idaho, with my office in Rigby, Idaho; that I served a copy of the foregoing document or pleading upon the following person(s) at the addresses below their names either by hand delivering, by facsimile transmission (Fax), or by mailing said document in the United States mail with the correct postage thereon, a true and correct copy thereof this 15 day of May, 1998.

Attorney Served:	Peter R. Anderson Department of Water Resources 1301 North Orchard Street Boise, ID 83706-2237	(Mail) + Fax
	Kent W. Foster, Esq. P.O. Box 50130 Idaho Falls, ID 83405	(Mail) + Fax
	George Petersen, Esq. 485 "E" Street Idaho Falls, ID 83402	(Mail) + Fax
	Breck H. Barton, Esq. P.O. Box 100 Rexburg, ID 83440	(Mail)

BLAIR GROVER

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Recd - 5/18/98

George C. Petersen, Jr., Esq.
Wm. Charles Carr, Esq.
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Idaho Falls, Idaho 83402
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BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME TED SORENSON d/b/a SORENSON ENGINEERING and IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-07252 (formerly No. 31-07646) IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.	**AFFIDAVIT OF JAMES DeMORDAUNT**

STATE OF IDAHO)
) ss.
County of Bonneville)

I, **Jim DeMordaunt**, do solemnly swear (or affirm) that the testimony given in this sworn statement is the truth, the whole truth, and nothing but the truth, that it is made on my personal knowledge, and that I would so testify in open court if called upon to do so.

1. Contrary to what he says, Ted Sorenson never proposed that D & D and Ben Wilding undertake the power generation project, with Ted acting only as an engineer.

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2. I always responded to any proposals which Ted Sorenson made to me. He proposed rerouting D & D's and Wilding's water through a new ditch to a power plant. He said that this would eliminate the losses occurring in the Old Reno Ditch and thereby increase the flow. He promised that if we would allow him to run our water through his power plant the resulting increase in flow would belong to us. Exhibit 251, a letter to me and others from Ted, dated February 2, 1983, is an example of what Ted was saying. On several different occasions as the proposed plan was discussed with Mr. Sorenson, I gave him verbal approval to use our water in exchange for receiving the increased flow which we all anticipated would result.

3. During all of our discussions about his power plant plan, Ted never said and never even implied that D & D or Wilding would have to pay for the increased water flow we were to receive. He told us he needed our water for his non-consumptive use and that he would give us the increased water in exchange for our allowing him to reroute and use our water to generate electricity.

4. The only initial concern I had with his plan was whether Ted Sorenson had the necessary financial backing to successfully follow through with his plan. I was concerned that if the new canal wasn't completed or failed, we would not be able to get our Birch Creek water delivered to our ranch. I therefore initially filed a protest to the application for this reason. Others had similar concerns. For example, Exhibit 252, dated October 10, 1982, is a copy of a note to IDWR from Ben Wilding, William T. Simmons and C.A. Wagoner protesting Sorenson's proposed power plant because they wanted ". . . to make a more thorough study of what is wanted before we grant permission to do that."

5. The financial backing issue was eventually resolved and the BLM agreed that the Old Reno Ditch could stay in place for a period as a backup method of delivering Birch Creek

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water to our ranch. Once these concerns were satisfied, I did not actively pursue the FERC protest. I agreed to the change in the path of delivery so our Birch Creek water could run through Ted's power plant.

6. Ted Sorenson's plan provided that all of the Birch Creek water below the Wagoner diversion, i.e. all of D & D and Wilding's water, would flow through the power plant and then to us. It did not include any bypass flow down Birch Creek. Ted assured us that there was no need for a bypass. In his letter to me of April 4, 1983 (Exhibit 245) he said:

> What about Fish & Game and the B.L.M.'s requirements for bypass flows? My approach would be to file a minor license with FERC for the project. This has the effect of giving the final say to the Federal Energy Regulatory Commission (FERC) - not the Fish & Game or the B.L.M. The loss of water in 3,000 L.F. of Birch Creek would be offset by 6 miles of new ditch which could support a fishery. I would need to hire a fisheries expert to document same. Therefore, no continuous bypass flow would occur because the loss of fishery habitat would be offset by production in the new ditch and because all water must be diverted to satisfy your existing water rights.

The Idaho Fish and Game Department, however, maintained their position that before they would drop their protest, there had to be a bypass flow. Because there sometimes had not been sufficient water during the peak irrigation season to satisfy our full water rights, D & D protested this proposed bypass. Our quarrel was not with Ted Sorenson, however, but with the State. (Ted even dropped from his application to IDWR his agreement that 5 cfs be bypassed so that we could fight this battle for him. *See* Modified Memorandum Decision and Order, Finding of Fact 3.) We were not contesting the power plant or the rerouting of our water—only whether some amount of this water had to flow over a bypass. If Wilding and I originally had not been promised that all of the extra water would belong to us, I would not have protested and spent several thousand dollars fighting to keep this water flowing through the power plant and to us. I certainly had no reason to contest this bypass if the water in question belonged to Ted.

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7. Ted Sorenson needed approximately two acres of my land on which to build his power plant. Exhibit 253 is a letter, with attached map, from Ray Rigby, attorney for Ted Sorenson, to my attorney, George C. Petersen, dated June 7, 1984, asking for land on which to build the power plant. He said that the BLM had "hassled" Ted to point he wanted to move the location of the power plant and that this move would require an added 4,500 feet of pipe line which would eliminate 4,500 feet of additional bed loss in Old Reno Ditch. "*He [Ted Sorenson] believes this will yield to the irrigators an additional approximately 40-50 miners inches of irrigation water.*" I agreed to sell him this land for $1,000—a pretty insignificant part of his total project cost. Exhibit 254 is a letter from me to Ted Sorenson, dated December 1, 1984, granting to him the right to use a D & D irrigation ditch for outflow from the power plant. Exhibit 255, is an Option Agreement in December of 1994 granting Ted Sorenson an option, for $25, to purchase up to two acres, at $500 per acre, of D & D land for his power plant, outflow ditches and power transmission lines. *I did not sell him the two acres in order to make money. Rather, I sold him the land in order to facilitate the project. In fact, the $1,000 didn't fully compensate me for my attorney fees and time spent on this transaction.* My willingness to sell Ted the land is further evidence that I approved of the project and had reached agreement with him. The protests which D & D filed were not against the project and the use of our water. Obviously, had we not already reached a basic agreement with Ted about this, I would not have been selling him land on which to build his power plant.

8. Several years after the power plant was in operation, Ted Sorenson approached me and asked if I would help pay for costs of some mitigation so that the 5 cfs bypass requirement perhaps could be eliminated. At that time, however, there was almost no water being bypassed—certainly not anywhere near 5 cfs. The 5 cfs bypass only occurred when Ted

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Sorenson knew someone from the State was coming to visit. It made no sense for me to contribute any money to accomplish a minimal increase of less than 1 cfs—especially when Ted had already promised us that all the increase would belong to us.

9. In about 1989 Ted Sorenson approached me about a plan to line up to 8,000 feet of Birch Creek above the power pond. This was a new idea which was not part of Ted's original agreement with us, so we agreed to share in the cost of this effort to reduce Birch Creek loss, share in the annual maintenance of this project, and share in any water saved as a result of lining this stretch of Birch Creek. I have already paid several $10,000's into this project.

10. Contrary to Mr. Foster's claim, D & D's termination of lease for the Simmons' water was not because D & D wanted to get water for free. D & D leased the Simmons' water right from Ted Sorenson from 1989 to 1993. During this time the IDWR Interim Order was in effect. It ordered that the Simmons' water right share proportionally in the Birch Creek losses and be delivered to D & D pursuant to the lease. Thus, the watermaster determined the percentage of loss in the reach each time he delivered water, reduced the 18.7 cfs of Simmons' water by this amount, and delivered this reduced amount of water to D & D. The remaining water was then split 7/12 to D & D and 5/12 to Newman. In October of 1993, IDWR said the Interim Order would not be extended to 1994. As a result, any benefit to be obtained from continuing to lease the Simmons' water was almost eliminated--in 1994 the watermaster delivered all the water at our splitter gate, per the 7/12 - 5/12 D & D/Newman agreement, until D & D and Newman's rights had been completely filled. Since most of the available water was used to deliver these rights, there was essentially nothing left to lease from Ted Sorenson.

11. D & D and Wilding/Newman have contributed significantly to Ted Sorenson's project. We have changed our positions to our detriment in doing so. For example:

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- We gave permission to move our water from the Old Reno Ditch and run it through Ted Sorenson's power plant. Without this permission Ted could not have gone forward as he did.

- We sold Ted land for the power plant and right of way at a nominal price so as to facilitate his progress. Without this he would have been delayed in trying to work out a purchase with the BLM or he would have had to incur the expense and delay involved in trying to condemn land. There is no guarantee he would have been successful in trying to negotiate with the BLM or in a condemnation action.

- D & D incurred attorney fees in trying to get 5 cfs of overflow through power plant.

- In reliance on Ted Sorenson's promises and our agreement, we have placed ourselves in the position of loosing our historical water flow. Had we never agreed to Ted's rerouting and (what we thought would be) non-consumptive use of our water, this threat to our water and our very livelihood, and this tremendously expensive and emotionally draining conflict would never have occurred. D & D has incurred and continues to incur attorney and expert witness fees in trying to protect and assure its historical flow of water and in trying to get what Ted Sorenson promised us—the right to any increased flow resulting from his project. For Mr. Foster to claim that we have not lost anything because of our involvement in Ted's plan is simply ridiculous. If it was possible, we would very much like to be able to go back and do this all over again. Had we known then

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what we know now about how Ted was going to renege on his promises and threaten our water, we would certainly have done things differently.

12. Mr. Foster asserts that I have attempted to block Ted's purchase of land. I don't know what he is talking about unless he has reference to the "Rattlesnake allotment." D & D had a BLM lease or allotment for several years on land adjacent to our lower ranch. This was a grazing right on which we put our cattle each spring. Ted Sorenson wanted a portion of this ground and offered to give the BLM some other ground he owned and which BLM wanted, in exchange for this "Rattlesnake" ground. D & D protested solely because we had historically leased this ground from the BLM and needed it for grazing our cattle. Our protest had nothing to do with our other dealings with Ted. Because the BLM wanted the ground Ted Sorenson offered in trade, the BLM went through with Ted Sorenson's deal and we lost some of our grazing rights.

13. Mr. Foster says that Ted Sorenson is now claiming "water which was never available to or used by D & D and Wilding (now Newman) because of seepage losses" in the Old Reno Ditch. This is not true. For many years, D & D and Wilding used bentonite in the Old Reno Ditch and this successfully sealed much of the seepage loss. For example, Exhibit 256 is a summary of some D & D checks written to Ben Wilding and others between July 8, 1962 and March 20, 1986. This summary shows that D & D and Wilding were placing bentonite in the Old Reno Ditch in 1966, 1969, 1970, 1971, 1973, 1974, 1975, 1976, 1977 and also doing other work on the Old Reno Ditch. Exhibit 257 is a letter from Roy W. Thompson, acting for the State Reclamation Engineer, dated September 29, 1960, which shows that these efforts had been so successful that at the time of one measurement, there were no losses in the

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Old Reno Ditch. After the government stopped our use of bentonite in about 1977, the losses began increasing. The losses in the ditch have varied greatly with time and circumstances.

14. At page 23 of his brief, Mr. Foster argues that when there were 30 cfs of water in Birch Creek at the new point of diversion, D & D and Wilding received only 15 cfs of water at the splitter box. This is not true. I have seen no records showing only 15 cfs of water at the splitter box and to think that D & D and Wilding could have successfully irrigated with a total of 15 cfs is ridiculous. With a 7/12 - 5/12 split, D & D would have received less than 9 cfs to irrigate about 1,400 acres. Even if, as Mr. Foster claims, we had only been irrigating 960 acres, this would be less than 1/2 miners inch per acre. Historically, we have had more water than this to operate.

15. Mr. Foster's statement at page 25 of his brief regarding D & D acreage is very misleading. From year to year, and during any given year, the acreage D & D was able to irrigate varied, depending on the water available. There were years and seasons when we were able to irrigate all of D & D's acreage. However, 1987 was a low water year. As a result we only *consistently* watered about 960 acres on which we grew machine-harvested crops. We also watered the other ranch acreage, but less consistently and only when water was available. This other acreage was pasture land with crops such as crested wheat grass--which was harvested by our cattle as they grazed. For example, the 3½ circles shown outlined in green on Exhibit C to Dr. Brockway's affidavit had barley, corn and wheat in 1997. In 1987, this area was growing crested wheat grass. It was flood irrigated as water was available—primarily in April and May. There are irrigation ditches in this area which allowed this irrigation—some of these ditches can even be seen on Exhibit C.

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Dated this 15 day of May, 1998.

James DeMordaunt

SUBSCRIBED AND SWORN to before me this 15th day of May, 1998.

(SEAL)

Notary Public for State of Idaho
Residing at: Idaho Falls
My Commission Expires: 10/25/2000

CERTIFICATE OF SERVICE

I hereby certify that I am a duly licensed attorney in the State of Idaho, with my office in Idaho Falls, Idaho, and that on the 15th day of May, 1998, I served a true and correct copy of the foregoing document on the persons listed below by first class mail, with the correct postage thereon, or by causing the same to be delivered as defined by Rule 5(b), I.R.C.P.

Persons Served:	Method of Service
Peter R. Anderson, Esq. Deputy Attorney General 1301 N. Orchard St. Boise, ID 83720-0098	(X) mail ( ) hand (X) fax
Kent W. Foster, Esq. HOLDEN, KIDWELL, HAHN & CRAPO, P.L.L.C. P.O. Box 50130 Idaho Falls, ID 83405-0130	( ) mail (X) hand ( ) fax
Blair J. Grover, Esq. GROVER & FAIRCHILD 215 Farnsworth Way P.O. Box 36 Rigby, ID 83442-0036	(X) mail ( ) hand (X) fax

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Breck H. Barton, Esq. (X) mail ( ) hand ( ) fax
BRECK BARTON & ASSOC., P.A.
P.O. Box 100
Rexburg, ID 83440

Norman C. Young (X) mail ( ) hand ( ) fax
Idaho Dept. of Water Resources
1301 N. Orchard St.
Boise, ID 83706

Ronald D. Carlson (X) mail ( ) hand ( ) fax
Eastern Regional Manager
Idaho Dept. of Water Resources
900 N. Skyline Dr.
Idaho Falls, ID 83402

Wm. Charles Carr

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Ted S. Sorenson P.E.-L.S.
CONSULTING ENGINEER
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401

Bus: 208-522-8069
Res: 208-529-2469

M E M O

TO: Ben Wilding
Steve Phillips
Jim DeMordaunt

DATE: February 2, 1983

RE: BEDLOSS ELIMINATION DATA

Gentlemen,

Attached is a sheet which will give you some idea of the water that can be utilized which is now seeping away as bedloss.

The upstream flow was measured at the USGS gaging station at Eight Mile Canyon Road (approximately 8,000 feet upstream of the proposed diversion). The downstream flow was measured by the University of Idaho Water Resource Institute where the road crosses Reno Ditch as shown on the attached map (approximately 1 mile southwest of Reno Ranch). The total distance between the two measuring points is approximately 49,500 feet. Of this distance, approximately 28,000 L.F. would be replaced by the new ditch.

With the proper sealing of the new ditch, approximately 57% (28,000/49,500) of the present bedloss could be eliminated.

The far right column shows the additional water that would be available (average 9.3 cfs or 465 inches) June through September.

Trusting this to be of value.

Very truly yours,

Ted S. Sorenson, P.E.
Consulting Engineer

TSS:kw
encs.

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EXHIBIT

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Oct. 10, 1982

We the water Users of Birch Creek water District #2-D oppose the building of a power plant on our stream. We want to make sure through study of water is wanted before we grant permission to do so.

Signed

Watermaster - Dennis Willis

W. T. Simmons

E. A. Hagerty

RECEIVED
OCT 12 1982
Department of Water Resources
Eastern District Office

EXHIBIT
MICROFILMED
JAN 08 2001

LAW OFFICES

RIGBY, THATCHER, ANDRUS,
BARTON & WALTERS, *Chartered*

25 NORTH SECOND EAST - P.O. BOX 250 - REXBURG, IDAHO 83440
RAY W. RIGBY - GORDON S. THATCHER - G. RICH ANDRUS
BRECK H. BARTON - W. JEFFREY WALTERS - JERRY R. RIGBY
TELEPHONE (208) 356-3633

June 7, 1984

George Peterson
Peterson, Moss & Olsen
485 E Street
Idaho Falls, ID 83401

Dear George:

Re: Birch Power Company

Please refer to your map of the proposed diversionary facilities, power plant site, etc. in the above-entitled matter. Mr. Sorensen had proposed building the power house on BLM property. It has been such a hassle with them that he proposes to build it on private property and wondered if he could have an option from D & D Enterprises on three acres of ground in the East Half Northeast Quarter of Section 14, Township 8 North, Range 31 East, Boise Meridian.

This will require him to building an additional 4500 feet of pipeline which will eliminate the same footage of bed loss in the Reno Ditch. He believes this will yield to the irrigators an additional approximate 40-50 miners inches of irrigation water.

He needs to have the power site identified before he can proceed with his FERC permit application. Would you please talk to your people and see what they might be willing to do? Let me know as soon as possible.

I'm enclosing a map showing in red the new proposal.

Yours very truly,

Ray W. Rigby

RWR:pae

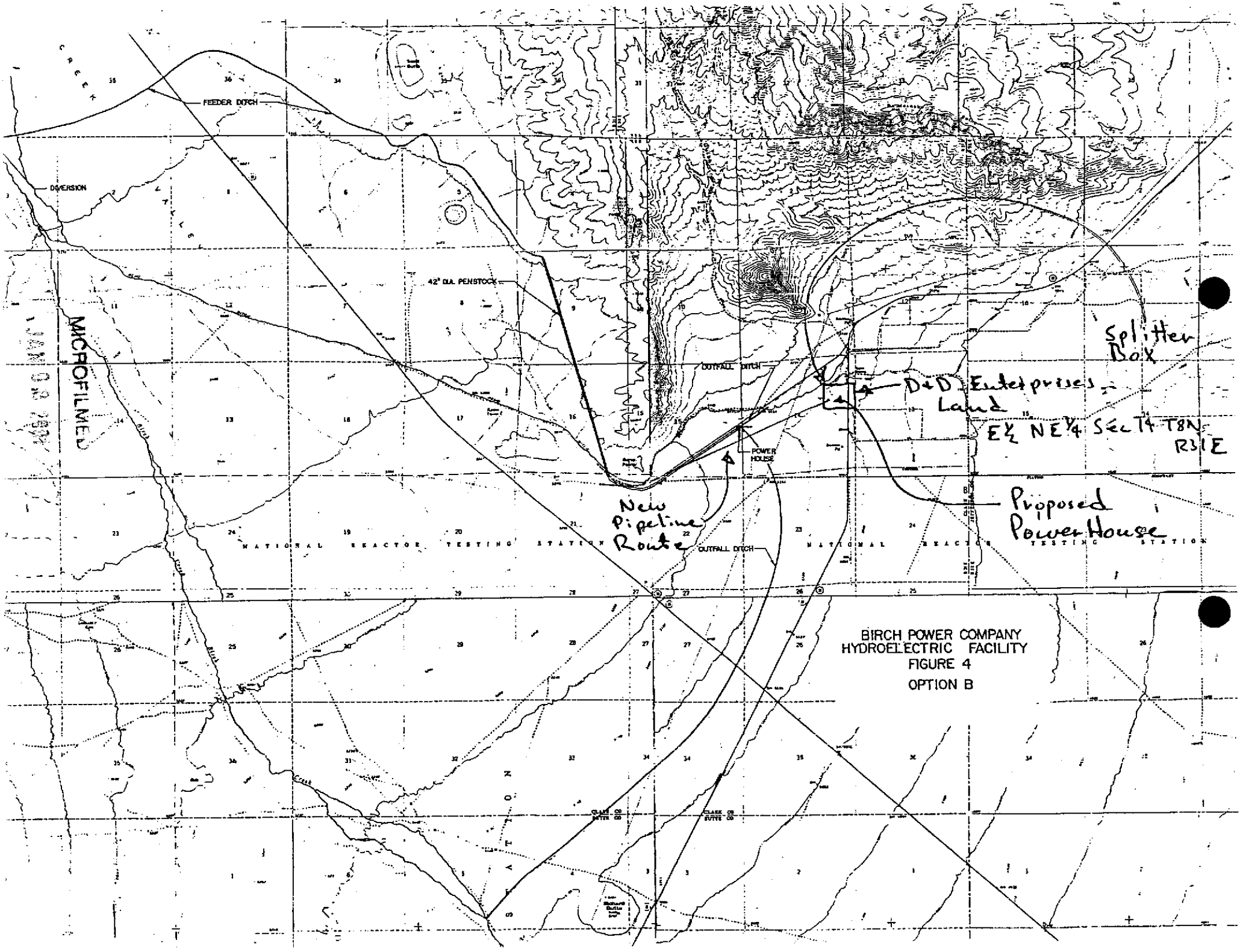
Enclosure

EXHIBIT

253

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FEEDER DITCH
DIVERSION
42" DIA. PENSTOCK
OUTFALL DITCH
POWER HOUSE
OUTFALL DITCH
NATIONAL REACTOR TESTING STATION
NATIONAL REACTOR TESTING STATION
MICROFILMED
Splitter Box
D&D Enterprises Land
E½ NE¼ Sec 14 T8N R31E
New Pipeline Route
Proposed Power House
BIRCH POWER COMPANY
HYDROELECTRIC FACILITY
FIGURE 4
OPTION B

Nerut Theater at Blackfoot
Center and Rio Theaters
and Motor Vu Drive In
at Idaho Falls

Double D Ranches - - - Top Quality Herefords

Holiday and Westwood Theaters
at Rexburg
Roxy Theater at St. Anthony
Roxy Theater at Salmon

D & D ENTERPRISES, INC.

P. O. Box 5

REXBURG, IDAHO 83440

December 1, 1984

Ted S. Sorenson
550 Linden Drive
Idaho Falls, Idaho 83401

RE: HYDROELECTRIC PROJECT ON BIRCH CREEK

Dear Mr. Sorenson:

This is to inform you that D & D Enterprises, Inc., an Idaho corporation, is the owner of record of the SE 1/16th of NE¼ of Section 14, Township 8 North, Range 31 East of the Boise Meridian, County of Clark, State of Idaho. There is currently in existence a ditch handling Birch Creek water for irrigation purposes that runs in a southeasterly direction within and for the entire length of the property described above.

D & D Enterprises, Inc. hereby grants you the use of this ditch for the purpose of an outfall flow from your propsed power plant to be located in the immediate area. Recognizing that this grant will at no time interfer with the avaliability and use of this ditch for irrigation purposes.

Regards,

James DeMordaunt-President
D & D Enterprises, Inc.

EXHIBIT

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JAN 3 0 2001

OPTION AGREEMENT

THIS OPTION AGREEMENT made and entered into as of the ____ day of December, 1984, by and between D & D ENTERPRISES, of Madison County, Idaho, hereinafter referred to as "Seller", and TED S. SORENSON and GAYLE A. SORENSON, husband and wife of Bonneville County, Idaho, hereinafter referred to as "Buyer".

WITNESSETH:

IN CONSIDERATION of the mutual covenants set forth herein, the parties agree as follows:

1. Buyer shall have the exclusive option to purchase, upon the terms and conditions set forth herein, such property as Buyer shall select up to a maximum of two (2) acres from the real estate described in the attached Exhibit A, located in Clark County, Idaho for the sum of $500.00 per acre. Right to purchase shall be for the sole purpose of constructing hydroelectric facilities including powerhouse, penstocks, measurement flumes, outfall ditches and power transmission lines.

2. The above said option shall contine in force and effect until 12:00 midnight, on December 31, 1988.

3. In consideration for the option given herein, Buyer shall pay Seller the sum of $25.00.

4. At any time prior to the expiration of the term of the option given herein Buyer may exercise the option to purchase given herein by Buyer giving written notice to Seller at the following address: P.O.Box 5, Rexburg, Idaho 83440 or to such other address as Seller shall direct by writing delivered to Buyer. Said exercise of the option shall be effective upon deposit by Buyer of said notice in the United States Mail, postage prepaid, certified mail, to Seller at the aforesaid address, or by personal delivery to Seller. In the event Buyer fails to exercise the option given herein prior to the expiration of the term hereof, this Option Agreement shall lapse and be of no further force and effect.

5. This Agreement shall be binding upon and inure to the benefit of the heirs, personal representatives, administrators, successors and assigns of the parties hereto.

IN WITNESS WHEREOF, the parties have caused their names to be subscribed, all as of the day and year first above written.

EXHIBIT

255

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JAN 09 2001

Ted S. Sorenson

Gayle A. Sorenson

STATE OF IDAHO)
) ss.
County of Bonneville)

On this ____day of _____, 1984, before me the undersigned, a Notary Public in and for said State, personally appeared Ted S. Sorenson and Gayle A. Sorenson, husband and wife, known to me to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Notary Public for:_____
Residing at:_____
My Commision Expires: _____

James D. Mardesen
D & D Enterprises

D & D Enterprises

STATE OF IDAHO)
) ss.
County of Madison)

On this 30 day of November, 1984, before me the undersigned, a Notary Public in and for said State, personally appeared James De Mardesen, known to me to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

MICROFILMED
JAN 0 8 2001

Notary Public for: State of Idaho
Residing at: Rexburg, Idaho
My Commission Expires: 12-18-86

Exhibit A

Beginning at the Northeast corner of Section 14, Township 8 North, Range 31 East of the Boise Meridian, County of Clark, State of Idaho, Thence West along north section line 1,335.5 feet; thence South along East 1/16th line 1,027.7 feet to the point of beginning. Thence South along East 1/16th line 200 feet; thence North 86 01' East 150 feet; thence North parallel to East 1/16th line 200 feet; thence South 86 01' West 150 feet to the point of Beginning. The above being part of the E½-NE¼ of Section 14, above township and range. All in Clark County, Idaho. Together with all ditch and water rights thereto appertaining and belonging.

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JAN 3 8 2001

# 634	7-8-62	Ben Wilding for seed [redacted] -hay, + dozing	957.1
# 516	8-23-63	" " for advance on settlement	500.-
# 943	9-15-64	" " settlement on material + labor	342.2
# 1175	7-2-66	Wilding Equipment for bentonite	700.—
# 1252	1-6-67	Ben R. Wilding for grader work settlement	525.50
# 1390	2-9-68	" " " " 1967 settlement - ditch	850.75
# 1398	3-26-68	Wallace Wilding for back-hoe - 3 hrs.	301.—
# 1521	12-31-68	Ben R. Wilding for ditch work	94.10
# 1566	6-2-69	Wilding Equipment for back-hoe work	265.—
# 1563	6-15-69	" " " 7½ of 600 yd. bentonite @ $1 per yd.	700.—
# 1549	9-21-69	Ben Wilding for caston work	748.—
# 1711	7-15-70	Wallace Wilding for bentonite + ditch work	906.3
# 1727	8-7-70	V. H. Toomes Construction Co. for 15 hrs. dragline	160.—
# 1733	8-17-70	Wallace Wilding for hauling gravel + back hoe work	962.—
# 1736	8-29-70	Feber Liner, Inc. for advance on ditch contract	1510.—
# 1744	9-3-70	" " " " " " " "	2000.—
# 1746	9-10-70	" " " " " " " "	1500.—
# 1750	9-22-70	Fiberglass Processes, Inc. for ditch contract + #45 tank	1368.5
# 1749	9-21-70	Bear State Plumbing + Heating for back-hoe work (Wallace Wilding)	240.—
# 1845	6-19-71	" " " " " " backhoe + bentonite	1470.—
# 1923	11-30-71	Ben Wilding for 1971 settlement	529.5
# 1986	5-18-72	Wilding Equipment for back-hoe work	243.—
# 2000	6-16-72	Wallace Wilding for backhoe work	252.—
# 2160	7-10-73	" " " bentonite	1050.—
# 2179	8-27-73	" " " ditch work	395.4
# 2262	4-17-74	Ben Wilding for 1973 settlement	188.68
# 2321	8-5-74	Wilding Equipment for bentonite + creek work	1213.—
# 2385	1-2-75	" " " 7½ 3 hrs. @ $20	35.—
# 2402	3-2-75	Ben Wilding for creek work	215.0
# 2467	7-1-75	Wilding Equipment for hauling bentonite	550.
# 2526	11-6-75	" " " back-hoe work	149.
# 2613	6-11-76	" " " bentonite + back hoe work	1176.
# 2691	12-16-76	Ben R. Wilding for 17 hr. ditch work @ $22	218.
# 2781	7-18-77	Wilding Equipment for 600 yd. bentonite @ 3.50 (7½)	1225.
# 671	6-5-81	Ben Wilding for creek work	402.
# 756	12-13-81	" " " backhoe 9½ hr. @ $30	285.
# 1135	12-13-83	" " "	349.
# 1282	9-24-84	" " " ditch work	449
# 1363	3-31-85	" " " 9 hr. dozer work + 69 4Z water measuring	519.
# 1504	12-4-85	" " " ditch work	748
# 1546	3-20-86	T. C. Mitchell cleaning pond + welder rent	1265
			$28,403.

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JAN 08 2001

EXHIBIT

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ROBERT E. SMYLIE
Governor

STATE OF IDAHO
DEPARTMENT OF RECLAMATION
GEO. N. CARTER, STATE RECLAMATION ENGINEER
BOISE

September 29, 1960

Mr. Ben R. Wilding, Watermaster,
Water District No. 39,
Dubois, Idaho.

Dear Mr. Wilding:

On the 21st day of September, 1960, the writer made meter measurements in Birch Creek commencing just below the Blue Dome Bridge on the main highway as measurement No. 1.

Measurement No. 2 was made at the head of your ditch just above the concrete structure approximately one-half mile below your point of diversion on Birch Creek.

Measurement No. 3 was made just above the private bridge approximately 2½ miles below where your ditch crosses the main highway.

Measurement No. 4 was made just above your water dividers on lower end of ditch.

According to my measurements on September 21st, your ditch shows no loss in transit. In fact, my measurements show more water at the end of your ditch than at the head of your ditch. Undoubtedly, I made a small error in measuring somewhere along the line. However, said measurements will be of some value to you.

Measurement No. 4 is, in all probability, 2 or 3 cubic feet per second high as I had trouble in finding a suitable place to measure.

The Department would appreciate knowing what you have done to your ditch to make ~~the~~ water tight.

Sorry I did not get to contact you when at your ranch. The results of meter measurements are as follows:

Measurement No. 1 - 58.17 c.f.s.
Measurement No. 2 - 41.62 c.f.s. - loss between Measurement No. 1 and No. 2 - 16.55 c.f.s. Measurement No. 3 - 40.21 c.f.s. Measurement No. 4 - 41.92 c.f.s.

Very truly yours,
GEO. N. CARTER
State Reclamation Engineer
By

ROY W. THOMPSON
Supervisor of Water Distribution

RWT:pmk

EXHIBIT

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JAN 0 8 2001

257

Rec'd 5/18/98

George C. Petersen, Jr., Esq.
Wm. Charles Carr, Esq.
PETERSEN, MOSS, OLSEN,
CARR, ESKELSON & HALL
485 "E" Street
Idaho Falls, Idaho 83402
(208) 523-4650

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF AMENDED APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON d/b/a SORENSON ENGINEERING and IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-07252 (formerly No. 31-07646) IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.	**BRIEF OF D&D ENTERPRISES, INC. IN OPPOSITION TO MOTION FOR SUMMARY JUDGMENT BY TED SORENSON**

1.0 ISSUE STATEMENTS

The following issues are discussed in this brief:

1.1 Consideration of Equitable Principles: D&D and Newman have asserted the equitable principle of estoppel in opposition to Sorenson's claim for any increased flow resulting from rerouting D&D and Newman's water through his power plant. They claim Sorenson promised that they would be the beneficiaries of this increased flow. They assert that this promise and their reliance upon it should estop Sorenson from claiming this water for himself and that this

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water should belong to them. In deciding on this and other issues relating to permits to appropriate water, change its place of diversion, and the like, can the Director of the Department of Water Resources consider equitable legal principles such as estoppel?

1.2 Ted Sorenson's Motion for Summary Judgment: Ted Sorenson has moved for summary judgment, asserting that there are no genuine issues of material fact pertaining to his motion and that as a matter of law, he is entitled to a judgment that:

(a) Water which was never available to or used by D & D and Wilding has been saved by Sorenson.

(b) Because Sorenson saved the water, he is entitled to it.

(c) Sorenson's water right in the saved water has a priority earlier than any D & D or Newman right.

(d) The amount of the saved water to which Sorenson is entitled is 14.51 cfs.

(e) Sorenson is entitled to 4.89 cfs of additional water, formerly bypass flow, for both consumptive and non-consumptive use.

Are there any issues of material fact as to each of these five claims and, if not, is Sorenson entitled to each such claim as a matter of law?

2.0 DISCUSSION OF THE ISSUES

2.1 The Director Can and Must Consider Equitable Principles in Making His Decisions.

A. The Enactment of Statutory Requirements Does Not Repeal the Equitable Principles of the Common Law.

The Idaho Supreme Court has considered whether the equitable principle of estoppel can be applied where statutory law sets forth specific requirement:

> Estoppel is a long accepted portion of Anglo-American jurisprudence. . . . Since estoppel is found in the common law, statutory changes therein are not presumed but must be shown by a clear intent to alter or oppose the common law or repeal it by necessary implication. [citations]

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We find no expression of clear intent to repeal the doctrine of estoppel in the language of [the statute in question].[1]

In enacting the statutory requirements of Idaho water law rights, the legislature nowhere disclosed "a clear intent to repeal the doctrine of estoppel." Estoppel is therefore a part of the applicable law which the Director must consider.

B. Idaho's Water Law Statutes Clearly Imply that Equitable Principles Should be Considered.

Although no express statutory mention of "equitable principles" of law has been found in Idaho's water law statutes (Title 42 of the Idaho Code), the clear implication is that these principles should be considered by the Director of IDWR in making those decisions authorized by statute. For example, in Sec. 42-1702 the Director is told to give instructions to the watermasters ". . . so as to secure a ***just*** distribution of water." (italics added)

In a broader sense, Secs. 42-203A and 221 set forth the criteria for granting permits to appropriate or change the point of diversion of water. A consideration of the *local public interest* is one of the criteria. This local public interest is further defined as "the affairs of the people in the area directly affected by the proposed use."[2] In order to fully consider the effect of Sorenson's claims on D&D and Newman, the principle of estoppel and the facts upon which it is based must be considered.[3]

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[1]*Twin Falls Clinic & Hospital Building Corp. v. Hamill,* 103 Idaho 19, 644 P.2d 341, 343 (1982). At issue was whether estoppel could be asserted to bar the defendant from asserting the defense of the statute of limitations expressly provided by Sec. 5-219, Idaho Code.

[2]Sec. 42-203A(5), Idaho Code

[3]Of course, the burden is on Sorenson to establish that the granting of his applications will be to the benefit of D&D and Newman or "that there are factors that overweigh the local public interest in favor of the project." *Shokal v. Dunn*, 109 Idaho 330, 707 P.2d 441, 450 (1985).

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In *Matter of Permit No. 47-7680* the Court stated that in determining what was in the local public interest, the legislature had ". . . clearly vested, in the director of the Department of Water Resources, considerable authority and discretion . . . ."[4] Authority and discretion this broad of necessity includes a consideration of equitable principles of law.

C. In Considering Water Law Cases, Idaho's Courts have Utilized Equitable Principles

The Idaho Supreme Court has repeatedly ruled that in considering water law issues, the district courts must utilize equitable principles. In *First Security Bank v. State* the Court said: "The court was within its equitable jurisdiction in decreeing a change in the place of use of the water."[5] And in *Harris v. Chapman* the Court found that an action to determine the extent and priority of water rights was in the nature of an action to quite title--an equitable proceeding.[6]

The Court in *Hillcrest Irrigation District v. Nampa and Meridian Irrigation District* expressly held that in a controversy over water rights, the principles of laches and estoppel could be considered:

> Long and continuous knowing acquiescence in another's use and enjoyment of a property or privilege may preclude one from subsequently asserting his claim.[7]

The same result was reached in *Beecher v. Cassia Creek Irrigation Co.* where the Supreme Court said that on appeal from the actions of the Commissioner of Reclamation [now Director of IDWR]:

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[4]114 Idaho 600, 759 P.2d 891, 897 (1988)

[5]49 Idaho 740, 291 P. 1064, 1066 (1930)

[6]51 Idaho 283, 5 P.2d 733 (1931)

[7]57 Idaho 403, 66 P.2d 115, 118 (1937).

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> "The district court acquired full *equitable jurisdiction* over the controversy. The court in a proceeding of this character has jurisdiction to impose reasonable limitations and conditions to avoid injury.[8]

More recently, the Idaho Supreme Court has held that the Director of IDWR had both the jurisdiction and obligation to determine the questions of abandonment and forfeiture as a step in performing his statutory duty to determine whether a transfer would injure another's water rights.[9] Indeed, one of the issues before the court in *Hidden Springs Trout Ranch, Inc. v. Hagerman Water Users, Inc.* was abandonment--an equitable issue: "This Court has frequently state that '[f]orfeitures are abhorrent and all intendments are to be indulged against a forfeiture.'"[10] Abandonment and forfeiture are issues to be considered in equity--"equity is against declaring a forfeiture."[11]

This same principle was stated in *Hodges v. Trail Creek Irrigation Co.* The Court there found:

> There can be no abandonment or forfeiture if the non-user is prevented from exercising his right to the water by circumstances over which he has no control, or where claimant to the water to which such user is entitled is prevented from using it by the wrongful acts of another.[12]

In *Jenkins, supra*, citing wrongful interference with a water right as a defense, the Court held that "[c]ertain defenses to forfeiture have been recognized."[13]

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[8]66 Idaho 1, 154 P.2d 507, 509 (1937)(emphasis added).

[9]*Jenkins v. State Department of Water Resources*, 103 Idaho 384, 647 P. 2d 1256, 1259 (1982).

[10]101 Idaho 677, 619 P.2d 1130, 1134 (1980).

[11]*Idaho Farms Co. v. North Side Canal Co.*, 24 F.Supp. 189 (D.Idaho 1938).

[12]78 Idaho 10, 297 P.2d 524, 527 (1956).

[13]647 P.2d at 1261.

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Marshall v. Niagara Springs Orchard Co. was an action to condemn a right of way for a ditch and power house. The trial court found that Marshall had obtained his permit pursuant to statutory procedures ". . . in accordance with the . . . laws of the state of Idaho . . . ."[14] On appeal the owners of the land on which the spring arose sought reversal on the basis that the appropriation of water was initiated by a trespass on private property. The Court agreed, stating: ". . . the permit was of no force or effect by reason of the fact that it was based upon a trespass . . . ."[15] Once again, equitable principles were considered in applying statutory law.

It is evident from the foregoing cases that equitable principles apply in water law cases. In some instances the Supreme Court has specifically held that these principles should be considered by IDWR. In other instances, the district court has been ordered to consider these same equitable principles. Since the Director and the courts must apply the same law in making their decisions, it is therefore abundantly clear that the Director must apply the equitable law of estoppel and any other applicable equitable considerations when he decides the D&D/Newman--Sorenson controversy.

D. In Similar Non-Water Administrative Proceedings Equitable Principles Have Been Considered.

In *Curry v. Ada County Highway District*[16], a quiet title action involving statutory real property filing requirements, the Court held that the doctrine of equitable estoppel could be

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[14]22 Idaho 144, 125 P. 208, 209 (1912).

[15]125 P. at 213.

[16]103 Idaho 818, 654 P.2d 911 (1982).

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applied. In *Erickson v. Marshall*[17] the Court held: "The general principles of waiver and estoppel continue to have validity under the UCC."

Similar results have been reached in other jurisdictions. For example, in *Red Rover Copper Co. v. Industrial Commission* the question of whether the Industrial Commission could apply principles of equity in a claim expressly created by statute was resolved in the affirmative. After noting that the differences between courts of equity and courts at law had been abolished, the court stated:

> We hold, therefore, that the commission in making an award necessarily has the right to consider and make the proper application of the rules of equity, as well as those of the common law, to the facts found by it.[18]

Similarly, in *Ames v. Department of Labor and Industries* the court said:

> The distinctions between actions at law and actions in equity have so far been abolished in this state as to permit of equitable defenses in law actions . . . . Certainly the department, like the courts, must consider equitable rules in all proper cases.[19]

Like all other states, Idaho does not draw distinctions between actions at law and actions in equity and allows the consideration of equitable principles as well as statutory law.

E. To Not Apply the Equitable Principle of Estoppel in this Case Would be Both Contrary to Idaho Law and a Miscarriage of Justice.

The fact that Sorenson promised to D&D and Wilding any extra water that resulted from his power project cannot be seriously disputed. Because of this promise and D&D and Wilding's resulting willingness to allow their water to be diverted, Sorenson was able to build his power plant. Sorenson should be required to perform on his promise. A failure to do so

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[17]115 Idaho 847, 771 P.2d 68, 70 (1989)

[18]118 P.2d 1102, 1107 (Az 1941).

[19]30 P.2d 239, 241 (Wash 1934).

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would be grave miscarriage of justice and not in accordance with applicable Idaho law. Sorenson should also be estopped to raise any defense or argument against D & D/Newman's claim to the increased water flow.

2.2 There Are Genuine Issues of Material Fact. Moreover, Ted Sorenson is Not Entitled to Judgment as a Matter of Law.

A. All of the Water Which Sorenson Claims He Saved by Eliminating the Use of the Old Reno Ditch was Available to and has been Used by D & D and Newman.

(1) D & D and Wilding reclaimed the water leaking in the ditch.

The record shows that until their efforts were stopped by the government, D & D and Wilding were placing bentonite in the Old Reno Ditch to reduce leakage. (Testimony of James DeMordaunt; Affidavit of James DeMordaunt)

The record also shows that these efforts were successful. At one point in time the leakage in the ditch was reduced to zero. (Ex. 257) Therefore the water diverted into the Old Reno Ditch reached its place of use at D & D/Wilding's splitter gate.

(2) When Birch Creek was diverted into the Old Reno Ditch, all the water was "used" by D & D and Wilding as a matter of law.

Hidden Springs Trout Ranch v. Hagerman Water Users, Inc., 101 Idaho 677, 619 P.2d 1130 (1985) is a case exactly on point. The Idaho Supreme Court there expressly found that once water was inverted out of the natural stream, it was all put to a beneficial use so long as the water not lost to seepage in the ditch was put to a beneficial use.

> While in a sense it might be said that the seepage water was not being beneficially used by Hagerman, we do not look exclusively to that part which seeped, but to the one made of the water as a whole. So long as that water which arrived at its destination was put to a beneficial use, and so long as the amount of water lost through seepage during transportation of that water from its place of origin to its place of use was reasonable,

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it cannot be said that the mere fact of seepage transformed it into water not beneficially used.[20]

B. Even though Sorenson's project may have resulted in increased flow because the leaking Old Reno Ditch was no longer being used to transport the water, Sorenson is not entitled to it because he promised it to D & D/Wilding.

(1) Sorenson promised any increased water to D & D and Wilding in exchange for their permission to reroute their water through Ted Sorenson's power plant.

This point has already been covered in D & D's Memorandum in Support of Motion for Summary Judgment. In addition to the evidence already cited, there is further evidence that Sorenson made this promise that no payment was expected from D & D and Newman, and that the offer was accepted. D & D's Motion to Intervene was made in September of 1983. The hearing on Sorenson's application was in mid-1984, and the IDWR decision was made in early 1985. Yet during this time, D & D and Sorenson were working together to move the project along. For example:

- Ray Rigby's letter of June 7, 1984, to George Petersen, asking that Sorenson have an option to purchase land for the power house and noting that the change in plans will ". . . yield to the irrigators an additional approximate 40-50 miners inches of irrigation water."[21]

- Jim DeMordaunt's letter to Ted Sorenson on December 1, 1984, granting Sorenson the use of a D & D irrigation ditch for an outfall from the power plant.[22]

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[20] 619 P.2d at 1135.

[21] Exhibit 253.

[22] Exhibit 254.

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- Option agreement between D & D and Sorenson giving Sorenson an option (for $25) to purchase two acres at $500 per acre, on which to build the power house, penstocks, measurement flows, outfall ditch and power transmission lines.[23]

Obviously D & D was not opposed to the project or none of this would have occurred. There is other evidence of Sorenson's promise without any expectation of payment. For example:

- Sorenson's Memo to Jim DeMordaunt and others on February 2, 1993.[24]

- References in Sorenson's "Preliminary Engineering Design and Plan Report":

  (a) Water rights would be finalized. (pp. 39-40)

  (b) Capital costs for the project did not include sums for condemnation of water rights—which would have been necessary if D & D and Wilding had not given their permission. (pp. 26-34, 37-38)

  (c) Revenue did not include a recovery of any income through the sale of increased flow water rights to D & D/Wilding, even though the project projects such an increased flow. (pp. 37-38)

(2) As leakage from the Old Reno Ditch, this water was subject to recapture by D & D/Wilding.

Hidden Springs Trout Ranch, holds:

> That a "senior appropriator retains his right to all of the water, including that which is lost through reasonable seepage, and thus may reclaim it . . . ."[25]

(3) D & D and Wilding/Newman did not abandon or forfeit the water which leaked from Old Reno Ditch.

As in *Hidden Springs*, for many years D & D/Wilding "tried repeatedly to reduce seepage loss from the open ditch."[26] Clearly, they never intended to abandon the water. Their

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[23] Exhibit 255.

[24] Exhibit 251.

[25] 619 P2.d at 1134.

[26] 619 P.2d at 1134-5.

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efforts were stopped by the government. Forfeiture likewise does not apply because, as noted in paragraph 2.2 A(2) of this brief and as in *Hidden Springs*, as long as all the water was diverted and that which reached the point of use was put to a beneficial use, it was **all** beneficially used.

(4) The recapture of the leakage was done by Sorenson on behalf of D & D and Newman, pursuant to his promise to them that they would get whatever increase resulted from eliminating the use of the Old Reno Ditch.

See D & D's Memorandum in Support of Motion for Summary Judgment, pp. 4-5, 13-14.

(5) Private Ditch.

See D & D's Memorandum in Support of Motion for Summary Judgment, pp. 7-11.

C. Even if Sorenson was Entitled to the Recaptured Water, the Priority of this Water Right Would Not be Earlier than D & D and Newman's Rights.

As established in *Hidden Springs*, once Birch Creek water was diverted, it had been put to a beneficial use by D & D and Wilding/Newman. It had been neither abandoned nor forfeited. It was not "new" water subject to appropriation, but was water which could be reclaimed by the senior appropriator. Disregarding Sorenson's promises to D & D and Newman and the other arguments against Sorenson acquiring the reclaimed water, even if Sorenson acquired the right to this water, the best priority he can have is the priority the water had when it was put to beneficial use by D & D and Newman — i.e., it would share, prorata, in the various priorities of the D & D and Newman rights. As Judge George stated[27]:

> D & D has an established water right to cover the full flow of Birch Creek at the diversion. If the water is lost by seepage, such does not change the nature of the

[27]Although we disagree with his results, his statement is instructive. Memorandum Decision Addendum at page 4.

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water from appropriated water to unappropriated waters . . . . If someone else saves the water . . . that appropriated water gains a new owner.

However, case law seems to indicate that in fact, the priority given to such reclaimed water when reclaimed by another party, is the date when the permit application is filed--in this case February of 1997. This was the case in both *Reno v. Richards*,[28] and *Bassinger*.[29]

Only the water "saved" in the natural stream by eliminating losses in the creek between the new and old point of diversion — approximately 1 cfs — is new water which can obtain an earlier priority date.

D. There is a factual issue as to the amount of water reclaimed by eliminating the use of the Old Reno Ditch and 3000 feet of lower Birch Creek.

Sorenson claims that 15 cfs of water has been reclaimed, based on Dr. Charles Brockway's affidavit. This conclusion, however, is not correct.

(1) Dr. Brockway's data and conclusions are flawed.

In the first place, Dr. Brockway does not identify the sources of data for his averaging the losses in the Old Reno Ditch, other than to say that they came from measurements made in 1980, 1983, 1985, and 1986. Until this data is identified as a matter of record, either introduced by testimony or affidavit, it cannot be the basis for his conclusions. Moreover, the data which is of record does not seem to support his conclusions:

Exhibit 212: 10/29/80 loss in the Old Reno Ditch is 23.08 cfs.
10/2/80 loss in the Old Reno Ditch is 12.10 cfs

Exhibit 213 8/23/83 loss in the Old Reno Ditch is 12.76 cfs, a second measurement loss is 11.87 cfs
9/8/83 loss in the Old Reno Ditch is 9.77 cfs

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[28] 32 Idaho 1, 178 P. 81, (1918) .

[29] 30 Idaho 289, 164 P. 522, (1917).

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> 6/8/85 loss from the head of the Old Reno Ditch to the U of I gauge is 10.7 cfs[30]

The average of these 6 measurements is 13.38 cfs. If the 10/29/80 loss is disregarded (as it would probably be in any statistical analysis, since it is so far from the mean of all measurements), the average loss is 11.44 cfs--not 15 cfs. Moreover, these few data points are insufficient to determine what loss figures should be used. And it is evident that the losses in the Old Reno Ditch varied significantly--from 9.77 to 23.08 cfs—they were not constant. Exhibit 257 is a letter from Roy W Thompson, Supervisor of Water Distribution for the State Reclamation Engineer (forerunner to the Director of IDWR) to Ben Wilding, dated September 29, 1960. According to measurements made on September 21, 1960, the Old Reno Ditch had **no loss**. Mr. Thompson stated:

> "According to my measurements on September 21st, your ditch shows no loss in transit. . . . The Department would appreciate knowing what you have done to your ditch to make it water tight."

Although no other measurement data is presently available, the record shows that up until about 1977, the Old Reno Ditch was being "bentonited" about every year. Given the scarcity of data, it is doubtful if a fair and accurate historical loss in the Old Reno Ditch and the 3000 feet of Birch Creek even can be determined. The losses have obviously varied considerably with time and circumstances.

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[30]Although it might have been overlooked, no data was found in the record for losses in the Old Reno Ditch in 1986.

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(2) Dr. Brockway has ignored the history of loss and the need to consider future probable deterioration of the power channel.

Dr. Brockway's conclusion that the loss in the power channel is now only 0.43 c.f.s. is very flawed. Once again he has ignored the historical data and jumped to a conclusion based on one test made over 28 days in October and November of 1997.

When the new power channel first came into use, very significant losses were measured between the power pond inlet and the power house. For example, on May 9, 1987 the loss was 4.7 c.f.s.; on May 15 the loss was 18.4 c.f.s.; on May 27 the loss was 9.38 c.f.s.; on July 3 the loss was 5.98 c.f.s (and the loss from the Highway Weir to the penstock was 3.12 c.f.s.).[31]

On June 12, 1987, Ted Sorenson wrote a letter indicating a loss of 51 c.f.s. that needed to be repaired.[32]

In Sorenson's Birch Power company Preliminary Engineering report, he originally projected a loss of 1.5 c.f.s. in a shorter canal than the one which was eventually constructed, but said that this projected loss should be doubled (i.e., a safety factor of 2) because of "long term effects of the ditch."[33] Mr. Sorenson does not explain what these long term effects might be, but presumably they would include deterioration of the liner. There is no evidence in the record as to how long this liner is supposed to last, for example. The record already contains evidence that when Birch Creek ices up in the winter, Sorenson's people have to work on it with

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[31]Exhibit 214.

[32]Exhibit 214.

[33] P. 7 of Engineering Report.

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a backhoe to clear the ice and keep the stream flowing. Photos of this winter work show how the stream bed (and presumably the liner) can be disturbed and damaged.[34]

It should be abundantly clear that as circumstances change, the losses in the power channel have changed and the record indicates that these losses will change, probably for the worse, again in the future. At the very least, there is a factual issue as to what the losses in the power channel are going to be in the future.

(3) Dr. Brockway has ignored the losses in the power pond and the channel from the power pond to the Highway Weir.

Dr. Brockway has gone to great lengths to establish nearly zero loss from the Highway Weir to the intake to the penstock. Again, his report of this study creates the illusion of careful scientific analysis. He has ignored the fact, however, that in determining the amount of water recovered by eliminating the Old Reno Ditch, the **total loss from the new point of diversion until the water reaches D&D and Newman must be determined.** The power pond and the first 1.5 miles of the new ditch are critical and the record indicates that they have significant loss problems. A prerequisite condition to changing the route of D&D and Newman's water was that this 1.5 miles of the new channel be a riparian habitat. This required that willows, birches, russian olives, and the like be planted along the banks and in the streams. Riffles, meanders and boulders were placed in the stream to slow flow and promote fish habitat.[35]

The record is clear that this stretch of the new route of the water has considerable loss problems. For example, consider the Watermaster's Water District 32-D reports:

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[34]*See, for example*, Exhibits 206 and 207 (offered but not yet admitted).

[35]*See, for example:* Birch Power Company Preliminary Engineering Design & Report, Appendix Three; Modified Order of IDWR.

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> Large losses in the reach of Birch Creek from the Hydro Pond to the Hiway Weir which were caused by mossing condition, raised water levels causing water to seep out the ditch rather than flow freely through it.[36]
>
> Mossing problems are a continuing problem and will continue to be.
>
> The habitat that has been planted along the stream banks in the reach from the Hydro Pond to the Penstock is a real problem as the tooles, cat tails, and willows continue to encroach from the banks into the middle of the channel squeezing and obstructing the flow. This will continue to get worse and create a lot of water loss unless something can be done.
>
> There also appears to be a lot of silt settling into the new section of channel and ditch which is lined in the reach from the Hydro Pond to the Highway Weir.[37]
>
> There is some estimated 0.20 to 0.50 c.f.s. of water loss going under the head wall of the control structure just through the Power House then leaking into the overflow channel. During a years period of time that is a lot of water.[38]

The watermaster expressed these same concerns again in 1992 and 1993. It is believed that were he to testify, he would state that these same problems continue to the present.

There is no evidence in the record establishing the total loss from the point where Birch Creek is diverted into the power pond until the water is delivered to D&D and Newman. As applicant, it is Sorenson's burden to establish this and he has not done so.

(4) Sorenson is double counting the water in question.

Finally, included in the water which reaches the diversion at the power pond is the 5 cfs of water that IDWR and the District Court said had to be bypassed as compensation for dewatering a section of Birch Creek. This bypass amount must be deducted from any amount

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[36]1990 Watermaster Annual Report, under "Other District Problems." Exhibit 231.

[37]1991 Watermaster's Annual Report under "Some Concerns." Exhibit 231.

[38]1993 Watermaster's Annual Report, under "Water Losses into Overflow Channel." Exhibit 231.

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that was reclaimed as a result of rerouting D&D and Newman's water, since if the Court and IDWR's direction is followed, this bypass further reduces the amount of reclaimed water.

E. The 5 cfs Overflow Does Not Belong to Sorenson.

Mr. Sorenson seeks an award of the 5 cfs of bypass ordered by the Director and affirmed by the District Court. There are factual issues pertaining to this issue and, as a matter of law, this water does not belong to Sorenson anyway.

Mr. Sorenson states that he has overflowed 5 cfs of water from the power pond as required by IDWR. This is not a correct statement, however. As shown in the affidavit of James DeMordaunt, and as it is believed the watermaster would testify, most of the time little or no water was overflowed down the old Birch Creek channel--this was apparently done just when someone from IDWR, Fish & Game, etc. was coming. As a matter of equity, Mr. Sorenson should not now be rewarded with a grant of 5 cfs of water when the orders of the Department and the Court were not followed. The old adage is still true--he who seeks justice in a court of equity must come there with clean hands. At the very least, factual issues exist here.

As a matter of law, any additional water which is allowed to flow through the power plant should be given to D&D and Newman. They were promised all the increased flow resulting from the use of their water in Sorenson's power plant.

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3.0 CONCLUSION.

Ted Sorenson's Motion for Summary Judgment should be denied. There are important factual issues still to be resolved. Moreover, even if there were no factual issues, the applicable law would not require a judgment in favor of Mr. Sorenson.

DATED this 15th day of May, 1998.

PETERSEN, MOSS, OLSEN, CARR
ESKELSON & HALL

Wm. Charles Carr

CERTIFICATE OF SERVICE

I hereby certify that I am a duly licensed attorney in the State of Idaho, with my office in Idaho Falls, Idaho, and that on the 15th day of May, 1998, I served a true and correct copy of the foregoing document on the persons listed below by first class mail, with the correct postage thereon, or by causing the same to be delivered as defined by Rule 5(b), I.R.C.P.

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RECEIVED
MAY 14 1998
Department of Water Resources

May 12, 1998

Peter Anderson
IDAHO DEPARTMENT OF
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1301 North Orchard
Boise, ID 83720

Dear Mr. Anderson:

We are enclosing with this letter amended affidavits of Ted S. Sorenson and Charles E. Brockway as well as a supplemental memorandum to address the equitable versus legal question pursuant to your request.

Yours very truly,

Kent W. Foster

Enclosure
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BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE
STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 and 32-07136 IN THE NAME OF TED SORENSON, d/b/a SORENSON ENGINEERING and IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-07252 (formerly no. 31-07646) IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.	**SUPPLEMENTAL MEMORANDUM OF BIRCH CREEK RANCHES, L.L.C.**

We are writing in response to the Hearing Officer's request, made during oral argument on May 4, 1998. As we understand it, a question had arisen whether IDWR, as a creature of statute, may consider "equitable" as distinguished from "legal" theories in performing its quasi-judicial function in a contested case.

Our research has not been exhaustive, but we have not found the definitive case or other statement of law. Our best judgment would be that under Idaho law, when IDWR is

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performing a judicial function within the context of its statutory responsibilities, it has all the specific jurisdiction conferred by statute as well as that which is reasonably implied. We think that is essentially what the Idaho Supreme Court held in *Jenkins v. State, Dept. of Water Resources,* 103 Idaho 384, 640 7 p.2d 1256 (1982). Although the specific issue we have been asked to treat was not directly addressed in that case, the court did say:

> Since we hold the director of the department had the necessary jurisdiction to determine questions of abandonment and forfeiture, it is clear that on appeal from that decision the district court acquired jurisdiction over the entire controversy. . . . (103 Idaho report at page 388 under head note no. 6).

The issue of common law abandonment would usually be considered an equitable theory, while the issue of statutory forfeiture would probably be considered a legal theory. As we began our research on this matter it refreshed our recollection somewhat regarding courts of equity and equitable remedies and courts of law and legal remedies, it again became apparent that the distinctions between the two are often quite subtle, and may be more academic than practical.

Perhaps this consideration as well as avoidance of a multiplicity of lawsuits were some of the policy considerations which resulted in our Idaho constitutional provision, Article 5, section 1:

> §1. **Forms of action abolished.-** The distinctions between actions at law and suits in equity, and the forms of all such actions and suits, are hereby prohibited; and there shall be in this state but one form of action for the enforcement or protection of private rights or the redress of private wrongs, which shall be denominated a civil action; . . .

The Idaho court has held that this section does not abolish the rules of law and equity (*Dewey v. Schreiber Implement, Co.*, 12 Idaho 280, 85 P 921 (1906)), but certainly in the

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courts of our state, both legal and equitable causes of action and legal and equitable defenses may be dealt with and resolved in a single proceeding. (*Carroll v. Hartford Fire Ins., Co.*, 28 Idaho 466, 154 P. 985 (1916)).

The current proceeding is not before an Idaho court at this point, but could come before the district court on appeal for judicial review of the administrative decision. Since 1980, an appeal from a decision of the director of IDWR in a contested case is not an appeal de novo, as previously it is an appeal on the record. (1980 Idaho Session Laws, Ch. 238; I.C. §42-204 5.; I.C. §42-1701A(4); I.C. §67-5270-5279). So, eventually, the matter could be before a district court. District courts would normally have jurisdiction of all issues in a proceeding, both equitable and legal. But, if IDWR does not have jurisdiction to consider possible equitable issues, does the district court gain that jurisdiction when it receives the appeal? Or must equitable issues be addressed separately to a court?

In our view, the underlying policy of the constitutional provision would be frustrated, at least to some extent, if we do not conclude that disposition of virtually all issues raised in a contested case are reasonably within the jurisdiction of IDWR. But, addressing this question in a vacuum is somewhat perplexing to us as well. We assume the only issue before the hearing officer in the pending matter which is primarily equitable in nature is the protestants' assertion that Mr. Sorenson is estopped from filing an application seeking to appropriate a right to use the saved water for irrigation purposes.

If water has been saved through Mr. Sorenson's efforts and expense (and we believe the record is clear that it has, and protestants appear to agree) and is therefor available in some amount (there appears to be no disagreement with the figure 14.51 CFS, testified to by Dr. Brockway), the question is: Who, if anyone, gets to use it for irrigation?

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Apparently what protestants are saying is that they get to use the saved water because Mr. Sorenson is equitably or quasi-estopped from appropriating it for irrigation of his land. But even if some theory of estoppel could be applied to prevent Mr. Sorenson from appropriating the right to use the saved water for his own irrigation (with which we most adamantly disagree), the question remains, under what theory could protestants get the water themselves?

We have never heard of any authority for the proposition that a water right can be appropriated or acquired by estoppel, and protestants have cited none. Protestants have not applied to appropriate such a water right under the applicable statutory provisions. They have claimed a constitutional appropriation, but there is no merit to such a claim. They have not diverted the water, and contrary to Mr. Carr's argument, there are no facts and there is no law to support the proposition that Mr. Sorenson was acting as protestants' agent, either in diverting and saving the water, or in making application to appropriate it for irrigation use. And, in terms of applying it to beneficial use, the big investment made by protestants in their large expansions, occurred in 1997, after Mr. Sorenson's application to appropriate the right to the use of the saved water had been filed, after notice had been published, and after protestants themselves had filed their protests.

Protestants have never purchased a right to the use of the saved water for their own irrigation, and they could not have legally acquired it by adverse possession. (Idaho Code §42-607) A more significant reason protestants could not have acquired the right to the use of the saved water for their irrigation purposes is that no such right has previously existed, and does not yet exist. The only right which now exists with respect to the saved water is the right and obligation to bypass 11% of the flow of Birch Creek, up to 5.0 CFS, from the new diversion, and perhaps (Mr. Fleenor's conclusion as to the balance of the 22% he found would be saved under option A is not entirely clear to us) authorizing the other 11% to be used through the power plant or to return to seepage in the power channel.

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We reassert that there is no legal or equitable theory under which protestants can claim any right in the saved water. We agree that so long as the water (prior to 1987) was flowing down the old Reno Ditch to their lands, they had a right to save the water themselves, or to cease wasting it, under the same law addressed and confirmed in *Hidden Springs Trout Ranch v. Hagerman Water,* 101 Idaho 677, 619 P.2d 1130 (1980). If someone had been using the water of a spring formed by such seepage or waste water, their right to continue such use would always have been subject to the right of protestants to cease wasting it. But, when one, through his work and expense, creates new facilities for transporting the water which reduces or eliminates the waste or seepage, the water formerly lost becomes saved water, belongs to the one who saves it, and takes a priority ahead of the rights of protestants. The opportunity for protestants to cease the seepage or waste has passed, as IDWR has already decided, and the district court has already affirmed.

IDWR did decide, and the district court did also affirm the issuance of permits nos. 32-7128 and 32-7136, with the 5.0 CFS bypass flow requirements. But the permits remained permits, subject to the statutory right of applicant to apply for an amendment, and for IDWR to grant the amendment. Idaho Code §42-211. That procedure has already been used once with respect to these permits, when the location of the power plant was revised. Since the permits were still permits in 1990 when applicant worked out the revision of the mitigation requirements with Idaho Department of Fish and Game, Bureau of Land Management and FERC, the statutory procedure for amending the permits was still available to applicant, and the permits may legally be amended to modify the bypass flow condition. However, the decisions of IDWR that applicant was required to save water, that it was water never previously available to protestants, that it belonged to applicant, and with a priority earlier than protestants' rights, are not sought to be amended. Only the permit holder may propose such an amendment. Some 14.51 CFS has been saved, and applicant has also sought to appropriate its use, after it passes through the power plant, for irrigation purposes. There was no legal or equitable time limit on applicant's filing of such an application. He did so as

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soon as he was able to acquire farmland after having all his offers and proposals to participants ignored and rejected for a period of some ten years.

Protestants (and in the case of LaVar Newman, his predecessor in interest) have protested and fought every application and every effort made by Mr. Sorenson in connection with the 14.51 CFS of saved water, which now flows from the power plant, and is available for appropriation for irrigation use. Mr. Sorenson did request permission of protestants to reroute the ditch in 1983. But there is no evidence anywhere in the record of which we are aware that they ever agreed. In fact, after protesting to IDWR, D&D then appealed the director's decision to the district court. D&D's argument was the same then as it is now (that the downstream irrigators should be entitled to the saved water for free). That issue has already been decided and is res judicata.

With respect to the elements of quasi-estoppel, the Idaho Court has stated:

> . . .The doctrine of quasi-estoppel has its basis in acceptance of benefits; it precludes a party from asserting to another's disadvantage a right inconsistent with a position previously taken by him or her. The doctrine applies where it would be unconscionable to allow a person to maintain a position inconsistent with one in which he acquiesced or of which he accepted a benefit. *KTVB, Inc. v. Boise City,* 94 Idaho 279, 281, 486 P.2d 992, 994 (1971). The act of the party against whom the estoppel is sought must have gained some advantage to himself or produced some disadvantage to another; or the person invoking the estoppel must have been induced to change his position. . . .

Mitchel v. Zilog, Inc., 125 Idaho 709, 715, 874 P.2d 520, 526 (1994); *Medical Serv. Group v. Boise Lodge 310*, 126 Idaho 90, 878 P.2d, 789 (ct. app. 1994); *Schiewe v. Farwell*, 125 Idaho 46, 867 P.2d 920 (1993).

Under the facts of our case, Mr. Sorenson did gain an advantage to himself through his investment, effort and willingness to take risk, but certainly not at the expense of the

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protestants. There is no disadvantage to the protestants, as IDWR has already found; if protestants do not receive the saved water, they are in exactly the same position they have always been historically. They have not changed their position in any way.

With respect to the elements of equitable estoppel, the Idaho court stated in the case of *Tiffany v. City of Payette*, 121 Idaho 396, 403, 825 P.2d 493, 500 (1992):

> The elements of equitable estoppel as related to the party estopped are:
>
> 1. Conduct which amounts to a false representation or concealment of material facts, or, at least, which is calculated to convey the impression that the facts are otherwise than, and inconsistent with, those which the party subsequently attempts to assert;
>
> 2. Intention, or at least expectation, that such conduct shall be acted upon by the other party; and
>
> 3. Knowledge, actual or constructive of the real facts.
>
> As related to the party claiming estoppel the elements are:
>
> 1. Lack of knowledge and the means of knowledge of the truth as to the facts in question;
>
> 2. Reliance upon the conduct of the party estopped;
>
> 3. Action based thereon of such a character as to change his position prejudicially.

There may be a dispute of material fact regarding a false representation by applicant or concealment of material facts. However, protestants clearly had the means of knowledge of the truth of the facts. Mr. Sorenson does not disagree that at the beginning of his project and for several years thereafter, he believed and hoped that the saved water could be used by the protestants. But his testimony is quite clear that he never intended or proposed or

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represented that they should get it for free or without any effort or contribution to his project to save the water from its loss by seepage. We think there was no lack of knowledge or means of knowledge of the truth on the part of the protestants or reliance by them in changing of their positions prejudicially. Again the record seems to be clear that the expansion of irrigated land by protestants occurred in 1997, after Mr. Sorenson had made application to appropriate the use of the saved water for irrigation purposes. To leave protestants in the exact same position where IDWR found them in 1984 is not unconscionable. While they would not receive a great windfall of very significant value, at Mr. Sorenson's expense, neither have they been deprived of anything they ever enjoyed prior to the construction of the power plant. Mr. Sorenson, as applicant, is obliged not to injure the protestants or their water rights in any way, but he is not obliged legally or equitably to perpetually provide, free of cost, the benefit protestants insist upon receiving. Protestants cannot legally use the saved water themselves under any theory.

Respectfully submitted this 14th day of May, 1998.

Kent W. Foster

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CERTIFICATE OF SERVICE

I hereby certify that I am a duly licensed attorney in the State of Idaho, resident of and with my office in Idaho Falls, Idaho; that I served a copy of the following described pleading or document on the attorneys listed below by hand delivering, by mailing or by facsimile, with the correct postage thereon, a true and correct copy thereof.

DOCUMENT SERVED: SUPPLEMENTAL MEMORANDUM OF BIRCH CREEK RANCHES, L.L.C.

ATTORNEYS SERVED:

Blair J. Grover, Esq. *[First Class Mail]*
GROVER & ARCHIBALD
P.O. Box 36
Rigby, Idaho 83442-0036

George C. Petersen, Esq. *[First Class Mail]*
PETERSEN, MOSS, OLSEN,
MEACHAM & CARR
485 "E" Street
Idaho Falls, Idaho 83402

Peter Anderson *[First Class Mail]*
IDAHO DEPARTMENT OF WATER
RESOURCES
1301 North Orchard Street
Statehouse Mail
Boise, Idaho 83720

Dated: 5/14/98

Kent W. Foster, Esq.
HOLDEN, KIDWELL, HAHN & CRAPO, P.L.L.C.

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Department of Water Resources

Kent W. Foster, Esq.
HOLDEN, KIDWELL, HAHN & CRAPO, P.L.L.C.
P.O. Box 50130
330 Shoup Avenue, Third Floor
Idaho Falls, Idaho 83405
Telephone: (208) 523-0620
Facsimile: (208) 523-9518

BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE
STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 and 32-07136 IN THE NAME OF TED SORENSON, d/b/a SORENSON ENGINEERING and IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-07252 (formerly no. 31-07646) IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.	**AMENDED AFFIDAVIT OF TED S. SORENSON IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT AND IN OPPOSITION TO PROTESTANTS' MOTIONS FOR SUMMARY JUDGMENT**

STATE OF IDAHO)
)ss.
County of Bonneville)

Ted S. Sorenson, being first duly sworn, on his oath deposes and says:

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1) I am the applicant in the above named consolidated matters presently pending before the Idaho Department of Water Resources, have personal knowledge of the facts set forth herein, and based on such personal knowledge testify as follows:

2) After obtaining B.S. and M.E. degrees in civil engineering from the University of Idaho and have worked on various water and small hydro electric projects. I moved to Idaho Falls in 1980. From both my schooling and my work experience, I was aware of the Public Utility Regulatory Policies Act of 1978, and the potential opportunities it presented for development of small hydro-electric projects.

3) Commencing in 1981, I began a feasibility investigation in Birch Creek Valley regarding the potential for a small hydro-electric power project using the waters of Birch Creek. Early in my investigation I became aware of the lands irrigated from Birch Creek, and it became apparent that the greatest potential for a viable project would be at the lower end of Birch Creek. As I studied available flow and irrigation use data and measurements, it became apparent to me that large seepage losses historically occurred in the lower portion of Birch Creek and in the Reno Ditch, a private ditch which diverted all of the waters of Birch Creek and transported them a distance of over 8 miles to the lands irrigated therefrom.

4) As I considered the possibilities, it became apparent to me that there was a potential for reducing the amount of the large seepage losses by construction of a new feeder canal for the power plant in which a soil sealant material could be used. In February of 1982, I approached Mr. Ben Wilding, one of the downstream irrigators and the watermaster for Birch Creek, and Mr. Paul DeMourdant, whom I understood to be a principle in D&D Enterprises, Inc., the other downstream irrigator, about the concept of a hydro-electric project using the waters of Birch Creek and potentially saving some of the water being lost to seepage. My original idea was for them to develop the hydro electric-facility and retain me as the engineer. They expressed no interest in the idea.

5) As I recall, I heard that Mr. Paul DeMourdant's interest in the D&D ranch was taken over by him son, Jim DeMourdant, about eight months later. I then went to Jim

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DeMourdant and suggested the same idea, which he also ignored. Over the next few months, I also proposed other concepts to Mr. Jim DeMourdant and Mr. Ben Wilding, including a joint venture. A copy of a memo I prepared and presented to them dated February 2, 1983, is attached hereto as Exhibit "A". The irrigators did not respond to my suggestions. From my investigation, I became convinced of the feasibility of the project and decided to proceed on my own.

6) As I continued my engineering efforts, it became more and more apparent that it would be necessary to move the point of diversion for the feeder canal for the power plant upstream from the Reno ditch diversion. In my contacts with Idaho Department of Fish and Game and Bureau of Land Management, I came to understand that they would insist on a bypass flow of 5.0 CFS for mitigation of riparian amenities along Birch Creek between any new point of diversion and the Reno ditch diversion. They also suggested I try to enter into an agreement with D&D and Wildings to move the ditch. I then prepared a letter dated April 4, 1983, which I sent to D&D and Wildings, a copy of which is attached hereto as Exhibit "B", seeking formal permission to substitute a new ditch for some portion of the old Reno ditch. I never received a written or verbal response to the letter, and neither Wildings nor D&D ever agreed to or granted permission for relocation of the ditch, verbally or in writing.

7) I eventually applied for a preliminary permit from the Federal Energy Regulatory Commission (FERC) which was granted, effective September 1, 1983. A copy of the letter from FERC advising me of the issuance of the preliminary permit is attached as Exhibit "C".

8) I also filed application with Idaho Department of Water Resources for a water right in September of 1982, which was assigned no. 32-7128. Then, in January of 1984, I filed a second application which was numbered 32-7136. Ben Wilding and D&D protested these applications. During these months I also met with Ben Wilding, Jim DeMordaunt, Roger DeMordaunt and their attorney on various occasions to advise them that my findings indicated a savings of more than 14.0 CFS could potentially be effected, and that it appeared

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there would be 5.0 CFS required as a bypass flow. They indicated they were not interested in participating in any manner and continued their protests. A hearing on the protests was held before Mr. Bobby D. Fleenor of IDWR on April 5, 1984. After the proposed memorandum decision and order were issued by Mr. Fleenor, D&D and Wildings objected and filed exceptions to it. Even after the final decision by IDWR and Mr. Fleenor, D&D appealed it to the district court.

9) I have reviewed the Ray Michener letter dated February 16, 1984, but since I already had a preliminary FERC permit and hence the exclusive right to develop the project using the waters of Birch Creek, I do not believe his proposal had any viability.

10) By December of 1984, I had finally decided to locate the power house at or near its present location and to use PVC liner, which I believed would be more effective in reducing seepage losses. I first approached D&D and was able to purchase an option to acquire a small parcel of wasteland. In 1986 I purchased from D&D and Ben Wilding the small tracts of land where the power plant is now located and for access. The land I purchased was unproductive land covered with sagebrush. I paid $500 per acre for the land, which was 5-10 times its market value at that time. I certainly made no representations about furnishing saved water to either irrigator in connection with the purchase of the land.

11) I completed the project and began to divert water through the new lined canal and to generate power in the spring of 1987. I also bypassed 11%, up to 5.0 CFS, as required, down the channel of Birch Creek, but the water never flowed down the channel more than about 500-800 feet before it all sank. As I began to work with the Idaho Department of Fish and Game and the Bureau of Land Management to remedy this problem, it became apparent that it could be done with a series of lined ponds supplied by a plastic pipe which could also provide water for a number of watering troughs with only a small fraction of the 5.0 CFS bypass flow requirement. I drove to Jim DeMordaunt's home where I met with him and discussed what I felt was a possibility to save most of the 5.0 CFS bypass water which could be available for irrigation. I invited him to join me in the effort and to use

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the extra 5.0 CFS and anything else we could save for irrigation. He declined. I also visited with Cleo Wilding about the possibility but he indicated he had no interest.

12) I went ahead on my own with the revised mitigation plan and by January 11, 1990, I received the written approval of the Bureau of Land Management and on March 12, 1990, I received written approval of Idaho Fish and Game to terminate the 5.0 CFS bypass flow and continue with just the .11 CFS required to supply the ponds and the troughs. On June 15, 1990 I received formal approval from FERC. Copies of the formal approvals are attached as Exhibits D, E and F. After having received notice that the substituted mitigation would be accepted, I filed application with IDWR to have the condition regarding the 5.0 CFS bypass flow modified on the two water right permits. Again D&D and Wilding protested the application.

13) The cost of the revised mitigation work has been just under $100,000. Yearly maintenance has average about $2,000. In recent years, I again offered Jim DeMourdant and LaVar Newman an opportunity to receive the additional 4.89 CFS of saved water by contributing, between them, from $15,000-25,000 to the cost of the additional mitigation work. They have continued to decline and to press their protests to my application.

14) When I was performing my feasibility investigation and doing the preliminary engineering back in 1981, 1982 and 1983, I obtained all the records and data I was able to find of measurements at various locations to determine the magnitude of the seepage losses in the relevant reaches, both of Birch Creek and the Reno ditch. I also employed the services of Don Shenton in making additional measurements. From records of USGS for the Eight Mile Canyon road gauge and the University of Idaho for the gauge on Reno ditch about a mile upstream from the old splitter box structure, I prepared a summary entitled, "Reno Ditch Flow Comparison", a copy of which is attached hereto as Exhibit "G". A copy of a map, showing the distances and relevant locations with respect to the proposed hydro-electric project is also attached as Exhibit "H". Since the filing of my application for saved water, I have employed Dr. Charles E. Brockway to review and analyze seepage losses, both as to

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the historical amount in the dewatered portions of the Birch Creek channel and the Reno ditch that have been replaced by the feeder canal for the power plant, and as to the losses which presently occur through the new facilities.

Dated: 5-8-98

Ted S. Sorenson

Subscribed and sworn (or affirmed) before me this 8th day of May, 1998.

NOTARY PUBLIC
RENAE STERZICK
STATE OF IDAHO
Residing at Idaho Falls, Idaho
My Commission Expires Jan. 14, 2004

(seal)

Notary Public for Idaho
Residing at Idaho Falls, Idaho
My Commission Expires: 1-14-2004

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CERTIFICATE OF SERVICE

I hereby certify that I am a duly licensed attorney in the State of Idaho, resident of and with my office in Idaho Falls, Idaho; that I served a copy of the following described pleading or document on the attorneys listed below by hand delivering, by mailing or by facsimile, with the correct postage thereon, a true and correct copy thereof.

DOCUMENT SERVED: AMENDED AFFIDAVIT OF TED S. SORENSON IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT AND IN OPPOSITION TO PROTESTANTS' MOTIONS FOR SUMMARY JUDGMENT

ATTORNEYS SERVED:

Blair J. Grover, Esq. *[First Class Mail]*
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MEACHAM & CARR
485 "E" Street
Idaho Falls, Idaho 83402

Peter Anderson *[First Class Mail]*
IDAHO DEPARTMENT OF WATER
RESOURCES
1301 North Orchard Street
Statehouse Mail
Boise, Idaho 83720

Dated: 5/14/98

Kent W. Foster, Esq.
HOLDEN, KIDWELL, HAHN & CRAPO, P.L.L.C.

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EXHIBIT "A"

Ted S. Sorenson P.E.-L.S.
CONSULTING ENGINEER
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401

Bus: 208-522-8069
Res: 208-529-2369

M E M O

TO: Ben Wilding
Steve Phillips
Jim DeMordaunt

DATE: February 2, 1983

RE: BEDLOSS ELIMINATION DATA

Gentlemen,

Attached is a sheet which will give you some idea of the water that can be utilized which is now seeping away as bedloss.

The upstream flow was measured at the USGS gaging station at Eight Mile Canyon Road (approximately 8,000 feet upstream of the proposed diversion). The downstream flow was measured by the University of Idaho Water Resource Institute where the road crosses Reno Ditch as shown on the attached map (approximately 1 mile southwest of Reno Ranch). The total distance between the two measuring points is approximately 49,500 feet. Of this distance, approximately 28,000 L.F. would be replaced by the new ditch.

With the proper sealing of the new ditch, approximately 57% (28,000/49,500) of the present bedloss could be eliminated.

The far right column shows the additional water that would be available (average 9.3 cfs or 465 inches) June through September.

Trusting this to be of value.

Very truly yours,

Ted S. Sorenson, P.E.
Consulting Engineer

TSS:kw
encs.

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EXHIBIT "B"

Ted S. Sorenson P.E.-L.S.
CONSULTING ENGINEER
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401

Bus: 208-522-8069
Res: 208-529-2469

April 4, 1983

TO: RENO DITCH IRRIGATORS

Gentlemen,

Enclosed is an analysis of the impact of the proposed new ditch on irrigational flows. Figure 1 shows the overall project as well as the present estimated bedloss based upon flow measurements taken by the University of Idaho (attached as Exhibit One) at the locations shown. For example, presently approximately 3.7 cfs is lost from Eight Mile Gauging Station downstream to the present diversion. Approximately 17 cfs is lost from Eight Mile Gauging Station downstream to the Reno Ranch splitter box. This data is calculated using flow data from the USGS Gauging Station at Eight Mile Road and flow data taken by the University of Idaho near the Reno Ranch splitter box. The data is enclosed for your exaimination. I would like to take several measurements this summer to further verify these numbers.

Table 1 lists the comparison between the present situation and the proposed situation. Although the new ditch could provide 9.3 cfs additional flow if bedloss and evaporation were totally eliminated (of course this is not possible), a reasonable estimate of the additional water available would be 9.3 cfs less 3.0 cfs (for evaporation and bedloss in the new ditch) or 6.4 cfs additional flow (approximately 315 inches).

The next question that arises is - Can the irrigators divert the water at the new diversion? Essentially all the water available at the new diversion would be required to meet your existing decreed water rights. The question arose - What about early spring and late fall flows in excess of 45 cfs? Apparently this water is let down from upstream irrigators when not needed. Accordingly, you have the right (according to my understanding) to lease water from existing upstream decreed water rights and therefore divert in excess of 45 cfs.

What about Fish & Game and the B.L.M.'s requirements for bypass flows? My approach would be to file a minor license with FERC for the project. This has the effect of giving the final say to the Federal Energy Regulatory Commission (FERC) - not the Fish & Game or the B.L.M. The loss of water in 3,000 L.F. of Birch Creek

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would be offset by 6 miles of new ditch which could support a fishery. I would need to hire a fisheries expert to document same. Therefore, no continuous bypass flow would occur because the loss of fishery habitat would be offset by production in the new ditch and because all water must be diverted to satisfy your existing water rights.

I would appreciate your permission to install the new ditch to deliver your irrigation water with the express provisions that:

1) The new diversion divert water for which you have a legal right.

2) That the bedlosses in the new ditch be less than the segment of old ditch replaced.

3) If the new ditch fails to meet these conditions you would have the right to abandon the new ditch and revert to the old ditch.

Trusting this to be of value.

Very truly yours,

Ted S. Sorenson, P.E.
Consulting Engineer

TSS:kw

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EXHIBIT "C"

FEDERAL ENERGY REGULATORY COMMISSION
REGIONAL OFFICE
819 Taylor Street
Fort Worth, Texas 76102

September 28, 1983

In response refer to:
OEPR-FW-7194-ID

Mr. Ted S. Sorenson
550 Linden Drive
Idaho Falls, Idaho 83401

Dear Mr. Sorenson:

The preliminary permit, effective September 1, 1983, for the proposed Birch Project, No. 7194, was issued September 7, 1983, to Birch Power Company for a period of 24 months.

The Fort Worth Regional Office has the responsibility to monitor activities being performed under the permit. This will include review of various studies required by the permit, performing field inspections, and attending pertinent planning meetings as appropriate. It is requested that you keep us informed of scheduled meetings that would entail planning for your project.

Our immediate concerns are the requirements of Articles 8 and 9 of the preliminary permit. Article 8 requires the submission of reports each six months on the progress of all investigations, consultations, studies accomplished, and work contemplated. As a minimum, the report must briefly describe the purposes and scope of all conferences and investigations, identify participants, summarize decisions and conclusions, provide a schedule for completing remaining work, and contain copies of important correspondence and studies. Each report must include a statement summarizing the permittee's conclusion as to the feasibility of the project and permittee's anticipated date for submitting a license or exemption application, as appropriate. The first report is due on February 28, 1983, and should include a specific schedule showing when study tasks will start and when they will be completed. One copy of the report should be submitted to this office, and three copies to the Director, Office of Electric Power Regulation, Federal Energy Regulatory Commission, Mail Stop 300-R8, 825 North Capitol Street, N.E., Washington, D.C. 20426.

In particular, the report should address the following items:

(1) the studies conducted during the past 6-month period (copies of study reports should be furnished);

(2) summary of consultations with agencies, and copies of correspondence and meeting notes verifying that such consultations took place during the past 6-month period;

(3) an outline and summary of engineering, environmental, and other investigations to be conducted during the ensuing 6-month period to determine the feasibility of the project as delineated by Article 1;

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(4) a summary of the consultations with the appropriate Federal, state, and local agencies that will take place during the ensuing 6-month period as outlined by Articles 7 and 10; and

(5) an assessment of the feasibility of the project.

You are especially urged to contact the appropriate Federal, state, and local agencies to obtain their views and requirements regarding the studies you intend to undertake. The list of agencies you must contact is included in our publication titled "Hydropower Licenses and Preliminary Permits." If you do not have this list, a copy of the publication may be obtained for $7.50 from Federal Energy Regulatory Commission, Division of Public Information, Room 1000, 825 N. Capitol Street, N.E., Washington, D. C. 20426.

Article 9 specifies that the permittee designate a liaison officer for the purpose of assuring the cooperation required by the terms of the permit. You should advise this office by November 7, 1983, as to who will assume your liaison responsibilities. Article 9 requires that the liaison officer communicate with appropriate agencies within 60 days of the date of the permit's issuance. The liaison officer should also keep these agencies informed of the progress of investigations. Mr. Jack Quarles, Civil Engineer, of this office, telephone number 817-334-4560, has been designated as our representative who will work with your liaison officer.

This office will exercise administrative supervision over those activities within the scope of the permit that include required onsite inspections, assurance of timely submittal and review of submitted reports, and review of work in progress.

Failure to diligently pursue investigations or comply with other requirements could result in cancellation of the permit. In order to maintain your priority for license application, an application for the project must be filed before the permit expires. Due to the competition for hydropower sites and the benefit of renewable resources, neither the period for the permit nor the time for filing a license application will be extended unless extenuating circumstances develop.

Sincerely yours,

Arthur C. Martin
Regional Engineer

By _____
Acting

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EXHIBIT "D"

FINDING OF NO SIGNIFICANT IMPACT

AND

DECISION/RATIONALE

EA Number: ID-030-9-46
EA Name: Lower Birch Creek Mitigation

Environmental Compliance:

The environmental document has been analyzed and a finding of no significant impact has resulted. Therefore, it is concluded that the proposed action would not significantly affect the quality of the human environment. Preparation of an environmental impact statement pursuant to Section 102(2)(c) of the National Environmental Policy Act of 1969 is not required to proceed with the proposed action.

Decision and Rationale:

I have received the environmental assessment and have determined that the proposed action would provide improved mitigation for Lower Birch Creek. Based on this review and my personal knowledge of the area, my decision is to accept the proposed action with the following stipulations:

1. Birch Power Company will obtain written concurrence or authorization from FERC, Idaho Department of Fish and Game, and Idaho Department of Water Resources prior to taking any action on this proposal.

2. The 5 cfs minimum flow will continue to be delivered to Lower Birch Creek until the mitigation pond system (2.0 acres) and drip system (0.46 acre) is in place and operational.

3. The drip system will be monitored and if determined to be in adequate to maintain the existing birch trees (within 600 feet below the diversion) an additional 0.46 acres of riparian pond system will be developed by Birch Power).

4. Birch Power will be responsible for construction, operation, and maintenance of the mitigation development.

5. Should the mitigation proposed fail to provide adequate aquatic/riparian habitat (as specified in proposal) due to improper design and construction or lack of necessary maintenance, the minimum flow requirement will be reinstated.

Approved By: LeRoy Cook
Area Manager

11 Jan 90
Date

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JAN 08 2001

EXHIBIT "E"

IDAHO FISH & GAME
600 South Walnut / Box 25
Boise, Idaho 83707

March 12, 1990

Mr. Ted Sorenson
Sorenson Engineering
550 Linden Drive
Idaho Falls, ID 83401

Re: Birch Creek Hydro, FERC No. 7194
Amendment to Article 404
Minimum Stream Flow

Dear Mr. Sorenson:

Idaho Department of Fish and Game personnel have reviewed your proposal to mitigate lost riparian vegetation in Lower Birch Creek due to inadequate stream resource maintenance flows. The Idaho Department of Fish and Game will not object to the proposal as submitted, which includes:

1. Replace riparian vegetation at a rate of 1.5:1.
2. Eliminate the 5 cfs minimum flow in the by-pass reach.
3. Construct and maintain a drip irrigation system to support riparian vegetation.
4. Construct and maintain six to eight ponds/riparian systems.
5. Construct 1 1/4 miles of fence as outlined by the U.S. Bureau of Land Management.
6. Develop one livestock watering facility.

Although we will not object to the proposed mitigation for Lower Birch Creek, we wish to make it clear Idaho Fish and Game will not follow this same path again. For all future developers, we will insist on flows that will insure protection of riparian communities.

Thank you for the opportunity to comment.

Sincerely,

Tracey Trent, Chief
Bureau of Program Coordination

TT:WR:tlv

cc: Reg. 6 (Idaho Falls)
FERC
BLM (Big Butte Resource Area)
USF&WS

Cecil D. Andrus / Governor
Jerry M. Conley / Director

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UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Birch Power Company — Project No. 7194-009 Idaho

ORDER MODIFYING MINIMUM FLOW REQUIRED BY ARTICLE 404, APPROVING RIPARIAN HABITAT MITIGATION PLAN AND DELETING ARTICLE 405

(Issued June 15, 1990)

On March 9, 1990, the Birch Power Company, licensee for the Birch Creek Hydroelectric Project, requested that the minimum flow requirement of article 404 be modified. Article 404 requires the licensee to discharge from the project a continuous minimum flow of 5 cubic feet per second (cfs), or 11 percent of the flow of Birch Creek, whichever is less, as measured immediately downstream from the project diversion, for the protection of riparian vegetation and wildlife resources. The licensee now proposes to reduce the minimum flow to the amount necessary to maintain riparian habitat it will develop below the project diversion.

As an alternative to releasing the required 5-cfs minimum flow, the licensee proposes to build and maintain 6 to 8 ponds below the diversion. Approximately 2.46 acres of riparian habitat will be created in association with the ponds. The principal components of the licensee's plan are installing about 6,000 feet of buried water pipeline, constructing 6 to 8 ponds, installing 1,000 feet of drip irrigation system, constructing 1.25 miles of livestock fencing, and developing one livestock water facility.

The licensee proposed the alternative minimum flow and riparian habitat mitigation plan because the current minimum flow discharged into Birch Creek will not preserve a significant portion of the riparian habitat below the project diversion. The bypass flow percolates into an alluvial fan within a short distance from the diversion. This flow will maintain only about .64 acres of riparian habitat. By implementing the alternative mitigation plan, about 2.46 acres of riparian habitat will be created and maintained.

The U.S. Fish and Wildlife Service, the Idaho Department of Fish and Game, and the Bureau of Land Management concur with the licensee's proposal to modify article 404 and develop the riparian habitat below the diversion.

EXHIBIT "F"

The licensee's plan to create and maintain riparian habitat will result in an increase in riparian habitat compared to long-term conditions under the current minimum flow required by article 404. The minimum flow can be reduced to the amount necessary to maintain the planned riparian habitat without causing adverse impacts. Further, by reducing the minimum flow to the amount necessary to maintain the planned riparian habitat, about 2,700 acre-feet of water will be available for power production and irrigation.

After considering the environmental information in the licensee's request for modification of article 404, the staff's independent assessment 1/, and agency comments, the Director finds that the issuance of this order is not a major Federal action significantly affecting the quality of the human environment.

Article 405 requires the licensee to install a streamflow gage below the diversion. Because the streamflow gage will no longer be necessary, article 405 should be deleted from the license.

The Director orders:

(A) The licensee shall implement the Birch Creek Alternative Flow Mitigation Plan filed on March 9, 1990, to create and maintain riparian habitat below the project's diversion.

(B) Article 404 is amended as follows:

"Article 404. Licensee shall discharge from the Birch Creek Project diversion a continuous minimum flow sufficient to maintain the riparian habitat described in its Birch Creek Alternative Flow Mitigation Plan

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1/ Environmental Assessment, Plan to Provide Alternative Minimum Flow and Create Riparian Habitat, Birch Creek Hydroelectric Project, FERC No. 7194-009, Idaho, Federal Energy Regulatory Commission, dated June 4, 1990. This document is available in the Commission's public files associated with this proceeding.

filed on March 9, 1990, and required by paragraph A of this order. This flow may be temporarily modified if required by operating emergencies beyond the control of the licensee and for short periods upon mutual agreement among the licensee, the Idaho Department of Fish and Game, and the United States Bureau of Land Management."

(C) The licensee shall file with the Commission an annual report providing the results of its monitoring and maintenance of the riparian community developed according to the plan required by paragraph A. The report shall include any changes in design or operation of the system necessary to support the amount and quality of riparian vegetation specified by the plan. The licensee's filing shall also include the comments of the Bureau of Land Management, the U.S. Fish and Wildlife Service, and the Idaho Department of Fish and Game on the annual report. The annual reports shall be filed by December 31 of each year beginning in 1991 and continue for 10 years or until directed otherwise by the Commission. The Commission reserves the right to require changes to the mitigation plan required by paragraph A.

(D) Article 405 of the license is deleted.

(E) This order is issued under authority delegated to the Director and is final unless appealed to the Commission under Rule 1902 within 30 days from the date of its issuance.

J. Mark Robinson
Director, Division of Project
Compliance and Administration

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PENALTY FOR PRIVATE USE, $300

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WASHINGTON, D.C. 20426

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EXHIBIT "G"



EXHIBIT TWO

RENO DITCH

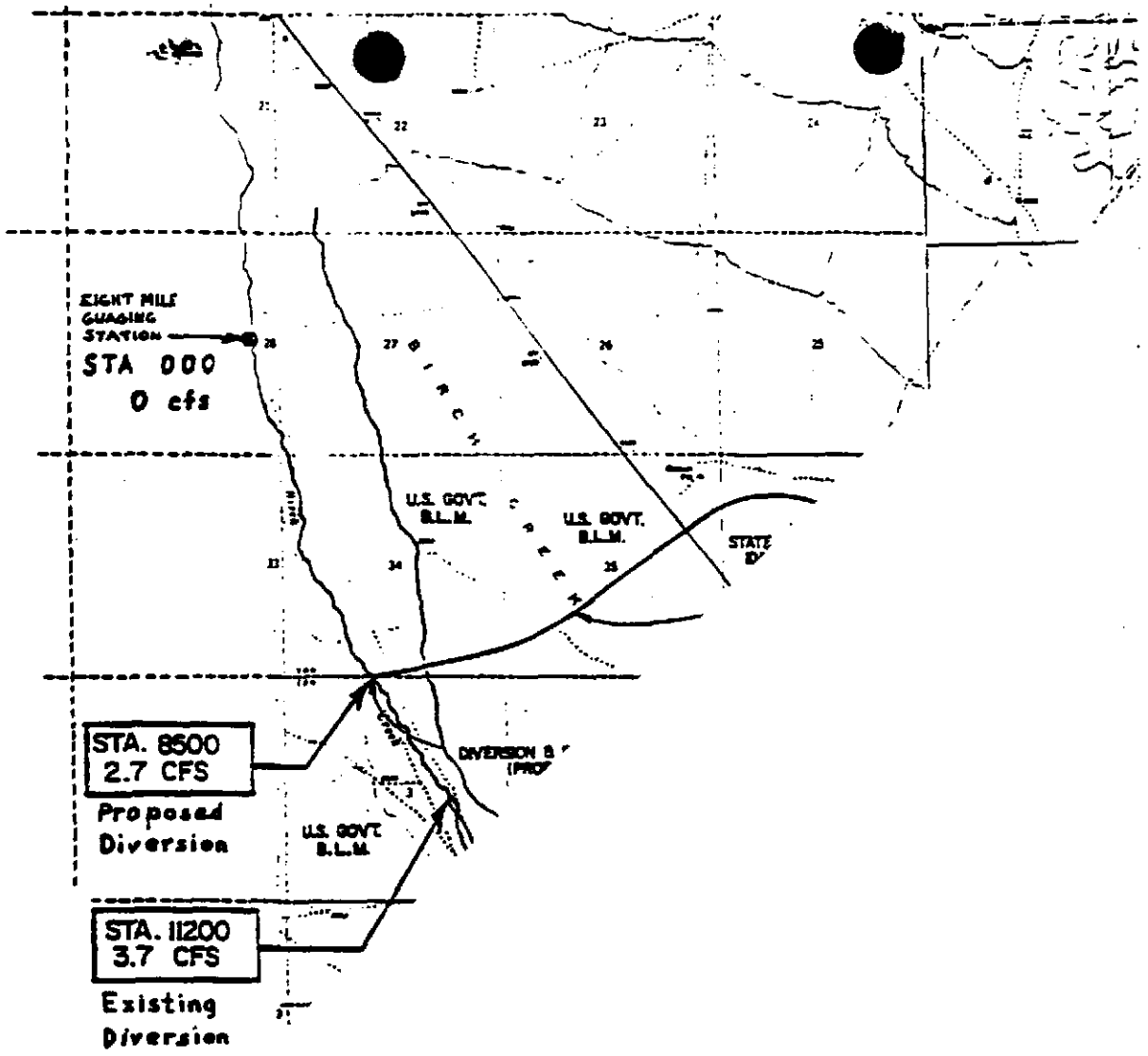
FLOW COMPARISON

1980 USGS / U OF I DATA VS. 1983
(All flows in cfs, 1 cfs = 50 inches)

	8/80	8/23/83
1. Proposed Diversion (STA 85 + 00)	43.0*	43.77
2. Existing Diversion (STA 112+00)	42.0*	42.07
3. Flow - Reno Ditch near Micro Wave Tower (STA 36 + 500)	34.0*	33.13
4. Flow at Reno Ranch Splitter Box (STA 500 + 00)	28.7*	30.2
5. Bedloss Existing to Proposed Diversion	1.0	1.7
6. Bedloss - Proposed Diversion to Micro Wave Site	9.0	10.64
7. Bedloss Proposed Diversion to Reno Ranch Splitter Box	14.3	13.57

*1970 - 1980 USGS average (Eight Mile) less 1980 prorated bedloss (U of I Gauge)

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RECEIVED
MAY 14 1998
Department of Water Resources

Kent W. Foster, Esq.
HOLDEN, KIDWELL, HAHN & CRAPO, P.L.L.C.
P.O. Box 50130
330 Shoup Avenue, Third Floor
Idaho Falls, Idaho 83405
Telephone: (208) 523-0620
Facsimile: (208) 523-9518

BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE
STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 and 32-07136 IN THE NAME OF TED SORENSON, d/b/a SORENSON ENGINEERING and IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-07252 (formerly no. 31-07646) IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.	**AMENDED AFFIDAVIT OF CHARLES E. BROCKWAY IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT AND IN OPPOSITION TO PROTESTANTS' MOTIONS FOR SUMMARY JUDGMENT**

STATE OF IDAHO)
)ss.
County of Twin Falls)

Charles E. Brockway, being first duly sworn, on his oath deposes and says:

1) I have been retained by Ted S. Sorenson in the above named consolidated matters presently pending before the Idaho Department of Water Resources, have personal

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knowledge of the facts set forth herein, and based on such personal knowledge testify as follows:

2) I have a B.S. in Civil Engineering from the University of Idaho, and an M.S. in Civil Engineering from California Institute of Technology and a PhD in Water Resources Engineering from Utah State University

3) I have worked for the U.S. Bureau of Reclamation as a hydraulic research engineer and was on the staff of the University of Idaho Civil and Agricultural Engineering Departments for 32 years. During this time I was responsible for research in water resources, irrigation, water quality and energy use at the University Research and Extension Center at Kimberly, ID. I have been involved in private consulting on water resources, hydrology, water rights, and water use in Idaho and am familiar with the hydrology and groundwater resources of the Eastern Snake River Plain including Birch Creek

4) I have evaluated the hydro electric project constructed and operated by Ted S. Sorenson which utilizes a new power canal diversion from Birch Creek bypassing the old Reno Ditch which formerly conveyed water to the D&D and Newman properties. The old Reno Ditch diversion from Birch Creek is approximately 0.7 miles downstream from the new power diversion. A discharge measuring structure including provisions for submerged orifice measurement or weir measurement is located approximately 0.5 miles downstream in the Old Reno ditch from the old Birch Creek diversion. The old Reno Ditch traverses the alluvial fan of Birch Creek for approximately 8 miles to a concrete structure which formerly divided the flow between the D&D Ranches and Newman Ranches. This structure has historically been referred to as the "splitter".

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5) Discharge measurements available to evaluate losses in the old Reno Ditch and Birch Creek Channel have been performed by Mr. Don Shenton and by the University of Idaho. I have reviewed and evaluated the available discharge and loss measurements and determined the historical losses in the old Reno Ditch . The average loss in the Birch Creek channel and Old Reno Ditch from the current hydro canal diversion downstream to the 'splitter' based on measurements made in 1980, 1983, 1985, and 1986 is 15.05 cfs

6) Diversions from Birch Creek to the D&D and Newman ranches are reported in the Watermaster Daily Record. There is disagreement as to the location of the reported diversions; They were measured either at the measuring structure in the Old Reno Ditch downstream of the diversion from Birch Creek or at the 'splitter' box near the old Reno Ranch. An evaluation of available flow data at the USGS gage Birch Creek at Eight Mile Canyon and the Old Reno Ditch indicates an average historical loss during the June 1 through September 15 period of 18.4 cfs between the gage at Eight Mile Canyon and the 'splitter' box. The flow in Birch Creek at Eight Mile Canyon would have to have exceeded the watermaster recorded diversions by at least 18.4 cfs if the recorded diversions were, in fact, measured at the 'splitter' box. A plot of the June 1September 15 recorded diversions from the Watermaster Daily Record for each year from 1955 through 1986 and the recorded discharge at the USGS gage Birch Creek at Eight Mile Canyon shows that for the period of record of the gage (1968-1987) the average flow at Eight Mile exceeded the recorded summertime diversions by only 13.0 cfs. Exhibit A, attached. It is likely, therefore, that the recorded diversions in the Watermaster Daily Record were measured at the measuring device below the diversion of the Old Reno Ditch from Birch Creek rather than at the 'splitter' .

7) I have reviewed the computer file data on the recorded water rights and SRBA claims for the D&D and Newman ranches and all records indicate that the point of diversion for these rights is in the NE ¼ NW ¼ Section 3 T8N R30E which is the head of the Old Reno

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Ditch at the diversion from Birch Creek. There are no apparent conditions on the water rights which allow for measurement at any other point than at the diversion. Absent any conditions specifying an alternate point of diversion or measurement or allowance for transmission losses, the Watermaster is required to measure and regulate at the recorded point of diversion. Therefore, the recorded diversions are presumed to be at the measuring device at the head of the Old Reno Ditch.

8) Regulation of diversions from a stream require frequent measurement and control of discharge to assure that allotted discharges to each water right holder are maintained. This requires that the watermaster measure discharge as near as possible to the diversion so that changes in discharge can be determined rapidly and further adjustment in discharge made if necessary. Measurement of diversions at the 'splitter' with the only control of discharge at the diversion, some 8 miles upstream, would require an inordinate amount of time for the watermaster to effectively regulate diversions. Measurement of the Old Reno Ditch diversions at the measuring device approximately 0.5 miles downstream of the diversion from Birch Creek would provide a reasonable response time for the watermaster to adequately regulate the diversion as required.

9) Determination of the amount of loss 'saved' or forgone by eliminating the Old Reno Ditch with the construction and operation of the power canal should include the losses in the power canal. This canal is membrane lined and is therefore expected to exhibit minimal losses. A seepage loss test was conducted for a period of 28 days in October and November 1997 to determine the loss. Inflow discharge at the Highway weir and outflow at the inlet to the penstock was continuously measured, except during iceing periods, with installed sharp crested weirs. The average total loss for the measurement period was 0.32 cfs and the estimated seepage loss was 0.29 cfs. Average total loss during a peak hot summer day is estimated to be 0.43 cfs. Exhibit B is a report on the power canal loss measurements.

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The forgone total loss as a result of the construction and operation of the power project is equal to the Old Reno Ditch total loss of 15.05 cfs minus the power canal loss of 0.43 cfs minus the habitat maintenance flow of 0.11 cfs (50 9pm) or a net total loss forgone of 14.51 cfs.

10) A determination of irrigated acreage on the D&D and Newman ranches was determined from aerial photos. An initial determination was performed by the firm Spatial Dynamics using 1987 satellite photography utilizing the same procedure which they use on contracts with the Idaho Department of Water Resources. A second determination was performed on 1997 aerial photos obtained from the Farm Services Administration office. this determination was performed using scaled computer images and compared with the 1987 determinations. Exhibit C is an aerial photo showing the irrigated acreage in each 40 acre tract in 1987 and 1997 for the Newman Farm and D&D Farm. this analysis shows an increased irrigated acreage on the D&D Farm of 599 acres and an increase of 168 acres on the Newman Farm between 1987 and 1997. This analysis includes irrigation from groundwater right 32-02100 which shows a place of use of 360 acres on the Newman Farm as shown on Exhibit C.

11) Exhibits A, B and C, referenced herein were attached to the original "AFFIDAVIT OF CHARLES E. BROCKWAY IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT AND IN OPPOSITION TO PROTESTANTS' MOTION FOR SUMMARY JUDGMENT", dated April 27, 1998. Those exhibits have not been reproduced and attached to this amendment, but the references herein to such exhibits are to the identical exhibits attached to the original affidavit.

Dated: 5/11/99

Charles E. Brockway

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JAN 0 8 2001

Subscribed and sworn (or affirmed) before me this 14th day of May, 1998.

Sharon Hart Strickland

Notary Public for Idaho
Residing in Gooding, Idaho
My Commission Expires: 12-17-2003



SHARON HART STRICKLAND
(seal) NOTARY PUBLIC
FOR IDAHO
RESIDING AT
GOODING, IDAHO
MY COMMISSION
EXPIRES 12/17/03

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JAN 0 8 2001

CERTIFICATE OF SERVICE

I hereby certify that I am a duly licensed attorney in the State of Idaho, resident of and with my office in Idaho Falls, Idaho; that I served a copy of the following described pleading or document on the attorneys listed below by hand delivering, by mailing or by facsimile, with the correct postage thereon, a true and correct copy thereof.

DOCUMENT SERVED: AMENDED AFFIDAVIT OF CHARLES E. BROCKWAY IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT AND IN OPPOSITION TO PROTESTANTS' MOTIONS FOR SUMMARY JUDGMENT

ATTORNEYS SERVED:

Blair J. Grover, Esq. *[First Class Mail]*
GROVER & ARCHIBALD
P.O. Box 36
Rigby, Idaho 83442-0036

George C. Petersen, Esq. *[First Class Mail]*
PETERSEN, MOSS, OLSEN,
MEACHAM & CARR
485 "E" Street
Idaho Falls, Idaho 83402

Peter Anderson *[First Class Mail]*
IDAHO DEPARTMENT OF WATER
RESOURCES
1301 North Orchard Street
Statehouse Mail
Boise, Idaho 83720

Dated: 5/14/98

Kent W. Foster, Esq.
HOLDEN, KIDWELL, HAHN & CRAPO, P.L.L.C.

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JUN 08 2001

Kent W. Foster, Esq.
HOLDEN, KIDWELL, HAHN & CRAPO, P.L.L.C.
P.O. Box 50130
330 Shoup Avenue, Third Floor
Idaho Falls, Idaho 83405
Telephone: (208) 523-0620
Facsimile: (208) 523-9518

BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE
STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 and 32-07136 IN THE NAME OF TED SORENSON, d/b/a SORENSON ENGINEERING and IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-07252 (formerly no. 31-07646) IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.	**CROSS MOTION FOR SUMMARY JUDGMENT**

The applicant in the above entitled consolidated matters hereby moves the hearing officer for summary judgment on the issues and to the extent set forth in the memorandum applicant has filed in support hereof and in opposition to the motions for summary judgment of D&D and Newman, protestants. Affidavits of Ted S. Sorenson and Dr. Charles E. Brockway are also filed in support hereof and in opposition to the motions for summary judgment of the protestants.

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JAN 0 8 2009

Dated this 28th day of April, 1998.

Kent W. Foster, Esq.

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JAN 08 2001

CERTIFICATE OF SERVICE

I hereby certify that I am a duly licensed attorney in the State of Idaho, resident of and with my office in Idaho Falls, Idaho; that I served a copy of the following described pleading or document on the attorneys listed below by hand delivering, by mailing or by facsimile, with the correct postage thereon, a true and correct copy thereof.

DOCUMENT SERVED: MOTION FOR SUMMARY JUDGMENT

ATTORNEYS SERVED:

Blair J. Grover, Esq. *[Hand Delivery]*
GROVER & ARCHIBALD
P.O. Box 36
Rigby, Idaho 83442-0036

George C. Petersen, Esq. *[Hand Delivery]*
PETERSEN, MOSS, OLSEN,
MEACHAM & CARR
485 "E" Street
Idaho Falls, Idaho 83402

Peter Anderson *[Hand Delivery]*
IDAHO DEPARTMENT OF WATER
RESOURCES
1301 North Orchard Street
Statehouse Mail
Boise, Idaho 83720

Dated: 4/28/98

Kent W. Foster, Esq.
HOLDEN, KIDWELL, HAHN & CRAPO, P.L.L.C.

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JAN 0 8 2001

Kent W. Foster, Esq.
HOLDEN, KIDWELL, HAHN & CRAPO, P.L.L.C.
P.O. Box 50130
330 Shoup Avenue, Third Floor
Idaho Falls, Idaho 83405
Telephone: (208) 523-0620
Facsimile: (208) 523-9518

BEFORE THE DEPARTMENT OF WATER RESOURCES
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IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 and 32-07136 IN THE NAME OF TED SORENSON, d/b/a SORENSON ENGINEERING and IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-07252 (formerly no. 31-07646) IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.	**AFFIDAVIT OF CHARLES E. BROCKWAY IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT AND IN OPPOSITION TO PROTESTANTS' MOTIONS FOR SUMMARY JUDGMENT**

Charles E. Brockway, on his oath, deposes and says:

1) I have been retained by Ted S. Sorenson in the above named consolidated matters presently pending before the Idaho Department of Water Resources and have personal knowledge of the facts set forth herein.

2) I have a B.S. in Civil Engineering from the University of Idaho, and an M.S. in Civil Engineering from California Institute of Technology and a PhD in Water Resources Engineering from Utah State University.

3) I have worked for the U.S. Bureau of Reclamation as a hydraulic research engineer and was on the staff of the University of Idaho Civil and Agricultural Engineering Departments for 32 years. During this time I was responsible for research in water resources, irrigation, water quality and energy use at the University Research and Extension Center at Kimberly, ID. I have been involved in private consulting on water resources, hydrology, water rights, and water use in Idaho and am familiar with the hyrology and groundwater resources of the Eastern Snake River Plain including Birch Creek.

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4) I have evaluated the hydro electric project constructed and operated by Ted S. Sorenson which utilizes a new power canal diversion from Birch Creek bypassing the old Reno Ditch which formerly conveyed water to the D&D and Newman properties. The old Reno Ditch diversion from Birch Creek is approximately 0.7 miles downstream from the new power diversion. A discharge measuring structure including provisions for submerged orifice measurement or weir measurement is located approximately 0.5 miles downstream in the Old Reno ditch from the old Birch Creek diversion. The old Reno Ditch traverses the alluvial fan of Birch Creek for approximately 8 miles to a concrete structure which formerly divided the flow between the D&D Ranches and Newman Ranches. This structure has historically been referred to as the "splitter".

5) Discharge measurements available to evaluate losses in the old Reno Ditch and Birch Creek Channel have been performed by Mr. Don Shenton and by the University of Idaho. I have reviewed and evaluated the available discharge and loss measurements and determined the historical losses in the old Reno Ditch . The average loss in the Birch Creek channel and Old Reno Ditch from the current hydro canal diversion downstream to the 'splitter' based on measurements made in 1980, 1983, 1985, and 1986 is 15.05 cfs.

6) Diversions from Birch Creek to the D&D and Newman ranches are reported in the Watermaster Daily Record. There is disagreement as to the location of the reported diversions; They were measured either at the measuring structure in the Old Reno Ditch downstream of the diversion from Birch Creek or at the 'splitter' box near the old Reno Ranch. An evaluation of available flow data at the USGS gage Birch Creek at Eight Mile Canyon and the Old Reno Ditch indictes an average historical loss during the June 1 through September 15 period of 18.4 cfs between the gage at Eight Mile Canyon and the 'splitter' box. The flow in Birch Creek at Eight Mile Canyon would have to have exceeded the watermaster recorded diversions by at least 18.4 cfs if the recorded diversions were, in fact, measured at the 'splitter' box. A plot of the June 1-September 15 recorded diversions from the Watermaster Daily Record for each year from 1955 through 1986 and the recorded discharge at the USGS gage Birch Creek at Eight Mile Canyon shows that for the period of record of the gage (1968-1987) the average flow at Eight Mile exceeded the recorded summertime diversions by only 13.0 cfs. Exhibit A, attached. It is likely, therefore, that the recorded diversions in the Watermaster Daily Record were measured at the measuring device below the diversion of the Old Reno Ditch from Birch Creek rather than at the 'splitter'.

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7) I have reviewed the computer file data on the recorded water rights and SRBA claims for the D&D and Newman ranches and all records indicate that the point of diversion for these rights is in the NE ¼ NW 1/4 Section 3 T8N R30E which is the head of the Old Reno Ditch at the diversion from Birch Creek. There are no apparent conditions on the water rights which allow for measurement at any other point than at the diversion. Absent any conditions specifying an alternate point of diversion or measurement or allowance for transmission losses, the Watermaster is required to measure and regulate at the recorded point of diversion. Therefore, the recorded diversions are presumed to be at the measuring device at the head of the Old Reno Ditch.

8) Regulation of diversions from a stream require frequent measurement and control of discharge to assure that allotted discharges to each water right holder are maintained. This requires that the watermaster measure discharge as near as possible to the diversion so that changes in discharge can be determined rapidly and further adjustment in discharge made if necessary. Measurement of diversions at the 'splitter' with the only control of discharge at the diversion, some 8 miles upstream, would require an inordinate amount of time for the watermaster to effectively regulate diversions. Measurement of the Old Reno Ditch diversions at the measuring device approximately 0.5 miles downstream of the diversion from Birch Creek would provide a reasonable response time for the watermaster to adequately regulate the diversion as required.

9) Determination of the amount of loss 'saved' or forgone by eliminating the Old Reno Ditch with the construction and operation of the power canal should include the losses in the power canal. This canal is membrane lined and is therefore expected to exhibit minimal losses. A seepage loss test was conducted for a period of 28 days in October and November 1997 to determine the loss. Inflow discharge at the Highway weir and outflow at the inlet to the penstock was continuously measured, except during iceing periods, with installed sharp crested weirs. The average total loss for the measurement period was 0.32 cfs and the estimated seepage loss was 0.29 cfs. Average total loss during a peak hot summer day is estimated to be 0.43 cfs. Exhibit B is a report on the power canal loss measurements. The forgone total loss as a result of the construction and operation of the power project is equal to the Old Reno Ditch total loss of 15.05 cfs minus the power canal loss of 0.43 cfs minus the habitat maintenance flow of 0.11 cfs (50 gpm) or a net total loss forgone of 14.51 cfs.

10) A determination of irrigated acreage on the D&D and Newman ranches was determined from aerial photos. An initial determination was performed by the firm Spatial

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Dynamics using 1987 satellite photography utilizing the same procedure which they use on contracts with the Idaho Department of Water Resources. A second determination was performed on 1997 aerial photos obtained from the Farm Services Admininstration office. This determination was performed using scaled computer images and compared with the 1987 determinations. Exhibit C is an aerial photo showing the irrigated acreage in each 40 acre tract in 1987 and 1997 for the Newman Farm and D&D Farm. This analysis shows an increased irrigated acreage on the D&D Farm of 599 acres and an increase of 168 acres on the Newman Farm between 1987 and 1997. This analysis includes irrigation from groundwater right 32-02100 which shows a place of use of 360 acres on the Newman Farm as shown on Exhibit C.

Dated: 4/27/98

Charles E. Brockway

STATE OF IDAHO)
)ss.
County of Twin Falls)

On the 27th day of April, 1998, before me, the undersigned, a notary public in and for said State, personally appeared Charles E. Brockway, known or identified to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

SHARON HART STRICKLAND
NOTARY PUBLIC
FOR IDAHO
RESIDING AT
GOODING, IDAHO
MY COMMISSION
EXPIRES 12/17/03

Notary Public for Idaho
Residing at ~~Twin Falls~~ Gooding, Idaho
My Commission Expires: 12-17-03

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CERTIFICATE OF SERVICE

I hereby certify that I am a duly licensed attorney in the State of Idaho, resident of and with my office in Idaho Falls, Idaho; that I served a copy of the following described pleading or document on the attorneys listed below by hand delivering, by mailing or by facsimile, with the correct postage thereon, a true and correct copy thereof.

DOCUMENT SERVED: AFFIDAVIT OF CHARLES E. BROCKWAY IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT AND IN OPPOSITION TO PROTESTANTS' MOTIONS FOR SUMMARY JUDGMENT

ATTORNEYS SERVED:

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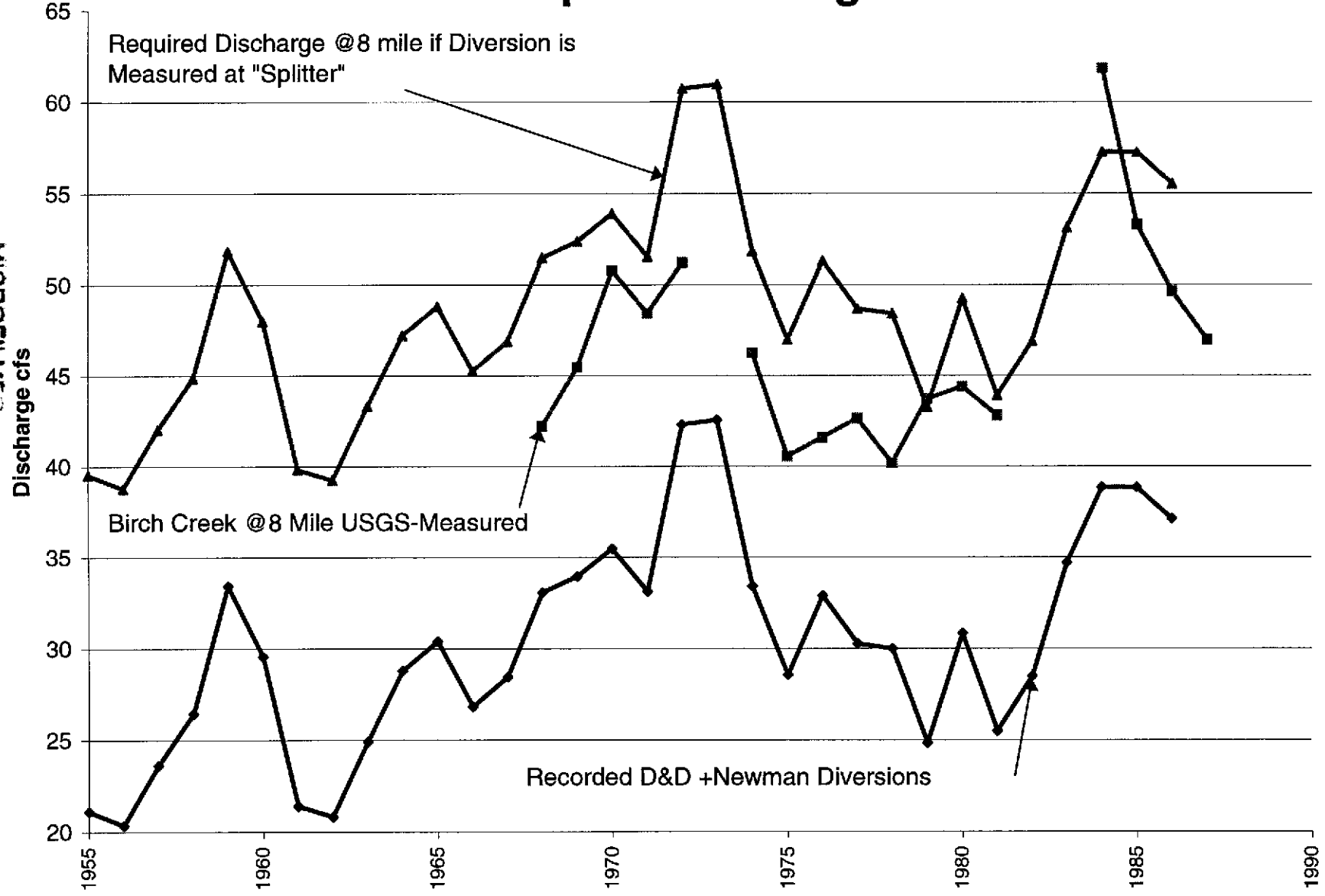
Dated: 4/28/98

Kent W. Foster, Esq.
HOLDEN, KIDWELL, HAHN & CRAPO, P.L.L.C.

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EXHIBIT A

Birch Creek Jun 1-Sept 15 Discharge and Diversions



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EXHIBIT B
Channel Losses in Birch Creek Power Canal
Results of Seepage Loss Measurements
1997

by

Brockway Engineering P.L.L.C.
C.E. Brockway PhD, P.E.

December 29, 1997

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Channel Losses in Birch Creek Power Canal
Results of Seepage Loss Measurements
1997

INTRODUCTION

The Birch Creek Power Project canal diverts from Birch Creek and flows generally east and south for a distance of 24,200 feet to the penstock inlet. The canal is fully lined with a membrane liner and includes a 5,550 foot long, 54 inch diameter inverted siphon section. The design velocity in the open channel section is 1.65 cfs.
Loss rates in the power canal have been estimated based on observed inflow and estimated turbine flows but have not been subject to a controlled inflow-outflow measurement program. Operating losses in the canal have become a factor in water rights deliberations relative to transfers of Birch Creek waters and a determination of losses was required.

PROCEDURE

Inflow-outflow discharge measurements are the best approach to evaluating operating seepage and evaporation losses in a long reach of canal. This procedure allows operating depths to be maintained, as compared with ponding methods, and provides actual operating velocities and depths in the channel. Measured losses include seepage and evaporation from the open water surface and are therefore indicative to total system losses at the time of measurement. Open water evaporation will vary over the season with air temperature, solar radiation, and wind speed.
The accuracy of measured losses depends on the accuracy of discharge measuring devices at the inlet and outlet of the reach. For channels with low operating losses, the variability in measured differences between inflow and outflow discharge may be within the precision of the individual measurements. Specifically, in long reaches with significant travel time, differences obtained from single inflow and outflow discharge measurements taken at the same time can yield highly variable loss rates. Utilization of continuous discharge recording devices, with integrated measurements over a significant period of time provides the best estimate of operational losses.

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Measuring Devices

The Birch Creek power canal has a 10 foot rectangular contracted weir installed at the point where the canal crosses the highway. The weir is installed at the downstream end of the 16 ft wide concrete bridge with staff gage and Stevens Typf F recorder installed on the concrete upstream of the weir. The weir and staff gage have been in operation since 1983. However, the elevations of the weir crest and staff gage were resurveyed in October 1997 in preparation of the loss measurements.

Prior to October 1997, no discharge measuring device was installed at the downstream end of the canal at the penstock inlet. In preparation for the loss measurements, an 8 ft rectangular contracted weir was installed on a steel frame at the inlet to the penstock. The weir included a staff gage located on the concrete headwall of the inlet structure and a Type F continuous water stage recorder. The weir and staff gage were surveyed prior to the discharge measurements for loss determination.

Data Collection

A site inspection and survey of both weirs was conducted on October 15, 1997 and water stage recorders set. Elevations of the weir crests and staff gage heights were made to adjust for any gage offsets and the dimensions and depths of the weir pool determined. The recorders were equipped with electric clocks on a 8 day time scale and 1:1 gage scales so that 0.01 feet on the chart equals 0.01 feet of water surface elevation change. The recorders were adjusted to staff gage readings and data collection began about noon on October 14, 1997. Site visits to each recorder were made by project personnel usually twice per day at which time the staff gage was read and the chart marked accordingly with the actual time, date and gage reading and visitors initials. The recorders were operated continuously until ice on the water surface interrupted measurements the afternoon of October 23, 1997. Warmer weather allowed resumption of the tests on November 5, 1997 and the recorders were operated until November 12, 1997.

Data Analysis

Recorder charts were removed from the recorders and indicated readings obtained every hour to the nearest 0.001 feet by visual interpolation of the chart trace. These readings were adjusted for time scale differences and rectified based on observed staff gage

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readings when the chart reading differed from the observed gage reading.
Discharge was initially calculated based on standard ratings for rectangular contracted weirs and the velocity of approach for each weir calculated based on the geometry of the weir pool. The calculated discharge for each hour was then adjusted for velocity of approach based on procedures recommended in the U.S. Bureau of Reclamation Water Measurement Manual(1984).
Losses were computed for each hourly discharge as the difference between the adjusted inflow and the adjusted outflow. Also, the average inflow and outflow discharges for the period during which icing conditions were not prevalent was calculated.
Based on the chart traces and daily peaks in discharge at the inflow and outflow stations, the approximate time of travel through the canal reach was estimated. The inflow discharge was then 'lagged' by the approximate travel time to put the discharge cycles more 'in phase' and produce a more uniform loss. The travel time based on estimates of differences in inflow and outflow peaks was compared with the estimated travel time based on design velocities in the open channel and the pipe siphon.
RESULTS
The average inflow measured at the Highway Weir for the period October 14 through November 12, 1997 excluding the icing periods was 58.50 cfs and the average outflow at the penstock was 58.28 cfs for an average difference or loss of 0.22 cfs. The attached spreadsheet output(Table 1) shows the hourly gage readings and calculated discharge for the Highway Weir and the Penstock Weir. The attached plot of discharge and calculated loss for the test period (Figure 1) shows the variation in loss rates with time and the daily fluctuations in inflow and outflow. Figure 2 shows the plotted inflow and outflow and calculated loss for the period October 14 through October 24 showing the time lag and variation in computed loss due to the time lag. Figure 2 also shows the effects of ice formation on the measured loss beginning on October 23rd.
The measured total loss of 0.22 cfs is equal to an average loss of 0.57 inches per day or about 0.05 ft/day over the total wetted area. It is estimated that the evaporation loss during the test period when weather conditions were cold was about 0.05 in/day over the exposed open water surface or 0.02 cfs. Estimated seepage loss is therefore 0.20 cfs. or 0.04 ft/day. During hot summer days, the

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evaporation loss may approach 0.25 in/day or an equivalent flow rate of 0.1 cfs. The expected evaporation plus seepage loss during the peak summer period is estimated at 0.2 plus 0.1 cfs or 0.3 cfs.

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Table 1 Birch Creek Power Canal Seepage Evaluation 1997

Highway Weir-Weir at highway bridge 10 ft rectangular contracted weir — Charts corrected based on observed staff gage readings

ZERO OF STAFF GAGE IS		-0.01	FT ABOVE WEIR CREST
WEIR WIDTH=	119.63 INCHES =		9.97 FT
WIDTH OF CONCRETE POOL=			15.83 FT
DEPTH BELOW WEIR CREST			2.00 FT

Penstock Inlet -Weir at inlet ot penstock 8 ft rectangular contracted weir

ZERO OF STAFF GAGE IS		0.00	FT ABOVE WEIR CREST
WEIR WIDTH=	93.0 INCHES =		7.750 FT
WIDTH OF POOL=			42.00 FT
DEPTH BELOW WEIR CREST			4.67 FT

Date	Highway Weir						Penstock Weir						Highway to Penstock			Moving Mean
	Chart Head ft	Observed Gage ft	Chart Head Corr	Discharg cfs	Velocity Head ft	Corr Discharge cfs	Chart Head ft	Observed Gage ft	Chart Head Corr	Discharge cfs	Velocity Head ft	Corr Discharge cfs	Uncorrecte for vel. cfs	Corrrected or vel & chart cfs	Lagged 4 hours	3 hour cfs
10/14/97 12:00 AM	1.456		1.460	56.33	0.016	57.47	1.741		1.737	56.53	0.001	56.37	-0.19	1.10	1.05	
10/14/97 1:00 AM	1.455		1.459	56.28	0.016	57.41	1.741		1.737	56.53	0.001	56.37	-0.25	1.04	1.04	
10/14/97 2:00 AM	1.455		1.459	56.28	0.016	57.41	1.742		1.738	56.57	0.001	56.42	-0.30	0.99	1.09	1.04
10/14/97 3:00 AM	1.453		1.457	56.16	0.016	57.29	1.742		1.738	56.57	0.001	56.42	-0.41	0.87	0.97	0.97
10/14/97 4:00 AM	1.454		1.458	56.22	0.016	57.35	1.741		1.737	56.53	0.001	56.37	-0.31	0.98	1.03	0.95
10/14/97 5:00 AM	1.455		1.459	56.28	0.016	57.41	1.740		1.736	56.48	0.001	56.32	-0.20	1.09	1.04	0.98
10/14/97 6:00 AM	1.458		1.462	56.45	0.016	57.59	1.740		1.736	56.48	0.001	56.32	-0.03	1.26	1.21	1.11
10/14/97 7:00 AM	1.458		1.462	56.45	0.016	57.59	1.740		1.736	56.48	0.001	56.32	-0.03	1.26	1.21	1.20
10/14/97 8:00 AM	1.459		1.463	56.50	0.016	57.64	1.741		1.737	56.53	0.001	56.37	-0.02	1.27	1.23	1.27
10/14/97 9:00 AM	1.450		1.454	55.99	0.016	57.12	1.741		1.737	56.53	0.001	56.37	-0.54	0.74	0.56	1.09
10/14/97 10:00 AM	1.462		1.466	56.67	0.017	57.82	1.741		1.737	56.53	0.001	56.37	0.15	1.45		1.16
10/14/97 11:00 AM	1.463		1.467	56.73	0.017	57.88	1.742		1.738	56.57	0.001	56.42	0.16	1.46		1.22
10/14/97 12:00 PM	1.465	1.47	1.469	56.85	0.017	58.00	1.745	1.75	1.741	56.72	0.001	56.56	0.13	1.44		
10/14/97 1:00 PM	1.464		1.468	56.79	0.017	57.94							na	na		
10/14/97 2:00 PM	1.462		1.466	56.67	0.017	57.82							na	na		
10/14/97 3:00 PM	1.460		1.464	56.56	0.017	57.70							na	na		
10/14/97 4:00 PM	1.462		1.466	56.67	0.017	57.82							na	na		
10/14/97 5:00 PM	1.455		1.459	56.28	0.016	57.41							na	na		
10/14/97 6:00 PM	1.451		1.455	56.05	0.016	57.18							na	na		
10/14/97 7:00 PM	1.449	1.45	1.453	55.93	0.016	57.06							na	na	0.97	
10/14/97 8:00 PM	1.445		1.449	55.71	0.016	56.82							na	na	0.74	
10/14/97 9:00 PM	1.443		1.447	55.59	0.016	56.71							na	na	0.67	
10/14/97 10:00 PM	1.442		1.446	55.53	0.016	56.65	1.735		1.731	56.24	0.001	56.09	-0.71	0.56	0.65	0.56
10/14/97 11:00 PM	1.440		1.444	55.42	0.016	56.53	1.735		1.731	56.24	0.001	56.09	-0.82	0.44	0.58	0.50
10/15/97 12:00 AM	1.440		1.444	55.42	0.016	56.53	1.734		1.730	56.20	0.001	56.04	-0.78	0.49	0.68	0.50
10/15/97 1:00 AM	1.440		1.444	55.42	0.016	56.53	1.733		1.729	56.15	0.001	55.99	-0.73	0.54	0.73	0.49
10/15/97 2:00 AM	1.441		1.445	55.48	0.016	56.59	1.732		1.728	56.10	0.001	55.95	-0.62	0.64	0.83	0.56
10/15/97 3:00 AM	1.442		1.446	55.53	0.016	56.65	1.730		1.726	56.01	0.001	55.85	-0.47	0.80	0.94	0.66
10/15/97 4:00 AM	1.444		1.448	55.65	0.016	56.77	1.729		1.725	55.96	0.001	55.81	-0.31	0.96	1.05	0.80
10/15/97 5:00 AM	1.445		1.449	55.71	0.016	56.82	1.728		1.724	55.91	0.001	55.76	-0.21	1.07	1.07	0.94
10/15/97 6:00 AM	1.447		1.451	55.82	0.016	56.94	1.727		1.723	55.87	0.001	55.71	-0.05	1.23	1.04	1.08
10/15/97 7:00 AM	1.449		1.453	55.93	0.016	57.06	1.727		1.723	55.87	0.001	55.71	0.07	1.35	1.06	1.21
10/15/97 8:00 AM	1.452		1.456	56.10	0.016	57.23	1.728		1.724	55.91	0.001	55.76	0.19	1.48	1.19	1.35
10/15/97 9:00 AM	1.454		1.458	56.22	0.016	57.35	1.731		1.727	56.06	0.001	55.90	0.16	1.45	1.22	1.42
10/15/97 10:00 AM	1.458		1.462	56.45	0.016	57.59	1.733	1.72	1.729	56.15	0.001	55.99	0.30	1.59	1.26	1.51
10/15/97 11:00 AM	1.458	1.46	1.462	56.45	0.016	57.59	1.734		1.730	56.20	0.001	56.04	0.25	1.54	1.12	1.53
10/15/97 12:00 PM	1.459		1.463	56.50	0.016	57.64	1.736		1.732	56.29	0.001	56.14	0.21	1.51	1.08	1.55
10/15/97 1:00 PM	1.459		1.463	56.50	0.016	57.64	1.740		1.736	56.48	0.001	56.32	0.02	1.32	1.04	1.46
10/15/97 2:00 PM	1.459		1.463	56.50	0.016	57.64	1.743		1.739	56.62	0.001	56.47	-0.12	1.18	0.99	1.34
10/15/97 3:00 PM	1.457		1.461	56.39	0.016	57.53	1.745		1.741	56.72	0.001	56.56	-0.33	0.97	0.82	1.15
10/15/97 4:00 PM	1.455		1.459	56.28	0.016	57.41	1.748		1.742	56.76	0.001	56.61	-0.49	0.80	0.71	0.98
10/15/97 5:00 PM	1.451		1.455	56.05	0.016	57.18	1.747		1.743	56.81	0.001	56.66	-0.76	0.52	0.52	0.76
10/15/97 6:00 PM	1.448		1.452	55.88	0.016	57.00	1.748		1.744	56.86	0.001	56.70	-0.98	0.30	0.67	0.54

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10/15/97 7:00 PM	1.447		1.451	55.82	0.016	56.94	1.748		1.744	56.86	0.001	56.70	-1.04	0.24	0.90	0.35
10/15/97 8:00 PM	1.440	1.44	1.444	55.42	0.016	56.53	1.747	1.72	1.743	56.81	0.001	56.66	-1.39	-0.12	0.58	0.14
10/15/97 9:00 PM	1.438		1.442	55.31	0.016	56.41	1.740		1.736	56.48	0.001	56.32	-1.17	0.09	0.61	0.07
10/15/97 10:00 PM	1.435		1.439	55.14	0.016	56.24	1.734		1.730	56.20	0.001	56.04	-1.06	0.20	0.62	0.05
10/15/97 11:00 PM	1.432		1.436	54.97	0.016	56.06	1.732		1.728	56.10	0.001	55.95	-1.13	0.12	0.49	0.14
10/16/97 12:00 AM	1.430		1.434	54.85	0.016	55.95	1.729		1.725	55.96	0.001	55.81	-1.11	0.14	0.57	0.15
10/16/97 1:00 AM	1.430		1.434	54.85	0.016	55.95	1.725		1.721	55.77	0.001	55.62	-0.92	0.33	0.66	0.20
10/16/97 2:00 AM	1.431		1.435	54.91	0.016	56.01	1.724		1.720	55.73	0.001	55.57	-0.81	0.44	0.77	0.30
10/16/97 3:00 AM	1.432		1.436	54.97	0.016	56.06	1.720		1.716	55.54	0.001	55.38	-0.57	0.68	0.82	0.48
10/16/97 4:00 AM	1.434		1.438	55.08	0.016	56.18	1.718		1.714	55.44	0.001	55.29	-0.36	0.89	0.89	0.67
10/16/97 5:00 AM	1.438		1.442	55.31	0.016	56.41	1.717		1.713	55.40	0.001	55.24	-0.09	1.17	1.08	0.92
10/16/97 6:00 AM	1.439		1.443	55.36	0.016	56.47	1.717		1.713	55.40	0.001	55.24	-0.03	1.23	0.86	1.10
10/16/97 7:00 AM	1.441		1.445	55.48	0.016	56.59	1.718		1.714	55.44	0.001	55.29	0.03	1.30	0.88	1.24
10/16/97 8:00 AM	1.443		1.447	55.59	0.016	56.71	1.719		1.715	55.49	0.001	55.34	0.10	1.37	0.85	1.30
10/16/97 9:00 AM	1.447		1.451	55.82	0.016	56.94	1.725		1.721	55.77	0.001	55.62	0.05	1.32	1.04	1.33
10/16/97 10:00 AM	1.448		1.452	55.88	0.016	57.00	1.727		1.723	55.87	0.001	55.71	0.01	1.29	0.91	1.33
10/16/97 11:00 AM	1.449		1.453	55.93	0.016	57.06	1.730		1.726	56.01	0.001	55.85	-0.07	1.21	0.83	1.27
10/16/97 12:00 PM	1.450		1.454	55.99	0.016	57.12	1.731		1.727	56.06	0.001	55.90	-0.07	1.22	0.79	1.24
10/16/97 1:00 PM	1.451		1.455	56.05	0.016	57.18	1.735		1.731	56.24	0.001	56.09	-0.20	1.09	0.85	1.17
10/16/97 2:00 PM	1.452	1.45	1.456	56.10	0.016	57.23	1.738	1.75	1.734	56.39	0.001	56.23	-0.28	1.00	0.96	1.10
10/16/97 3:00 PM	1.451		1.455	56.05	0.016	57.18	1.740		1.736	56.48	0.001	56.32	-0.43	0.85	0.99	0.98
10/16/97 4:00 PM	1.448		1.452	55.88	0.016	57.00	1.740		1.736	56.48	0.001	56.32	-0.60	0.67	0.91	0.84
10/16/97 5:00 PM	1.445		1.449	55.71	0.016	56.82	1.739		1.735	56.43	0.001	56.28	-0.73	0.55	0.97	0.69
10/16/97 6:00 PM	1.440		1.444	55.42	0.016	56.53	1.737		1.733	56.34	0.001	56.18	-0.92	0.35	0.77	0.52
10/16/97 7:00 PM	1.435		1.439	55.14	0.016	56.24	1.735		1.731	56.24	0.001	56.09	-1.11	0.15	0.67	0.35
10/16/97 8:00 PM	1.431		1.435	54.91	0.016	56.01	1.730		1.726	56.01	0.001	55.85	-1.10	0.15	0.62	0.22
10/16/97 9:00 PM	1.428		1.432	54.74	0.016	55.83	1.728		1.724	55.91	0.001	55.76	-1.17	0.07	0.54	0.13
10/16/97 10:00 PM	1.423		1.427	54.46	0.016	55.54	1.724		1.720	55.73	0.001	55.57	-1.27	-0.03	0.30	0.07
10/16/97 11:00 PM	1.420		1.424	54.29	0.016	55.37	1.720		1.716	55.54	0.001	55.38	-1.25	-0.01	0.17	0.01
10/17/97 12:00 AM	1.420		1.424	54.29	0.016	55.37	1.718		1.714	55.44	0.001	55.29	-1.15	0.08	0.22	0.01
10/17/97 1:00 AM	1.419		1.423	54.23	0.016	55.31	1.717		1.713	55.40	0.001	55.24	-1.16	0.07	0.21	0.04
10/17/97 2:00 AM	1.420		1.424	54.29	0.016	55.37	1.716		1.712	55.35	0.001	55.19	-1.06	0.17	0.27	0.11
10/17/97 3:00 AM	1.423		1.427	54.46	0.016	55.54	1.715		1.711	55.30	0.001	55.15	-0.84	0.39	0.44	0.21
10/17/97 4:00 AM	1.427		1.431	54.68	0.016	55.77	1.714		1.710	55.26	0.001	55.10	-0.57	0.67	0.30	0.41
10/17/97 5:00 AM	1.430		1.434	54.85	0.016	55.95	1.714		1.710	55.26	0.001	55.10	-0.40	0.85	0.14	0.64
10/17/97 6:00 AM	1.432		1.436	54.97	0.016	56.06	1.714		1.710	55.26	0.001	55.10	-0.29	0.96	0.31	0.83
10/17/97 7:00 AM	1.435		1.439	55.14	0.016	56.24	1.722		1.718	55.63	0.001	55.48	-0.49	0.76	0.48	0.86
10/17/97 8:00 AM	1.438		1.442	55.31	0.016	56.41	1.729		1.725	55.96	0.001	55.81	-0.65	0.61	0.66	0.78
10/17/97 9:00 AM	1.440		1.444	55.42	0.016	56.53	1.728		1.724	55.91	0.001	55.76	-0.49	0.77	0.77	0.72
10/17/97 10:00 AM	1.442		1.446	55.53	0.016	56.65	1.728		1.724	55.91	0.001	55.76	-0.38	0.89	0.80	0.76
10/17/97 11:00 AM	1.445		1.449	55.71	0.016	56.82	1.728		1.724	55.91	0.001	55.76	-0.21	1.07	0.83	0.91
10/17/97 12:00 PM	1.447		1.451	55.82	0.016	56.94	1.728		1.724	55.91	0.001	55.76	-0.09	1.18	0.90	1.05
10/17/97 1:00 PM	1.448	1.45	1.452	55.88	0.016	57.00	1.730	1.75	1.726	56.01	0.001	55.85	-0.13	1.15	0.72	1.13
10/17/97 2:00 PM	1.448		1.452	55.88	0.016	57.00	1.733		1.729	56.15	0.001	55.99	-0.27	1.01	0.72	1.11
10/17/97 3:00 PM	1.447		1.451	55.82	0.016	56.94	1.734		1.730	56.20	0.001	56.04	-0.38	0.90	0.71	1.02
10/17/97 4:00 PM	1.446		1.450	55.76	0.016	56.88	1.739		1.735	56.43	0.001	56.28	-0.67	0.60	0.84	0.84
10/17/97 5:00 PM	1.440		1.444	55.42	0.016	56.53	1.739		1.735	56.43	0.001	56.28	-1.01	0.25	0.68	0.59
10/17/97 6:00 PM	1.435		1.439	55.14	0.016	56.24	1.738		1.734	56.39	0.001	56.23	-1.25	0.01	0.62	0.29
10/17/97 7:00 PM	1.432		1.436	54.97	0.016	56.06	1.734		1.730	56.20	0.001	56.04	-1.23	0.02	0.68	0.10
10/17/97 8:00 PM	1.427		1.431	54.68	0.016	55.77	1.730		1.726	56.01	0.001	55.85	-1.32	-0.08	0.63	-0.02
10/17/97 9:00 PM	1.423	1.42	1.427	54.46	0.016	55.54	1.725	1.72	1.721	55.77	0.001	55.62	-1.31	-0.08	0.62	-0.04
10/17/97 10:00 PM	1.418		1.422	54.18	0.016	55.25	1.720		1.716	55.54	0.001	55.38	-1.36	-0.13	0.62	-0.10
10/17/97 11:00 PM	1.416		1.420	54.06	0.015	55.14	1.715		1.711	55.30	0.001	55.15	-1.24	-0.01	0.69	-0.07
10/18/97 12:00 AM	1.415		1.419	54.01	0.015	55.08	1.706		1.702	54.88	0.001	54.73	-0.87	0.35	0.68	0.07
10/18/97 1:00 AM	1.415		1.419	54.01	0.015	55.08	1.704		1.700	54.79	0.001	54.63	-0.78	0.45	0.63	0.26
10/18/97 2:00 AM	1.419		1.423	54.23	0.016	55.31	1.700		1.696	54.60	0.001	54.44	-0.37	0.86	0.86	0.55
10/18/97 3:00 AM	1.420		1.424	54.29	0.016	55.37	1.699		1.695	54.55	0.001	54.40	-0.26	0.97	0.64	0.76
10/18/97 4:00 AM	1.422		1.426	54.40	0.016	55.48	1.700		1.696	54.60	0.001	54.44	-0.20	1.04	0.66	0.96
10/18/97 5:00 AM	1.424		1.428	54.51	0.016	55.60	1.700		1.696	54.60	0.001	54.44	-0.09	1.15	0.73	1.05
10/18/97 6:00 AM	1.428		1.432	54.74	0.016	55.83	1.706		1.702	54.88	0.001	54.73	-0.14	1.11	0.92	1.10
10/18/97 7:00 AM	1.430		1.434	54.85	0.016	55.95	1.708		1.704	54.97	0.001	54.82	-0.12	1.13	0.99	1.13
10/18/97 8:00 AM	1.431		1.435	54.91	0.016	56.01	1.709		1.705	55.02	0.001	54.87	-0.11	1.14	0.67	1.13

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10/18/97 9:00 AM	1.435		1.439	55.14	0.016	56.24	1.710		1.706	55.07	0.001	54.91	0.07	1.33	0.81	1.20
10/18/97 10:00 AM	1.437		1.441	55.25	0.016	56.36	1.711		1.707	55.12	0.001	54.96	0.14	1.40	0.83	1.29
10/18/97 11:00 AM	1.439		1.443	55.36	0.016	56.47	1.719		1.715	55.49	0.001	55.34	-0.13	1.14	0.71	1.29
10/18/97 12:00 PM	1.440	1.44	1.444	55.42	0.016	56.53	1.721	1.74	1.717	55.58	0.001	55.43	-0.16	1.10	0.54	1.21
10/18/97 1:00 PM	1.441		1.445	55.48	0.016	56.59	1.723		1.719	55.68	0.001	55.52	-0.20	1.07	0.60	1.10
10/18/97 2:00 PM	1.440		1.444	55.42	0.016	56.53	1.728		1.724	55.91	0.001	55.76	-0.49	0.77	0.63	0.98
10/18/97 3:00 PM	1.439		1.443	55.36	0.016	56.47	1.733		1.729	56.15	0.001	55.99	-0.78	0.48	0.57	0.77
10/18/97 4:00 PM	1.438		1.442	55.31	0.016	56.41	1.733		1.729	56.15	0.001	55.99	-0.84	0.42	0.60	0.56
10/18/97 5:00 PM	1.437		1.441	55.25	0.016	56.36	1.731		1.727	56.06	0.001	55.90	-0.80	0.46	0.63	0.45
10/18/97 6:00 PM	1.435		1.439	55.14	0.016	56.24	1.731		1.727	56.06	0.001	55.90	-0.92	0.34	0.86	0.41
10/18/97 7:00 PM	1.430		1.434	54.85	0.016	55.95	1.725		1.721	55.77	0.001	55.62	-0.92	0.33	0.80	0.38
10/18/97 8:00 PM	1.424	1.43	1.428	54.51	0.016	55.60	1.723	1.71	1.719	55.68	0.001	55.52	-1.16	0.08	0.64	0.25
10/18/97 9:00 PM	1.422		1.426	54.40	0.016	55.48	1.720		1.716	55.54	0.001	55.38	-1.14	0.10	0.76	0.17
10/18/97 10:00 PM	1.418		1.422	54.18	0.016	55.25	1.715		1.711	55.30	0.001	55.15	-1.13	0.10	0.81	0.09
10/18/97 11:00 PM	1.415		1.419	54.01	0.015	55.08	1.711		1.707	55.12	0.001	54.96	-1.11	0.12	0.63	0.11
10/19/97 12:00 AM	1.410		1.414	53.73	0.015	54.79	1.706		1.702	54.88	0.001	54.73	-1.16	0.06	0.34	0.09
10/19/97 1:00 AM	1.411		1.415	53.78	0.015	54.85	1.700		1.696	54.60	0.001	54.44	-0.82	0.40	0.45	0.19
10/19/97 2:00 AM	1.411		1.415	53.78	0.015	54.85	1.700		1.696	54.60	0.001	54.44	-0.82	0.40	0.45	0.29
10/19/97 3:00 AM	1.411		1.415	53.78	0.015	54.85	1.700		1.696	54.60	0.001	54.44	-0.82	0.40	0.40	0.40
10/19/97 4:00 AM	1.413		1.417	53.89	0.015	54.96	1.699		1.695	54.55	0.001	54.40	-0.66	0.56	0.42	0.46
10/19/97 5:00 AM	1.417		1.421	54.12	0.015	55.19	1.699		1.695	54.55	0.001	54.40	-0.43	0.80	0.51	0.59
10/19/97 6:00 AM	1.420		1.424	54.29	0.016	55.37	1.700		1.696	54.60	0.001	54.44	-0.31	0.92	0.45	0.76
10/19/97 7:00 AM	1.423		1.427	54.46	0.016	55.54	1.702		1.698	54.69	0.001	54.54	-0.24	1.00	0.53	0.91
10/19/97 8:00 AM	1.425		1.429	54.57	0.016	55.66	1.705		1.701	54.83	0.001	54.68	-0.26	0.98	0.46	0.97
10/19/97 9:00 AM	1.428		1.432	54.74	0.016	55.83	1.710		1.706	55.07	0.001	54.91	-0.33	0.92	0.45	0.97
10/19/97 10:00 AM	1.430		1.434	54.85	0.016	55.95	1.712		1.708	55.16	0.001	55.01	-0.31	0.94	0.57	0.95
10/19/97 11:00 AM	1.432		1.436	54.97	0.016	56.06	1.716		1.712	55.35	0.001	55.19	-0.38	0.87	0.59	0.91
10/19/97 12:00 PM	1.434	1.43	1.438	55.08	0.016	56.18	1.720	1.72	1.716	55.54	0.001	55.38	-0.46	0.80	0.56	0.87
10/19/97 1:00 PM	1.435		1.439	55.14	0.016	56.24	1.720		1.716	55.54	0.001	55.38	-0.40	0.86	0.48	0.84
10/19/97 2:00 PM	1.437		1.441	55.25	0.016	56.36	1.722		1.718	55.63	0.001	55.48	-0.38	0.88	0.55	0.85
10/19/97 3:00 PM	1.437		1.441	55.25	0.016	56.36	1.725		1.721	55.77	0.001	55.62	-0.52	0.74	0.60	0.83
10/19/97 4:00 PM	1.435		1.439	55.14	0.016	56.24	1.728		1.724	55.91	0.001	55.76	-0.78	0.48	0.53	0.70
10/19/97 5:00 PM	1.434		1.438	55.08	0.016	56.18	1.729		1.725	55.96	0.001	55.81	-0.88	0.38	0.85	0.53
10/19/97 6:00 PM	1.430		1.434	54.85	0.016	55.95	1.728		1.724	55.91	0.001	55.76	-1.06	0.19	0.71	0.35
10/19/97 7:00 PM	1.427		1.431	54.68	0.016	55.77	1.727		1.723	55.87	0.001	55.71	-1.18	0.06	0.63	0.21
10/19/97 8:00 PM	1.425	1.42	1.429	54.57	0.016	55.66	1.719	1.71	1.715	55.49	0.001	55.34	-0.92	0.32	0.56	0.19
10/19/97 9:00 PM	1.422		1.426	54.40	0.016	55.48	1.717		1.713	55.40	0.001	55.24	-0.99	0.24	0.48	0.21
10/19/97 10:00 PM	1.420		1.424	54.29	0.016	55.37	1.715		1.711	55.30	0.001	55.15	-1.01	0.22	0.69	0.26
10/19/97 11:00 PM	1.414		1.418	53.95	0.015	55.02	1.714		1.710	55.26	0.001	55.10	-1.30	-0.08	0.39	0.13
10/20/97 12:00 AM	1.410		1.414	53.73	0.015	54.79	1.712		1.708	55.16	0.001	55.01	-1.44	-0.22	0.20	-0.03
10/20/97 1:00 AM	1.408		1.412	53.61	0.015	54.67	1.705		1.701	54.83	0.001	54.68	-1.22	-0.01	0.09	-0.10
10/20/97 2:00 AM	1.410		1.414	53.73	0.015	54.79	1.704		1.700	54.79	0.001	54.63	-1.06	0.16	0.16	-0.02
10/20/97 3:00 AM	1.410		1.414	53.73	0.015	54.79	1.703		1.699	54.74	0.001	54.59	-1.01	0.20	0.25	0.12
10/20/97 4:00 AM	1.415		1.419	54.01	0.015	55.08	1.703		1.699	54.74	0.001	54.59	-0.73	0.49	0.49	0.28
10/20/97 5:00 AM	1.415		1.419	54.01	0.015	55.08	1.704		1.700	54.79	0.001	54.63	-0.78	0.45	0.45	0.38
10/20/97 6:00 AM	1.415		1.419	54.01	0.015	55.08	1.702		1.698	54.69	0.001	54.54	-0.69	0.54	0.16	0.49
10/20/97 7:00 AM	1.420		1.424	54.29	0.016	55.37	1.703		1.699	54.74	0.001	54.59	-0.45	0.78	0.17	0.59
10/20/97 8:00 AM	1.422		1.426	54.40	0.016	55.48	1.704		1.700	54.79	0.001	54.63	-0.39	0.85	0.34	0.72
10/20/97 9:00 AM	1.425		1.429	54.57	0.016	55.66	1.710		1.706	55.07	0.001	54.91	-0.50	0.74	0.56	0.79
10/20/97 10:00 AM	1.432		1.436	54.97	0.016	56.06	1.716		1.712	55.35	0.001	55.19	-0.38	0.87	0.68	0.82
10/20/97 11:00 AM	1.435	1.43	1.439	55.14	0.016	56.24	1.715	1.72	1.711	55.30	0.001	55.15	-0.17	1.09	0.72	0.90
10/20/97 12:00 PM	1.435		1.439	55.14	0.016	56.24	1.714		1.710	55.26	0.001	55.10	-0.12	1.14	0.62	1.03
10/20/97 1:00 PM	1.434		1.438	55.08	0.016	56.18	1.720		1.716	55.54	0.001	55.38	-0.46	0.80	0.52	1.01
10/20/97 2:00 PM	1.434		1.438	55.08	0.016	56.18	1.723		1.719	55.68	0.001	55.52	-0.60	0.66	0.42	0.87
10/20/97 3:00 PM	1.434		1.438	55.08	0.016	56.18	1.725		1.721	55.77	0.001	55.62	-0.69	0.56	0.56	0.67
10/20/97 4:00 PM	1.433		1.437	55.02	0.016	56.12	1.726		1.722	55.82	0.001	55.66	-0.80	0.46	0.51	0.56
10/20/97 5:00 PM	1.430		1.434	54.85	0.016	55.95	1.728		1.724	55.91	0.001	55.76	-1.06	0.19	0.33	0.40
10/20/97 6:00 PM	1.429		1.433	54.80	0.016	55.89	1.725		1.721	55.77	0.001	55.62	-0.97	0.27	0.93	0.31
10/20/97 7:00 PM	1.425		1.429	54.57	0.016	55.66	1.725		1.721	55.77	0.001	55.62	-1.20	0.04	0.84	0.17
10/20/97 8:00 PM	1.420	1.41	1.424	54.29	0.016	55.37	1.725	1.71	1.721	55.77	0.001	55.62	-1.48	-0.25	0.69	0.02
10/20/97 9:00 PM	1.415		1.419	54.01	0.015	55.08	1.711		1.707	55.12	0.001	54.96	-1.11	0.12	0.16	-0.03
10/20/97 10:00 PM	1.410		1.414	53.73	0.015	54.79	1.708		1.704	54.97	0.001	54.82	-1.25	-0.03	0.39	-0.05

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10/20/97 11:00 PM	1.408		1.412	53.61	0.015	54.67	1.705		1.701	54.83	0.001	54.68	-1.22	-0.01	0.32	0.03
10/21/97 12:00 AM	1.407		1.411	53.56	0.015	54.61	1.710		1.706	55.07	0.001	54.91	-1.51	-0.30	0.31	-0.11
10/21/97 1:00 AM	1.405		1.409	53.44	0.015	54.50	1.699		1.695	54.55	0.001	54.40	-1.11	0.10	0.10	-0.07
10/21/97 2:00 AM	1.407		1.411	53.56	0.015	54.61	1.698		1.694	54.51	0.001	54.35	-0.95	0.26	0.17	0.02
10/21/97 3:00 AM	1.410		1.414	53.73	0.015	54.79	1.697		1.693	54.46	0.001	54.30	-0.73	0.48	0.25	0.28
10/21/97 4:00 AM	1.414		1.418	53.95	0.015	55.02	1.699		1.695	54.55	0.001	54.40	-0.60	0.62	0.11	0.46
10/21/97 5:00 AM	1.418		1.422	54.18	0.016	55.25	1.700		1.696	54.60	0.001	54.44	-0.42	0.81	0.20	0.64
10/21/97 6:00 AM	1.423		1.427	54.46	0.016	55.54	1.702		1.698	54.69	0.001	54.54	-0.24	1.00	0.25	0.81
10/21/97 7:00 AM	1.427		1.431	54.68	0.016	55.77	1.710		1.706	55.07	0.001	54.91	-0.38	0.86	0.30	0.89
10/21/97 8:00 AM	1.428		1.432	54.74	0.016	55.83	1.713		1.709	55.21	0.001	55.05	-0.47	0.78	0.07	0.88
10/21/97 9:00 AM	1.430		1.434	54.85	0.016	55.95	1.718		1.714	55.44	0.001	55.29	-0.59	0.66	0.10	0.77
10/21/97 10:00 AM	1.433		1.437	55.02	0.016	56.12	1.722		1.718	55.63	0.001	55.48	-0.61	0.65	-0.20	0.70
10/21/97 11:00 AM	1.435		1.439	55.14	0.016	56.24	1.728		1.724	55.91	0.001	55.76	-0.78	0.48	-0.18	0.60
10/21/97 12:00 PM	1.436		1.440	55.19	0.016	56.30	1.730		1.726	56.01	0.001	55.85	-0.81	0.45	0.02	0.52
10/21/97 1:00 PM	1.435		1.439	55.14	0.016	56.24	1.740		1.736	56.48	0.001	56.32	-1.34	-0.08	-0.13	0.28
10/21/97 2:00 PM	1.435	1.435	1.439	55.14	0.016	56.24	1.742	1.74	1.738	56.57	0.001	56.42	-1.44	-0.18	-0.23	0.06
10/21/97 3:00 PM	1.435		1.439	55.14	0.016	56.24	1.739		1.735	56.43	0.001	56.28	-1.29	-0.04	-0.18	-0.10
10/21/97 4:00 PM	1.439		1.443	55.36	0.016	56.47	1.741		1.737	56.53	0.001	56.37	-1.16	0.10	0.15	-0.04
10/21/97 5:00 PM	1.438		1.442	55.31	0.016	56.41	1.743		1.739	56.62	0.001	56.47	-1.31	-0.05	0.18	0.00
10/21/97 6:00 PM	1.435		1.439	55.14	0.016	56.24	1.742		1.738	56.57	0.001	56.42	-1.44	-0.18	0.15	-0.04
10/21/97 7:00 PM	1.432		1.436	54.97	0.016	56.06	1.740		1.736	56.48	0.001	56.32	-1.51	-0.26	0.21	-0.16
10/21/97 8:00 PM	1.430		1.434	54.85	0.016	55.95	1.738		1.734	56.39	0.001	56.23	-1.53	-0.28	0.19	-0.24
10/21/97 9:00 PM	1.428		1.432	54.74	0.016	55.83	1.735	1.71	1.731	56.24	0.001	56.09	-1.50	-0.26	0.17	-0.27
10/21/97 10:00 PM	1.422		1.426	54.40	0.016	55.48	1.730		1.726	56.01	0.001	55.85	-1.61	-0.37	0.01	-0.30
10/21/97 11:00 PM	1.420		1.424	54.29	0.016	55.37	1.728		1.724	55.91	0.001	55.76	-1.62	-0.39	-0.16	-0.34
10/22/97 12:00 AM	1.420		1.424	54.29	0.016	55.37	1.726		1.722	55.82	0.001	55.66	-1.53	-0.30	-0.20	-0.35
10/22/97 1:00 AM	1.420		1.424	54.29	0.016	55.37	1.722		1.718	55.63	0.001	55.48	-1.34	-0.11	-0.30	-0.27
10/22/97 2:00 AM	1.422		1.426	54.40	0.016	55.48	1.723		1.719	55.68	0.001	55.52	-1.28	-0.04	-0.37	-0.15
10/22/97 3:00 AM	1.423		1.427	54.46	0.016	55.54	1.724		1.720	55.73	0.001	55.57	-1.27	-0.03	-0.36	-0.06
10/22/97 4:00 AM	1.425		1.429	54.57	0.016	55.66	1.726		1.722	55.82	0.001	55.66	-1.25	-0.01	-0.43	-0.03
10/22/97 5:00 AM	1.427		1.431	54.68	0.016	55.77	1.730		1.726	56.01	0.001	55.85	-1.32	-0.08	-0.41	-0.04
10/22/97 6:00 AM	1.430		1.434	54.85	0.016	55.95	1.731		1.727	56.06	0.001	55.90	-1.20	0.05	-0.28	-0.01
10/22/97 7:00 AM	1.431		1.435	54.91	0.016	56.01	1.735		1.731	56.24	0.001	56.09	-1.33	-0.08	-0.32	-0.04
10/22/97 8:00 AM	1.433		1.437	55.02	0.016	56.12	1.737		1.733	56.34	0.001	56.18	-1.31	-0.06	-0.44	-0.03
10/22/97 9:00 AM	1.437		1.441	55.25	0.016	56.36	1.738		1.734	56.39	0.001	56.23	-1.13	0.13	-0.35	-0.01
10/22/97 10:00 AM	1.438		1.442	55.31	0.016	56.41	1.740		1.736	56.48	0.001	56.32	-1.17	0.09	-0.38	0.05
10/22/97 11:00 AM	1.439		1.443	55.36	0.016	56.47	1.745		1.741	56.72	0.001	56.56	-1.35	-0.09	-0.37	0.04
10/22/97 12:00 PM	1.442		1.446	55.53	0.016	56.65	1.748		1.744	56.86	0.001	56.70	-1.32	-0.05	-0.39	-0.02
10/22/97 1:00 PM	1.445	1.44	1.449	55.71	0.016	56.82	1.750		1.746	56.95	0.001	56.80	-1.25	0.03	-0.40	-0.04
10/22/97 2:00 PM	1.445		1.449	55.71	0.016	56.82	1.751		1.747	57.00	0.001	56.84	-1.29	-0.02	-0.35	-0.02
10/22/97 3:00 PM	1.445		1.449	55.71	0.016	56.82	1.755	1.75	1.751	57.19	0.001	57.03	-1.48	-0.21	-0.31	-0.07
10/22/97 4:00 PM	1.446		1.450	55.76	0.016	56.88	1.759		1.755	57.38	0.001	57.22	-1.62	-0.34	-0.20	-0.19
10/22/97 5:00 PM	1.447		1.451	55.82	0.016	56.94	1.758		1.754	57.33	0.001	57.18	-1.51	-0.24	-0.14	-0.26
10/22/97 6:00 PM	1.444		1.448	55.65	0.016	56.77	1.757		1.753	57.28	0.001	57.13	-1.64	-0.36	-0.32	-0.31
10/22/97 7:00 PM	1.444		1.448	55.65	0.016	56.77	1.756		1.752	57.24	0.001	57.08	-1.59	-0.32	-0.03	-0.31
10/22/97 8:00 PM	1.442	1.44	1.446	55.53	0.016	56.65	1.756	1.74	1.752	57.24	0.001	57.08	-1.70	-0.43	-0.01	-0.37
10/22/97 9:00 PM	1.438		1.442	55.31	0.016	56.41	1.756		1.752	57.24	0.001	57.08	-1.93	-0.67	-0.10	-0.47
10/22/97 10:00 PM	1.437		1.441	55.25	0.016	56.36	1.750		1.746	56.95	0.001	56.80	-1.70	-0.44	-0.20	-0.51
10/22/97 11:00 PM	1.437		1.441	55.25	0.016	56.36	1.747		1.743	56.81	0.001	56.66	-1.56	-0.30	-0.11	-0.47
10/23/97 12:00 AM	1.438		1.442	55.31	0.016	56.41	1.744		1.740	56.67	0.001	56.51	-1.36	-0.10	-0.10	-0.28
10/23/97 1:00 AM	1.437		1.441	55.25	0.016	56.36	1.745		1.741	56.72	0.001	56.56	-1.46	-0.20	-0.11	-0.20
10/23/97 2:00 AM	1.437		1.441	55.25	0.016	56.36	1.743		1.739	56.62	0.001	56.47	-1.37	-0.11	-0.16	-0.14
10/23/97 3:00 AM	1.438		1.442	55.31	0.016	56.41	1.744		1.740	56.67	0.001	56.51	-1.36	-0.10	-0.19	-0.14
10/23/97 4:00 AM	1.439		1.443	55.36	0.016	56.47	1.743		1.739	56.62	0.001	56.47	-1.26	0.01	-0.23	-0.07
10/23/97 5:00 AM	1.440		1.444	55.42	0.016	56.53	1.744		1.740	56.67	0.001	56.51	-1.25	0.02	-0.27	-0.02
10/23/97 6:00 AM	1.440		1.444	55.42	0.016	56.53	1.746		1.742	56.76	0.001	56.61	-1.34	-0.08	-0.46	-0.02
10/23/97 7:00 AM	1.442		1.446	55.53	0.016	56.65	1.748		1.744	56.86	0.001	56.70	-1.32	-0.05	-0.43	-0.04
10/23/97 8:00 AM	1.442		1.446	55.53	0.016	56.65	1.750		1.746	56.95	0.001	56.80	-1.42	-0.15	-0.62	-0.09
10/23/97 9:00 AM	1.448		1.452	55.88	0.016	57.00	1.754		1.750	57.14	0.001	56.99	-1.27	0.01	-0.70	-0.06
10/23/97 10:00 AM	1.450		1.454	55.99	0.016	57.12	1.756		1.752	57.24	0.001	57.08	-1.25	0.03	-0.68	-0.03
10/23/97 11:00 AM	1.451	1.46	1.455	56.05	0.016	57.18	1.760		1.756	57.43	0.001	57.27	-1.38	-0.10	-0.48	-0.02
10/23/97 12:00 PM	1.453		1.457	56.16	0.016	57.29	1.769	1.76	1.765	57.85	0.001	57.70	-1.69	-0.41	-0.45	-0.16

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10/23/97 1:00 PM	1.453		1.457	56.16	0.016	57.29	1.771		1.767	57.95	0.001	57.79	-1.79	-0.50	-0.55	-0.33
10/23/97 2:00 PM	1.455		1.459	56.28	0.016	57.41	1.768		1.764	57.81	0.001	57.65	-1.53	-0.24	-1.24	-0.38
10/23/97 3:00 PM	1.457		1.461	56.39	0.016	57.53	1.770		1.766	57.90	0.001	57.75	-1.51	-0.22	-1.08	-0.32
11/5/97 3:00 PM	1.528		1.529	60.49	0.018	61.55	1.870		1.851	62.71	0.001	61.84	-2.23	-0.29	0.19	-0.35
11/5/97 4:00 PM	1.525		1.526	60.31	0.018	61.37	1.869		1.850	62.66	0.001	61.79	-2.35	-0.43	0.30	-0.38
11/5/97 5:00 PM	1.522		1.523	60.14	0.018	61.19	1.865		1.846	62.47	0.001	61.60	-2.33	-0.41	0.22	-0.38
11/5/97 6:00 PM	1.520	1.52	1.521	60.02	0.018	61.07	1.860		1.841	62.23	0.001	61.35	-2.21	-0.29	0.10	-0.37
11/5/97 7:00 PM	1.517		1.518	59.85	0.018	60.89	1.854	1.83	1.835	61.94	0.001	61.06	-2.09	-0.18	-0.08	-0.29
11/5/97 8:00 PM	1.517		1.518	59.85	0.018	60.89	1.852		1.833	61.84	0.001	60.97	-1.99	-0.08	-0.08	-0.18
11/5/97 9:00 PM	1.517		1.518	59.85	0.018	60.89	1.852		1.833	61.84	0.001	60.97	-1.99	-0.08	-0.08	-0.11
11/5/97 10:00 PM	1.518		1.519	59.90	0.018	60.95	1.852		1.833	61.84	0.001	60.97	-1.93	-0.02	-0.02	-0.06
11/5/97 11:00 PM	1.518		1.519	59.90	0.018	60.95	1.852		1.833	61.84	0.001	60.97	-1.93	-0.02	-0.02	-0.04
11/6/97 12:00 AM	1.518		1.519	59.90	0.018	60.95	1.852		1.833	61.84	0.001	60.97	-1.93	-0.02	-0.07	-0.02
11/6/97 1:00 AM	1.519		1.520	59.96	0.018	61.01	1.852		1.833	61.84	0.001	60.97	-1.88	0.04	-0.06	0.00
11/6/97 2:00 AM	1.519		1.520	59.96	0.018	61.01	1.852		1.833	61.84	0.001	60.97	-1.88	0.04	-0.11	0.02
11/6/97 3:00 AM	1.520		1.521	60.02	0.018	61.07	1.853		1.834	61.89	0.001	61.02	-1.87	0.05	-0.09	0.04
11/6/97 4:00 AM	1.523		1.524	60.20	0.018	61.25	1.854		1.835	61.94	0.001	61.06	-1.74	0.18	-0.06	0.09
11/6/97 5:00 AM	1.524		1.525	60.25	0.018	61.31	1.855		1.836	61.98	0.001	61.11	-1.73	0.19	-0.05	0.14
11/6/97 6:00 AM	1.524		1.525	60.25	0.018	61.31	1.856		1.837	62.03	0.001	61.16	-1.78	0.14	-0.05	0.17
11/6/97 7:00 AM	1.524		1.525	60.25	0.018	61.31	1.859		1.840	62.18	0.001	61.31	-1.92	0.00	-0.05	0.11
11/6/97 8:00 AM	1.525		1.526	60.31	0.018	61.37	1.860		1.841	62.23	0.001	61.35	-1.91	0.01	-0.18	0.05
11/6/97 9:00 AM	1.526	1.53	1.527	60.37	0.018	61.43	1.860		1.841	62.23	0.001	61.35	-1.86	0.07	-0.22	0.03
11/6/97 10:00 AM	1.528		1.529	60.49	0.018	61.55	1.860	1.85	1.841	62.23	0.001	61.35	-1.74	0.19	-0.15	0.09
11/6/97 11:00 AM	1.530		1.531	60.60	0.018	61.67	1.864		1.845	62.42	0.001	61.55	-1.82	0.12	-0.08	0.13
11/6/97 12:00 PM	1.530		1.531	60.60	0.018	61.67	1.866		1.847	62.52	0.001	61.64	-1.91	0.02	-0.13	0.11
11/6/97 1:00 PM	1.529		1.530	60.54	0.018	61.61	1.867		1.848	62.57	0.001	61.69	-2.02	-0.09	0.01	0.02
11/6/97 2:00 PM	1.529		1.530	60.54	0.018	61.61	1.868		1.849	62.62	0.001	61.74	-2.07	-0.14	0.15	-0.07
11/6/97 3:00 PM	1.528		1.529	60.49	0.018	61.55	1.869		1.850	62.66	0.001	61.79	-2.18	-0.25	0.29	-0.16
11/6/97 4:00 PM	1.525		1.526	60.31	0.018	61.37	1.865		1.846	62.47	0.001	61.60	-2.16	-0.23	0.25	-0.20
11/6/97 5:00 PM	1.523		1.524	60.20	0.018	61.25	1.862		1.843	62.32	0.001	61.45	-2.13	-0.21	0.37	-0.23
11/6/97 6:00 PM	1.522		1.523	60.14	0.018	61.19	1.858		1.839	62.13	0.001	61.26	-1.99	-0.07	0.36	-0.17
11/6/97 7:00 PM	1.519	1.52	1.520	59.96	0.018	61.01	1.855		1.836	61.98	0.001	61.11	-2.02	-0.11	0.23	-0.13
11/6/97 8:00 PM	1.518		1.519	59.90	0.018	60.95	1.850	1.82	1.831	61.74	0.001	60.87	-1.84	0.08	0.17	-0.03
11/6/97 9:00 PM	1.517		1.518	59.85	0.018	60.89	1.849		1.830	61.69	0.001	60.82	-1.85	0.06	0.11	0.01
11/6/97 10:00 PM	1.517		1.518	59.85	0.018	60.89	1.848		1.829	61.64	0.001	60.77	-1.80	0.11	0.11	0.08
11/6/97 11:00 PM	1.517		1.518	59.85	0.018	60.89	1.848		1.829	61.64	0.001	60.77	-1.80	0.11	0.06	0.10
11/7/97 12:00 AM	1.517		1.518	59.85	0.018	60.89	1.848		1.829	61.64	0.001	60.77	-1.80	0.11	0.02	0.11
11/7/97 1:00 AM	1.518		1.519	59.90	0.018	60.95	1.848		1.829	61.64	0.001	60.77	-1.74	0.17	-0.02	0.13
11/7/97 2:00 AM	1.519		1.520	59.96	0.018	61.01	1.849		1.830	61.69	0.001	60.82	-1.73	0.18	-0.01	0.16
11/7/97 3:00 AM	1.520		1.521	60.02	0.018	61.07	1.850		1.831	61.74	0.001	60.87	-1.72	0.20	0.00	0.18
11/7/97 4:00 AM	1.522		1.523	60.14	0.018	61.19	1.852		1.833	61.84	0.001	60.97	-1.70	0.22	-0.02	0.20
11/7/97 5:00 AM	1.514		1.515	59.67	0.018	60.71	1.853		1.834	61.89	0.001	61.02	-2.22	-0.31	-0.65	0.03
11/7/97 6:00 AM	1.525		1.526	60.31	0.018	61.37	1.854		1.835	61.94	0.001	61.06	-1.62	0.30	-0.13	0.07
11/7/97 7:00 AM	1.527		1.528	60.43	0.018	61.49	1.857		1.838	62.08	0.001	61.21	-1.65	0.28	0.03	0.09
11/7/97 8:00 AM	1.528		1.529	60.49	0.018	61.55	1.860		1.841	62.23	0.001	61.35	-1.74	0.19	-0.15	0.26
11/7/97 9:00 AM	1.528		1.529	60.49	0.018	61.55	1.863		1.844	62.37	0.001	61.50	-1.89	0.05	-0.29	0.17
11/7/97 10:00 AM	1.530		1.531	60.60	0.018	61.67	1.862		1.843	62.32	0.001	61.45	-1.72	0.21	-0.17	0.15
11/7/97 11:00 AM	1.530	1.53	1.531	60.60	0.018	61.67	1.867		1.848	62.57	0.001	61.69	-1.96	-0.03	-0.13	0.06
11/7/97 12:00 PM	1.530		1.531	60.60	0.018	61.67	1.870		1.851	62.71	0.001	61.84	-2.11	-0.17	-0.13	0.00
11/7/97 1:00 PM	1.530		1.531	60.60	0.018	61.67	1.870		1.851	62.71	0.001	61.84	-2.11	-0.17	-0.13	-0.13
11/7/97 2:00 PM	1.530		1.531	60.60	0.018	61.67	1.869	1.86	1.850	62.66	0.001	61.79	-2.06	-0.13	0.12	-0.16
11/7/97 3:00 PM	1.530		1.531	60.60	0.018	61.67	1.869		1.850	62.66	0.001	61.79	-2.06	-0.13	0.31	-0.14
11/7/97 4:00 PM	1.527		1.528	60.43	0.018	61.49	1.869		1.850	62.66	0.001	61.79	-2.24	-0.31	0.23	-0.19
11/7/97 5:00 PM	1.523		1.524	60.20	0.018	61.25	1.864		1.845	62.42	0.001	61.55	-2.23	-0.30	0.04	-0.24
11/7/97 6:00 PM	1.523		1.524	60.20	0.018	61.25	1.860		1.841	62.23	0.001	61.35	-2.03	-0.11	0.23	-0.24
11/7/97 7:00 PM	1.522		1.523	60.14	0.018	61.19	1.858	1.82	1.839	62.13	0.001	61.26	-1.99	-0.07	0.22	-0.16
11/7/97 8:00 PM	1.521		1.522	60.08	0.018	61.13	1.857		1.838	62.08	0.001	61.21	-2.00	-0.08	-0.13	-0.09
11/7/97 9:00 PM	1.521		1.522	60.08	0.018	61.13	1.853		1.834	61.89	0.001	61.02	-1.81	0.11	-0.04	-0.02
11/7/97 10:00 PM	1.521		1.522	60.08	0.018	61.13	1.852		1.833	61.84	0.001	60.97	-1.76	0.16	-0.04	0.06
11/7/97 11:00 PM	1.522		1.523	60.14	0.018	61.19	1.858		1.839	62.13	0.001	61.26	-1.99	-0.07	-0.07	0.07
11/8/97 12:00 AM	1.524		1.525	60.25	0.018	61.31	1.856		1.837	62.03	0.001	61.16	-1.78	0.14	-0.05	0.08
11/8/97 1:00 AM	1.525		1.526	60.31	0.018	61.37	1.856		1.837	62.03	0.001	61.16	-1.72	0.20	-0.18	0.09

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11/8/97 2:00 AM	1.525		1.526	60.31	0.018	61.37	1.858		1.839	62.13	0.001	61.26	-1.82	0.11	-0.23	0.15
11/8/97 3:00 AM	1.527		1.528	60.43	0.018	61.49	1.860		1.841	62.23	0.001	61.35	-1.80	0.13	-0.16	0.15
11/8/97 4:00 AM	1.528		1.529	60.49	0.018	61.55	1.864		1.845	62.42	0.001	61.55	-1.93	0.00	-0.10	0.08
11/8/97 5:00 AM	1.529		1.530	60.54	0.018	61.61	1.865		1.846	62.47	0.001	61.60	-1.92	0.01	-0.09	0.05
11/8/97 6:00 AM	1.529		1.530	60.54	0.018	61.61	1.866		1.847	62.52	0.001	61.64	-1.97	-0.04	-0.14	-0.01
11/8/97 7:00 AM	1.529		1.530	60.54	0.018	61.61	1.866		1.847	62.52	0.001	61.64	-1.97	-0.04	-0.19	-0.02
11/8/97 8:00 AM	1.530		1.531	60.60	0.018	61.67	1.867		1.848	62.57	0.001	61.69	-1.96	-0.03	-0.17	-0.04
11/8/97 9:00 AM	1.530	1.53	1.531	60.60	0.018	61.67	1.868	1.86	1.849	62.62	0.001	61.74	-2.01	-0.08	-0.17	-0.05
11/8/97 10:00 AM	1.532		1.533	60.72	0.018	61.79	1.869		1.850	62.66	0.001	61.79	-1.94	0.00	-0.10	-0.04
11/8/97 11:00 AM	1.531		1.532	60.66	0.018	61.73	1.870		1.851	62.71	0.001	61.84	-2.05	-0.11	-0.16	-0.07
11/8/97 12:00 PM	1.531		1.532	60.66	0.018	61.73	1.870		1.851	62.71	0.001	61.84	-2.05	-0.11	-0.21	-0.08
11/8/97 1:00 PM	1.531		1.532	60.66	0.018	61.73	1.871		1.852	62.76	0.001	61.89	-2.10	-0.16	-0.21	-0.13
11/8/97 2:00 PM	1.531		1.532	60.66	0.018	61.73	1.871		1.852	62.76	0.001	61.89	-2.10	-0.16	-0.11	-0.15
11/8/97 3:00 PM	1.531		1.532	60.66	0.018	61.73	1.872		1.853	62.81	0.001	61.94	-2.15	-0.21	0.18	-0.18
11/8/97 4:00 PM	1.530		1.531	60.60	0.018	61.67	1.872		1.853	62.81	0.001	61.94	-2.21	-0.27	0.12	-0.21
11/8/97 5:00 PM	1.526	1.52	1.527	60.37	0.018	61.43	1.870		1.851	62.71	0.001	61.84	-2.34	-0.41	-0.17	-0.30
11/8/97 6:00 PM	1.526		1.527	60.37	0.018	61.43	1.864	1.85	1.845	62.42	0.001	61.55	-2.05	-0.12	-0.22	-0.27
11/8/97 7:00 PM	1.526		1.527	60.37	0.018	61.43	1.864		1.845	62.42	0.001	61.55	-2.05	-0.12	-0.27	-0.22
11/8/97 8:00 PM	1.526		1.527	60.37	0.018	61.43	1.865		1.846	62.47	0.001	61.60	-2.10	-0.17	-0.27	-0.14
11/8/97 9:00 PM	1.526		1.527	60.37	0.018	61.43	1.866		1.847	62.52	0.001	61.64	-2.15	-0.22	-0.37	-0.17
11/8/97 10:00 PM	1.525		1.526	60.31	0.018	61.37	1.867		1.848	62.57	0.001	61.69	-2.26	-0.33	-0.43	-0.24
11/8/97 11:00 PM	1.525		1.526	60.31	0.018	61.37	1.867		1.848	62.57	0.001	61.69	-2.26	-0.33	-0.43	-0.29
11/9/97 12:00 AM	1.526		1.527	60.37	0.018	61.43	1.869		1.850	62.66	0.001	61.79	-2.29	-0.37	-0.32	-0.34
11/9/97 1:00 AM	1.528		1.529	60.49	0.018	61.55	1.869		1.850	62.66	0.001	61.79	-2.18	-0.25	-0.20	-0.31
11/9/97 2:00 AM	1.529		1.530	60.54	0.018	61.61	1.869		1.850	62.66	0.001	61.79	-2.12	-0.19	-0.19	-0.27
11/9/97 3:00 AM	1.532		1.533	60.72	0.018	61.79	1.868		1.849	62.62	0.001	61.74	-1.90	0.04	-0.05	-0.13
11/9/97 4:00 AM	1.532		1.533	60.72	0.018	61.79	1.868		1.849	62.62	0.001	61.74	-1.90	0.04	-0.15	-0.03
11/9/97 5:00 AM	1.532		1.533	60.72	0.018	61.79	1.869		1.850	62.66	0.001	61.79	-1.94	0.00	-0.15	0.03
11/9/97 6:00 AM	1.532		1.533	60.72	0.018	61.79	1.870		1.851	62.71	0.001	61.84	-1.99	-0.05	-0.25	-0.01
11/9/97 7:00 AM	1.533		1.534	60.78	0.018	61.85	1.872		1.853	62.81	0.001	61.94	-2.03	-0.09	-0.24	-0.05
11/9/97 8:00 AM	1.534		1.535	60.84	0.018	61.91	1.872		1.853	62.81	0.001	61.94	-1.97	-0.03	-0.18	-0.06
11/9/97 9:00 AM	1.535		1.536	60.90	0.018	61.97	1.874		1.855	62.91	0.001	62.03	-2.01	-0.07	-0.26	-0.06
11/9/97 10:00 AM	1.535		1.536	60.90	0.018	61.97	1.875	1.87	1.856	62.96	0.001	62.08	-2.06	-0.12	-0.21	-0.07
11/9/97 11:00 AM	1.536	1.54	1.537	60.95	0.018	62.03	1.875		1.856	62.96	0.001	62.08	-2.00	-0.06	-0.15	-0.08
11/9/97 12:00 PM	1.537		1.538	61.01	0.018	62.09	1.878		1.859	63.10	0.001	62.23	-2.09	-0.14	-0.09	-0.10
11/9/97 1:00 PM	1.537		1.538	61.01	0.018	62.09	1.877		1.858	63.05	0.001	62.18	-2.04	-0.09	-0.09	-0.10
11/9/97 2:00 PM	1.535		1.536	60.90	0.018	61.97	1.877		1.858	63.05	0.001	62.18	-2.16	-0.21	-0.12	-0.15
11/9/97 3:00 PM	1.534		1.535	60.84	0.018	61.91	1.877		1.858	63.05	0.001	62.18	-2.22	-0.27	-0.18	-0.19
11/9/97 4:00 PM	1.534		1.535	60.84	0.018	61.91	1.877		1.858	63.05	0.001	62.18	-2.22	-0.27	-0.08	-0.25
11/9/97 5:00 PM	1.533		1.534	60.78	0.018	61.85	1.875		1.856	62.96	0.001	62.08	-2.18	-0.24	-0.04	-0.26
11/9/97 6:00 PM	1.533	1.53	1.534	60.78	0.018	61.85	1.875	1.85	1.856	62.96	0.001	62.08	-2.18	-0.24	0.01	-0.25
11/9/97 7:00 PM	1.532		1.533	60.72	0.018	61.79	1.873		1.854	62.86	0.001	61.98	-2.14	-0.20	0.04	-0.22
11/9/97 8:00 PM	1.530		1.531	60.60	0.018	61.67	1.871		1.852	62.76	0.001	61.89	-2.16	-0.22	-0.13	-0.22
11/9/97 9:00 PM	1.530		1.531	60.60	0.018	61.67	1.870		1.851	62.71	0.001	61.84	-2.11	-0.17	-0.17	-0.20
11/9/97 10:00 PM	1.530		1.531	60.60	0.018	61.67	1.868		1.849	62.62	0.001	61.74	-2.01	-0.08	-0.17	-0.16
11/9/97 11:00 PM	1.530		1.531	60.60	0.018	61.67	1.869		1.850	62.66	0.001	61.79	-2.06	-0.13	-0.17	-0.13
11/10/97 12:00 AM	1.531		1.532	60.66	0.018	61.73	1.870		1.851	62.71	0.001	61.84	-2.05	-0.11	-0.16	-0.11
11/10/97 1:00 AM	1.532		1.533	60.72	0.018	61.79	1.870		1.851	62.71	0.001	61.84	-1.99	-0.05	-0.15	-0.10
11/10/97 2:00 AM	1.532		1.533	60.72	0.018	61.79	1.870		1.851	62.71	0.001	61.84	-1.99	-0.05	-0.20	-0.07
11/10/97 3:00 AM	1.533		1.534	60.78	0.018	61.85	1.871		1.852	62.76	0.001	61.89	-1.98	-0.04	-0.19	-0.05
11/10/97 4:00 AM	1.533		1.534	60.78	0.018	61.85	1.872		1.853	62.81	0.001	61.94	-2.03	-0.09	-0.24	-0.06
11/10/97 5:00 AM	1.533		1.534	60.78	0.018	61.85	1.873		1.854	62.86	0.001	61.98	-2.08	-0.14	-0.24	-0.09
11/10/97 6:00 AM	1.533		1.534	60.78	0.018	61.85	1.874		1.855	62.91	0.001	62.03	-2.13	-0.19	-0.24	-0.14
11/10/97 7:00 AM	1.533		1.534	60.78	0.018	61.85	1.875		1.856	62.96	0.001	62.08	-2.18	-0.24	-0.19	-0.19
11/10/97 8:00 AM	1.534		1.535	60.84	0.018	61.91	1.875		1.856	62.96	0.001	62.08	-2.12	-0.18	-0.08	-0.20
11/10/97 9:00 AM	1.534		1.535	60.84	0.018	61.91	1.875		1.856	62.96	0.001	62.08	-2.12	-0.18	-0.27	-0.20
11/10/97 10:00 AM	1.535		1.536	60.90	0.018	61.97	1.874		1.855	62.91	0.001	62.03	-2.01	-0.07	-0.26	-0.14
11/10/97 11:00 AM	1.537	1.54	1.538	61.01	0.018	62.09	1.873	1.86	1.854	62.86	0.001	61.98	-1.85	0.10	-0.19	-0.05
11/10/97 12:00 PM	1.537		1.538	61.01	0.018	62.09	1.877		1.858	63.05	0.001	62.18	-2.04	-0.09	-0.19	-0.02
11/10/97 1:00 PM	1.537		1.538	61.01	0.018	62.09	1.878		1.859	63.10	0.001	62.23	-2.09	-0.14	-0.14	-0.04
11/10/97 2:00 PM	1.537		1.538	61.01	0.018	62.09	1.879		1.860	63.15	0.001	62.28	-2.14	-0.19	-0.09	-0.14
11/10/97 3:00 PM	1.536		1.537	60.95	0.018	62.03	1.879		1.860	63.15	0.001	62.28	-2.20	-0.25	-0.15	-0.19

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11/10/97 4:00 PM	1.536		1.537	60.95	0.018	62.03	1.878		1.859	63.10	0.001	62.23	-2.15	-0.20	-0.15	-0.21
11/10/97 5:00 PM	1.536		1.537	60.95	0.018	62.03	1.877		1.858	63.05	0.001	62.18	-2.10	-0.15	-0.10	-0.20
11/10/97 6:00 PM	1.532	1.53	1.533	60.72	0.018	61.79	1.877	1.86	1.858	63.05	0.001	62.18	-2.33	-0.39	-0.30	-0.25
11/10/97 7:00 PM	1.532		1.533	60.72	0.018	61.79	1.877		1.858	63.05	0.001	62.18	-2.33	-0.39	-0.20	-0.31
11/10/97 8:00 PM	1.530		1.531	60.60	0.018	61.67	1.876		1.857	63.00	0.001	62.13	-2.40	-0.46	-0.27	-0.42
11/10/97 9:00 PM	1.530		1.531	60.60	0.018	61.67	1.875		1.856	62.96	0.001	62.08	-2.35	-0.42	-0.22	-0.42
11/10/97 10:00 PM	1.530		1.531	60.60	0.018	61.67	1.873		1.854	62.86	0.001	61.98	-2.26	-0.32	-0.27	-0.40
11/10/97 11:00 PM	1.530		1.531	60.60	0.018	61.67	1.872		1.853	62.81	0.001	61.94	-2.21	-0.27	-0.32	-0.34
11/11/97 12:00 AM	1.531		1.532	60.66	0.018	61.73	1.871		1.852	62.76	0.001	61.89	-2.10	-0.16	-0.16	-0.25
11/11/97 1:00 AM	1.532		1.533	60.72	0.018	61.79	1.872		1.853	62.81	0.001	61.94	-2.09	-0.15	-0.10	-0.19
11/11/97 2:00 AM	1.532		1.533	60.72	0.018	61.79	1.873		1.854	62.86	0.001	61.98	-2.14	-0.20	-0.15	-0.17
11/11/97 3:00 AM	1.532		1.533	60.72	0.018	61.79	1.871		1.852	62.76	0.001	61.89	-2.04	-0.10	-0.20	-0.15
11/11/97 4:00 AM	1.532		1.533	60.72	0.018	61.79	1.871		1.852	62.76	0.001	61.89	-2.04	-0.10	-0.30	-0.13
11/11/97 5:00 AM	1.532		1.533	60.72	0.018	61.79	1.872		1.853	62.81	0.001	61.94	-2.09	-0.15	-0.30	-0.12
11/11/97 6:00 AM	1.532		1.533	60.72	0.018	61.79	1.873		1.854	62.86	0.001	61.98	-2.14	-0.20	-0.10	-0.15
11/11/97 7:00 AM	1.532		1.533	60.72	0.018	61.79	1.875		1.856	62.96	0.001	62.08	-2.24	-0.30	-0.30	-0.22
11/11/97 8:00 AM	1.532		1.533	60.72	0.018	61.79	1.875		1.856	62.96	0.001	62.08	-2.24	-0.30	-0.20	-0.26
11/11/97 9:00 AM	1.532		1.533	60.72	0.018	61.79	1.871		1.852	62.76	0.001	61.89	-2.04	-0.10	-0.10	-0.23
11/11/97 10:00 AM	1.533		1.534	60.78	0.018	61.85	1.875		1.856	62.96	0.001	62.08	-2.18	-0.24	-0.04	-0.21
11/11/97 11:00 AM	1.533	1.53	1.534	60.78	0.018	61.85	1.873		1.854	62.86	0.001	61.98	-2.08	-0.14	-0.09	-0.16
11/11/97 12:00 PM	1.533		1.534	60.78	0.018	61.85	1.871	1.86	1.852	62.76	0.001	61.89	-1.98	-0.04	-0.14	-0.14
11/11/97 1:00 PM	1.532		1.533	60.72	0.018	61.79	1.871		1.852	62.76	0.001	61.89	-2.04	-0.10	-0.15	-0.09
11/11/97 2:00 PM	1.532		1.533	60.72	0.018	61.79	1.872		1.853	62.81	0.001	61.94	-2.09	-0.15	-0.15	-0.10
11/11/97 3:00 PM	1.532		1.533	60.72	0.018	61.79	1.873		1.854	62.86	0.001	61.98	-2.14	-0.20	-0.15	-0.15
11/11/97 4:00 PM	1.531		1.532	60.66	0.018	61.73	1.872		1.853	62.81	0.001	61.94	-2.15	-0.21	-0.16	-0.19
11/11/97 5:00 PM	1.531		1.532	60.66	0.018	61.73	1.872		1.853	62.81	0.001	61.94	-2.15	-0.21	-0.21	-0.21
11/11/97 6:00 PM	1.530		1.531	60.60	0.018	61.67	1.872		1.853	62.81	0.001	61.94	-2.21	-0.27	-0.17	-0.23
11/11/97 7:00 PM	1.530		1.531	60.60	0.018	61.67	1.871		1.852	62.76	0.001	61.89	-2.16	-0.22	-0.13	-0.23
11/11/97 8:00 PM	1.530	1.53	1.531	60.60	0.018	61.67	1.872	1.83	1.853	62.81	0.001	61.94	-2.21	-0.27	-0.13	-0.25
11/11/97 9:00 PM	1.530		1.531	60.60	0.018	61.67	1.870		1.851	62.71	0.001	61.84	-2.11	-0.17	-0.13	-0.22
11/11/97 10:00 PM	1.530		1.531	60.60	0.018	61.67	1.869		1.850	62.66	0.001	61.79	-2.06	-0.13	-0.13	-0.19
11/11/97 11:00 PM	1.530		1.531	60.60	0.018	61.67	1.869		1.850	62.66	0.001	61.79	-2.06	-0.13	-0.17	-0.14
11/12/97 12:00 AM	1.530		1.531	60.60	0.018	61.67	1.869		1.850	62.66	0.001	61.79	-2.06	-0.13	-0.22	-0.13
11/12/97 1:00 AM	1.530		1.531	60.60	0.018	61.67	1.869		1.850	62.66	0.001	61.79	-2.06	-0.13	-0.22	-0.13
11/12/97 2:00 AM	1.531		1.532	60.66	0.018	61.73	1.870		1.851	62.71	0.001	61.84	-2.05	-0.11	-0.11	-0.12
11/12/97 3:00 AM	1.531		1.532	60.66	0.018	61.73	1.871		1.852	62.76	0.001	61.89	-2.10	-0.16	-0.11	-0.13
11/12/97 4:00 AM	1.531		1.532	60.66	0.018	61.73	1.871		1.852	62.76	0.001	61.89	-2.10	-0.16	-0.11	-0.15
11/12/97 5:00 AM	1.531		1.532	60.66	0.018	61.73	1.870		1.851	62.71	0.001	61.84	-2.05	-0.11	-0.11	-0.15
11/12/97 6:00 AM	1.530		1.531	60.60	0.018	61.67	1.870		1.851	62.71	0.001	61.84	-2.11	-0.17	-0.13	-0.15
11/12/97 7:00 AM	1.530		1.531	60.60	0.018	61.67	1.870		1.851	62.71	0.001	61.84	-2.11	-0.17	-0.13	-0.15
11/12/97 8:00 AM	1.530		1.531	60.60	0.018	61.67	1.870		1.851	62.71	0.001	61.84	-2.11	-0.17	-0.13	-0.17
11/12/97 9:00 AM	1.530		1.531	60.60	0.018	61.67	1.869		1.850	62.66	0.001	61.79	-2.06	-0.13		-0.16
11/12/97 10:00 AM	1.530		1.531	60.60	0.018	61.67	1.869		1.850	62.66	0.001	61.79	-2.06	-0.13		-0.14
11/12/97 11:00 AM	1.530	1.53	1.531	60.60	0.018	61.67	1.869	1.85	1.850	62.66	0.001	61.79	-2.06	-0.13		-0.13

Loss Highway to Penstock

verage Diff. non-icing corrected **0.22** cfs Avg Diff. non-icing not correcte -1.32 Uncorrected Corrected

Avg	57.42	58.50		58.74		58.28	-1.32	0.22	Avg
Canal Length HW weir to siphon=	12969.7 ft.	Wetted Per.=	21.84 ft	Design Vel.=	1.65 fps		-2.40	-0.67	Min
Canal Length siphon to Penstock weir	5681.1 ft.	Wetted Per.=	21.84 ft	Design Vel.=	1.65 fps		0.30	1.59	Max
				Loss Ra	0.048 ft/day				
				or	0.572 in/day		-2.26%	0.38%	Avg % inflow
							-4.11%	-1.14%	Min % inflow
							0.51%	2.72%	Max % inflow

54 inch inverted siphon length	5550.0 ft		
Avg vel. in siphon=	3.610 fps		
Design flow travel time HW weir to penstock=	3.57 hr	Canal Average Water Surface Width	20.96 ft
Observed travel time(peak to peak) approx=	3 to 4 hr	Canal Open Water Area	8.97 acres
		Estimated Evaporation during seepage tes	0.05 in/day
		Estimated evaporation loss	0.02 cfs

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Figure 1 Birch Power Canal 1997 Loss Measurements

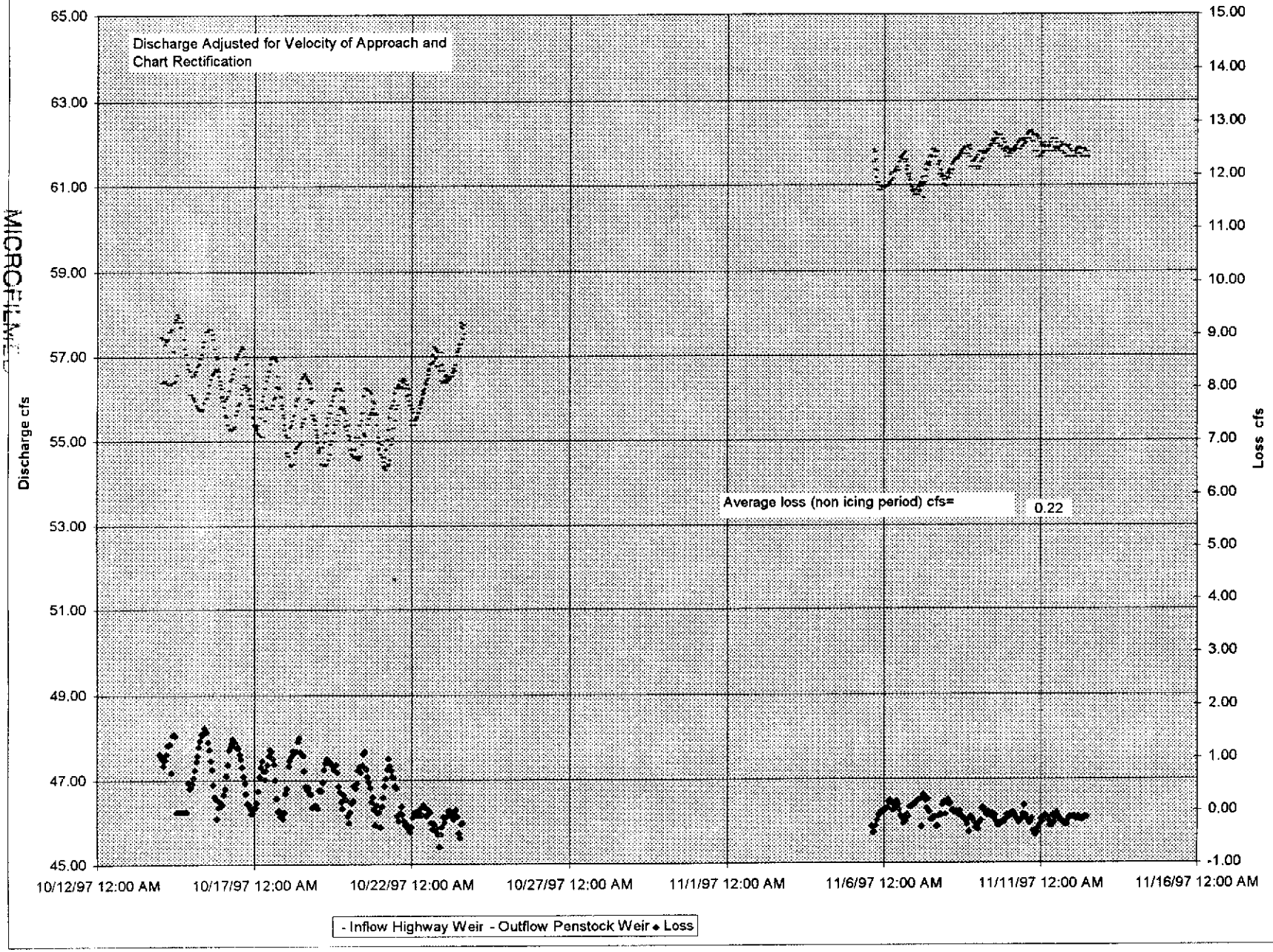
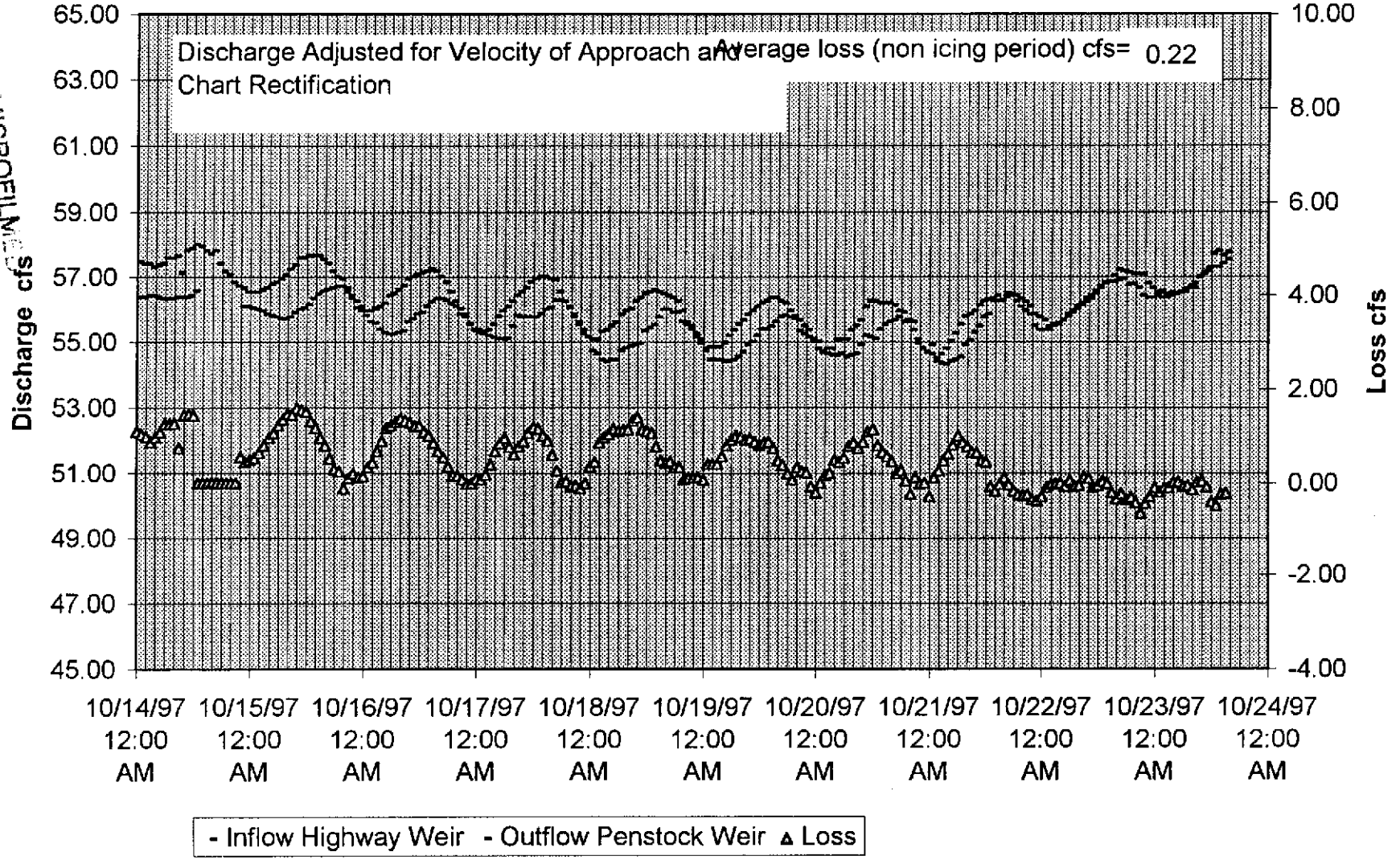


Figure 2 Birch Power Canal 1997 Loss Measurements Prior to Ice Period





1997 Irrigation on Newman Farms and D-D Farms

General boundary of 1997 irrigation - Newman

General boundary of 1997 irrigation - D-D

Areas not irrigated in 1997

BROCKWAY ENGINEERING 3/6/98 SCALE: 1 INCH = 2000 FT

Explanation

Areas irrigated during 1997 are overlain on a 1987 aerial photo. 1997 irrigation determined from aerial photos taken July 15, 1997. 1987 irrigation determined from Spatial Dynamics analysis of landsat photograph. Top number is 1987; bottom number is 1997.

Acreage Summary

	1987	1997	Chg
D-D	979	1578	+599
Newman	1185	1353	+168
TOTAL	2164	2931	+767

Kent W. Foster, Esq.
HOLDEN, KIDWELL, HAHN & CRAPO, P.L.L.C.
P.O. Box 50130
330 Shoup Avenue, Third Floor
Idaho Falls, Idaho 83405
Telephone: (208) 523-0620
Facsimile: (208) 523-9518

BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE
STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 and 32-07136 IN THE NAME OF TED SORENSON, d/b/a SORENSON ENGINEERING and IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-07252 (formerly no. 31-07646) IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.	**AFFIDAVIT OF TED S. SORENSON IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT AND IN OPPOSITION TO PROTESTANTS' MOTIONS FOR SUMMARY JUDGMENT**

Ted S. Sorenson, on his oath, deposes and says:

1) I am the applicant in the above named consolidated matters presently pending before the Idaho Department of Water Resources and have personal knowledge of the facts set forth herein.

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2) After obtaining B.S. and M.E. degrees in civil engineering from the University of Idaho and have worked on various water and small hydro electric projects. I moved to Idaho Falls in 1980. From both my schooling and my work experience, I was aware of the Public Utilities Regulatory Policies Act of 1978, and the potential opportunities it presented for development of small hydro electric projects.

3) Commencing in 1981, I began a feasibility investigation in Birch Creek Valley regarding the potential for a small hydro electric power project using the waters of Birch Creek. Early in my investigation I became aware of the lands irrigated from Birch Creek, and it became apparent that the greatest potential for a viable project would be at the lower end of Birch Creek. As I studied available flow and irrigation use data and measurements, it became apparent to me that large seepage losses historically occurred in the lower portion of Birch Creek and in the Reno Ditch, a private ditch which diverted all of the waters of Birch Creek and transported them a distance of over 8 miles to the lands irrigated therefrom.

4) As I considered the possibilities, it became apparent to me that there was a potential for reducing the amount of the large seepage losses by construction of a new feeder canal for the power plant in which a soil sealant material could be used. In February of 1982, I approached Mr. Ben Wilding, one of the downstream irrigators and the watermaster for Birch Creek, and Mr. Paul DeMourdant, whom I understood to be a principle in D&D Enterprises, Inc., the other downstream irrigator, about the concept of a hydro electric project using the waters of Birch Creek and potentially saving some of the water being lost to seepage. My original idea was for them to develop the hydro electric facility and retain me as the engineer. They expressed no interest in the idea.

5) As I recall, I heard that Mr. Paul DeMourdant's interest in the D&D interests in the ranch was taken over by him son, Jim DeMourdant about eight months later. I then

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went to Jim DeMourdant and suggested the same idea, which he also ignored. Over the next few months, I also proposed other concepts to Mr. Jim DeMourdant and Mr. Ben Wilding, including a joint venture. A copy of a memo I prepared and presented to them dated February 2, 1983, is attached hereto as Exhibit "A". The irrigators did not respond to my suggestions. From my investigation, I became convinced of the feasibility of the project and decided to proceed on my own.

6) As I continued my engineering efforts, it became more and more apparent that it would be necessary to move the point of diversion for the feeder canal for the power plant upstream from the Reno ditch diversion. In my contacts with Idaho Department of Fish and Game and Bureau of Land Management, I came to understand that they would insist on a bypass flow of 5.0 CFS for mitigation of riparian amenities along Birch Creek between any new point of diversion and the Reno ditch diversion. They also suggested I try to enter into an agreement with D&D and Wildings to move the ditch. I then prepared a letter dated April 4, 1983, which I sent to D&D and Wildings, a copy of which is attached hereto as Exhibit "B", seeking formal permission to substitute a new ditch for some portion of the old Reno ditch. I never received a written response to the letter, and neither Wildings nor D&D ever agreed to or granted permission for relocation of the ditch.

7) I eventually applied for a preliminary permit from the Federal Energy Regulatory Commission (FERC) which was granted, effective September 1, 1983. A copy of the letter from FERC advising me of the issuance of the preliminary permit is attached as Exhibit "C".

8) I also filed application for a water right in September of 1982, which was assigned no. 32-7128. Then, in January of 1984, I filed a second application which was numbered 32-7136. Ben Wilding and D&D protested these applications. During these

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months I also met with Ben Wilding, Jim DeMordaunt, Roger DeMordaunt and their attorney on various occasions to advise them that my findings indicated a savings of more than 14.0 CFS could be effected, and that it appeared there would be 5.0 CFS as a bypass flow. They indicated they were not interested in participating in any manner and continued their protests. A hearing on the protests was held before Mr. Bobby D. Fleenor of IDWR on April 5, 1984. After the proposed memorandum decision and order were issued by Mr. Fleenor, D&D and Wildings objected and filed exceptions to it. Even after the final decision by IDWR and Mr. Fleenor, D&D appealed it to the district court.

9) I have reviewed the Ray Michener letter dated February 16, 1984, but since I already had a preliminary FERC permit and hence the exclusive right to develop the project using the waters of Birch Creek, I do not believe his proposal had any viability.

10) By December of 1984, I had finally decided to locate the power house at or near its present location and to use PVC liner, which I believed would be more effective in reducing seepage losses. I first approached D&D and was able to purchase an option to acquire a small parcel of wasteland. In 1986 I purchased from D&D and Ben Wilding the small tracts of land where the power plant is now located and for access. The land I purchased was unproductive land covered with sagebrush. I paid $500 per acre for the land, which was 5-10 times its market value at that time. I certainly made no representations about furnishing saved water to either irrigator in connection with the purchase of the land.

11) I completed the project and began to divert water through the new lined canal and to generate power in the spring of 1987. I also bypassed 11%, up to 5.0 CFS, as required, down the channel of Birch Creek, but the water never flowed down the channel more than of 500-800 feet before it all sank. As I began to work with the Idaho Department of Fish and Game and the Bureau of Land Management to remedy this problem, it became

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apparent that it could be done with a series of lined ponds supplied by a plastic pipe which could also provide water for a number of troughs with only a small fraction of the 5.0 CFS bypass flow requirement. I drove to Jim DeMordaunt's home where I met with him and discussed what I felt was a possibility to save most of the 5.0 CFS bypass water which could be available for irrigation. I invited him to join me in the effort and to use the extra 5.0 CFS and anything else we could save for irrigation. He declined. I also visited with Cleo Wilding about the possibility but he indicated he had no interest.

12) I went ahead on my own with the revised mitigation plan and by January 11, 1990, I received the written approval of the Bureau of Land Management and on March 12, 1990, I received written approval of Idaho Fish and Game to terminate the 5.0 CFS bypass flow and continue with just the .11 CFS required to supply the ponds and the troughs. On June 15, 1990 I received formal approval from FERC. Copies of the formal approvals are attached as Exhibits D, E and F. After having received notice that the substituted mitigation would be accepted, I filed application with IDWR to have the condition regarding the 5.0 CFS bypass flow modified on the two water right permits. Again D&D and Wilding protested the application.

13) The cost of the revised mitigation work as been just under $100,000. Yearly maintenance has average about $2,000. In recent years, I have offered Jim DeMourdant and LaVar Newman an opportunity to receive the additional saved water by contributing, between them, from $15,000-25,000 to the cost of the additional mitigation work. They have continued to decline and to press their protests to my application.

14) When I was performing my feasibility investigation and doing the preliminary engineering back in 1981, 1982 and 1983, I obtained all the records and data I was able to find of measurements at various locations to determine the magnitude of the seepage losses

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in the relevant reaches, both of Birch Creek and the Reno ditch. I also employed the services of Don Shenton in making additional measurements. From records of USGS for the Eight Mile Canyon road gauge and the University of Idaho for the gauge on Reno ditch about a mile upstream from the old splitter box structure, I prepared a summary entitled, "Reno Ditch Flow Comparison", a copy of which is attached hereto as Exhibit "G". A copy of a map, showing the distances and relevant locations with respect to the proposed hydro electric project is also attached as Exhibit "H". Since the filing of my application for saved water, I have employed Dr. Charles E. Brockway to review and analyze seepage losses, both as to the historical amount in the dewatered portions of the Birch Creek channel and the Reno ditch that have been replaced by the feeder canal for the power plant, and as to the losses which presently occur through the new facilities.

Dated: 4/27/98

Ted S. Sorenson

STATE OF IDAHO)
)ss.
County of Bonneville)

On the 27th day of April, 1998, before me, the undersigned, a notary public in and for said State, personally appeared Ted S. Sorenson, known or identified to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

Notary Public for Idaho
Residing at Idaho Falls, Idaho
My Commission Expires: 5/25/2002

(seal)

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CERTIFICATE OF SERVICE

I hereby certify that I am a duly licensed attorney in the State of Idaho, resident of and with my office in Idaho Falls, Idaho; that I served a copy of the following described pleading or document on the attorneys listed below by hand delivering, by mailing or by facsimile, with the correct postage thereon, a true and correct copy thereof.

DOCUMENT SERVED: AFFIDAVIT OF TED S. SORENSON IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT AND IN OPPOSITION TO PROTESTANTS' MOTIONS FOR SUMMARY JUDGMENT

ATTORNEYS SERVED:

Blair J. Grover, Esq. *[Hand Delivery]*
GROVER & ARCHIBALD
P.O. Box 36
Rigby, Idaho 83442-0036

George C. Petersen, Esq. *[Hand Delivery]*
PETERSEN, MOSS, OLSEN,
MEACHAM & CARR
485 "E" Street
Idaho Falls, Idaho 83402

Peter Anderson *[Facsimile and Overnight Mail]*
IDAHO DEPARTMENT OF WATER
RESOURCES
1301 North Orchard Street
Statehouse Mail
Boise, Idaho 83720

Dated: 4/28/98

Kent W. Foster, Esq.
HOLDEN, KIDWELL, HAHN & CRAPO, P.L.L.C.

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EXHIBIT "A"

Ted S. Sorenson P.E.-L.S.
CONSULTING ENGINEER
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401

Bus: 208-522-8069
Res: 208-529-2469

M E M O

TO: Ben Wilding
Steve Phillips
Jim DeMordaunt

DATE: February 2, 1983

RE: BEDLOSS ELIMINATION DATA

Gentlemen,

Attached is a sheet which will give you some idea of the water that can be utilized which is now seeping away as bedloss.

The upstream flow was measured at the USGS gaging station at Eight Mile Canyon Road (approximately 8,000 feet upstream of the proposed diversion). The downstream flow was measured by the University of Idaho Water Resource Institute where the road crosses Reno Ditch as shown on the attached map (approximately 1 mile southwest of Reno Ranch). The total distance between the two measuring points is approximately 49,500 feet. Of this distance, approximately 28,000 L.F. would be replaced by the new ditch.

With the proper sealing of the new ditch, approximately 57% (28,000/49,500) of the present bedloss could be eliminated.

The far right column shows the additional water that would be available (average 9.3 cfs or 465 inches) June through September.

Trusting this to be of value.

Very truly yours,

Ted S. Sorenson, P.E.
Consulting Engineer

TSS:kw
encs.

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EXHIBIT "B"

Ted S. Sorenson P.E.-L.S.
CONSULTING ENGINEER
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401

Bus: 208-522-8069
Res: 208-529-2469

April 4, 1983

TO: RENO DITCH IRRIGATORS

Gentlemen,

Enclosed is an analysis of the impact of the proposed new ditch on irrigational flows. Figure 1 shows the overall project as well as the present estimated bedloss based upon flow measurements taken by the University of Idaho (attached as Exhibit One) at the locations shown. For example, presently approximately 3.7 cfs is lost from Eight Mile Gauging Station downstream to the present diversion. Approximately 17 cfs is lost from Eight Mile Gauging Station downstream to the Reno Ranch splitter box. This data is calculated using flow data from the USGS Gauging Station at Eight Mile Road and flow data taken by the University of Idaho near the Reno Ranch splitter box. The data is enclosed for your exaimination. I would like to take several measurements this summer to further verify these numbers.

Table 1 lists the comparison between the present situation and the proposed situation. Although the new ditch could provide 9.3 cfs additional flow if bedloss and evaporation were totally eliminated (of course this is not possible), a reasonable estimate of the additional water available would be 9.3 cfs less 3.0 cfs (for evaporation and bedloss in the new ditch) or 6.4 cfs additional flow (approximately 315 inches).

The next question that arises is - Can the irrigators divert the water at the new diversion? Essentially all the water available at the new diversion would be required to meet your existing decreed water rights. The question arose - What about early spring and late fall flows in excess of 45 cfs? Apparently this water is let down from upstream irrigators when not needed. Accordingly, you have the right (according to my understanding) to lease water from existing upstream decreed water rights and therefore divert in excess of 45 cfs.

What about Fish & Game and the B.L.M.'s requirements for bypass flows? My approach would be to file a minor license with FERC for the project. This has the effect of giving the final say to the Federal Energy Regulatory Commission (FERC) - not the Fish & Game or the B.L.M. The loss of water in 3,000 L.F. of Birch Creek

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would be offset by 6 miles of new ditch which could support a fishery. I would need to hire a fisheries expert to document same. Therefore, no continuous bypass flow would occur because the loss of fishery habitat would be offset by production in the new ditch and because all water must be diverted to satisfy your existing water rights.

I would appreciate your permission to install the new ditch to deliver your irrigation water with the express provisions that:

1) The new diversion divert water for which you have a legal right.

2) That the bedlosses in the new ditch be less than the segment of old ditch replaced.

3) If the new ditch fails to meet these conditions you would have the right to abandon the new ditch and revert to the old ditch.

Trusting this to be of value.

Very truly yours,

Ted S. Sorenson, P.E.
Consulting Engineer

TSS:kw

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EXHIBIT "C"

FEDERAL ENERGY REGULATORY COMMISSION

REGIONAL OFFICE
819 Taylor Street
Fort Worth, Texas 76102

September 28, 1983

In response refer to:
OEPR-FW-7194-ID

Mr. Ted S. Sorenson
550 Linden Drive
Idaho Falls, Idaho 83401

Dear Mr. Sorenson:

The preliminary permit, effective September 1, 1983, for the proposed Birch Project, No. 7194, was issued September 7, 1983, to Birch Power Company for a period of 24 months.

The Fort Worth Regional Office has the responsibility to monitor activities being performed under the permit. This will include review of various studies required by the permit, performing field inspections, and attending pertinent planning meetings as appropriate. It is requested that you keep us informed of scheduled meetings that would entail planning for your project.

Our immediate concerns are the requirements of Articles 8 and 9 of the preliminary permit. Article 8 requires the submission of reports each six months on the progress of all investigations, consultations, studies accomplished, and work contemplated. As a minimum, the report must briefly describe the purposes and scope of all conferences and investigations, identify participants, summarize decisions and conclusions, provide a schedule for completing remaining work, and contain copies of important correspondence and studies. Each report must include a statement summarizing the permittee's conclusion as to the feasibility of the project and permittee's anticipated date for submitting a license or exemption application, as appropriate. The first report is due on February 28, 1983, and should include a specific schedule showing when study tasks will start and when they will be completed. One copy of the report should be submitted to this office, and three copies to the Director, Office of Electric Power Regulation, Federal Energy Regulatory Commission, Mail Stop 300-RB, 825 North Capitol Street, N.E., Washington, D.C. 20426.

In particular, the report should address the following items:

(1) the studies conducted during the past 6-month period (copies of study reports should be furnished);

(2) summary of consultations with agencies, and copies of correspondence and meeting notes verifying that such consultations took place during the past 6-month period;

(3) an outline and summary of engineering, environmental, and other investigations to be conducted during the ensuing 6-month period to determine the feasibility of the project as delineated by Article 1;

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(4) a summary of the consultations with the appropriate Federal, state, and local agencies that will take place during the ensuing 6-month period as outlined by Articles 7 and 10; and

(5) an assessment of the feasibility of the project.

You are especially urged to contact the appropriate Federal, state, and local agencies to obtain their views and requirements regarding the studies you intend to undertake. The list of agencies you must contact is included in our publication titled "Hydropower Licenses and Preliminary Permits." If you do not have this list, a copy of the publication may be obtained for $7.50 from Federal Energy Regulatory Commission, Division of Public Information, Room 1000, 825 N. Capitol Street, N.E., Washington, D. C. 20426.

Article 9 specifies that the permittee designate a liaison officer for the purpose of assuring the cooperation required by the terms of the permit. You should advise this office by November 7, 1983, as to who will assume your liaison responsibilities. Article 9 requires that the liaison officer communicate with appropriate agencies within 60 days of the date of the permit's issuance. The liaison officer should also keep these agencies informed of the progress of investigations. Mr. Jack Quarles, Civil Engineer, of this office, telephone number 817-334-4560, has been designated as our representative who will work with your liaison officer.

This office will exercise administrative supervision over those activities within the scope of the permit that include required onsite inspections, assurance of timely submittal and review of submitted reports, and review of work in progress.

Failure to diligently pursue investigations or comply with other requirements could result in cancellation of the permit. In order to maintain your priority for license application, an application for the project must be filed before the permit expires. Due to the competition for hydropower sites and the benefit of renewable resources, neither the period for the permit nor the time for filing a license application will be extended unless extenuating circumstances develop.

Sincerely yours,

Arthur C. Martin
Regional Engineer

By _____
Acting

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EXHIBIT "D"

FINDING OF NO SIGNIFICANT IMPACT

AND

DECISION/RATIONALE

EA Number: ID-030-9-46
EA Name: Lower Birch Creek Mitigation

Environmental Compliance:

The environmental document has been analyzed and a finding of no significant impact has resulted. Therefore, it is concluded that the proposed action would not significantly affect the quality of the human environment. Preparation of an environmental impact statement pursuant to Section 102(2)(c) of the National Environmental Policy Act of 1969 is not required to proceed with the proposed action.

Decision and Rationale:

I have received the environmental assessment and have determined that the proposed action would provide improved mitigation for Lower Birch Creek. Based on this review and my personal knowledge of the area, my decision is to accept the proposed action with the following stipulations:

1. Birch Power Company will obtain written concurrence or authorization from FERC, Idaho Department of Fish and Game, and Idaho Department of Water Resources prior to taking any action on this proposal.

2. The 5 cfs minimum flow will continue to be delivered to Lower Birch Creek until the mitigation pond system (2.0 acres) and drip system (0.46 acre) is in place and operational.

3. The drip system will be monitored and if determined to be in adequate to maintain the existing birch trees (within 600 feet below the diversion) an additional 0.46 acres of riparian pond system will be developed by Birch Power).

4. Birch Power will be responsible for construction, operation, and maintenance of the mitigation development.

5. Should the mitigation proposed fail to provide adequate aquatic/riparian habitat (as specified in proposal) due to improper design and construction or lack of necessary maintenance, the minimum flow requirement will be reinstated.

Approved By: LeRoy Cook
Area Manager

11 Jan 90
Date

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EXHIBIT "E"

IDAHO FISH & GAME
600 South Walnut / Box 25
Boise, Idaho 83707

March 12, 1990

Mr. Ted Sorenson
Sorenson Engineering
550 Linden Drive
Idaho Falls, ID 83401

Re: Birch Creek Hydro, FERC No. 7194
Amendment to Article 404
Minimum Stream Flow

Dear Mr. Sorenson:

Idaho Department of Fish and Game personnel have reviewed your proposal to mitigate lost riparian vegetation in Lower Birch Creek due to inadequate stream resource maintenance flows. The Idaho Department of Fish and Game will not object to the proposal as submitted, which includes:

1. Replace riparian vegetation at a rate of 1.5:1.
2. Eliminate the 5 cfs minimum flow in the by-pass reach.
3. Construct and maintain a drip irrigation system to support riparian vegetation.
4. Construct and maintain six to eight ponds/riparian systems.
5. Construct 1 1/4 miles of fence as outlined by the U.S. Bureau of Land Management.
6. Develop one livestock watering facility.

Although we will not object to the proposed mitigation for Lower Birch Creek, we wish to make it clear Idaho Fish and Game will not follow this same path again. For all future developers, we will insist on flows that will insure protection of riparian communities.

Thank you for the opportunity to comment.

Sincerely,

Tracey Trent, Chief
Bureau of Program Coordination

TT:WR:tlv

cc: Reg. 6 (Idaho Falls)
FERC
BLM (Big Butte Resource Area)
USF&WS

Cecil D. Andrus / Governor
Jerry M. Conley / Director

working for wildlife - since 1935

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UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Birch Power Company — Project No. 7194-009 Idaho

ORDER MODIFYING MINIMUM FLOW REQUIRED BY ARTICLE 404, APPROVING RIPARIAN HABITAT MITIGATION PLAN AND DELETING ARTICLE 405

(Issued June 15, 1990)

On March 9, 1990, the Birch Power Company, licensee for the Birch Creek Hydroelectric Project, requested that the minimum flow requirement of article 404 be modified. Article 404 requires the licensee to discharge from the project a continuous minimum flow of 5 cubic feet per second (cfs), or 11 percent of the flow of Birch Creek, whichever is less, as measured immediately downstream from the project diversion, for the protection of riparian vegetation and wildlife resources. The licensee now proposes to reduce the minimum flow to the amount necessary to maintain riparian habitat it will develop below the project diversion.

As an alternative to releasing the required 5-cfs minimum flow, the licensee proposes to build and maintain 6 to 8 ponds below the diversion. Approximately 2.46 acres of riparian habitat will be created in association with the ponds. The principal components of the licensee's plan are installing about 6,000 feet of buried water pipeline, constructing 6 to 8 ponds, installing 1,000 feet of drip irrigation system, constructing 1.25 miles of livestock fencing, and developing one livestock water facility.

The licensee proposed the alternative minimum flow and riparian habitat mitigation plan because the current minimum flow discharged into Birch Creek will not preserve a significant portion of the riparian habitat below the project diversion. The bypass flow percolates into an alluvial fan within a short distance from the diversion. This flow will maintain only about [illegible]64 acres of riparian habitat. By implementing the alternative [illegible]tigation plan, about 2.46 acres of riparian habitat will be created and maintained.

The U.S. Fish and Wildlife Service, the Idaho Department of Fish and Game, and the Bureau of Land Management concur with the licensee's proposal to modify article 404 and develop the riparian habitat below the diversion.

EXHIBIT "F"

The licensee's plan to create and maintain riparian habitat will result in an increase in riparian habitat compared to long-term conditions under the current minimum flow required by article 404. The minimum flow can be reduced to the amount necessary to maintain the planned riparian habitat without causing adverse impacts. Further, by reducing the minimum flow to the amount necessary to maintain the planned riparian habitat, about 2,700 acre-feet of water will be available for power production and irrigation.

After considering the environmental information in the licensee's request for modification of article 404, the staff's independent assessment 1/, and agency comments, the Director finds that the issuance of this order is not a major Federal action significantly affecting the quality of the human environment.

Article 405 requires the licensee to install a streamflow gage below the diversion. Because the streamflow gage will no longer be necessary, article 405 should be deleted from the license.

The Director orders:

(A) The licensee shall implement the Birch Creek Alternative Flow Mitigation Plan filed on March 9, 1990, to create and maintain riparian habitat below the project's diversion.

(B) Article 404 is amended as follows:

"Article 404. Licensee shall discharge from the Birch Creek Project diversion a continuous minimum flow sufficient to maintain the riparian habitat described in its Birch Creek Alternative Flow Mitigation Plan

---

1/ Environmental Assessment, Plan to Provide Alternative Minimum Flow and Create Riparian Habitat, Birch Creek Hydroelectric Project, FERC No. 7194-009, Idaho, Federal Energy Regulatory Commission, dated June 4, 1990. This document is available in the Commission's public files associated with this proceeding.

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filed on March 9, 1990, and required by paragraph A of this order. This flow may be temporarily modified if required by operating emergencies beyond the control of the licensee and for short periods upon mutual agreement among the licensee, the Idaho Department of Fish and Game, and the United States Bureau of Land Management."

(C) The licensee shall file with the Commission an annual report providing the results of its monitoring and maintenance of the riparian community developed according to the plan required by paragraph A. The report shall include any changes in design or operation of the system necessary to support the amount and quality of riparian vegetation specified by the plan. The licensee's filing shall also include the comments of the Bureau of Land Management, the U.S. Fish and Wildlife Service, and the Idaho Department of Fish and Game on the annual report. The annual reports shall be filed by December 31 of each year beginning in 1991 and continue for 10 years or until directed otherwise by the Commission. The Commission reserves the right to require changes to the mitigation plan required by paragraph A.

(D) Article 405 of the license is deleted.

(E) This order is issued under authority delegated to the Director and is final unless appealed to the Commission under Rule 1902 within 30 days from the date of its issuance.

J. Mark Robinson
Director, Division of Project
Compliance and Administration

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REGULATORY COMMISSION
FERC-351

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

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EXHIBIT "G"



EXHIBIT TWO

RENO DITCH

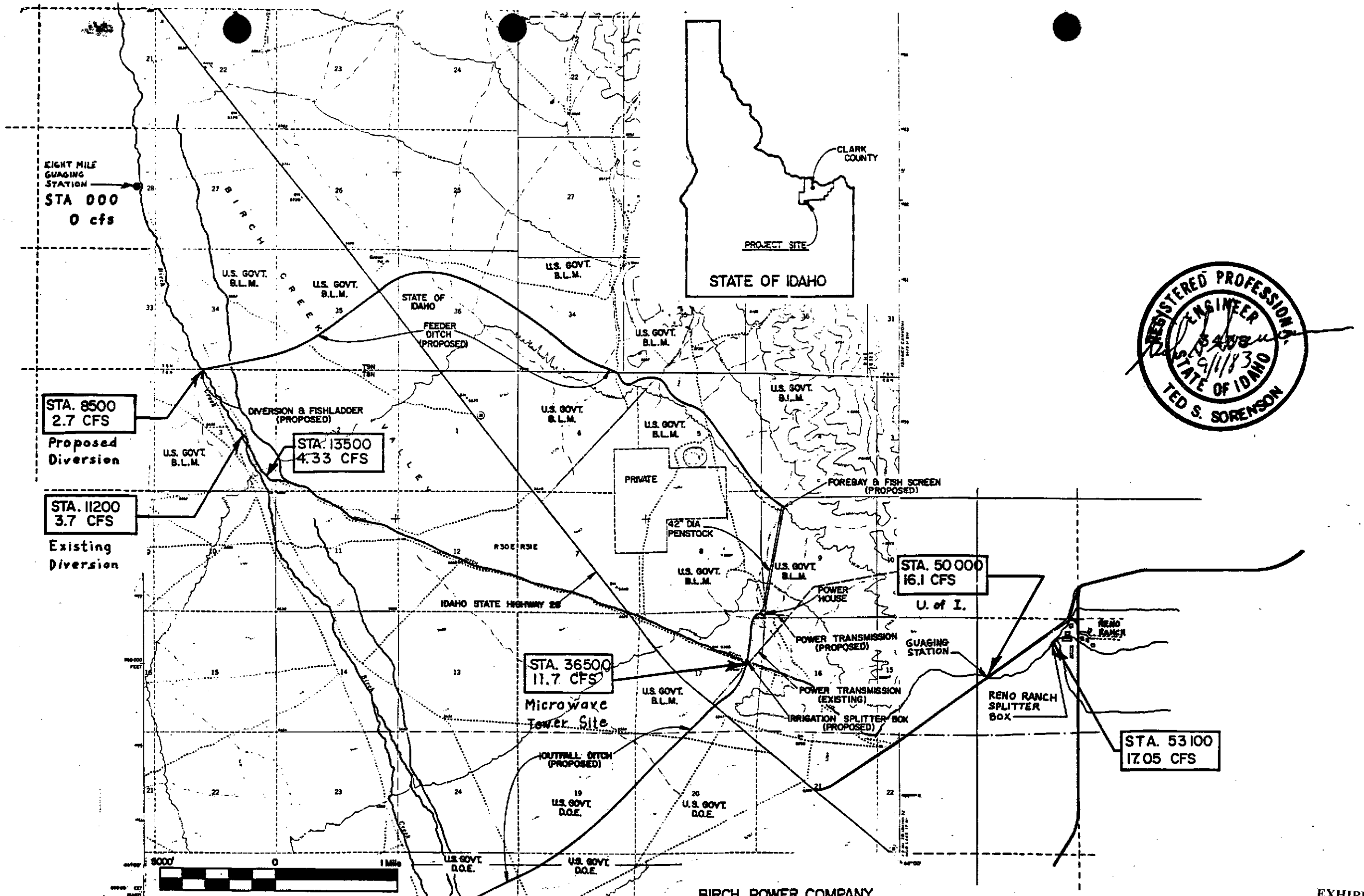
FLOW COMPARISON

1980 USGS / U OF I DATA VS. 1983
(All flows in cfs, 1 cfs = 50 inches)

	8/80	8/23/83
1. Proposed Diversion (STA 85 + 00)	43.0*	43.77
2. Existing Diversion (STA 112+00)	42.0*	42.07
3. Flow - Reno Ditch near Micro Wave Tower (STA 36 + 500)	34.0*	33.13
4. Flow at Reno Ranch Splitter Box (STA 500 + 00)	28.7*	30.2
5. Bedloss Existing to Proposed Diversion	1.0	1.7
6. Bedloss - Proposed Diversion to Micro Wave Site	9.0	10.64
7. Bedloss Proposed Diversion to Reno Ranch Splitter Box	14.3	13.57

*1970 - 1980 USGS average (Eight Mile) less 1980 prorated bedloss (U of I Gauge)

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REGISTERED PROFESSIONAL ENGINEER
9/11/83
STATE OF IDAHO
TED S. SORENSON

BIRCH POWER COMPANY
HYDROELECTRIC FACILITY
GENERAL LOCATION MAP
& BEDLOSS DATA

EXHIBIT "H"

5005

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BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE
STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 and 32-07136 IN THE NAME OF TED SORENSON, d/b/a SORENSON ENGINEERING and IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-07252 (formerly no. 31-07646) IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.	**MEMORANDUM IN SUPPORT OF APPLICANT'S MOTION FOR SUMMARY JUDGMENT AND IN OPPOSITION TO PROTESTANTS' MOTIONS FOR SUMMARY JUDGMENT**

INTRODUCTION

On April 10, 1998, we received from counsel for D&D Enterprises, Inc. copies of a "MOTION BY PROTESTANT D&D ENTERPRISES, INC. FOR SUMMARY JUDGMENT" and "D&D ENTERPRISES, INC.'s MEMORANDUM IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT". The case headings on both documents suggest that they were filed in the matter of the amended application for transfer, no. 3553, but the

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content of each appears to be directed to the issues relevant to the matter of the application of Ted Sorenson for amendment of water rights permits, nos. 32-07128 and 32-07136 and the application of Birch Creek Ranches for permit no. 32-07252.

Then, on April 16, 1998, we received from counsel for LaVar Newman copies of "PROTESTANT NEWMAN'S MOTION FOR SUMMARY JUDGMENT", "AFFIDAVIT OF BLAIR GROVER" and "PROTESTANT NEWMAN'S MEMORANDUM IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT". All of these documents purport to have been filed in the matters of the application to amend the power permits and the application for permit to appropriate the saved water.

We have prepared our cross motion for summary judgment and affidavits in support thereof and in opposition to the protestants' motions, and this memorandum, assuming we are all addressing the issues in the consolidated permit amendment and saved water amendment proceedings and not in the transfer no. 3553 proceedings.

STATEMENT OF FACTS

On November 9, 1978, the United States Congress passed the Public Utilities Regulatory Policies Act of 1978, sometimes referred to as "PURPA". [1] Section 210 of the Act (16 USC 824a-3) provided for the promulgation and implementation of rules by the Federal Energy Regulatory Commission (formerly the Federal Power Commission and referred to hereafter as FERC) requiring public utilities to purchase electricity generated by "small power production facilit[ies]."

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[1] Public law 95-617, codified in Title 16 of the United States Code.

In late 1980, pursuant to rules promulgated by FERC and the Idaho Public Utilities Commission, public utilities doing business in Idaho, including Utah Power & Light, Co., commenced a program of purchasing electricity generated by qualifying small power production facilities.

In 1982, Ted S. Sorenson[2] organized Birch Power Company to provide an entity to develop small hydro-electric facilities in the state of Idaho. One of the first projects Mr. Sorenson began to investigate for feasibility was in the Birch Creek Valley in Clark County, Idaho. By late summer of 1982, his engineering investigation had led him to the conclusion that such a project was feasible and he applied to FERC for a preliminary permit for a proposed hydro-electric project on Birch Creek and to the Idaho Department of Water Resources for a permit to appropriate water from Birch Creek for the purpose of generating electric power. His first application for permit appears to have been filed about September 8, 1982 and was assigned no. 32-7128.

A preliminary permit, effective September 1, 1983, for the proposed Birch Creek Project, no. 7194, was issued September 7, 1983, to Birch Power Company for a period of twenty four (24) months by FERC. From Mr. Sorenson's continuing studies and investigation, he gained information that led him to apply for a second permit to appropriate water from Birch Creek. That application appears to have been filed with the Department of Water Resources about January 3, 1984, and was designated no. 32-7136.

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[2] Throughout this memorandum we have referred to Ted S. Sorenson as Ted Sorenson or Mr. Sorenson and intend that designation to refer to all of the companies or other names under which he has done business with respect to his power project and related matters in the Birch Creek Valley. These include Mr. Sorenson and his wife, Gayle A. Sorenson, Sorenson Engineering, Birch Power Company, Birch Creek Ranches, Inc., and Birch Creek Ranches, L.L.C.

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Some of Mr. Sorenson's early findings regarding the feasibility of the project led him to believe that by moving the point of diversion for the Old Reno Ditch upstream some distance, and then constructing a channel along the hills on the eastern side of the valley, sufficient elevation could be achieved that water could be dropped through a penstock to operate a power plant and permit discharge of the water from the power plant into the old Reno Ditch for continued use of the downstream irrigators. Mr. Sorenson became convinced that the new channel and penstock could be designed and constructed in such a manner that at least some of the water historically lost through seepage in the lower portion of Birch Creek and the Reno Ditch could be saved and hence the amount available for irrigation could be increased.

During his engineering investigation, Mr. Sorenson had become aware that there were two water users diverting water from Birch Creek through the old Reno Ditch and irrigating farmland and pasture with the water: Mr. Ben Wilding (hereafter sometimes referred to as Wilding or Wildings), who was also the state watermaster for the water district (District 32), comprised of the irrigation uses of the waters of Birch Creek, and D&D Enterprises, Inc. (hereafter often referred to as D&D). Thinking that such savings could provide a desirable benefit to the downstream irrigators, Mr. Sorenson approached Mr. Ben Wilding and Mr. Paul DeMordaunt, Jim DeMordaunt's father, as early as February of 1982 to discuss the possibility of building a hydro-electric plant on Birch Creek. His initial suggestion was that Wilding and DeMordaunt develop the project and retain Mr. Sorenson as the engineer. Wilding and DeMordaunt indicated that they had no interest in such a proposal. Several months later in 1982, Mr. Sorenson learned that Jim DeMordaunt had taken over his father's interest and so Mr. Sorenson approached him with a similar idea. Mr. Jim DeMordaunt indicated he had no interest in such a proposal and later Mr. Sorenson approached Mr. Jim Demordaunt and Mr. Wilding with a joint venture proposal which was likewise rejected.

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Not only did Wilding and D&D decline to participate in the power project, but when IDWR began the processing of Mr. Sorenson's applications for permit, nos. 32-7128 and 32-7136, they filed protests and actively opposed Mr. Sorenson's efforts. The applications were formally protested by Idaho Fish and Game Department, Bureau of Land Management, William T. Simmons, C.A. Wagoner, and, as we have already stated, Ben R. Wilding and D&D. D&D Enterprises, Inc. was also granted leave to intervene to participate in the hearing on the protests (for application no. 32-7136) and was an active participant in the hearing held before Bobby D. Fleenor, IDWR's hearing officer, on April 5, 1984.

At the April 5, 1984 hearing, Mr. Sorenson presented evidence he had gathered through his investigations regarding the amount of seepage losses in various reaches of Birch Creek and the Reno Ditch. At that point in time, he had two potential plans or options for location of the proposed power plant. Option A would have placed the power plant at a site known as the "Microwave Tower Site". Water discharged through the power plant would have been conveyed through a new ditch to a point on the old Reno Ditch approximately 25,300 feet downstream from the old point of diversion for the Reno Ditch on Birch Creek, or some 4.75 miles. Option B would have placed the power plant further down gradient to the east where it would have discharged the water through a new ditch back into the old Reno Ditch near a stream gauge operated historically by the University of Idaho near a point where a road crosses the Reno Ditch in section 14 of Township 8 North Range 31 East. This point is some 38,800 feet downstream on the Reno Ditch from its old point of diversion on Birch Creek, a distance of some 7.25 miles.

Mr. Sorenson also proposed, for either option A or option B, that the point of diversion for the new hydropower feeder channel be moved upstream from the old diversion for the Reno Ditch a distance of some 3,000 feet. His studies indicated seepage losses in the 3,000 feet of lower Birch Creek channel and the 4.75 miles of Reno Ditch under option A

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would be 8 to 9 CFS, and between the proposed new point of diversion and the point of reintroduction of water into Reno Ditch under option B, some 14 to 15 CFS.

At the time of the hearing in 1984, Mr. Sorenson was considering, among other possibilities, a particular method of reducing seepage losses in the proposed new channel using some type of soil sealant, and his estimates, based on the use of one or the other of the soil sealants led him to expect a savings from reduction of seepage losses of at least 5 to 6 CFS under option A and 10 to 11 CFS under option B.

Although Mr. Sorenson was pretty well convinced there could be a saving of water from losses to seepage through some method in connection with construction of the hydro electric project, he was not able to promise or guarantee there would be a savings, or if so, the exact amount. In response to questions from D&D's lawyer, Mr. George Peterson, at the April 5, 1984 hearing, he testified as follows:

> MR. PETERSON: All right, fine. Let me ask you a couple of preliminary questions, I believe your testimony was to the effect that there would not be any water loss either under Plan A or Plan B as compared with the present water that is received by the two water users, Mr. Wilding and D&D, is that correct?
>
> MR. SORENSON: Yes, sir.
>
> MR. PETERSON: And I believe you made certain projections that you anticipated under plan A there would be at least an additional 5 and maybe even as much as 6 second feet.
>
> MR. SORENSON: That potential exists, yes sir.
>
> MR. PETERSON: Okay, and I believe you further said that under plan B there is a potential of up to 10 second feet.
>
> MR. SORENSON: Yes, sir.

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MR. PETERSON: Now are there are some maybe's as far as that additional is concerned that would tend to reduce that down, where you are constructing a totally new ditch, and you have new banks, and certainly have soil that is not sealed and such, could you address those?

MR. SORENSON: I can address those from experience as an engineer. I have specified sealing for lagoons and the anchors in size, I have measured the leakage, we have been able to achieve the reduction of leakage that we specified. We have done a study here on that, to the best of my knowledge, that potential for increase, yes, is there, however I would point out to you in practice and in time, that there may need to be some touch up to the sealing done. All that I am pointing out, Mr. Peterson, I guess our position is by this report in pointing out, is that the potential is there for an increase. We are saying very definitely that there will be no decrease.

MR. PETERSON: So it would be a fair statement Mr. Sorenson, as far as the hearing officer and the group that is here that is concerned that in effect you're guaranteeing that there will not be a loss but you are certainly not guaranteeing on the other side that there will be under plan A an additional 5 cfs or under plan B an additional 10?

MR. SORENSON: I am not in a position to guarantee that, no. I am in a position to specify that and work toward that as a goal. Based upon my experience as an engineer on other projects, in my view the potential to achieve that is there. It is not uncommon to specify leakages no greater than a quarter inch per day based upon that the report calculates that there would be .8 cfs loss on that basis. I have applied a factor of safety of almost 3 and a quarter when I said we were accounting for 3 cfs bed loss and with that 3 cfs bed loss under option A there would be an additional 5 cfs gain and under option B there would be approximately 10 to 11 cfs gain. I have a letter that my attorney has there from Midstate Distributors. It is a soil sealant company. They have investigated the taken soil samples, they are willing to enter into a contract to seal the ditch such that the leakage is not greater than a quarter inch per day and guarantee it with a warranty. And I don't know the procedure, Mr. Rigby, but maybe we ought to introduce that at this time.

MR. RIGBY: We will.

MR. SORENSON: Okay.

MR. PETERSON: Let me get back to my witness.

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MR. SORENSON: Okay, I'm sorry.

MR. PETERSON: Well, Mr. Sorenson, the point I am trying to make is that at this stage, we are really not in a position to start dividing up extra water because we really don't know how much extra water there will be. Is that a fair statement?

MR. SORENSON: We are in a position that is a fair statement with this qualifier, we are in a position to say that we are not going to decrease the water supply that is there, we are saying that there will be an increase of water availability. Your estimates of how much it will be increased may be different than my estimates. And I think any engineer that would work on it you would have a separate opinion.

MR. PETERSON: Okay, so when we're talking about increases we're talking about estimates, is that correct?

MR. SORENSON: Yes. Professional estimates.

MR. PETERSON: We have nothing further. Mr. Examiner I would like you to know that as far as D&D is concerned, we are withdrawing most of our complaints in view of the amendment here, the concern of D&D is that they receive at least the same number of cfs's as they have experienced historically in the past and of course when the time comes, if there is an increase, we will make the appropriate application to take advantage of that increase. Other than that we have no protest. We take Mr. Sorenson for his testimony and also put him on notice that if for some reason there is not the same number of cfs's delivered, then of course he will hear from us.

MR. SORENSON: I'm sure.

(April 5, 1984, Hearing Transcript, page 30, lines 16-25, page 31, lines 1-25, page 32, lines 1-25 and page 32 lines 1-24.)

At the same time, the Idaho Fish and Game Department and the Bureau of Land Management were concerned about the potential loss of environmental amenities in the 3,000 feet of Birch Creek channel Mr. Sorenson was proposing to de-water between the old Reno Ditch diversion and the proposed new upstream diversion for the hydropower feeder channel. It appears from the testimony at the hearing that the agencies wanted 5.0 CFS of the flow of

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Birch Creek for a bypass flow. The irrigation water users appeared to be opposed to this proposal.

On November 21, 1984, Mr. Fleenor issued a "Proposed Memorandum Decision and Order" finding, inter alia, that water had historically been lost to seepage in the 3,000 feet of Birch Creek channel and the first 5 miles of the Reno Ditch, that the loss constituted some 22% of the total flow of Birch Creek at the proposed new point of diversion, and that such water lost to seepage had never been used for irrigation by Wildings or D&D. He then concluded that the water which would be saved by sealing the power plant feeder ditch would be new water, and if used for purposes other than irrigation by Wildings and D&D, their existing irrigation rights would not be injured. He further found and concluded, that 11% of the flow of Birch Creek at the new point of diversion, not to exceed 5.0 CFS, should be allowed to flow past the new point of diversion to mitigate riparian, fish and wildlife values.

On November 27, 1984, A. Kenneth Dunn, director of IDWR, entered an "Order Issuing Proposed Decision". Ben Wilding filed an objection to the proposed decision, ostensibly on behalf of all of the water users of District 32-D, which we understand to have been intended to include himself and D&D. Apparently D&D also filed exceptions to the proposed memorandum decision or otherwise objected to it as well.

On March 27, 1985, Mr. Fleenor issued a "Modified Memorandum Decision and Order", and Mr. Dunn contemporaneously entered an "Order Adopting Modified Memorandum Decision and Order". In Mr. Fleenor's modified decision, he again concluded (Conclusion of Law 1)):

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1) The water that will be saved by sealing the feeder ditch is new water that has never been available for use by the Reno Ditch irrigators, therefor, the existing irrigation rights will not be injured if the water being saved is used to provide water for livestock and to protect the public interest by protecting the riparian habitat along the natural stream channel of Birch Creek. The person who saves the water is entitled to the benefit of the water with his right to the saved right being prior to the other parties. Reno v. Richards, 32 Idaho 1, 6, 13 (1918) and Basinger v. Taylor, 36 Idaho 591, 596-597, 599 (1922).

In Mr. Dunn's order, he stated:

> The Birch Creek water users took exception to the conclusion that the saved water belongs to the applicant and also to the requirement that water must be left in the natural channel of Birch Creek to provide water for livestock and to maintain the vegetation along the stream. In answer, I find that the court has consistently awarded water saved to the person saving it. I also find that the preservation of the riparian habitat along the stream is in the public interest, is consistent with the policy of the Water Resource Board and will not deprive the water users of any water they normally would receive (paragraph 3 at page 1 of the "Order Adopting Modified Memorandum Decision and Order") . . .
>
> On January 14, 1985, D&D Enterprises, Inc. responded to the exceptions of the Birch Creek Water Users, the Idaho Department of Fish and Game and the Bureau of Land Management. The primary objection of D&D Enterprises, Inc. concern the disposition of the saved water. While I would agree that if the holder of a decreed water right saves the water normally lost in his conveyance works to seepage he would be entitled to the water under his decree. That, however, is not the case here. The water in this instance is being saved by a party other than the owners of the decreed rights. Therefore, the arguments of D&D Enterprises, Inc. do not convince me to reach a different decision. (Last full paragraph on page 2 of "Order Adopting Modified Memorandum Decision and Order")

D&D then appealed the final decision of IDWR to the district court. In that appeal, IDWR appeared and actively participated as a respondent. IDWR's position with respect to D&D's insistence that it should receive the saved water instead of Mr. Sorenson was fully

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set out in it's brief dated June 20, 1986. A copy of the brief is included herewith as an attachment to this memorandum and clearly establishes IDWR's position on this issue.

In its memorandum decision, entered June 26, 1986, the district court upheld the ruling of IDWR and no further appeal was taken from the district court's decision.

As Mr. Sorenson completed preparation for the construction of the power project, two more important decisions were made. First, instead of a soil sealant or bentonite product, he decided on a relatively newer technology for reducing seepage losses, the use of a PVC membrane liner, which was installed in the pond at the point of diversion and throughout the entire length of the hydro-plant feeder canal, except where pipe or penstock was installed.

Second, the power plant was not located at either the Option A or the Option B site, but rather about a mile further downstream from the Option B site, below the old splitter box structure on the Reno ditch. That is something over 41,900 feet from the old point of diversion for the Reno ditch or a little over 7.9 miles. From the new point of diversion on the Reno ditch which is upstream over 3,000 feet from the old point of diversion, the total distance of de-watered channel of Birch Creek and Reno ditch is more than 44,600 feet of Birch Creek Channel and Reno Ditch or over 8½ miles. Formal application to amend the permits to adjust the location of the power plant was submitted to IDWR in August of 1986, and was approved by A. Kenneth Dunn on August 15 of that year.

Water diverted through the new channel began producing power at the new plant in the spring of 1987. During the first years of operation, some problems had to be addressed. At first, a few leaks in the PVC liner system were discovered, each of which had to be sealed. It also became apparent that the 5.0 CFS by-pass flow from the diversion pond did not accomplish much in the way of preserving fish and riparian habitat downstream from the new

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point of diversion. In fact, the full 5.0 CFS of by-pass flow sunk within the first 1,000 feet of the old Birch Creek Channel. After studying this problem for a time, Mr. Sorenson came to believe the problem could be resolved in a manner which could potentially even increase the amount of water discharged from the power plant into the Reno Ditch. He therefore went to Mr. Jim DeMordaunt of D&D, and presented to him the idea and invited him to consider whether the irrigation water users would like to participate in the effort to save additional water for irrigation of their farms. Again, the suggestion was rejected.

Nevertheless, in cooperation with the Idaho Fish and Game Department and the Bureau of Land Management, Mr. Sorenson secured the approval of FERC and went ahead with the proposal. It consisted of the construction of a series of lined ponds on either side of the de-watered creek channel below the new point of diversion, and the installation of a plastic pipe to supply water to the ponds and some watering troughs. Riparian vegetation was then planted around the ponds and the ponds provided seepage around the edges for riparian plant growth as well as water fowl and wildlife habitat and protection. The ponds and troughs furnish water for wildlife and stock watering. Instead of a bypass flow of 5.0 CFS, the entire new facilities require some 50 gallons per minute (.11 CFS) and the balance of the former by-pass water (4.89 CFS or more) is also diverted into the feeder channel for the power plant. After the facilities were built and tested for a time, Idaho Fish and Game Department and the Bureau of Land Management, as well as FERC, accepted the substituted mitigation, and an application to modify the water right permits with respect to the bypass flow condition was filed with IDWR by Mr. Sorenson in April of 1990. It was, of course, protested by D&D and by the widow of Ben Wilding. Both of these protests complained that the application for amendment of the permits, which were obtained for power production purposes, made no provision for disposition of the saved water.

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By 1988, the second year of operation of the power plant, it had become obvious to Mr. Sorenson that during the irrigation season, when the upstream irrigators were diverting water, flows of water through the power plant were significantly reduced. By 1989, he had determined that the flows through the power plant could be increased by virtually the entire amount of any such irrigation diversions which were left in the creek and allowed to flow down to the new point of diversion for the power plant. During that year, he was successful in purchasing the Simmons ranch and water rights, and entering into a lease arrangement with D&D to rent the additional water that could be made available below the power plant. Mr. Sorenson filed a formal application to transfer the Simmons' water to the D&D lands, but it was protested by D&D as well as by Wildings. The processing of the application became complex, and then because of serious problems which occurred with a project to line a portion of the Birch Creek Channel with PVC liner immediately upstream from the hydro-power diversion, the whole matter of the transfers and the other applications were delayed for some years.

During this time, Mr. Sorenson tried to develop some proposal which would result in the use of the additional water from savings and from his purchase of water rights from Simmons, then Woodie, and then Waggoner, through the power plant, and also in the production of some income from use of the extra water available in Reno Ditch after discharge from the power plant, for irrigation. Mr. Sorenson's original intent with respect to the liner project was to provide additional water which could be used through the power plant and perhaps helped to overcome some of the objection of the downstream water users regarding the bed losses in the natural channel itself. In November of 1993, Mr. Sorenson filed two applications with IDWR, one to transfer the saved water IDWR had already determined to be created by the power project, to 960 acres of D&D lands, and a second application for a permit to drill wells in the Simmons Ranch area to augment flows in Birch Creek and offset bed losses in the reach from Blue Dome down to the new hydro-power

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diversion. Neither application was ever processed by IDWR. In May of 1994, Mr. Sorenson filed an application which proposed to transfer the right to the saved or salvaged water to offset transmission losses in the channel of Birch Creek in the reach from the Lone Pine/Blue Dome area down to the hydro-power diversion. Again, IDWR would not process the application.

In the spring of 1994, when D&D Enterprises declined to renew its lease of water from Mr. Sorenson, it became abundantly and quite finally clear that while D&D and Newman were happy to have all the extra water made available below the power plant through the savings and through the reduction of upstream irrigation diversions, they had absolutely no intention of paying anything for it. From that time, Mr. Sorenson then directed his efforts to acquiring irrigable land of his own, and to legally identifying water rights which he could use for the irrigation of such land.

Mr. Sorenson did eventually acquire land which could serve as the place of use for both the transferred water and the saved water to which he is entitled by virtue of having purchased the water rights proposed to be transferred and by having saved water through construction of the power plant and attendant facilities. That land is identified as the proposed place of use, part for the transferred water rights under Transfer no. 3553, and part for the saved water.

At no time, from the initiation of his feasibility investigations in Birch Creek Valley to the present, has Mr. Sorenson ever represented, promised, or even inferred, that he would provide saved, salvaged or transferred water to D&D or Wildings (now Newmans) for free. He made numerous offers and proposals for them to participate in the cost of development of the power project and attendant facilities, any and all of which proposals would have resulted in the sharing by either or both of them in the benefits from the saved, salvaged, and

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even transferred water. Every such offer or proposal was ignored or rejected by D&D, Wildings and Newmans, and they have fought Mr. Sorenson's efforts every step of the way, as they are still doing. For reasons known only to themselves, and unarticulated in any recognizable concept of rightness or fairness, they insist that they are entitled to the saved water and a good share of the transferred water, without paying compensation to anyone.

D&D and Wildings (or Newmans) have forgone no right and have given up nothing in reliance on any representation by Mr. Sorenson. Mr. Sorenson has made no misrepresentation of fact or law. Nor have the protestants been deprived of anything to which they were entitled by law; instead, without benefit of legal authority to do so, D&D has expanded the acreage it irrigates by 599 acres, and LaVar Newman has expanded his irrigated acreage by 168 acres by using, for free, the water saved and transferred by Mr. Sorenson.

The protestants' claim of foregoing an alternate project proposed by Mr. Ray Michener is entirely bogus. By the time Mr. Michener's letter was written (February 16, 1984, according to D&D Exhibit No. 246 in the transfer proceeding), Mr. Sorenson had been the applicant for a preliminary permit from FERC for the hydro-electric project using Birch Creek water, for many months, and the holder of a preliminary FERC permit since September 1, 1983. The Michener proposal would not have been viable unless Mr. Sorenson had failed to construct his project and forfeited his permit and right to become a licensee.

Neither D&D nor Wildings (and Newman) ever contributed anything to the project. Mr. Sorenson paid each of them, in lawful money of the United States, for the land and rights-of-way he acquired, at a rate substantially higher than the market value for the type of land he so acquired. As a FERC licensee, Mr. Sorenson could have exercised the federal government's power of eminent domain under 16 U.S.C. § 814, had that been needful.

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D&D even went to the effort to oppose, wherever they could legally do so, Mr. Sorenson's acquisition of land to become the place of use for his purchased and saved water rights. But Mr. Sorenson has been successful in acquiring sufficient farmland which will produce customary crops through proper irrigation practices. He has also obtained necessary authority from the Bureau of Land Management to construct a proposed gravity flow mainline, pond and intake structure to provide the water for operation of his on farm sprinkler system.

ARGUMENT

Applicant asserts that with respect to the saved water application, certain propositions have previously been legally resolved, and summary judgment should be granted with respect thereto.

A. SORENSON'S MOTION FOR SUMMARY JUDGMENT

The three important issues which have previously been fully litigated and determined between these parties, both before IDWR and in district court, are:

1) Water which was never available to or used by D&D and Wildings (now Newman) because of seepage losses which occurred between the point where the hydro power diversion is located on Birch Creek and the point on the old Reno Ditch where water discharged from the power plant reenters the Reno Ditch, has been saved by applicant through construction of the hydro-electric power project, and

2) Because applicant saved the water, applicant is entitled to the use and benefit thereof, and

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3) Applicant's right to the use of the saved water is prior to the rights of D&D and Newman.

The only remaining issues for resolution at this time, are:

4) The amount of such saved water, and

5) The bypass flow condition for 11% or 5.0 CFS (less the .1 CFS actually required for the amended mitigation requirement) must be modified in the permits to the non-consumptive use for power production and under the new application, the use must be authorized for irrigation of applicant's land.

Issues 1), 2) and 3):

With respect to the first three issues, there are actually three closely related and well established and recognized principles or doctrines, each of which fully applies to the facts of this case. They include: res adjudicata or res judicata (claim preclusion), collateral estoppel or judicial estoppel (issue preclusion) and law of the case.

We have pointed out and have even quoted IDWR's prior decision in the matter of permits nos. 32-07128 and 32-07136. That decision was appealed by D&D to the district court and the district court upheld the decision of IDWR. IDWR and the district court clearly established that Mr. Sorenson's project would save water which had never previously been available to D&D and Wildings (Newman is the successor in interest of Wildings and in privity with them), that Mr. Sorenson and not the holders of the decreed rights (D&D and Wildings) was entitled to the benefit and use of the saved water, and that Sorenson's right to the saved water is prior to the rights of D&D and Wildings (now Newman).

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The current proceeding is a consolidation of an application for amendment of the permits in the same continuing matter in which the decision of IDWR has already been issued and which was appealed to and affirmed by the district court acting in its appellate capacity, together with a formal application for appropriation and use of the saved water. The three issues referenced above are the same issues litigated and determined earlier in this proceeding, and the parties are the same parties or in privity with a former party. The doctrines upon which we rely are well established and articulated. The hearing officer will be quite familiar with them and lengthy citation of authority is hardly necessary. We include only the following:

46 Am Jur 2d, §§394-400

Yoakum v. Hartford Fire Insurance Co., 129 Idaho 171, 923 P.2d 416 (1996);

Foster v. City of St. Anthony, 122 Idaho 883, 841 P.2d 413 (1922);

Andre v. Morrow, 106 Idaho 455, 680 P.2d 1355 (1984);

Alumet v. Bear Lake Grazing Co., 119 Idaho 946, 812 P.2d 253 (1991);

Insurance Associates Corp. v. Hansen, 116 Idaho 948, 782 P.2d 1230 (1989);

Matter of Barker, 110 Idaho 871, 719 P.2d 1131 (1986).

Issue 4):

We suppose D&D and Newman feel so frenzied in their quest to defeat any and every effort of Mr. Sorenson that they do not wish to miss any possible argument. Perhaps that accounts for their inconsistent positions that there both has been water saved by construction of the power plant and facilities and that there hasn't been water saved by construction of the power plant and facilities.

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The application, no. 32-07252, states that the saved water is 34% of the flow of Birch Creek at the point of diversion. Thirty four percent would be 17 CFS if the flow at that point were 50 CFS. If it were 30 CFS, as Ben Wilding testified it usually was at the old Reno diversion most of every summer after the upstream irrigators commenced irrigating, and until they stopped, (Transcript of April 5, 1994 Hearing before IDWR, page 124, lines 8-13) 34% would only be 10.2 CFS. However, we seek to have the application conform to the evidence which will be presented, and from Dr. Brockway's analysis, it appears that between the variations in stream flow at the old point of diversion (25 CFS to 60 CFS) the seepage losses did not vary significantly; they remained at about 15.0 CFS quite consistently.

Dr. Charles E. Brockway has recently studied both the seepage loss which historically occurred in the 3,000 feet of Birch Creek channel and the 8 miles of Reno ditch down to the old splitter box (the over 8½ miles between the new point of diversion for the hydro power channel and the present location of discharge from the power plant back into the Reno ditch) as well as seepage losses which presently occur in the hydro power channel between the new point of diversion and the discharge from the power plant into the Reno ditch. From his affidavit and attachments, we perceive three important conclusions:

1. The historical seepage losses which occurred in the lower 3,000 feet of Birch Creek and the over 8 miles of Reno ditch averaged slightly over 15.0 CFS, actually, 15.05 CFS.

2. The losses which occur between the new point of diversion for the hydro power channel and the discharge from the hydro power plant, including the up to .11 CFS diverted in a plastic pipe from the diversion pond for maintenance of the series of riparian habitat ponds and the watering troughs, and up to .30 CFS in the hydro power channel itself, averaged about .41 CFS.

3. Neither the historical seepage loss in the old channels, nor the losses in the newer hydro power channel vary significantly with fluctuations

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in the CFS flow of Birch Creek at the new point of diversion. Whether those flows have been as low as 25 CFS or as high as 60 CFS, the loss figures have remained fairly constant.

Dr. Brockway's study and analysis has led him to conclude that historical seepage losses which occurred in the over 3,000 feet of Birch Creek channel from the new point of diversion down to the old Reno diversion and from that point down to the splitter box were pretty consistently 15.05 CFS, whether the flow in Birch Creek at the new point of diversion was as low as 25 CFS or as high as 60 CFS. The measurements and studies done by Mr. Sorenson in 1982 and 1983, the testimony of Ben Wilding, and the subsequent studies by Dr. Brockway are not inconsistent, and unless there is material dispute of these facts, we think the hearing officer can quantify the amount of saved water through the power channel as 14.64 CFS (15.05 CFS -.41 CFS consisting of .11 CFS for the current mitigation effort and .30 CFS of loss in the power channel itself).

Undoubtedly Ben Wilding's testimony, given at the hearing on April 5, 1984, is as good evidence as we can obtain about the historical conditions he perceived during his experience as an irrigator and watermaster on Birch Creek. He testified that in the spring or in the fall, when upstream irrigation was not occurring, there would be available at the Reno ditch diversion up to 2,200 miners inches (44 CFS) or more, and as the summer went on, and the upstream irrigators began to receive their irrigation water, the amount available at the Reno diversion would drop to about 1,500 miners inches (30 CFS). (Transcript, page 124.) He then testified that in the 8 miles of Reno ditch below the point of diversion from Birch Creek, there was a "terrific loss". (Transcript, page 126, lines 24 and 25).

When Mr. Sorenson was designing the power project and while he was still trying to enter into a joint effort with downstream irrigators to salvage water which could have thus been used by them, a significant effort was made to quantify the seepage losses in the 3,000

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feet of Birch Creek channel and in the Reno ditch. It is clear that the hearing officer, Mr. Bobby D. Fleenor, arrived at his decision respecting the 22% bed loss, primarily from a flow comparison summary prepared by Mr. Sorenson which was contained in his "Preliminary Engineering Design and Plan Report", stamped 12/15/83. This document was submitted to IDWR on December 23, 1983, and was then made an exhibit (Exhibit No. 1) at the hearing held April 5, 1984. (See Hearing Transcript at pages 13 and 14) We obtained our copy of the exhibit from Mr. Phil Rassier who made the copy from the original in the department files. The "Birch Creek Flow Comparison" to which we will refer is the first page under a cover page entitled "Appendix to Bed Loss Map Reno Ditch". A copy is attached to Mr. Sorenson's Affidavit. On the summary are two columns of seven numbers each. The first column is headed "8/80" and the second, "8/23/83". The first column of numbers comes from 1970 to 1980 USGS and University of Idaho averages at various locations with prorated calculations made at other points by Mr. Sorenson, and the second column are measurements by Mr. Don Shenton on 8/23/83 at various locations with prorated calculations for other points by Mr. Sorenson. The first number in each column is the flow in Birch Creek at the proposed new point of diversion. The sixth number in each column is the calculated bed loss or seepage between the proposed new point of diversion and the "micro wave site" (the potential location for the hydro power plant under option A). It appears that Mr. Fleenor drew brackets from number 1 to number 6 on each column and then calculated the loss as a percentage. 9.0 CFS loss from the proposed new point of diversion on Birch Creek to the micro wave site is just slightly less than 21% of 43.0 CFS, the calculated flow at the proposed point of diversion on Birch Creek. Likewise, for the second column, 10.64 CFS is slightly over 24% of 43.77 CFS. Mr. Fleenor apparently wrote the figures 21% and 24% next to his hand drawn brackets and then placed his initials "BDF" under each percentage. It appears to us that these calculated percentages were the basis for his decision that 22% of the flow of Birch Creek at the new point of diversion for the hydro power channel was

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historically lost to seepage in the remaining 3,000 feet of Birch Creek channel and the first 4½ to 5 miles of the Reno ditch down to the micro wave site.

The power plant was subsequently located further downstream on the Reno ditch, a short distance below the old splitter box structure which is over 8½ miles downstream from the new point of diversion for the hydropower channel. In this reach, historical seepage losses for the two columns on the "flow comparison" chart are 14.3 CFS and 13.57 CFS (under number 7 of each column) or 33% and 31% respectively.

In tables 2 and 3 at page 6 of Mr. Sorenson's "Preliminary Engineering Design and Plan Report" (Exhibit 1 at the April 5, 1984 hearing) Mr. Sorenson listed data from measurements taken at the USGS gauging station at Eight Mile Canyon road between 1971 and 1980 (table 2) and both at the Eight Mile Canyon road gauge and the University of Idaho gauging station (where his option B site could have been located). For example, from table 3, 17 measurements were made at the two locations during the 1980 irrigation season. The average for that data for that year was 45.2 CFS at the Eight Mile Canyon road gauge and 29.2 CFS at the University of Idaho gauge some 9½ miles downstream, an average loss of some 16.0 CFS. By prorating the flows at the proposed new point of diversion and the splitter box near the Reno ranch, the resulting figures are quite consistent with Mr. Wilding's testimony.

Even though there is not as much data as some might wish, and there may be some dispute as to how much water may have been available at the splitter box on any given day in any given year, Mr. Wilding's testimony is consistent with other testimony that the irrigators were historically short of water at that point. Whatever the flow may have been at the Reno diversion, there was approximately 14 CFS less at the splitter box, and whatever amount may have been available at the splitter box, there was some 14 CFS more at the point

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of diversion and another approximately 1.0 CFS some 3,000 feet upstream at the location of the new diversion for the hydro power channel.

If Mr. Sorenson uses the saved or salvaged water, nothing changes so far as the amount of water that was historically available to the downstream irrigators at the splitter box. When there was 60 CFS at Birch Creek at the new point of diversion, they historically received 45 CFS at the splitter box. If there was 30 CFS flow in Birch Creek at the new point of diversion, as Mr. Wilding testified there usually was in the summers, they historically received 15 CFS at the splitter box. They are entitled to exactly what they would have received if the power project had never been constructed; no more and no less.

The disaster scenario portrayed by the protestants is of course ludicrous, and does not represent anything factual. First, whatever the flow of Birch Creek may be at the point of diversion for the hydro power channel, 15.0 CFS of it would have been lost to seepage between that point and the old splitter box near the Reno ranch and was never available to the protestants for irrigation. Whatever portion of that 15.0 CFS is saved by the new facilities, belongs to Mr. Sorenson, and the downstream water users are not injured by any use he may make of it.

During the irrigation season, when the water to be transferred from the Simmons, Woodie and Wagoner ranches upstream is allowed to remain in Birch Creek and flow down to the new point of diversion, it still must be distributed in accordance with existing priorities, the same as it was when it was diverted upstream. We have already seen that there is no significant change in seepage losses in Birch Creek when the water formerly diverted above Blue Dome is allowed to remain in the creek and is diverted at the new diversion for the hydro power plant. Again, the downstream irrigators are entitled to no more and no less than they would have received historically when the upstream diversions were occurring.

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All that needs to be done to ensure this result is to distribute the water at the new point of diversion exactly as was done historically, in accordance with the priority dates of the various rights.

Therefore, in a year such as 1997, when, during the irrigation season, the flow of Birch Creek was up to 59 CFS at the new point of diversion, 15 CFS would have been lost by the time the water reached the splitter box anyway. The remaining 44 CFS was subject to administration in accordance with the priority list; the downstream irrigators got the first 16 CFS, then Simmons got the next 2.4 CFS and so on. If the flow at the Reno diversion was 44 CFS, the downstream irrigators got 25.3 CFS and the upstream irrigators got 18.7 CFS. Sorenson proposes nothing different, so far as what the downstream irrigators are to receive, than what they received historically at the splitter box. At that point, they were chronically short of water, and it is true that Mr. Sorenson's current proposals would do nothing to change that fact. He has given them numerous opportunities to participate with him to improve that circumstance. They have ignored and rejected the offers, and have fought him every step of the way in his efforts to increase the supply. He has no duty, under any reasonable legal theory, to improve their circumstances. So long as Mr. Sorenson does nothing to reduce the amount of water which would have been available to D&D and Newman at the old splitter box structure, they have not been injured, and cannot, by definition, be injured because they do not get to share in benefits Mr. Sorenson has created through his own efforts and at his own expense.

In an effort to better understand to what extent protestants were historically short of water, applicant has applied the same technology for calculating irrigated acres in 1987 as was used by Marci Pape of IDWR in her preparation of IDWR exhibit 1,000 in the transfer proceeding. In fact, the same company that created the map for Ms. Pape (Spatial Dynamics), has prepared a map for applicant of the lands irrigated by D&D and Wildings

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(now Newman) in 1987. The result shows that in 1987, a maximum of 979 acres was irrigated by D&D and 1185 acres by Wildings.

Also, during the summer of 1997, a new flight was made of these lands by the United States, and applicant has obtained copies of the aerial photographs made of the D&D and Newman lands, in color. Dr. Brockway has made an analysis of the acreage being irrigated by protestants in 1997. D&D's irrigated acreage has increased by 599 acres and Newman's irrigated acreage by 168 acres.

As we have said, quantification of the amount of saved water is still an issue for resolution in this proceeding. If there is no genuine dispute as to the relevant facts, perhaps it can be decided on summary judgment.

Issue 5):

Mr. Sorenson's construction of the works and facilities by means of which water has been saved, was done pursuant to federal and state agency authorization, including permits nos. 32-07128 and 32-07136, which included a requirement that a savings in the amount of 11%, up to 5.0 CFS, be saved for the bypass flow requirement. Because of the use by Mr. Sorenson of better technology than was being considered at the time of the 1984 hearing (PVC membrane lining for the diversion pond and new channel instead of a soil sealant such as bentonite), the change in location of the power plant pursuant to IDWR approved amendment of the permits to a point further downstream on the Reno Ditch, and the revision of the mitigation requirements of Idaho Fish and Game, Bureau of Land Management and FERC so the bypass flow is now .11 CFS rather than 5.0 CFS, the savings of water is almost equal to the former loss from seepage, and is substantially greater than was anticipated in 1984

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The savings has occurred legally and, of course, there was no legal requirement that Mr. Sorenson apply for the use of the saved water for irrigation purposes within any time frame. It is impossible to forfeit a right that has never come into legal existence; that is, the right to use the saved water for irrigation purposes. The right to the use of the additional water, saved by modification of the bypass flow condition, through the power plant, was filed in 1990, upon receipt of written approval from Idaho Fish and Game, Bureau of Land Management and FERC. (See Exhibits D, E, and F to Ted Sorenson's Affidavit)

B. PROTESTANTS' MOTIONS FOR SUMMARY JUDGMENT

The arguments of D&D and Newman do not rise above the level of an attempt to formally establish their freeloader status. Those arguments must be viewed in the context of what IDWR has already decided and what has been affirmed by the district court in its appellate decision. The arguments made by D&D and Newman all seek to re-construe and misconstrue what IDWR, the district court, and even the Idaho Supreme court, have already said about the issues. The cases cited by protestants, particularly the cases of *Reno v. Richards*, 32 Idaho 1, 178 P.81 (1918); *Basinger v. Taylor* 30 Idaho 289, 164 P. 522 (1917) and 36 Idaho 591, 211 P. 1085 (1922); and *Hill v. Green*, 47 Idaho 157, 274 P. 110 (1928), are the very cases and authority which were relied on by IDWR and the district court in the decisions that water would be saved through the construction of Mr. Sorenson's project, that Mr. Sorenson is entitled to the benefits of the saved water, and that Mr. Sorenson's right to the saved water is prior to the other rights.

Nevertheless, D&D and Newman argue that:

1) Mr. Sorenson is estopped from having a right in any saved water;

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2) Water in a private ditch is not subject to appropriation; and

3) The saved water has been appropriated by D&D and Newman, not Sorenson.

1) Estoppel

Although we are satisfied that protestants' arguments are conclusively barred and precluded under the doctrines of res judicata, collateral estoppel and law of the case, they are also without merit for other reasons. We do not disagree with the statements cited by protestants as to the law of estoppel in Idaho. But the facts do not support application of any estoppel doctrine against Mr. Sorenson in this case. We have never known of any authority, and protestants have cited none, for the proposition that one who saves water must thereafter provide it, without cost, and in perpetuity, to anyone else, including holders of decreed water rights. IDWR has already concluded, and the district court affirmed, that the saved water is water which was historically lost to seepage between the new diversion on Birch Creek for the power plant, and the point of reintroduction of the water into the Reno Ditch below the power plant, and was not historically available to protestants for their use. Protestants, IDWR said, could not be injured by not receiving the saved water because they never had it before it was saved.

It is possible, of course, that use of bentonite, as described by the protestants, had some impact on the amount of water lost to seepage, but that practice was abandoned in 1977, long before any of the applications with which we are concerned were filed, and we know of no studies done or measurements made to quantify the possible effects of the use of bentonite anyway. If any such data exists, it has not been brought to the attention of IDWR in this or the former proceeding. And IDWR concluded that the water saved by the efforts of Mr. Sorenson had never been available to the protestants prior to the power plant effort.

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None of the statements made by Mr. Sorenson, as quoted or testified to by protestants, can possibly be considered as a promise or representation or misrepresentation to the effect that he intended to save water for the benefit of the protestants, for free. His affidavit makes it clear that he offered options to protestants and their predecessors in interest on numerous occasions to participate in and receive the benefit of the water savings effort. None of such proposals contemplated that the protestants would contribute nothing to the effort, and all such proposals were ignored or rejected by protestants.

Protestants have not, in fact, given up anything of value without having been more than adequately compensated for it. D&D and Wilding never gave any formal consent to rerouting irrigation water through the feeder canal to the power house instead of through the old Reno Ditch; in fact, they protested Mr. Sorenson's applications to do so and have fought his efforts since the outset. They forwent nothing in connection with the so called Ray Michener option because it was never a viable alternative. Mr. Sorenson already owned the FERC preliminary permit. Protestants received payment for the land and access to the power plant they sold to Mr. Sorenson in excess of the market value. Mr. Sorenson became a FERC licensee, and they could not have refused to sell the necessary property to him anyway; he could have exercised the federal power of eminent domain under 16 USC §814. The only thing that ever deprived protestants of any opportunity they might otherwise have had was their failure to act timely and their own refusal to participate with Mr. Sorenson in any manner.

2) Private Ditch

Mr. Sorenson did not initiate a water right in trespass as that concept has been expressed in Idaho law. He has not gone on protestants' land to locate the diversion works, the conveyance canal, or his penstock and power plant. No portion of the diversion works for the old Reno Ditch, nor the ditch itself to a point downstream from the old splitter box

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structure, is on private land. Nor is any portion of the new diversion facility or the power plant feeder canal, pipeline or penstock on private land until it reaches the tract now owned by Mr. Sorenson where the plant is located.

We have already pointed out that IDWR has found and concluded and has been affirmed by the district court that the water formerly lost to seepage through the 3,000 feet of Birch Creek channel and the Reno Ditch was never available to protestants. They may at one time have had an opportunity to save or salvage it themselves had they acted in a timely manner, but they did not. Once it was saved by Mr. Sorenson, it was too late for protestants to do so, and they cannot claim injury by being denied something they never had. There is no statute or case law which would prohibit the saving or salvaging of water which has historically been lost to seepage. The fact that most of the seepage occurred in a private ditch is a distinction without a difference, and the case of *Basinger v. Taylor, supra*, does not stand for the proposition asserted by protestants that the water saved from seepage lost through a private ditch is not subject to appropriation by the one who saves it.

In fact, the construction of the pipeline by the corporate appellants in the Basinger case, and the transport therethrough of the 22 CFS of the former users of the "Farmers ditch" saved not only the 5.5 CFS formerly lost in Dry Creek between the former downstream head gate for the Farmers Ditch and the new upstream head works for the pipeline, but an additional amount of water up to 25 CFS formerly lost through the old Farmers Ditch. The court did <u>not</u> say that the builder of the pipeline was not entitled to the 25 CFS saved from loss through the old ditch because it was saved from loss through a private ditch. The court said the loss was unreasonable because of its magnitude, and could not have been legally continued even if the pipeline had not been built. Therefore, the owner of the pipeline was not entitled to the 25 CFS as saved water with a priority prior to all others as with the 5.5

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CFS. However, the pipeline owner was entitled to appropriate the water saved from loss in the ditch, as previously unappropriated water, rather than saved water.

There is nothing in the Basinger decision to suggest that there was some right on the part of the former ditch users to the saved water or the water formerly lost through the ditch. The water formerly lost through the ditch was not designated as saved water, which would have entitled it to the earliest or an independent priority, because its loss had been unreasonable; but it was treated as unappropriated water and the pipeline owner still acquired it through appropriation. The court treated the entire loss of 25 CFS as unreasonable, rather than deciding some portion of the loss was reasonable. Presumably, if some portion of the loss had been determined to be reasonable, the pipeline owner would also have received the right to that amount, as saved water, with the earliest or independent priority.

In our case, there has been no allegation or finding that the former seepage losses through the Reno Ditch were unreasonable in amount. Therefore the circumstance with which the court dealt in the Basinger case is not present and there is no reason to treat the water saved from seepage loss through the Reno Ditch any differently than that saved from loss in the natural channel. Those potentially affected by applicant's proposed use of the saved water do not include protestants, but rather those who may be interested in the use of the water which, when lost to seepage, at least theoretically contributed to the amount of ground water available in the Snake Plain Regional Aquifer.

There are no protestants in this case seeking to assert injury to such ground water users or their rights. Applicant has obtained other ground water rights under which ground water has historically been legally diverted down gradient from the Birch Creek area, and applicant proposes to cease diversions under such rights to mitigate any such potential injury to other ground water appropriators from the saving of water which would otherwise have

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percolated, and to comply with the provisions of the exceptions contained in subparagraph 9b) of the pending moratorium order.

In the days of *Reno v. Richards, Basinger v. Taylor and Hill v. Green*, it was possible to appropriate a water right, and to save or salvage water merely by constructing the facilities, diverting the water, and applying it to beneficial use. Now, the law provides that the exclusive method for appropriating a water right is the application, permit and licensing procedure set forth in Title 42 of the Idaho Code (I.C. §42-103). Whether those provisions apply to acquiring a water right through saving or salvaging of water formerly lost to seepage may be a legitimate question, and there is probably an alternative position available to Mr. Sorenson because the saving function has now been accomplished and has been previously authorized by IDWR and the district court. But we know of no authority, in Idaho or elsewhere, which even suggests that water saved by one person through his own expense and diligence belongs to someone else, free of cost or effort, just because the seepage loss once occurred in a private ditch. If Ted Sorenson, who through his own efforts, (also at his own expense, subject to the entire risk, while all of his offers to the irrigators were ignored or rejected , and subject to their constant opposition) saved the water, is not entitled to the use and benefit of that saved water, there is surely no legal or equitable theory under which the protestants can claim any right to it.

3) Constitutional Appropriation

The claim that D&D and Newman have acquired the right to the beneficial use of the saved water through the constitutional method of appropriation does not fit within the current parameters of Idaho law as we understand it, or as we understand IDWR to construe it. It is true that for many years it was possible to appropriate a water right in Idaho by following the statutory procedure or by merely diverting the water and applying it to a beneficial use. Even if the latter method, often referred to as the "constitutional method", were still available,

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D&D and Newmans have done nothing so far as the diversion of the saved water; that is, the construction, operation or maintenance of the works by means of which the water is saved and hence made available, has all been performed by Mr. Sorenson with the refusal to participate by D&D and Newman.

But, the Idaho legislature eliminated the old "constitutional" method of appropriation of surface water with the passage or amendments of such statutes, in 1971, as Idaho Code §42-103 and Idaho Code §42-201. Actually, the legislature had earlier eliminated the "constitutional" method of appropriation with respect to ground water, with the amendment, in 1963, of Idaho Code §42-229. The constitutionality of making the statutory method the exclusive means of legally appropriating a ground water right was challenged in the case of *Tappan v. Smith*, 92 Idaho 451, 444 P.2d 412 (1968). The Idaho Supreme Court held the legislative change in the law to be constitutional in that case. We have understood for many years the position of IDWR is that the 1971 legislative determination that the statutory method of appropriation is the exclusive method for appropriating a right to the use of surface water as well, is constitutional, and has been recognized as such now for some 27 years. Of course neither D&D, Wildings or Newman took any effective action to save the seepage water themselves prior to the construction of the power project by Mr. Sorenson, and they have not filed any application under the provisions of Idaho Code §42-103 and 42-201, et seq. to appropriate the saved water, regardless of Mr. Peterson's 1984 comment. (Transcript of April 5, 1984 hearing at page 33, lines 18-20.)

CONCLUSION

We urge that it is clear applicant is entitled to summary judgment that he has saved water which , because of seepage losses, was never available historically to the downstream irrigators, that applicant is entitled to the use of the saved water and with a priority earlier

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than the irrigators. This result is compelled under the doctrines of res judicata, collateral estoppel and law of the case. In addition, unless there is some disputed fact of which we are unaware, applicant is entitled to a summary judgment that the amount of saved water is 14.64 CFS and to change the use of the 4.89 CFS to power production and, with the balance of the 14.64 CFS, for irrigation use on applicant's lands.

Protestants' arguments of estoppel, saving of water in a private ditch and constitutional appropriation are without merit.

Respectfully submitted this 28th day of April, 1998.

Kent W. Foster, Esq.
HOLDEN, KIDWELL, HAHN & CRAPO

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CERTIFICATE OF SERVICE

I hereby certify that I am a duly licensed attorney in the State of Idaho, resident of and with my office in Idaho Falls, Idaho; that I served a copy of the following described pleading or document on the attorneys listed below by hand delivering, by mailing or by facsimile, with the correct postage thereon, a true and correct copy thereof.

DOCUMENT SERVED: MEMORANDUM IN SUPPORT OF APPLICANT'S MOTION FOR SUMMARY JUDGMENT AND IN OPPOSITION TO PROTESTANTS' MOTIONS FOR SUMMARY JUDGMENT

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IN THE DISTRICT COURT OF THE SEVENTH JUDICIAL DISTRICT OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF BONNEVILLE

IN THE MATTER OF APPLICATION FOR PERMIT NOS. 32-7128 AND 32-7136 IN THE NAME OF BIRCH POWER COMPANY	Case No. 33072
D & D ENTERPRISES, INC. Protestant-Appellant, vs. A. KENNETH DUNN, Director IDAHO DEPARTMENT OF WATER RESOURCES, Respondents, and BIRCH POWER COMPANY, Applicant-Respondent.	

RESPONDENT'S BRIEF

Appeal from the Idaho Department of Water Resources
A. Kenneth Dunn, Director
Bobby Fleenor, Hearing Officer, Presiding

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STATEMENT OF THE CASE

The Idaho Department of Water Resources has constructed a map of the area in controversy. The map, hereinafter referred to as the "map," is provided as an aid to the argument before the Court, and is attached herein as Appendix A.

Nature of the Case

This is an appeal of D & D Enterprises, Inc., (D & D Corporation), protestant-appellant, from an Idaho Department of Water Resources (Water Resources) administrative decision approving applications for permit Nos. 32-7128 and 32-7136 to appropriate water, subject to thirteen conditions, by Birch Power Company (Birch Power). A hearing was held before Water Resources at which Birch Power, D & D Corporation, the Idaho Department of Fish and Game (Fish & Game), and the U.S. Bureau of Land Management (BLM) were afforded the opportunity to present and contest evidence. Water Resources rendered its decision in light of the evidence presented at the hearing.

D & D Corporation asserts that Water Resources has abused its discretion by imposing conditions which require some of the water saved by Birch Power's project to be left in the natural channel of Birch Creek. The Birch Power project utilizes several water conservation measures including a new point of diversion, sealing of the feeder ditch, and conveyance of water in steel penstocks. Water Resources has required Birch Power to provide a bypass flow from the water saved so the project will not dewater the creek in conflict with the local public interest.

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The appeal is brought pursuant to I.C. § 42-1701A(4), in accordance with I.C. § 67-5215(f), and is confined to the record. The Court's role is not to substitute its local public interest judgment for that of Water Resources on whether the project is in the local public interest, as D & D Corporation asserts, but either to affirm the decision, or upon a finding of an abuse of discretion by Water Resources, to remand the case to Water Resources for further proceeding. Shokal v. Dunn, ___ Idaho ___, 707 P.2d 441, 450 (1985).

Course of Proceedings

On September 8, 1982, Birch Power filed with Water Resources application for permit No. 32-7128 to appropriate 45 cfs of water for hydropower generation from Birch Creek in Clark County. Protests were filed with Water Resources. On January 3, 1984, Birch Power filed application for permit No. 32-7136 to appropriate an additional 30 cfs of water for hydropower generation from Birch Creek to be used in combination with application No. 32-7128. Protests were filed.

On February 23, 1984, Water Resources issued an order granting D & D Corporation leave to intervene in the matter of the applications. On April 5, 1984, Water Resources held a combined hearing on both applications. At the hearing, Birch Power dropped its request for a 5 cfs bypass flow of water in Birch Creek and left the allocation of the saved water to the discretion of Water Resources. Tr. pp. 3-5.

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On November 27, 1984, Water Resources served an Order Issuing Proposed Decision with attached Proposed Memorandum Decision and Order on the parties. Exceptions to the proposed decision were received from Fish & Game, the Birch Creek Water users, BLM and D & D Corporaton. No requests for oral argument before Water Resources were received.

On March 26, 1985, the director of Water Resources signed the Order Adopting Modified Memorandum Decision and Order. On the following day Water Resources issued the Modified Memorandum Decision and Order, and the Order Adopting the decision.

On April 25, 1985, D & D Corporation filed its Petition For Review to this Court in accordance with I.C. § 67-5215(b). Additional proceedings before this Court are not enumerated.

Statement of Facts

Both Birch Creek and the Reno Ditch lose significant amounts of water from their channels to seepage. R.p. 177. Water Resources found that this existing seepage water is lost and not recovered in the water system. R.p. 178. Reno Ditch diversion, point 'b' on the map, diverts the entire flow of Birch Creek throughout the year, dewatering the natural streambed below point 'b' except when the creek is frozen. Tr. pp. 124, 125. D & D Corporation, in conjunction with Ben Wilding, diverts water from Birch Creek, through approximately 7 1/2 miles of the Reno Ditch, for delivery at their irrigation splitter box at point 'c' on the map (lower right). D & D Corporation presented evidence that

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during some summer periods there is a consistent shortage of water to fill the joint Reno Ditch water rights as measured at point 'c', but not at point 'b'. Tr. pp. 124, 129.

D & D Corporation did not present any evidence regarding the quantity or priority of its individual water rights or the amount of water shortage it allegedly experiences. No evidence was presented on this issue by D & D Corporation. On the contrary, Mr. Phillips, D & D Corporation's Ranch Manager, testified that the corporation sinks all the water available to it on the ranch starting in January of an average year. Tr. p. 129. Robert McCardy, BLM wildlife biologist, testified that Ben Wilding is irrigating some of his land for the purpose of creating riparian vegetation, Tr. p. 145-46.

Birch Power applied to Water Resources for permission to divert water from Birch Creek through a new system, at point 'a' on the map, for the nonconsumptive use of hydropower generation. After powering the turbine, the water would be discharged into Reno Ditch at a location within 3 miles of point 'c'. Birch Power acknowledged that diversion of the entire amount of water in the creek at point 'a' would result in dewatering 3,000 ft. of natural stream and the majority of the Reno Ditch. Tr. p. 20.

The Idaho Water Resource Board has recognized a specific reach of Birch Creek, which includes the stretch of natural channel between points 'a' and 'b' on the map, for its recreational, fish, and wildlife values. R. pp. 132-34. The creek not only

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supplies irrigation and stock water, but is also heavily used by campers and fishermen, and is a vital water source for local wildlife and vegetation. See R. pp. 175, 178. Much of the creek is a blue ribbon trout fishery. R. pp. 132-34. Idaho's largest antelope herd summers, winters and fawns in the valley supported by the creek. Tr. p. 137. The creek supports a riparian ecosystem that is used by many wildlife species. Id. Free water and riparian vegetation is very scarce in the area. Tr. p. 135. Some species would not be present in the valley without the vegetation and water of Birch Creek. Id. Robert McCardy testified that a flow of 5 cfs of water in the natural channel of Birch Creek would maintain the existing riparian vegetation. Id. at 160.

Birch Power, on the other hand, applied to develop part of the Birch Creek resource for hydropower purposes. Testimony indicated that the beneficial result of this development would be jobs for the construction, maintenance, and planning of the facility; more business in the locality; more tax revenue for state and local government; less dependency on foreign oil as an energy source; a reduction in the operational expenses of the Reno Ditch irrigators since Birch Power would assume the costs and responsibility of maintaining the diversion system; an increase in the amount of water available in the system; and the return of capital to an Idaho investor from an Idaho investment. See Tr.pp. 15-20, 24-29.

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Furthermore, Birch Power developed a plan in conjunction with Fish & Game and the BLM to mitigate the environmental impacts of its project while simultaneously protecting the Reno Ditch irrigators from injury. Birch Power plans to use a biologically safe chemical sealant to line its new feeder ditch. R. pp. 177-78. In addition, the gradient of the feeder ditch would be lessened from that existing in Reno Ditch to reduce scouring and water would be transported through a steel penstock in other areas of the project. R.p. 175. As a result of these efforts the comparable water loss from Birch Creek and the Reno Ditch would be cut in half. Id. Birch Power would develop a new fishery in the feeder ditch to mitigate the loss of the fishery in the 3,000 ft. of natural stream. R.p. 178. Water saved by Birch Power's efforts would be left in the natural channel as a bypass flow in an effort to maintain riparian vegetation and provide stockwater. See R.pp. 181. At the hearing, Birch Power disclaimed any interests in the saved water. Tr.pp. 3-5. In addition, Birch Power agreed to plant new vegetation along the feeder ditch to mitigate damage to the Birch Creek ecosystem. R.pp. 87-89.

Birch Power had two options, A and B, under consideration for development at the time of the hearing. Evidence was received that option A would save 5 to 6 cfs of water from the existing bed loss in Birch Creek and the Reno Ditch, while option B would save 10 to 11 cfs from the same area. Tr. pp. 18-19, 30-33. D &

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D Corporation had received Birch Power's report on the water savings prior to the time of the hearing. R. pp. 121-25. The original hearing date was postponed specifically in order that D & D Corporation could present evidence from its own expert, Mr. Ray Michener, on the amount of water to be saved from the new project. R. pp. 121-25.

The Director's decision imposed conditions upon Birch Power's applications to safeguard the public interest. The bypass flow was limited to the amount of water saved, up to a maximum of 5.0 cfs, by Birch Power's project. R. p. 181. The Director found that this saved water is presently lost to the existing water system and consequently that the Reno Ditch irrigators would not be injured by the Birch Power project and the condition requiring a bypass flow for stock water and riparian vegetation based on water saved by the project. R. p. 179. D & D Corporation presented no evidence on the priority date of the watering rights in the area. Evidence received at the hearing indicates that water has been used for stock watering since the area was first settled. Tr. pp. 165-66.

Reno Ditch has apparently existed in its present condition since the previous century or earlier part of this century. D & D Corporation has not experienced any shortage of water as measured at its point of diversion. Tr. p. 126. The essence of the Director's decision is that D & D Corporation's claimed injury is not paramount to the public interest in the

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areas of new development, existing stock watering uses, and the protection of valuable wildlife and riparian habitat on Birch Creek. See R.p. 180.

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ISSUE ON APPEAL

Whether substantial evidence supports the Director of the Department of Water Resources' finding that the local public interest requires that a portion of the water salvaged by the Birch Power project be allowed to remain in the natural channel of Birch Creek to maintain the riparian vegetation and to satisfy livestock watering rights.

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ARGUMENT

I.

THE BIRCH POWER PROJECT AS APPROVED BY THE DIRECTOR SATISFIES THE PUBLIC INTEREST CRITERION OF SECTON 42-203A, IDAHO CODE

Idaho Code § 42-203A (Supp. 1985) states the authority of the Director of the Idaho Department of Water Resources (Director) to act upon applications to appropriate unappropriated water. Idaho Code § 42-203A (Supp. 1985) states in part as follows:

> Such hearing shall be conducted in accordance with the provisions of section 42-1701A(1) and (2), Idaho Code. The director of the department of water resources shall find and determine from the evidence presented to what use or uses the water sought to be appropriated can be and are intended to be applied. In all applications whether protested or not protested, where the proposed use is such...(e) that it will conflict with the local public interest, where the local public interest is defined as the affairs of the people in the area directly affected by the proposed use; the director of the department of water resources may reject such application and refuse issuance of a permit therefor, or may partially approve and grant a permit for a smaller quantity of water than applied for, or may grant a permit upon conditions.

In Shokal v. Dunn, ___ Idaho ___, 707 P.2d 441 (1985), the Idaho Supreme Court interpreted Idaho Code § 42-203A and concluded that the proposed dewatering of a 700 foot section of Billingsley Creek raised significant public interest and public trust concerns. Id. at 451. The Court emphasized that Idaho Code § 42-204A places upon the Director the affirmative duty to assess and protect the public interest. Id. at 448 (emphasis in original).

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A. The Proponents of a Particular Public Interest Element Bears the Burden of Demonstrating its Degree of Impact

The Shokal case involved a petition for judicial review of a decision of Water Resources granting the applicant a permit to appropriate 100 cfs of water from Billingsley Creek for fish propagation and hydropower generation. The Supreme Court thoroughly reviewed the procedure and elements involved in Water Resources' public interest evaluations and conditions in decisions rendered under I.C. § 42-203A. On the issue of which parties bear the burden of production, the Court was very clear.

> Those applying for permits and those challenging the application bear the burden of demonstrating which elements of the public interest are impacted and to what degree. As Judge Schroeder correctly noted below, this burden of production lies with the party that has knowledge peculiar to himself. For example, the designer of a fish facility has particularized knowledge of the safeguards or their lack concerning the numbers of fish that may escape and the amount of fecal material that will be discharged into the river. As to such information the applicant should have the burden of going forward and ultimately the burden of proof on the impact on the local public interest. On the other hand, a protestant who claims a harm peculiar to himself should have the burden of going forward to establish that harm.

707 P.2d at 450.

Birch Power, the applicant in the present case, produced substantial evidence in favor of its application to appropriate water for hydropower production. Birch Power presented evidence on the project's hydropower generation, its production of income, the creation of new jobs from the project, and a reduction in

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U.S. dependency on foreign oil as a result of the project.

Fish & Game established that much of Birch Creek is a blue ribbon trout fishery and that fish habitat would be destroyed if substantial dewatering of Birch Creek occurred. R. pp. 132-34, 1978. The BLM established the importance of Birch Creek in regards to range management. The creek supports Idaho's largest antelope herd in addition to a large variety of other wildlife and vegetation. Tr. p. 137. Furthermore, cattle and sheep stock grazing on BLM land utilize the water below point 'a'. Tr. p. 142. Livestock have been in the area utilizing Birch Creek since the area was first settled. Tr. pp. 155-56.

Replacement of comparable vegetation along the natural channel of Birch Creek would take 35 to 40 years. Tr. p. 140. Without the vegetation, some species of wildlife existing in the valley would cease to exist there. Robert McCardy, the BLM wildlife biologist testified that: "Birch Creek is like an oasis on a desert, especially near the Reno Ditch where free water and riparian vegetation is very scarce." Tr. p. 139. McCardy further testified and the Director found that 5 cfs of water left in the natural channel of Birch Creek would maintain the existing riparian vegetation. Tr. pp. 160, 178.

In contrast, the record indicates a lack of any evidence of a peculiar public interest claim on behalf of D & D Corporation. Rather, the Corporation chose only to address the issue of whether the project will interfere with D & D's existing water

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rights under I.C. § 42-203A(5)(a)(Supp. 1985). Counsel for the Corporation framed the issue as follows:

> Mr. Examiner, I would like you to know that as far as D & D is concerned, we are withdrawing most of our complaints in view of the amendment here, the concern of D & D is that they receive at least the same number of cfs's as they have experienced historically in the past and of course when the time comes, if there is an increase, we will make the appropriate application to take advantage of that increase. Other than that we have no protest. We take Mr. Sorenson for his testimony and also put him on notice that if for some reason there is not the same number of cfs's delivered, then of course, he will hear from us.

Tr. p. 33.

This issue is discussed infra under the heading of III A.

B. Birch Power Demonstrated that its Project Would Provide Numerous Public Benefits and Not Interfere with D & D Corporation's Historic Water Supply

In regard to which party carries the burden of proof in I.C. § 42-203A hearings before Water Resources, the Idaho Supreme Court in Shokal stated:

> The burden of proof in all cases as to where the public interest lies, as Judge Schroeder also correctly noted, rests with the applicant: [I]t is not [the] protestant's burden of proof to establish that the project is not in the local public interest. The burden of proof is upon the applicant to show that the project is either in the local public interest or that there are factors that overweigh the local public interest in favor of the project.

707 P.2d at 450.

Substantial evidence was received at the hearing regarding the valuable fish and wildlife habitat provided by Birch Creek,

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and its heavy recreational use by the public, and its use by livestock. Birch Power demonstrated that it was willing and able to meet the public interest concerns presented before Water Resources. First, Birch Power provided plans and data which demonstrated the ability of the project to save water. Birch Power then worked with the BLM and Fish & Game to mitigate damages to the fish, wildlife, vegetation, range management and recreational uses occurring within Birch Creek's environment which ordinarily would be adversely affected by the project. Tr. pp. 48-49.

Birch Power agreed to provide tailored trout habitat in its feeder ditch to provide a better fishery than now currently exists in the 3,000 ft. stretch of natural channel of Birch Creek. Birch Power also agreed to plant new vegetation along its feeder ditch and provide recreational access to the feeder ditch.

Birch Power will use a biologically safe chemical sealant in the feeder ditch to accomplish water savings which it originally intended to be used for a bypass flow to maintain the riparian vegetation existing along the 3,000 ft. of Birch Creek and provide stock water. At the hearing Birch Power left the disposition of the saved water to Water Resources' discretion.

Furthermore, Birch Power took the responsibility to maintain the feeder ditch and diversion from Birch Creek, thereby relieving the Reno Ditch water users of the costs of maintaining the majority of the ditch. In addition, since the feeder ditch

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would not freeze solid in winter months, like Birch Creek does below point 'b', D & D Corporation would have water available over a greater period of time than it currently does. Finally, Birch Power's Option B would save substantially more than the 5 cfs bypass flow necessary to maintain the Birch Creek vegetation. Birch Power's evidence established that development of Option B is more attractive financially than Option A.

With the foregoing evidence presented, Water Resources was under the affirmative duty to assess and protect the public interest elements. In Shokal, the Idaho Supreme Court plainly set forth the parameters of Water Resources' function under I.C. Section 42-203A: "The determination of what elements of the public interest are impacted, and what the public interest requires, is committed to Water Resources' sound discretion." 707 P.2d at 450.

II.

D & D CORPORATION, IS NOT ENTITLED TO ANY OF THE WATER SAVED BY THE EFFORTS OF BIRCH POWER

A. Idaho Favors the Conservation and Efficient Use of the Water Resources of the State

The principle of conservation and efficient use of the water resources of Idaho is not a recent development. The principle has existed since statehood. "It is the policy of the laws of this state, and it has been so declared from time to time by this Court, to require the highest and greatest possible duty from the waters of the state in the interest of agriculture and other

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useful and beneficial purposes." Farmers' Etc. Co. v. Riverside Irr. Dist., 16 Idaho 525, 535 (1909); See also Washington State Sugar Co. v. Goodrich, 27 Idaho 26, 44 (1915). "Economy must be required and demanded in the use and application of water." Farmers, 16 Idaho at 535. "It is the policy of the law to prevent the wasting of water." Stickney v. Hanraham, 7 Idaho 424, 433 (1900). "The policy of the law of this state is to secure the maximum use and benefit, and least wasteful use, of its water resources." Poole v. Olaveson, 82 Idaho 496, 502 (1960). "It is clearly state policy that water be put to its maximum use and benefit." Parker v. Wallentine, 103 Idaho 506, 513 (1982).

Likewise, it is the policy of Idaho law to encourage rather than discourage measures to prevent waste of water or to increase the effective use of water. Reynolds Irr. Dist. v. Sproat, 69 Idaho 315, 334 (1949). "It is the policy of the law to encourage the most efficient, and least wasteful, use of the waters of the state." Simonson v. Moon, 72 Idaho 39 (1951). "The governmental function in enacting not only I.C. § 42-607, but the entire water distribution system under Title 42 of the Idaho Code is to further the state policy of securing the maximum use and benefit of its water resources." Nettleton v. Higginson, 98 Idaho 87, 91 (1977). The people and legislature of Idaho have further emphasized the need to monitor water use by formulating and implementing "a state water plan for optimum development of water resources in the public interest." Idaho Const. Art. 15 § 7.

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"The welfare of the people of this state is dependent upon conservation, development and optimum use of our water resources." I.C. § 42-1731 (1971).

B. Idaho Law Generally Provides That Those Who Save Water are Entitled to the Use of the Water Conserved

The general principle of water conservation is that the person who saves the water is entitled to it. Reno v. Richards, 32 Idaho 1, 6 (1918); Basinger v. Taylor, 36 Idaho 591, 596 (1922); Hill v. Green, 47 Idaho 157 (1928). Hutchins has defined salvaged waters as "parts of a particular stream or other water supply that have been lost, as far as any beneficial use is concerned, to any of the established users, but are saved from further loss from the supply by artificial means and so are made available for use." II W. Hutchins, Water Rights Laws in the Nineteen Western States, 65 (1974). In Reno v. Richards, an appeal of an adjudication of the waters of Birch Creek, the Idaho Supreme Court adopted the general rule that those who save water are entitled to the use of the water conserved. 32 Idaho at 6, 13.

The Reno case illustrated two different methods of saving water. The first was by clearing and streamlining the channel of Pass Creek and constructing a ditch to carry the water through a new route to Birch Creek where the industrious parties diverted the amount of water saved downstream. Id. at 6. The second method was by constructing two ditches to substitute for the

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natural channel of Birch Creek in delivering water. The trial court found that the ditches conserved and prevented from waste approximately 5 cfs of Birch Creek water. Id. at 11. On remand, the Supreme Court directed the trial court to determine the amount saved by the individual parties and to award each with the amount of water saved by it. Id. at 11-13. "There is no incentive for the accomplishment of such saving of water, unless the persons who have saved the same shall reap the benefits of their efforts." Id. at 13.

The Idaho Supreme Court reaffirmed this policy of law in the case of Basinger v. Taylor, 36 Idaho 591 (1922), under facts similar to the present case. The Basinger case was one of a series of appeals regarding rights to the waters of Dry Creek, in Butte County. The focus of the case was the determination of rights in water saved by the efforts of the Blaine County Irrigation Company (Improver). Three principle parties were involved: (1) the Improver; (2) the individual appellants who had diverted water through Farmers' Ditch; and (3) the Taylors who also had a diversion below the Improver's ditch. The water for the Farmers' Ditch had the earliest priority date, 1891. The Taylors had a right to 8.8 cfs with a priority date prior to the Improver's 1912 date of appropriation. The Taylor's point of diversion was 300 feet upstream of the Farmer's Ditch.

In 1912, the Improver put in a pipeline upstream from the diversions of Farmers' Ditch and the Taylors. Improver then

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supplied water to the Farmers' Ditch irrigators from the pipeline and the Farmers' Ditch diversion was closed. Improver then claimed the right to the 10% loss of water saved from the natural channel between the pipeline intake and the Farmers' Ditch diversion point (11 cfs). In addition, Improver also claimed the 50% loss of water saved from loss in Farmers' Ditch (22 cfs). Id. at 596. The Improver claimed that under Reno, it had a paramount right to the saved water over all prior appropriators, including the Taylor's. Id. at 592. The Taylors argued that the Improver could not predicate any right upon its savings of water, nor could it transfer the point of diversion from Farmers' Ditch to the pipeline intake.

The Court ruled that the Improver had a paramount right to the water saved from the natural stream, but modified the award to 5.5 cfs. Id. at 596-97, 599. The Court did not reward the Improver for the water saved from Farmers' Ditch because the loss was unreasonable and excessive. Id. 597. The Court stated that under the facts, it was not necessary to remand the case for a third trial to determine the amount of water actually saved by Improver. Id. at 599.

In the present case, Basinger mandates that Birch Power, as the salvager, is entitled to the water saved from the Reno Ditch if such loss is reasonable and not excessive. The Director did not find that the loss of water in Reno Ditch was excessive or unreasonable as measured by legal standards. Consequently, Birch

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Power is entitled to the water saved from loss by its efforts. Birch Power has relinquished its claims to the saved water in favor of Water Resources and a determination by the Director.

D & D Corporation, on the other hand, cites Reynolds Irrigation Dist. v. Sproat, 70 Idaho 217 (1950); Linford v. G. H. Hall and Son, 78 Idaho 49 (1956); and Hidden Springs Trout Ranch v. Hagerman Water, 101 Idaho 677 (1980), for the proposition that it has the right to reclaim and beneficially use seepage and waste water previously lost in its lines of water transmission. The Corporation, however, fails to apply the key element in these cases that the party awarded the previously lost water was the party who had actually saved it. In the present case, the entire amount of saved water is accomplished solely from the efforts of Birch Power, not D & D Corporation. D & D Corporation is not entitled to the reclaimed seepage water unless D & D actually saves the water. In this instance, the language and ruling of the Court in Reno merits repetition: "There is no incentive for the accomplishment of such saving of water, unless the persons who have saved the same shall reap the benefits of their efforts." 32 Idaho at 13. D & D Corporation has expended no efforts to accomplish any water savings. If the project were to be denied, no water would exist for D & D to appropriate. It is contrary to Idaho's case law, constitution and statutes to reward D & D Corporation, a passive party, with water which has been saved by Birch Power.

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III.

D & D CORPORATION WILL NOT BE INJURED BY THE BIRCH POWER PROJECT AS APPROVED BY THE DIRECTOR

A. The Director Correctly Concluded the Project Will not Reduce the Quantity of Water Available to Existing Water Rights Under I.C. § 42-203A(5)(a).

The Director must consider, under I.C. § 42-203A(5)(a), whether a proposed project will interfere with existing water rights. D & D Corporation produced no evidence indicating that the Corporation would be harmed by allowance of the project as approved by the Director. D & D Corporation did not contest the accuracy of Birch Power's projected water savings with expert testimony, despite the fact that the original hearing date was postponed specifically in order that the D & D Corporation expert, Mr. Ray Michener, could testify on the amount of water to be saved by Birch Power's project.

The Corporation presented testimoney that it consistently experiences a water shortage during some summer periods at its irrigation splitter box, point 'c' on the map, but that there was no shortage at point 'b', the headgate for Reno Ditch. No specific testimony was presented on how much or how long of a shortage D & D Corporation historically experiences. The Corporation did present the testimony of its ranch manager that it could devleop another 250 acres of land with an additional 5 cfs of water. Tr. pp. 129-130. This testimony, however, indicates that the Corporation desires to enlarge its water rights, instead of curing a water shortage. The Corporation presented no evidence

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that it irrigates less land than available under its water rights because of any shortage. On the contrary, D & D Corporation put on evidence that it uses all the water it can get to sink on the ranch including time outside of the irrigation season and throughout the year. This appears to be the Corporation's practice even when it has water available in excess of its water rights. See R. p. 22.

Testimony also indicated that Ben Wilding, the other Reno Ditch water user, irrigates to maintain his own riparian habitat. Tr. pp. 145-46. Indeed, Wilder, the local watermaster, acknowledged that local water users have long been aware of ditch bed losses of water in Reno Ditch, yet they have not taken any action. Tr. p. 127. Wilding also stated that the water users had studied Birch Power's proposal and had concluded that the project "would save us a tremendous amount of water." Tr. pp. 127-28.

D & D Corporation presented no evidence on its individual water rights or their respective dates of priority. The Corporation presented no evidence that its water rights precede those for livestock in the area. Further, the Corporation made no showing of plans or a commitment to eliminate water loss in Reno Ditch on its own efforts or to share in the costs shouldered by Birch Power to save water. Under such facts, D & D will not be injured as a result of the Director's approval of the Birch Power Project.

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Water rights in Idaho are measured from the point of diversion of the water. Basinger, 36 Idaho at 597. In the instant case, the 44 cfs of water rights belonging to the Reno Ditch irrigators is measured at the headgate of the Reno Ditch at point 'b' on the map. The extent of a water right includes the allowance of a reasonable loss of water from the ditch conveying the water to its place of use. Id. Evidence received at the hearing before Water Resources established that the Reno Ditch irrigators experience no shortage of water at the headgate of its diversion at point 'b' during any period of the summer. Tr. p. 126.

The corresponding measurement of the water received at the Reno Ditch irrigation splitter box, point 'c' on the map, is approximately 30 cfs when 44 cfs of water is delivered at point 'b'. Tr. p. 17. A basic principle of Idaho's appropriation doctrine is that the beneficial use is the measure and limit of an appropriative water right. I.C. § 42-220 states that no water right holder "shall at any time be entitled to the use of more water than can be beneficially applied on the lands for the benefit of which such right may have been confirmed."

It follows that as measured at the irrigation splitter box, the Reno Ditch irrigators have historically beneficially used only the quantity of approximately 30 cfs of water on their appurtenant acreage. If the entire loss of water in the Reno Ditch were to be eliminated tomorrow, the Reno irrigators would

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not be entitled to switch the measuring point of 44 cfs from point 'b' to point 'c' unless such use of water was not an enlargement of their original water rights. As previously noted, D & D produced evidence that if it received an additional 5 cfs of water it would put 250 new acres into production. This clearly would be an enlargement of D & D's water rights.

> [I]f conditions change after an appropriation is made and the necessity for the beneficial use diminishes, then to the extent of the lessened necessity, the appropriator no longer has use for the excess water and the change inures to the benefit of subsequent appropriators who have need for it.

Clark, 1 Waters and Water Rights, § 19.2, p. 86-87 (1967).

The doctrine of appurtenancy does not allow an appropriator to enlarge the original priority date of a water right to additional lands. Dickenson, Installation of Water Saving Devices as a Means of Enlarging an Appropriative Right to Use of Water, 2 Nat. Resources Law, 272 at 285, 286 (1969). Instead, a new application for the enlarged use must be filed with a new priority. This procedure allows the doctrine of prior appropriation to apply to the water which had been used inefficiently by the original appropriator and makes possible a more intense use of water resources.

At the hearing, counsel for D & D Corporation, clearly acknowledged this fundamental concept of western water law when he stated, "of course when the time comes, if there is any increase (in the amount of water received by D & D Corporation),

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we will make the appropriate applications to take advantage of that increase." Tr. p. 33.

In addition, D & D Corporation's winter water supply will not be shut off due to freezing as currently occurs with the Reno Ditch diversion because of the location of the feeder ditch and its construction. Tr. p. 118. Consequently, D & D will have water available for stock throughout the year. Further, if Birch Power exercises an option similar to Option B as opposed to Option A, an additional 5-6 cfs of water over the bypass flow would be available to D & D Corporation at the outflow of the feeder ditch. Evidence was received that Option B is a better financial investment than Option A. Tr. p. 71. D & D would not have to incur any additional expenses other than to file applications with Water Resources to divert the additional water at its splitter box. Birch Power also presented evidence that a supplier would guarantee the effectiveness of its ditch sealant in preventing seepage losses. Tr. p. 55. The record indicates that the cumulative impact of the Project upon D & D Corporation would not be negative or even neutral, but rather a substantial positive impact.

Water Resources received substantial evidence in support of the Director's conclusion of law that:

> The water that will be saved by sealing the feeder ditch is new water that has never been available for use by the Reno Ditch irrigators, therefore, the existing irrigation rights will not be injured if the water being saved is used to provide water for livestock and to protect the public interest by

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> preserving the riparian habitat along the natural stream channel of Birch Creek. The person who saves the water is entitled to the benefit of the water with his right to the saved water being prior to the right of the other parties. Reno v. Richards, 32 Idaho 1, 6, 13 (1918) and Basinger v. Taylor, 36 Idaho 591, 596-597, 599 (1922).

R. p. 179.

B. Since D & D Corporation Will Not Be Injured It May Not Prohibit The Approved Project

At the hearing, counsel for Birch Power aptly noted that Birch Power's applications are analogous to a transfer in the point of diversion. Tr. p. 133. If the present case were to be decided under the criteria used in diversion transfer cases, D & D Corporation would have to suffer a substantial injury - "a real and actual injury" - before the transfer would be prohibited. Beecher v. Cassia Creek Irr. Co., 66 Idaho 1, at 7-8 (1944). In a case in which an irrigator was forced to accept a change in both point of diversion and source of water supply, the Utah Supreme Court cited Basinger, among other cases for the proposition that:

> Indeed, the right to change the means or method of diversion of the prior appropriator, if it becomes necessary in order to make a larger use of the public waters by a subsequent appropriator if it can be done without injury to the prior appropriator, is no longer an open question anywhere.

United States v. Caldwell, 231 P.434 (Utah 1924).

As previously noted, D & D will benefit, not suffer, from the Birch Power Project. The only injury which D & D Corporation can complain of is the lost opportunity to save water from the Reno

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Ditch itself. This "opportunity", however, has been left unexercised for almost a century. D & D presented no evidence that it was willing to save any water through its own efforts or expenses. Since the Corporation has suffered no real or actual injury, it should not be allowed to prohibit the Birch Power Project.

Further, Idaho law has never allowed appropriators to use their rights in complete disregard of the rights of the public. Schodde v. Twin Falls Water Co., 224 U.S. 107, 120-121 (1912). The issue before the U.S. Supreme Court in Schodde was whether under Idaho law an upstream appropriator could prohibit the construction of a dam for a large irrigation project because the backwater from the dam would render his diversion method by a water wheel inoperative. The Court freely excerpted from the opinions of the lower courts and ruled that those decisions clearly portrayed the situation and correctly applied the appropriate law. Id. at 121-122.

> His claim (Schodde) is that he cannot divert it by the means he first adopted for taking the waters from the river, and that the defendant by placing a dam across the river has deprived him of the right to the current of the river which prior to the erection of the dam rendered his means of diversion available. Is this current and the means adopted for the diversion of the appropriated water part of or attached to plaintiff's right of appropriation? It is contended on the part of the plaintiff that the current of the river is necessarily appurtenant to the water location and that the means of utilizing that current is attached as an appurtenance to the appropriation. We have not been referred to any case - and we know of none - where either of these propositions has been upheld.

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Id. at 119-20.

In the present case, D & D Corporation has substituted the Reno Ditch for Schodde's water wheel. D & D asserts that it has the right to water lost in the Reno Ditch even though that water is not needed for D & D to receive its historic and beneficially used supply of water under the Birch Power plan. D & D Corporation, in effect, is asking for the absolute right to divert by its inefficient means in Reno Ditch at the expense of the public interest. The cost to the public interest would be the nonexistence of the bypass flow.

> We say within reasonable limits, for this right to water, like the right by prior occupancy to mining ground or agricultural land, is not unrestricted. It must be exercised with reference to the general condition of the country and the necessities of the people, and not so as to deprive a whole neighborhood or community of its use and vest an absolute monopoly in a single individual.

Id. at 121.

The Colorado Supreme Court in Fellhauer v. People, 447 P.2d 986, 994 (1969) addressed the apparent conflict between existing "vested" inefficient diversions and the policy of maximum or optimum utilization of water resources:

> It is implicit in these constitutional provisions that, along with vested rights, there shall be maximum utilization of the water of this state. As administration of water approaches its second century the curtain is opening upon the new drama of maximum utilization and how constitutionally that doctrine can be integrated into the law of vested rights. We have known for a long time that the doctrine was lurking in the backstage shadows as a result of the accepted, though oft violated, principle that the right to water does not give the right to waste it.

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Id. at 994 (emphasis in original).

Quoting an earlier decision, the Colorado Court elaborated further:

> At his own point of diversion on a natural water course, each diverter must establish some reasonable means of effectuating his diversion. He is not entitled to command the whole or a substantial flow of the stream merely to facilitate his taking the fraction of the whole flow to which he is entitled. Schodde v. Twin Falls Land & Water Co., 224 U.S. 107, 119, 32 S.Ct. 470, 56 L.Ed. 686. This principle applied to diversion of underflow or underground water means that priority of appropriation does not give a right to an inefficient means of diversion.
>
> . . .
>
> The plaintiffs cannot reasonably 'command the whole' source of supply merely to facilitate the taking by them of the fraction of the entire flow to which their senior appropriation entitles them.

Id.

The public interest criterion in I.C. § 42-203A was enacted to help implement Idaho Const. Art. 15, § 7 and the State Water Plan. See Idaho State Water Plan, Policy 1 (1982). D & D Corporation does not have the paramount right to appropriate water in complete disregard of Idaho law and the public interest.

IV.

THE PERMIT CONDITION REQUIRING A BYPASS FLOW IN BIRCH CREEK IS NECESSARY TO SATISFY THE LOCAL PUBLIC INTEREST

"I.C. § 42-203A places upon the Director the affirmative duty to assess and protect the public interest." Shokal, 707 P.2d at 448. "The Director of Water Resources has...considerable

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flexibility and authority...to protect the public interest." Id. The Director carried out his duty in the instant case.

In order to protect existing irrigation rights, Water Resources ordered that the bypass flow shall be composed solely of water saved by the efforts of Birch Power.

> Eleven percent of the flow of Birch Creek at the diversion to the feeder ditch, the amount of water saved by the new ditch, or 5 cubic feet per second whichever is the least, shall be allowed to flow past the feeder canal diversion in the natural channel of Birch Creek. The amount of water saved shall be computed by subtracting the amount of water being lost in the new feeder ditch which can be measured, from the amount that would have been lost in the 3,000 feet of stream channel and the Reno Ditch, which is 22% (0.22) of the water flowing in the stream at the new point of diversion.

R. p. 181.

The purposes of the bypass flow were to provide water for livestock and to protect the public interest by preserving the riparian habitat along the natural channel of Birch Creek. R. p. 179.

Also in order to protect existing irrigation rights and the public interest elements served by the bypass flow, Water Resources ordered that Birch Power operate and maintain its project to save at least 11% of the flow at point 'a' (equivalent to a 50% reduction in water lost to the existing system).

> The feeder canal shall be constructed and maintained in a manner that will reduce the amount of seepage loss by at least 11% of the flow at the proposed point of diversion.

R. p. 181.

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In addition, Water Resources provided for the accurate measurement of the amount of water to be saved by Birch Power's project.

> A measuring device and lockable controlling works of a type acceptable to the Department (Water Resources) shall be permanently installed and maintained as part of the diverting works. A second measuring device shall be installed near the end of the feeder ditch so that the amount of water lost in the feeder ditch can be determined.

R. pp. 180-81.

A. Requirement of the Bypass Flow Was a Proper Exercise of Discretion by the Director

"The determination of what elements of the public interest are impacted, and what the public interest requires, is committed to Water Resources' sound discretion." Shokal, 707 P.2d at 450. This Court should rely on the judgment of Water Resources as to the weight of the evidence on questions of fact and the public interest analysis under I.C. § 42-203A. I.C. § 67-5215(g) (Supp. 1985); Shokal 707 p.2d at 450.

No substantial rights of D & D Corporation have been prejudiced because of the administrative proceedings conducted by Water Resources. D & D was present at the hearing, it presented evidence and it conducted cross-examination of witnesses. Substantial evidence was presented which supports Water Resources' condition requiring Birch Power to maintain a bypass flow of saved water.

Fish & Game and the BLM, as noted in part I of this brief, demonstrated which elements of the public interest would be

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impacted and to what degree, by the complete dewatering of 3,000 feet of Birch Creek. Range and wildlife management, recreational use, and livestock utilization, in the area would be impaired by a complete dewatering of Birch Creek. Uncontroverted evidence established that a bypass flow of 5 cfs, however, would maintain the riparian habitat along Birch Creek.

Birch Power demonstrated that its project will save the water necessary to provide the bypass flow. At least one potential subcontractor is willing to guarantee the efficiency of its ditch sealer. Tr.p. 55. Birch Power's water saving projections were unchallenged by D & D Corporation despite the fact that the original hearing was postponed solely for the purpose of having D & D's expert participate at the hearing.

A protestant who claims a harm peculiar to itself has the burden of going forward to establish that harm. Shokal 707 P.2d at 450. D & D Corporation failed to show that it would be harmed by the bypass flow condition. D & D presented no evidence on its individual water rights. Although D & D claims that it experiences a shortage of water during some periods, these claims are unfounded since a water right is measured at its point of diversion, not place of use. Contrary to D & D's claims, it will be benefited, not harmed by establishment of the Birch Power project approved by Water Resources.

B. The Condition Requiring A Bypass Flow Does Not Establish A Minimum Stream Flow

The Idaho Code and the State Water Plan make clear distinc-

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tions between the recognition of minimum stream flows on one hand, and the conditions imposed on water right permits in the public interest on the other. Minimum stream flows are provided for under I.C. §§ 42-1501 et. seq. and Policy 6 of the State Water Plan. Public interest conditions imposed on water right applications fall under I.C. § 42-203 and Policy 1 of the State Water Plan. A basic difference is that minimum stream flows are water rights and are protected as vested property rights under the law. The bypass flow, on the other hand, is merely a condition applied to Birch Power's water right applications.

I.C. § 42-203A allows for the balancing of public interest elements with new projects and provides the opportunity to mitigate damages to the public interest on a case by case basis. Birch Power's plan to provide for a new trout habitat in the feeder ditch in return for diverting the majority of Birch Creek from its natural channel is an excellent example of implementing the multi-purpose uses of Birch Creek water in the public interest. Requiring a bypass flow for the maintenance of valuable riparian habitat from the water saved by Birch Power's efforts is another excellent example. "The authority and duty of the Director to protect the public interest spring naturally from the statute." Shokal 707 P.2d at 448.

This same flexibility in optimum use planning is not available with minimum stream flows. In Shokal, the Court noted that the public interest elements in I.C. §§ 42-1501 and 42-203A

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overlap, but that they are two different statutory provisions. 707 P.2d at 448-49. The dewatering of any creek under I.C. § 42-203A raises significant public interest and public trust concerns. Id. at 451.

CONCLUSION

Water Resources has not abused its discretion in this case. The Director found that the saved water was previously lost to the water system and had not contributed as sub or return flow. The Director imposed conditions upon Birch Power, a nonconsumptive water user, to operate and maintain the proposed diversion in a manner that imposes no injury upon D & D Corporation. The facts indicate that D & D Corporation will not only be uninjured, but will benefit substantially from Birch Power's project. Birch Power is rewarded for its efforts in saving water through the approval of its water right permits for the project. Damage to the Birch Creek fishery is mitigated by the establishment of a new fishery in the feeder ditch. Damage to the riparian vegetation is mitigated by the existence of a bypass flow which will also supply livestock with water. Projects like Birch Power's, which have the potential for enhancement of the public interest, should be encouraged rather than thwarted by claims from inefficient water users. The general justification given for allowing an appropriator to make its own water diversion system more efficient is that no one has the right to force another to waste water for his own benefit. Hidden Springs Trout Ranch v.

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Hagerman Water, 101 Idaho 677, 681 (1980). This policy should also apply for the benefit of the public interest. D & D Corporation does not have the right to continue its wasting of water in Reno Ditch at the expense of the public interest and the optimum development and use of water resources in Idaho.

The Idaho Department of Water Resources respectfully requests the District Court to affirm the decision of the Director in approving application for permit Nos. 32-7128 and 32-7136 upon conditions because the challenged findings of fact are supported by substantial evidence and because the decision promotes the optimum development and conservation of water resources as mandated by Idaho law.

DATED this 20th day of June, 1986.

JIM JONES
Attorney General

KENNETH R. ARMENT
Deputy Attorney General
Department of Water Resources

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY That on this 20th day of June, 1986, true and correct copies of the foregoing DEPARTMENT OF WATER RESOURCES RESPONDENT'S BRIEF were mailed, postage prepaid to:

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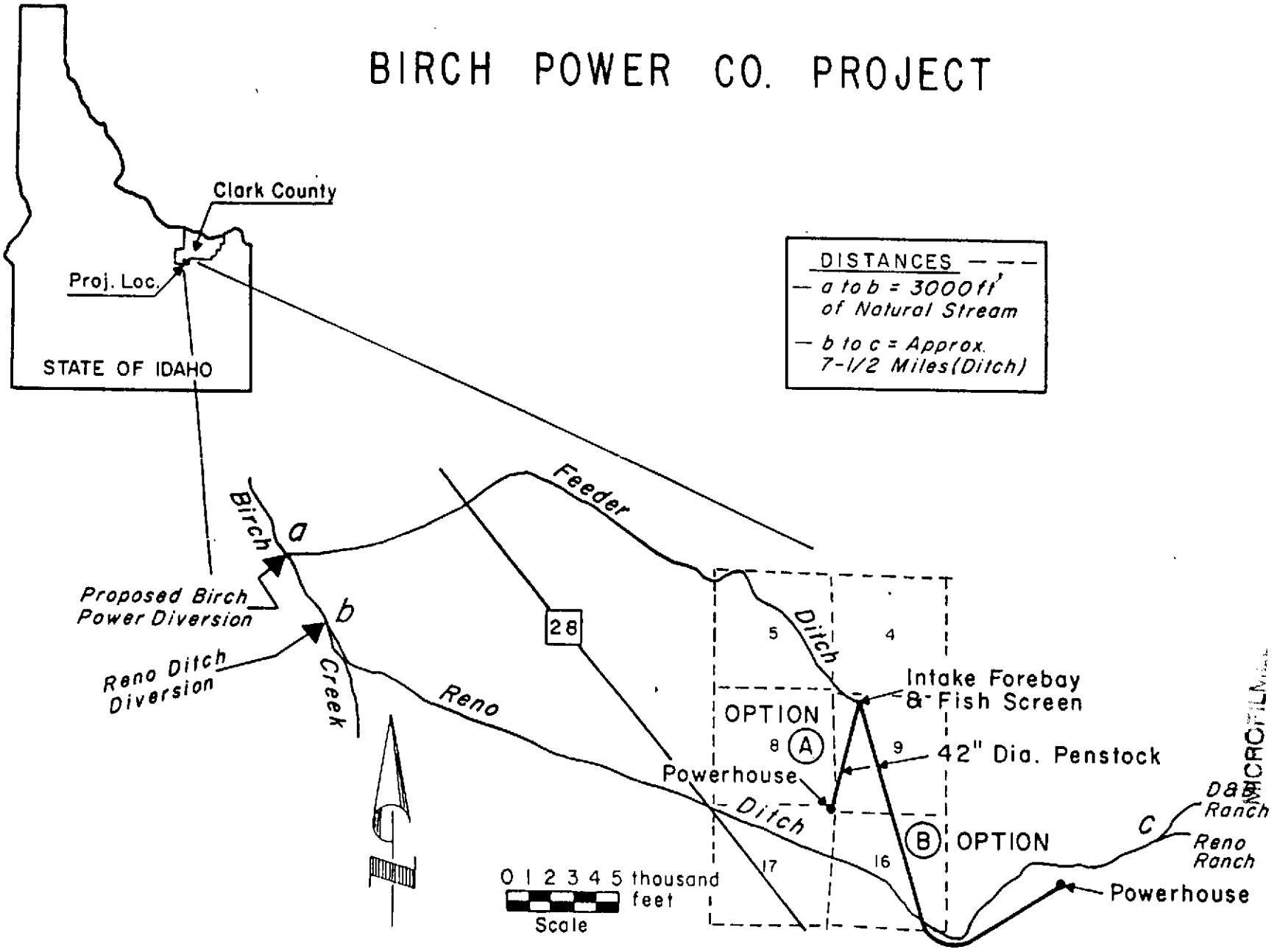
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Deputy Attorney General
Department of Water Resources

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BIRCH POWER CO. PROJECT



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Department of Water Resources

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BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME TED SORENSON d/b/a SORENSON ENGINEERING and IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-07252 (formerly No. 31-07646) IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.,	WITNESS LIST OF PROTESTANT LAVAR NEWMAN

COMES NOW the Protestant, LaVar Newman, by and through his undersigned attorney of record, Blair Grover, and states that he anticipates call the following witnesses:

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Blaine Larsen	Dubois, Idaho
James Gneiting	566 North 3400 East Lewisville, Idaho
Owen J. Amy	Arco, Idaho

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Agents of U.S. Bureau of Land Management	Idaho Falls, Idaho
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Mac Wagoner	Dubois, Idaho
Bill Simmons	Mud Lake, Idaho
John Phillips	Dubois, Idaho

DATED this 27 day of February, 1998.

GROVER & ARCHIBALD

BLAIR GROVER

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I am a duly licensed attorney in the State of Idaho, with my office in Rigby, Idaho; that I served a copy of the foregoing document or pleading upon the following person(s) at the addresses below their names either by hand delivering, by facsimile transmission (Fax), or by mailing said document in the United States mail with the correct postage thereon, a true and correct copy thereof this 27 day of February, 1998.

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BLAIR GROVER

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BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

RECEIVED
MAR 0 2 1998
Department of Water Resources

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS NOS. 32-07128 AND 32-07136 IN THE NAME OF TED SORENSON d/b/a SORENSON ENGINEERING

and

IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-07252 (formerly No. 31-07646) IN THE NAME OF BIRCH CREEK RANCHES L.L.C.

WITNESS LIST

Ted S. Sorenson

Charles E. Brockway

Roland Winberg

John Phillips

William Simmons

Dated this 27th day of February, 1998.

Kent W. Foster

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JAN 0 8 2001

CERTIFICATE OF SERVICE

I hereby certify that I am a duly licensed attorney in the State of Idaho, resident of and with my office in Idaho Falls, Idaho; that I served a copy of the following described pleading or document on the attorneys listed below by hand delivering, by mailing or by facsimile, with the correct postage thereon, a true and correct copy thereof on this 27th day of February, 1998.

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BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF THE APPLICATION FOR AMENDMENT OF WATER RIGHT PERMITS Nos. 32-07128 and 32-07136 IN THE NAME OF TED SORENSON d/b/a SORENSON ENGINEERING	)	D & D WITNESS LIST
and	)	
IN THE MATTER OF APPLICATION FOR PERMIT NO. 32-07252 (formerly No. 31-07646) IN THE NAME OF BIRCH CREEK RANCHES, L.L.C.	)	

Protestant D & D Enterprises submits the following as witnesses it may call at the hearing on this matter:

Jack Barraclough

Jack Burnett

Ron Carlson

Jim DeMordaunt

Roger DeMordaunt

Dan Kotansky and others from the U.S.G.S.

Lavar Newman

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Steve Phillips

John Phillips

Bill Simmons

Todd Simmons

Mac Wagoner

Cleo Wilding

R.W. Erickson

Don Shenton

Greg Shenton

Ted Sorenson

Employees of ASCS Rigby office who have not yet been identified

DATED this 26th day of February, 1998.

PETERSEN, MOSS, OLSEN, CARR
ESKELSON & HALL

Wm. Charles Carr

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CERTIFICATE OF SERVICE

I hereby certify that I am a duly licensed attorney in the State of Idaho, with my office in Idaho Falls, Idaho, and that on the 26th day of February, 1998, I served a true and correct copy of the foregoing document on the persons listed below by first class mail, with the correct postage thereon, or by causing the same to be delivered as defined by Rule 5(b), I.R.C.P.

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