LEGEND: Types of Activity

Preconstruction and Other Work | Construction

LINE NO	CLASS AND ACCOUNT	PROGRAM ITEM	QUANTITY	UNIT	ESTIMATED TOTAL 1/	TOTAL TO JUNE 30, 68	FISCAL YEARS First	Second	Third	Fourth	Fifth	BALANCE TO COMPLETE	ESTIMATED COMPLETION DATE	LINE NO
	1	2	3	4	5	6	7	8	9	10	11	14	15	
1		IRRIGATION SERVICE LAND--FULL	2,270	Ac.						2,270 Ac.				1
2		MUNICIPAL AND INDUSTRIAL WATER	85	AF						85 AF				2
3											Initial Water Available			3
4	100	CONSTRUCTION PROGRAM												4
5	.06	WELLS	25.2	cfs	558,000	15,000	29,000	81,000	206,000	222,000	4,000			5
6	.01	Well Cluster No. 1	20.0	cfs	435,000	13,000	29,000	75,000	125,000	194,000	4,000			6
7	.02	Well Cluster No. 2	15.5	cfs	415,000	11,000	27,000	71,000	173,000	144,000	4,000			7
8	.03	Well Cluster No. 3	20.0	cfs	478,000	12,000	13,000	71,000	180,000	180,000	4,000			8
9	.04	Well Cluster No. 4					15,000	70,000	180,000	180,000	4,000			9
10	.05	LATERALS	10.1	mi.	847,000	25,000	10,000	80,000	395,000	320,000	7,000			10
11	.01	Pipe Distribution System No. 1	11.1	mi.	761,000	21,000	8,000	71,000	145,000	300,000	7,000			11
12	.02	Pipe Distribution System No. 2	6.7	mi.	469,000	13,000	6,000	49,000	280,000	179,000	4,000			12
13	.03	Pipe Distribution System No. 3	13.3	mi.	815,300	24,000	10,000	80,000	180,000	316,000	7,000			13
14	.04	Pipe Distribution System No. 4												14
15	.15	GENERAL PROPERTY			35,000	1,000	1,000	2,000	8,000	21,000	1,000			15
16	.01	Permanent Operating Facilities			12,000	1,000	1,000	2,000	8,000	80,000	16,000			16
17	.02	Recreational Facilities--Twin Lakes Access Area					1,000	15,000	50,000	25,000	16,000			17
18		Service Facilities Depreciation & Salvage												18
19														19
20		TOTAL CONSTRUCTION COST			4,805,300	138,000	96,000	620,000	2,135,000	1,960,000	74,000			20
21														21
22		TOTAL PROJECT COST			4,965,000	138,000	96,000	632,000	2,135,000	1,960,000	74,000			22
23														23
24		Consolidated Expenditures and Credits			-140,000	-138,000	-71,000	-10,000			16,000			24
25														25
26		TOTAL EXPENDITURES			4,825,000		25,000	622,000	2,135,000	1,960,000	90,000			26
27														27
28		TOTAL OBLIGATIONS			4,825,000		25,000	622,000	2,135,000	1,960,000	90,000			28
29														29
30														30
31														31
32		FUNDS REQUIRED					25,000	622,000	2,135,000	1,960,000	90,000			32
33														33

Notes: 1/ January 1969 price level.

Testing and minor rectification will continue from initial water delivery through December of fifth year.

Recommended _____ (Operating Office Head) (Date)

Recommended _____ (Regional Director) (Date)

Recommended _____ (Asst. Sec. of W.C.D.) (Date)

Approved _____ (Commissioner) (Date)

Revised: April 1969 (Date)

SHEET 1 OF 1 SHEETS

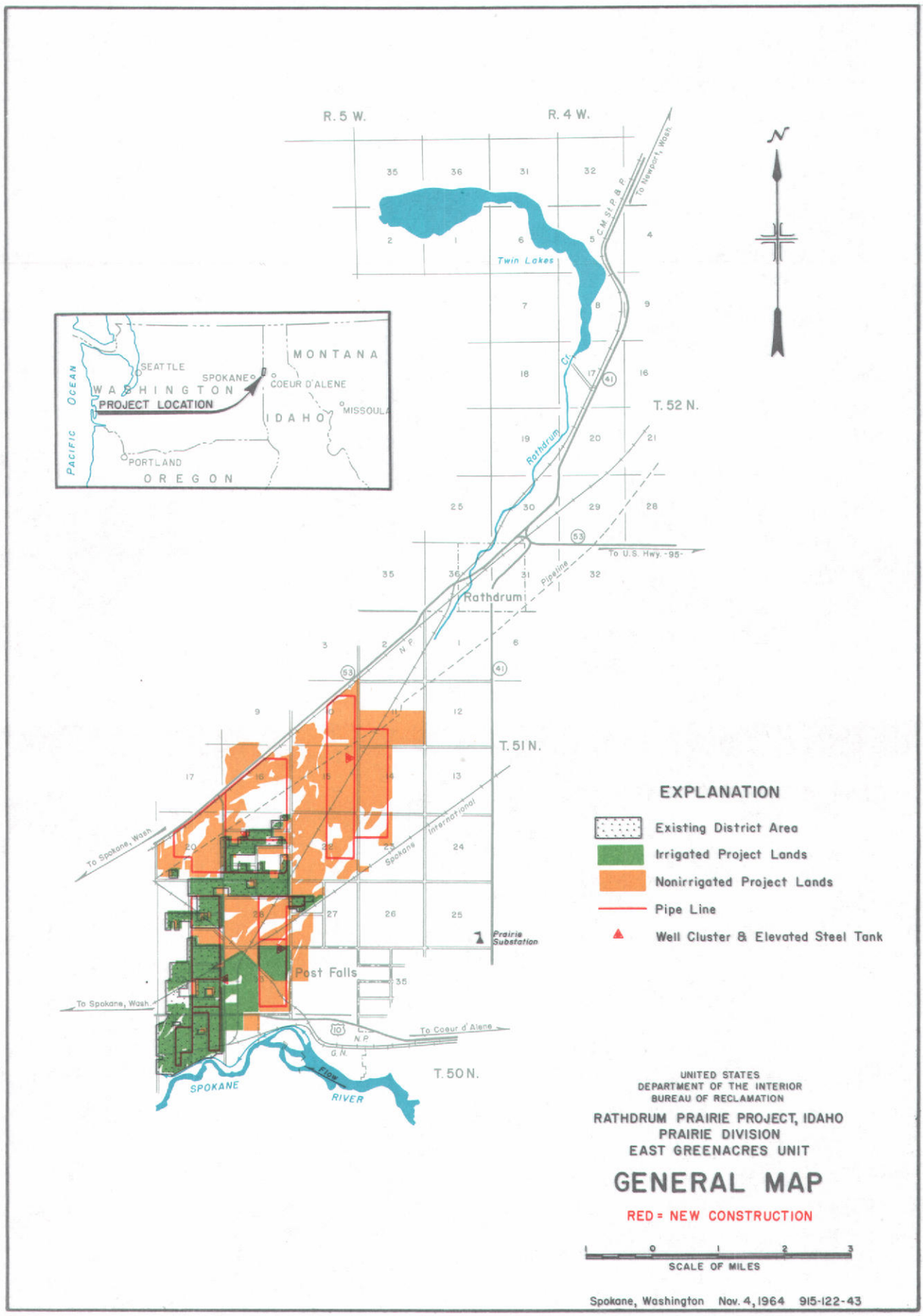
Form 9-9.5 UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION MARCH 1964

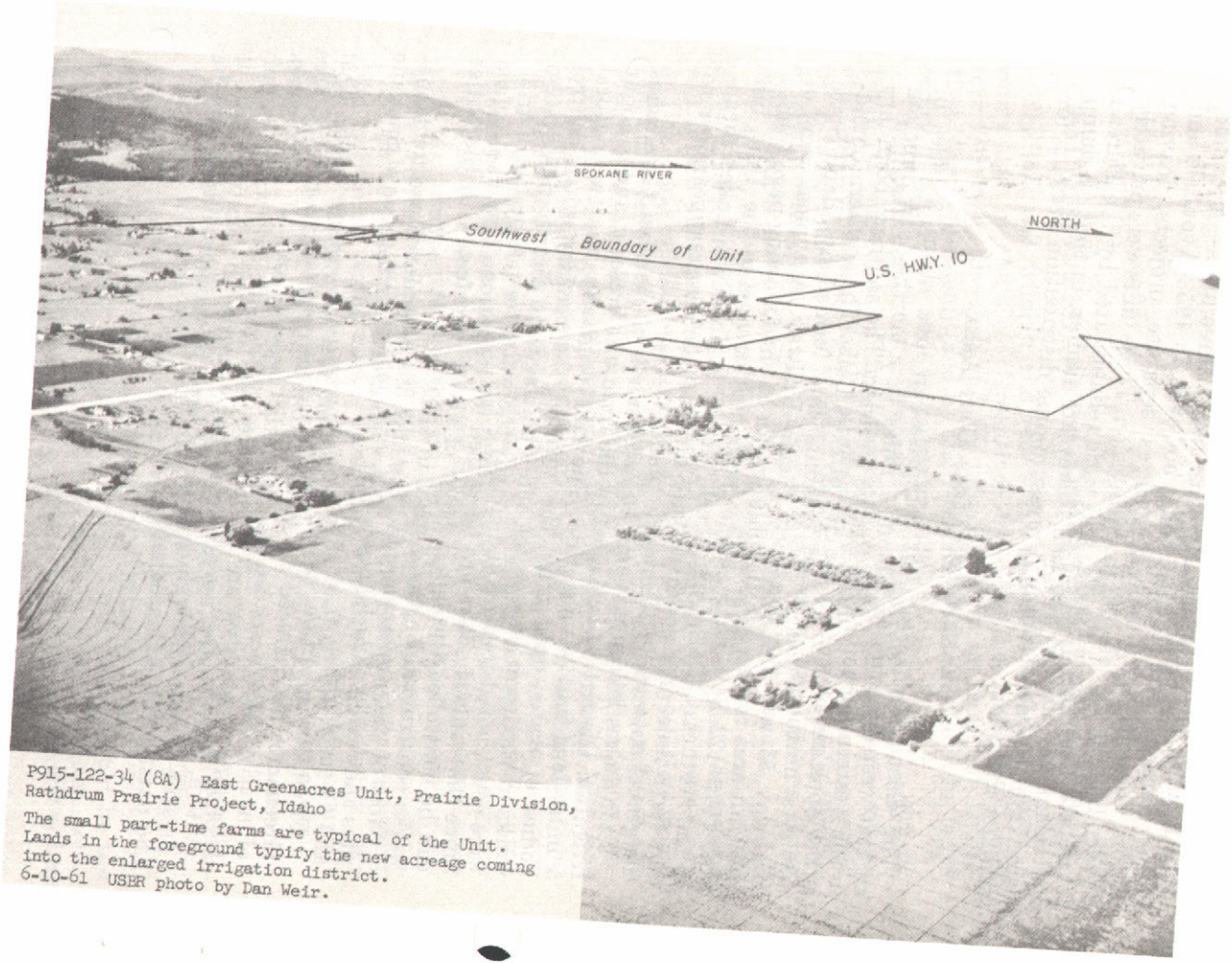
CONTROL SCHEDULE

RATHDRUM PRAIRIE PROJECT, IDAHO
EAST GREENACRES UNIT

Spokane, Washington (Office) November 1968 (Date) 1

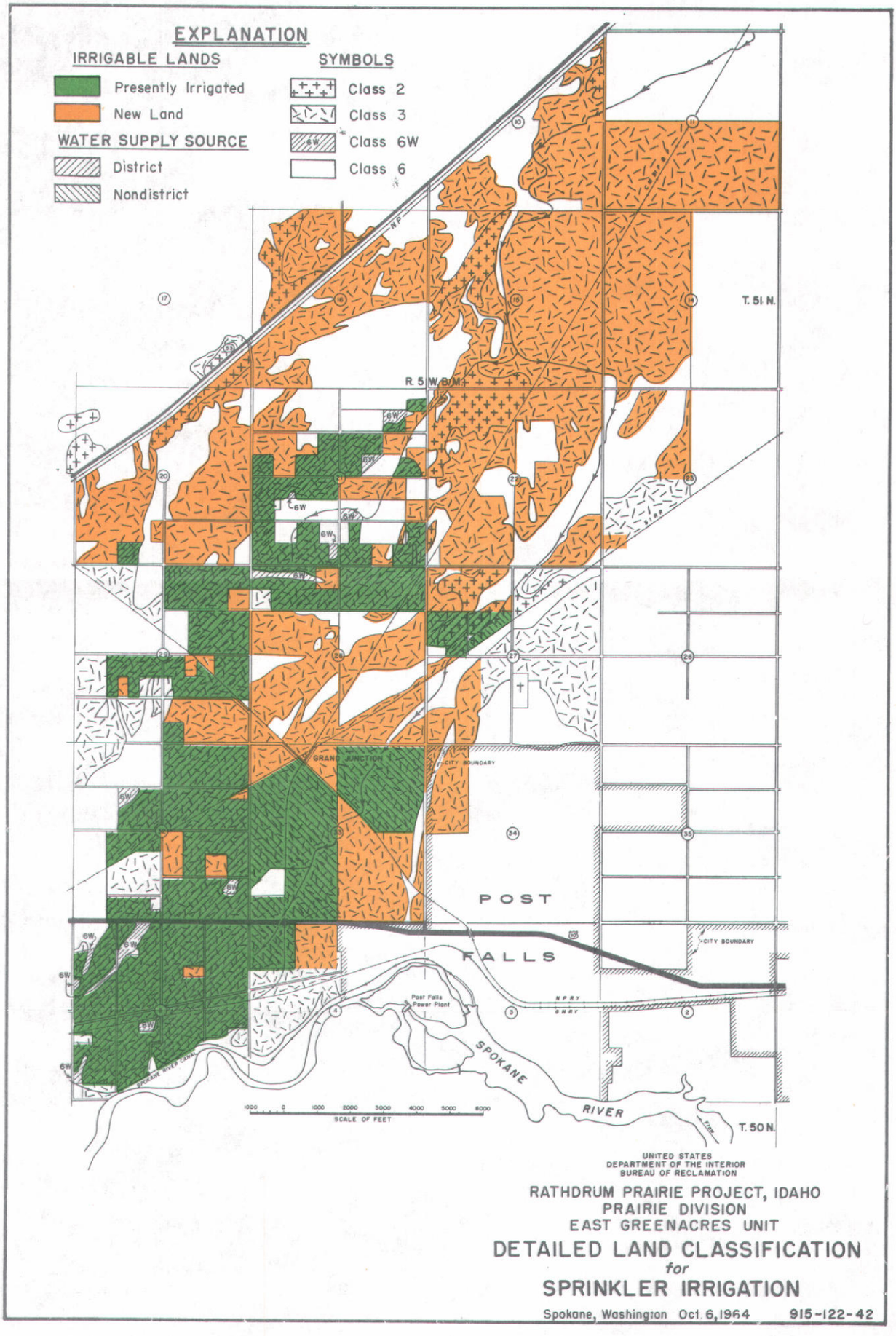
☑ GENERAL INVESTIGATIONS ☐ CONSTRUCTION ☐ LOAN PROGRAM ☐ OTHER

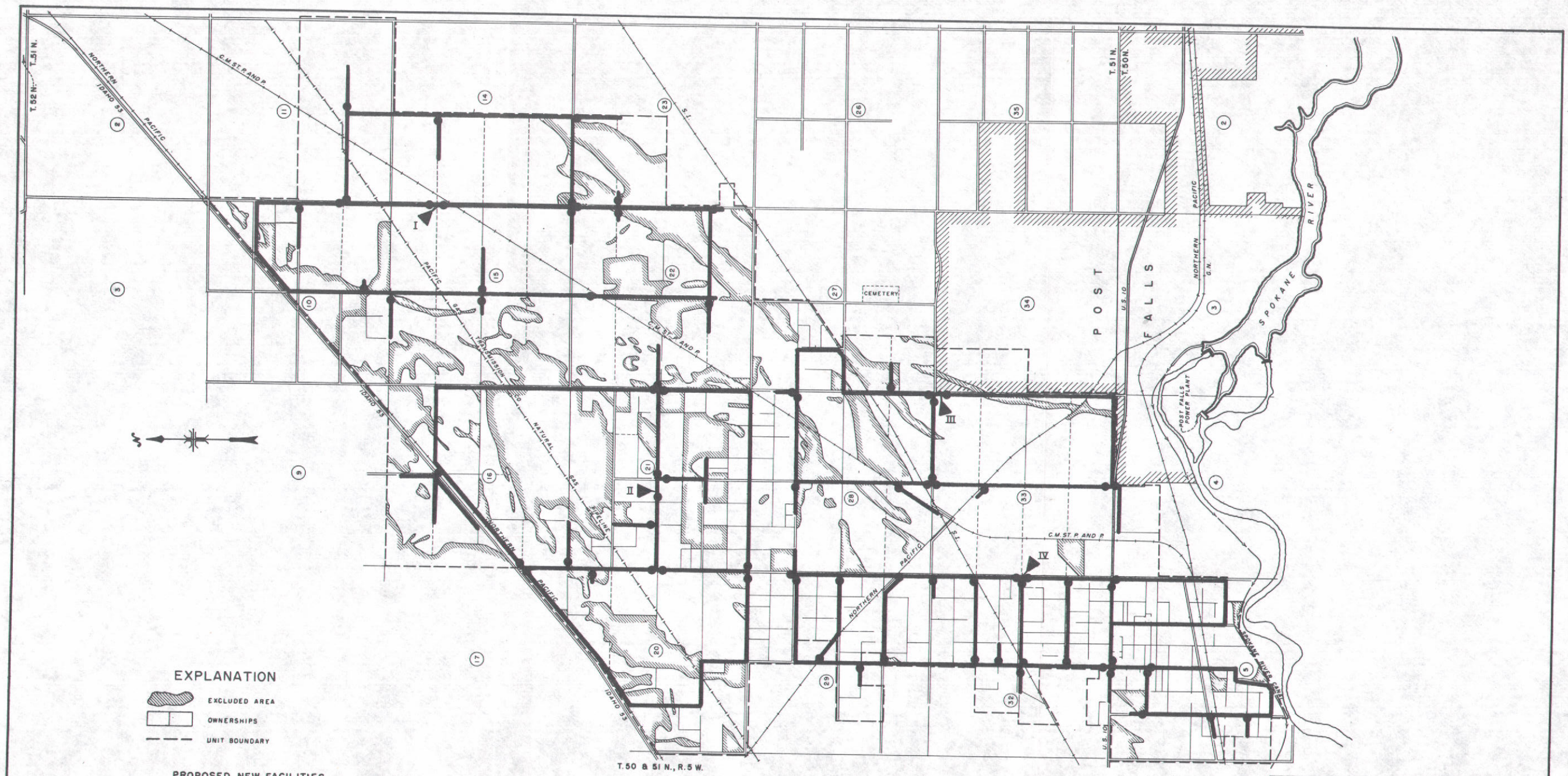

R. 5 W.
R. 4 W.
To Newport, Wash.
C.M.St.P.&P.
Twin Lakes
Ck.
Rathdrum
T. 52 N.
To U.S. Hwy. -95-
Pipeline
Rathdrum
N.P.
T. 51 N.
To Spokane, Wash.
Spokane International
Prairie Substation
Post Falls
To Spokane, Wash.
To Coeur d'Alene
G.N.
T. 50 N.
SPOKANE
RIVER
PACIFIC OCEAN
SEATTLE
SPOKANE
COEUR D'ALENE
MONTANA
WASHINGTON
PROJECT LOCATION
IDAHO
MISSOULA
PORTLAND
OREGON
EXPLANATION
Existing District Area
Irrigated Project Lands
Nonirrigated Project Lands
Pipe Line
Well Cluster & Elevated Steel Tank
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
RATHDRUM PRAIRIE PROJECT, IDAHO
PRAIRIE DIVISION
EAST GREENACRES UNIT
GENERAL MAP
RED = NEW CONSTRUCTION
SCALE OF MILES
Spokane, Washington Nov. 4, 1964 915-122-43



P915-122-34 (8A) East Greenacres Unit, Prairie Division, Rathdrum Prairie Project, Idaho

The small part-time farms are typical of the Unit. Lands in the foreground typify the new acreage coming into the enlarged irrigation district.
6-10-61 USBR photo by Dan Weir.


EXPLANATION
IRRIGABLE LANDS
Presently Irrigated
New Land
WATER SUPPLY SOURCE
District
Nondistrict
SYMBOLS
Class 2
Class 3
Class 6W
Class 6
T. 51 N.
R. 5 W. B.M.
GRAND JUNCTION
CITY BOUNDARY
POST
FALLS
Post Falls Power Plant
SPOKANE RIVER CANAL
SPOKANE
RIVER
T. 50 N.
SCALE OF FEET
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
RATHDRUM PRAIRIE PROJECT, IDAHO
PRAIRIE DIVISION
EAST GREENACRES UNIT
DETAILED LAND CLASSIFICATION
for
SPRINKLER IRRIGATION
Spokane, Washington Oct. 6, 1964
915-122-42



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
RATHDRUM PRAIRIE PROJECT
EAST GREENACRES UNIT-IDAHO

WELL SYSTEMS I, II, III, IV
LAYOUT-FEASIBILITY PLAN

Rev. 4-15-66 Coeur d'Alene Area Office

DRAWN D.L. SUBMITTED J.A. Mandry
TRACED D.L.S. RECOMMENDED R.E. Gipson
CHECKED [illegible] APPROVED O.E. Parr
CHIEF DESIGNING ENGINEER

DENVER, COLORADO, AUGUST 3, 1964

915-D-1

7-1720
(6-62)
Bureau of Reclamation

EAST GREENACRES UNIT

BASIC ESTIMATE DC-1 SUMMARY

Feasibility Estimate

Prepared by UCDO

PROJECT BATHDRUM PRAIRIE, IDAHO
Date of Estimate November, 1964
Prices as of July, 1964
Sheet 2 of 2 sheets

PROPERTY CLASS	PROPERTY IDENTIFICATION	PROPERTY ACCOUNT	PROPERTY DESCRIPTION	LABOR AND MATERIALS BY CONTRACTOR COST	MATERIALS AND EQUIPMENT BY GOVERNMENT COST	LABOR BY GOVERNMENT FORCES COST	FIELD COST PROPERTY ACCOUNT	TOTAL FIELD COST IDENTIFIED PROPERTY	SERVICE FACILITIES IDENTIFIED PROPERTY	INVESTIGNS ENGR'G. AND OTHER COST IDENTIFIED PROPERTY	TOTAL COST IDENTIFIED PROPERTY	TOTAL COST PROPERTY CLASS	Previous Estimate Prices as of TOTAL COST IDENTIFIED PROPERTY
1			2	3	4	5	6	7	8	9	10	11	12
00			LATERALS (CONTINUED)										
	04		PIPE DISTRIBUTION SYSTEM NO. 4										
		30	LAND AND RIGHTS					540,000	1,420	193,580	735,000		
		36	WATERWAYS	1,400			1,400						
		37	LATERAL STRUCTURES	387,000			387,000						
				151,600			151,600						
15			GENERAL PROPERTY										
	01		PERMANENT OPERATING FACILITIES										
		30	LAND AND RIGHTS					58,500	80	17,420	76,000	100,000	
		33	STRUCTURES AND IMPROVEMENTS	1,500			1,500						
		72	OFFICE FURNITURE AND EQUIPMENT	27,800			27,800						
		73	TRANSPORTATION EQUIPMENT	2,400			2,400						
		75	SHOP EQUIPMENT	11,400			11,400						
		77	TOOLS AND WORK EQUIPMENT	1,200			1,200						
		78	COMMUNICATION EQUIPMENT	10,000			10,000						
				4,200			4,200						
	02		RECREATIONAL FACILITIES--TWIN LAKES ACCESS AREA										
		30	LAND AND RIGHTS	8,000			8,000	18,500	170	5,330	24,000		
		33	STRUCTURES AND IMPROVEMENTS	10,500			10,500						
			TOTAL CONSTRUCTION COST					3,157,000	8,500	1,079,500	4,245,000	4,245,000	
			TOTAL PROJECT COST									4,245,000	

LEGEND: Types of Activity

Preconstruction | Construction

LINE NO	CLASS AND ACCOUNT	PROGRAM ITEM	QUANTITY	UNIT	ESTIMATED TOTAL 1/	TOTAL TO JUNE 30, -65	FISCAL YEARS First	Second	Third	Fourth	Fifth	BALANCE TO COMPLETE	ESTIMATED COMPLETION DATE	LINE NO
	1	2	3	4	5	6	7	8	9	10	11	14	15	
1		IRRIGATION SERVICE LAND--FULL	5,270	Ac.						5,270 Ac.				1
2		MUNICIPAL AND INDUSTRIAL WATER	35	AF						35 AF				2
3														3
4	130.	CONSTRUCTION PROGRAM								-0- Initial Water Available				4
5	.24.01	Well Cluster No. 1	25.2	cfs	450,000	13,300	19,600	51,000	148,000	175,700	4,800			5
6	.24.02	Well Cluster No. 2	20.0	cfs	397,000	11,700	15,000	79,000	144,000	143,500	3,800			6
7	.24.03	Well Cluster No. 3	15.5	cfs	338,000	9,700	13,000	72,000	123,000	118,100	3,400			7
8	.24.04	Well Cluster No. 4	20.0	cfs	383,000	11,300	15,000	79,000	139,000	135,000	3,700			8
9	.26.01	Pipe Distribution System No. 1	10.3	mi.	761,000	22,500	10,000	90,000	347,000	284,000	7,500			9
10	.26.02	Pipe Distribution System No. 2	11.1	mi.	681,000	20,100	8,000	77,000	343,000	250,600	2,500			10
11	.26.03	Pipe Distribution System No. 3	6.7	mi.	408,000	12,000	5,000	48,000	186,000	153,100	3,900			11
12	.26.04	Pipe Distribution System No. 4	12.0	mi.	735,000	21,700	10,000	78,000	340,000	273,100	7,800			12
13	.15.01	Permanent Operating Facilities			76,000	8,400	600	2,000	8,000	63,000				13
14	.15.02	Recreational Facilities--Twin Lakes Access Area			24,000	700	400		3,000	20,900				14
15		Service Facilities Depreciation & Salvage						5,000	5,000		-10,000			15
16														16
17		TOTAL CONSTRUCTION COST			4,245,000	125,400	96,600	626,000	1,759,000	1,618,000	30,000			17
18														18
19		TOTAL PROJECT COST			4,245,000	125,400	96,600	626,000	1,759,000	1,618,000	30,000			19
20														20
21		Consolidated Expenditures and Credits			-130,000	-125,400	-1,600	-16,000	-3,000	-	-10,000			21
22														22
23		TOTAL EXPENDITURES			4,115,000		95,000	610,000	1,752,000	1,618,000	40,000			23
24														24
25		TOTAL OBLIGATIONS			4,115,000		95,000	610,000	1,752,000	1,618,000	40,000			25
26														26
27														27
28														28
29		FUNDS REQUIRED												29
30							95,000	610,000	1,752,000	1,618,000	40,000			30
31														31
32														32
33														33

Notes: 1/ July 1964 price level.

Testing and minor rectification will continue from initial water delivery through December of fifth year. Estimated cost is $60,000 broken down to $30,000 for fourth year and $30,000 for fifth year.

Recommended: _____ (Operating Office Head) (Date)

Recommended: _____ (Regional Director) (Date)

Recommended: _____ (Chief, Div. of PC & P) (Date)

Approved: _____ (Commissioner) (Date)

Revised: 4/3/66 (Date) SHEET 1 OF 1 SHEETS

Form PP-5 AUG. 1951

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

CONTROL SCHEDULE

RATHDRUM PRAIRIE PROJECT, IDAHO
EAST GREENACRES UNIT

Spokane, Washington (Office) November 1964 (Date) 1 (Revision)

☒ GENERAL INVESTIGATIONS ☐ LOAN PROGRAM
☐ CONSTRUCTION ☐ OTHER

These mosquitoes represent four important genera or groups: *Anopheles*, *Culex*, *Aedes*, and *Psorophora*. All mosquito species have four distinct stages in their life cycle: the egg, the larva ("wiggler"), the pupa ("tumbler"), and the adult (Fig. 1). A characteristic common to all mosquitoes is that they live in water continuously from the time the eggs hatch until the adults emerge. The aquatic stages generally occur in shallow water with an abundance of vegetation and flotage and where they are protected from wave action. They do not occur in the deep open waters of lakes, ponds, or streams.

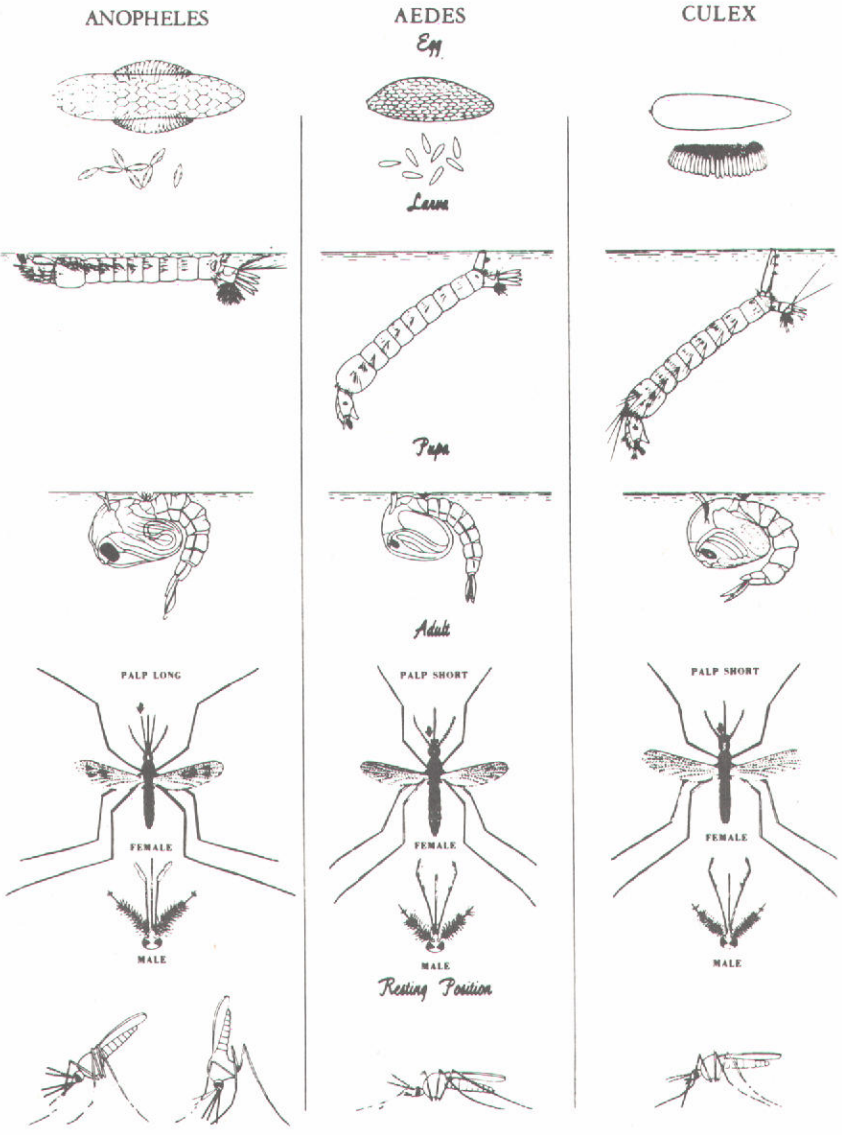
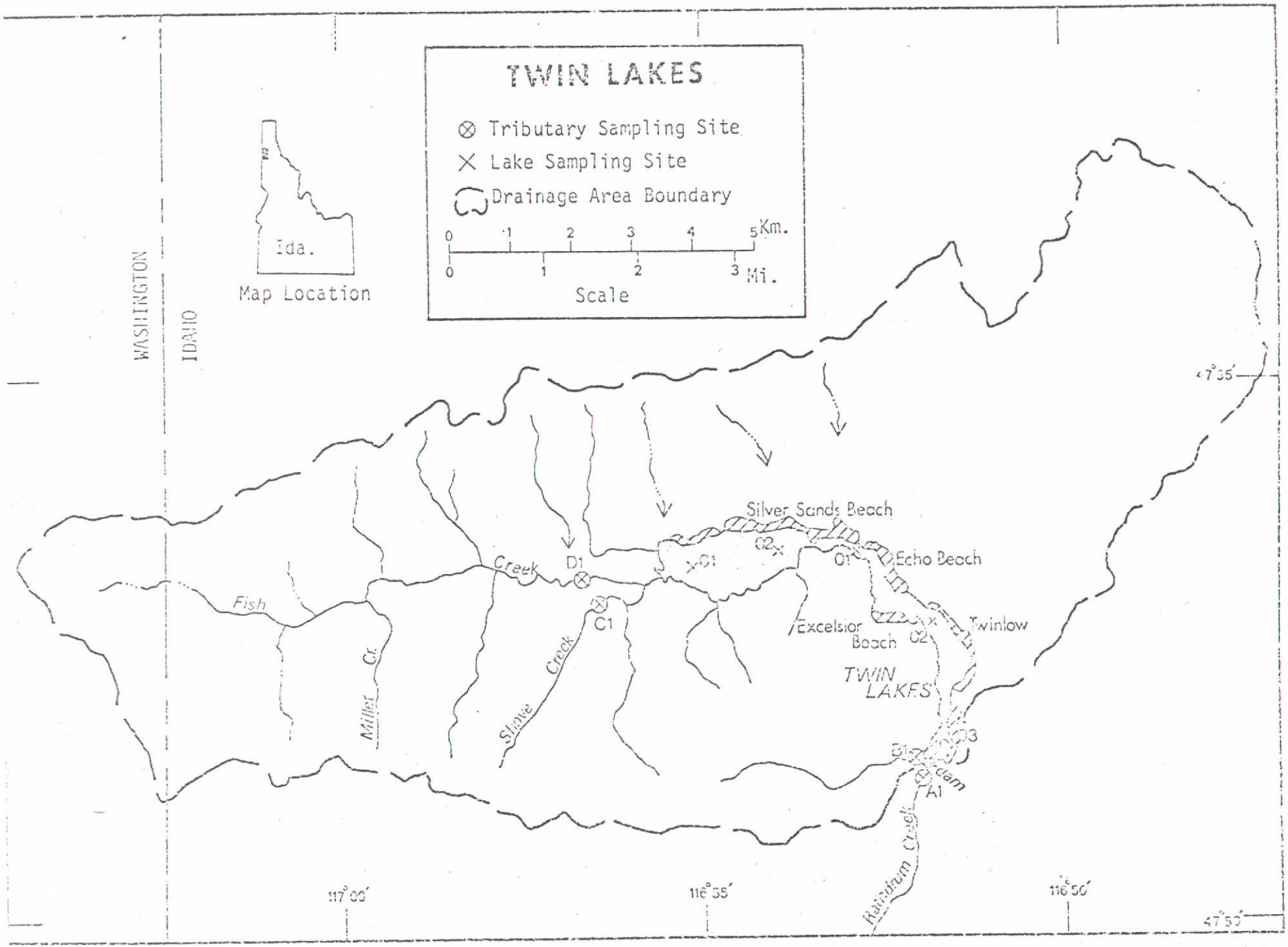
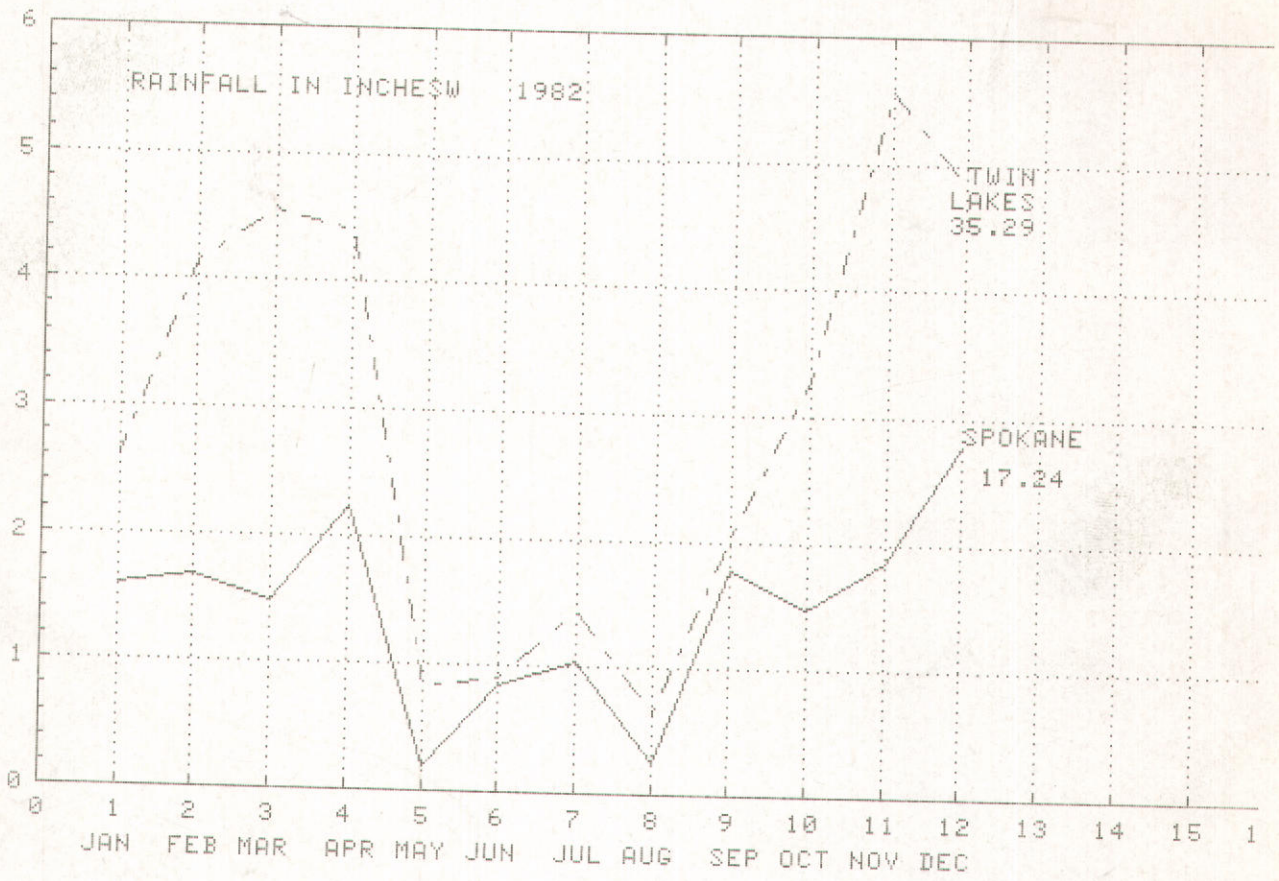


Figure 1. Characteristics of Anophelines and Culicines

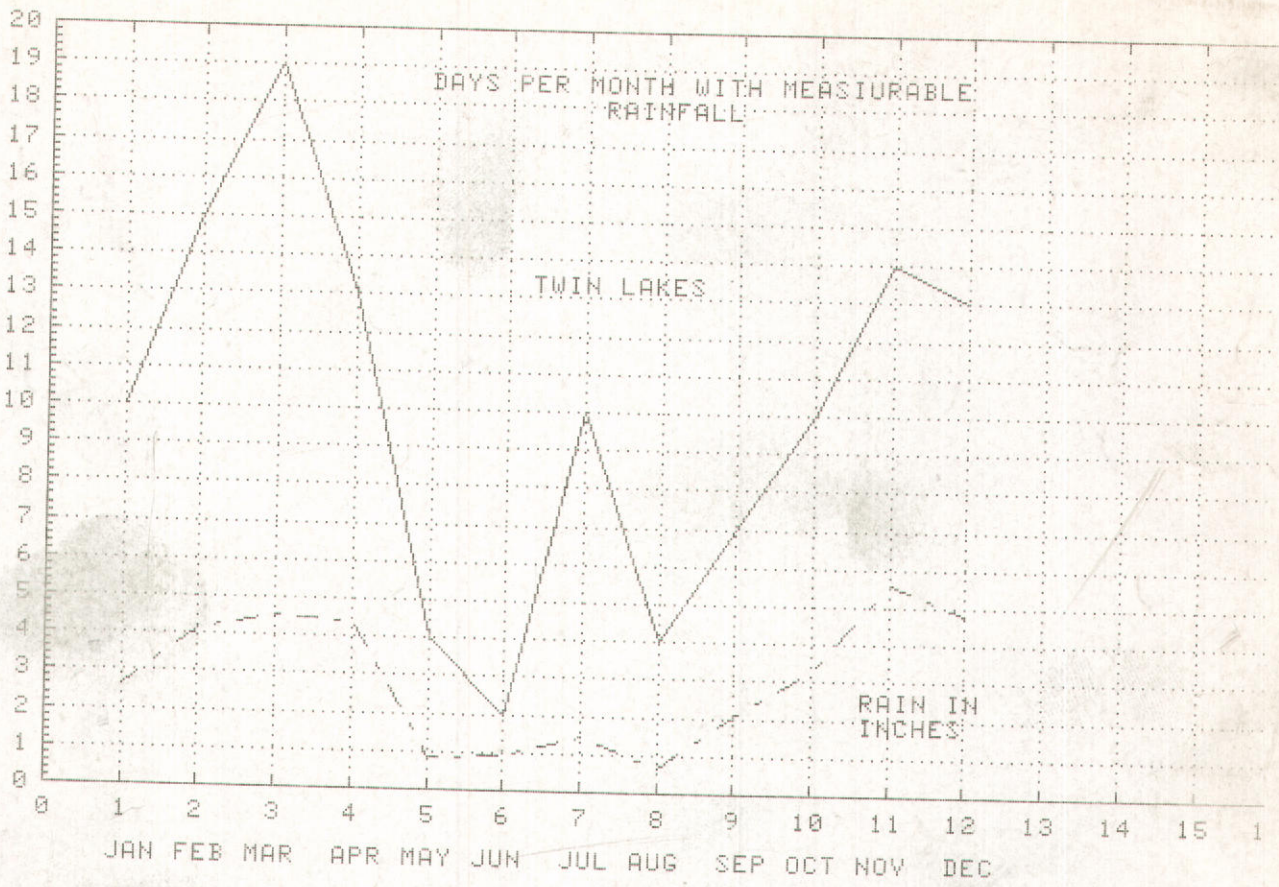

TWIN LAKES
⊗ Tributary Sampling Site
× Lake Sampling Site
Drainage Area Boundary
0 1 2 3 4 5 Km.
0 1 2 3 Mi.
Scale
Ida.
Map Location
WASHINGTON
IDAHO
Silver Sands Beach
Echo Beach
Excelsior Beach
Twinlow
TWIN LAKES
Fish Creek
Miller Cr.
Slave Creek
Rathdrum Creek
D1
C1
O1
O2
O3
B1
A1
47°35'
117°00'
116°55'
116°50'
47°30'

Department of Water Administration
PROTESTANT'S
Exhibit 4
Date Admitted 3/24/83





MICROFILMED



MICROFILMED

ROBERT GREEN THEN VOLUNTEERED TO PROVIDE A MEETIN G PLACE AT THE CARRIAGE INN AT TWIN LAKES ON THE FOLLOWING MONDAY, APRIL 4.

ON APRIL 4, 18 PEOPLE WERE IN ATTENDANCE AT A PRELIMINARY MEETING WHERE THE DECISION WAS MADE TO BECOME BETTER INFORMED AND TO SOLICIT PROFESSIONAL EXPERTISE IN THE PROCESS OF FORMING AN ENTITY.

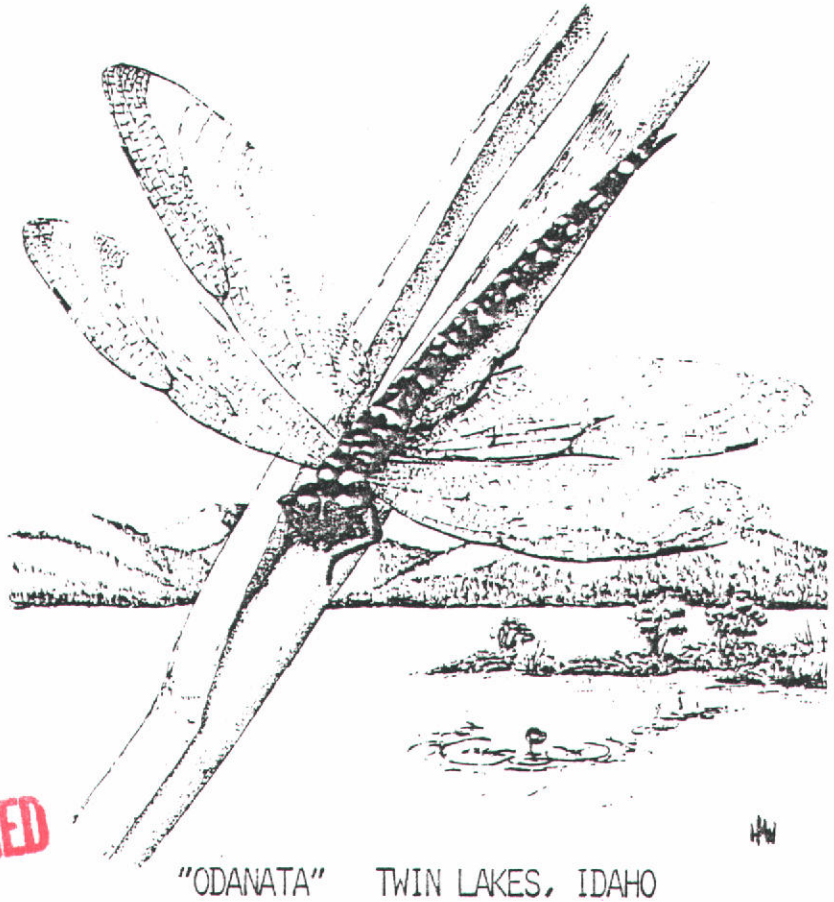
ADJOURNED WITH A MEETING SCHEDULED FOR APRIL 18 WITH PROFESSIONALS FROM SEATTLE AND COEUR D' ALENE TO PRESENT INFORMATION.

ON APRIL 18, PRESENTATIONS WERE GIVEN BY THE DEPT OF ENVIRONMENT, PANHANDLE HEALTH DIST., THE SOIL CONSERVATION SERVICE, A LIMNOLOGICAL VIEWPOINT, AND THE IDAHO FISH AND GAME DEPARTMENT. AN EFFORT WILL BE MADE TO INFORM A LARGER PORTION OF THE PUBLIC. A MEETING WAS SCHEDULED FOR APRIL 25.

THE MEETING ON APRIL 25 WAS HELD AT THE CARRIAGE INN, TWIN LAKES AND GORDON SYLTE AND OTHERS GAVE AN OVERVIEW OF THE PROGRESS TO DATE. BOB TINDER HAS ARRANGED FOR WAYNE FAUDE OF THE BOISE OFFICE OF THE SOIL CONSERVATION SERVICE TO MEET WITH THE INTERESTED PEOPLE ON MAY 4, 1983 AND PRESENT THE MECHANICS OF FORMING A WATERSHED IMPROVEMENT DISTRICT, THE BEST TYPE OF ENTITY TO ACCOMPLISH THE PURPOSE OF THIS GROUP.

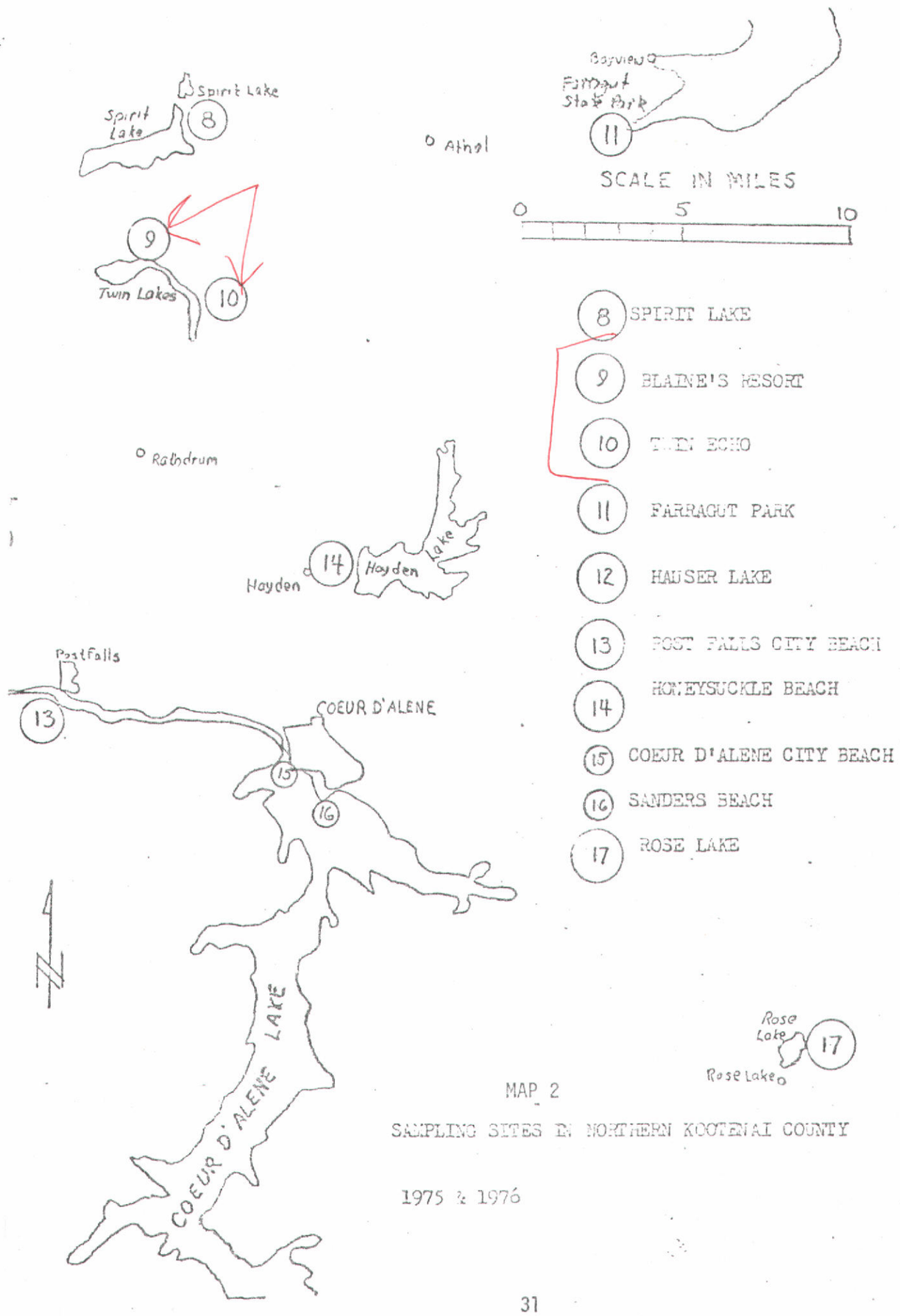
THANK YOU TO ALL OF THE PEOPLE WHO HAVE DONATED THEIR TIME AND MONEY TO HELP RESEARCH AND ORGANISE THE MANY RAMIFICATIONS & SOLUTIONS TO THIS CHANGE OF USE TRANSFER OF WATER RIGHTS

PLEASE! DONATIONS & INVOLVEMENT ARE NEEDED AND APPRECIATED!



"ODANATA" TWIN LAKES, IDAHO

MICROFILMED



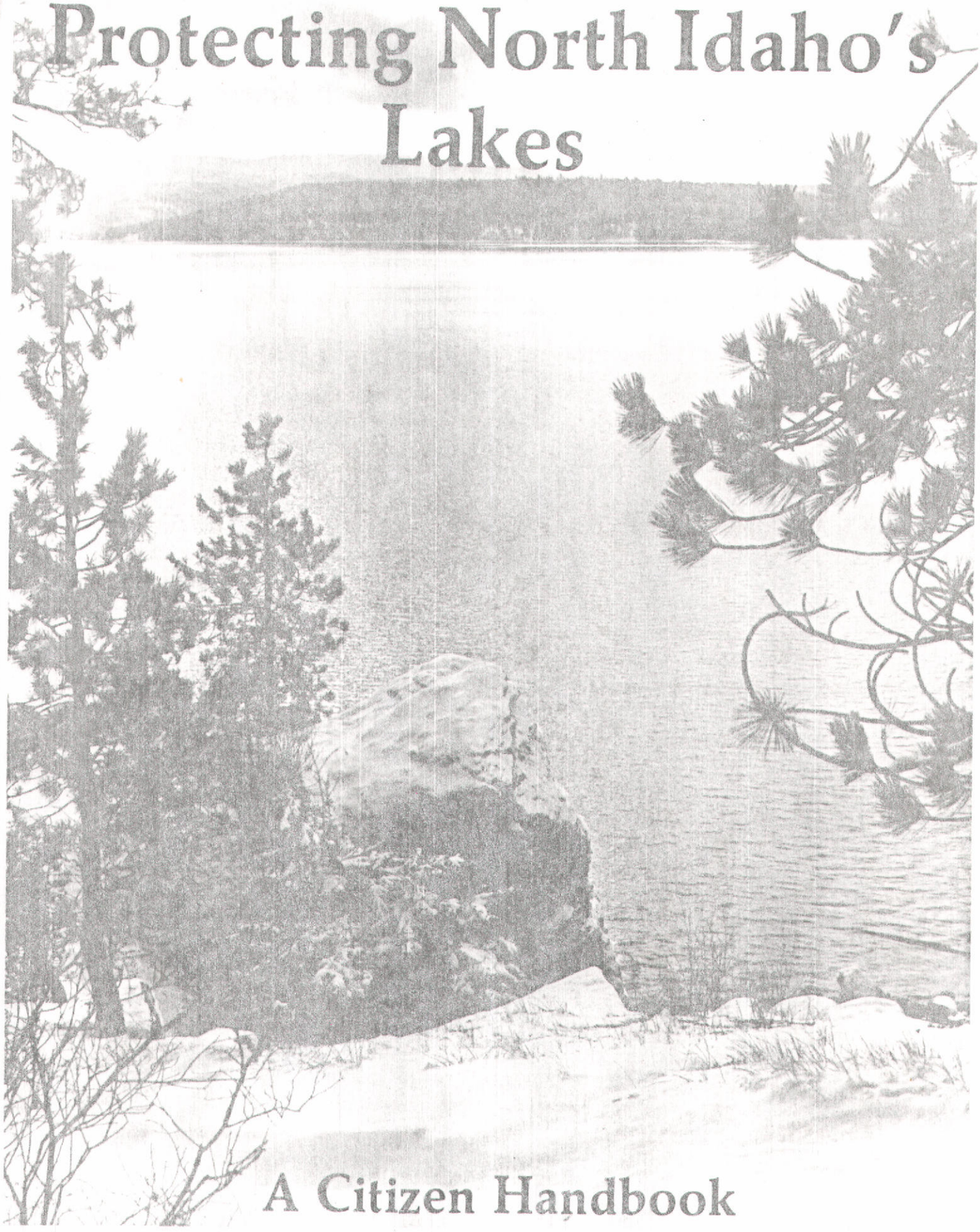
MAP 2

SAMPLING SITES IN NORTHERN KOOTENAI COUNTY

1975 & 1976

MICROFILMED

Protecting North Idaho's Lakes



A Citizen Handbook

MICROFILMED

Water Logs $ ____ ____
$ ____ ____
$ ____ ____
TOTAL - - - $ ____ 1 —

Roberta Garrett

STATE OF IDAHO
Department of Water Resources

No 23722

Boise, Idaho, June 14, 19 82

RECEIVED FROM Nelson, Rishart, of Twin Falls $ 1 25/100
One and 25/100 DOLLARS
ck No. 5397 92-39/1241

FOR
Copy- $ ____ ____
#37-7722 $ ____ ____
$ ____ ____
$ ____ ____
TOTAL - - - $ ____ 1 25

Roberta Garrett

STATE OF IDAHO
Department of Water Resources

No 23723

Boise, Idaho, 6-14, 19 82

RECEIVED FROM Bureau of Reclamation of Boise ID. $ 50 00
FIFTY AND NO/100 DOLLARS
Cash

FOR
Transfer App's $ 50 00
$ ____ /
$ ____ /
$ ____ ____
TOTAL - - - $ 50 00

Jan Johnson

STATE OF IDAHO
Department of Water Resources

No 23724

Boise, Idaho, June 15, 19 82

RECEIVED FROM Jacobsen Well Drilling of Spokane $ 10 00
Ten and No/100 DOLLARS
ck No. 13877 38-7/351

FOR
Drillers Lic $ ____ ____
#59 $ ____ ____
$ ____ ____
$ ____ ____
TOTAL - - - $ ____ 10 —

Roberta Garrett

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF RECLAMATION

Boise, Idaho, August 26, 1952

No 29736

RECEIVED FROM East Cunningham Irr. Dist. of Post Falls, Idaho $4.00

Four and 00/100 DOLLARS

FOR

Carey Act Trust Fund	$	
Application for Permit No.	$	
Proofs	$	
2 Certified Copy #14257	$	4 00
Recording Deed	$	
Certificate	$	
TOTAL	$	4 00

Geo. D. Carter
State Reclamation Engineer

By Edna P. Ritter

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF RECLAMATION

GEO. N. CARTER, STATE RECLAMATION ENGINEER

BOISE

ROBERT E. SMYLIE
Governor

August 27, 1959

RE: Permit No. 14757

Ethel A. Ostlund, Secretary, Treasurer
East Greenacres Irrigation District
Rt 1
Post Falls, Idaho

Dear Mrs. Ostlund:

Enclosed is the certified copy of Water License No. 14757 which you requested together with departmental receipt No. 29736 for $4.00 for this copy and the one that we sent you previously.

Very truly yours,

GEO. N. CARTER
State Reclamation Engineer
By

Edna P. Rutledge
(Mrs.) Edna P. Rutledge
Chief Clerk

EPR:mr
enclosures 2

Department of Water Administration
APPLICANT'S
Exhibit 1
Date Admitted 3/24/83 RH

MICROFILMED

State of Idaho

License and Certificate of Water Right

Water License No. 14757 Priority 5-4-1920 Amount 45.74 sec. ft

THIS IS TO CERTIFY that East Greenacres Irrigation District of Post Falls, Idaho, made application for a permit to appropriate the public waters of the State of Idaho, dated May 4, 1920, 19; that Permit No. 14757 was issued under said application; that Certificate of Completion of works, with a carrying capacity of 50 second feet, was issued thereunder on October 3, 19 22, showing that said works were completed on the 25th day of March, 19 22; and that on the 10th day of July, 1926 East Greenacres Irrigation District of Post Falls, State of Idaho, made proof to the satisfaction of the Commissioner of Reclamation of Idaho, of a right to the use of the waters of Upper and Lower Fish Lake otherwise known as Twin Lakes a tributary of for the purpose of irrigation and domestic use, under Use Permit No. 14757 of the Commissioner of Reclamation, and that said right to the use of said waters has been perfected in accordance with the laws of Idaho, and is hereby confirmed by the State Reclamation Engineer of Idaho and entered of record in Volume 6 of Licenses, at Page 3397, on the 13th day of September, 19 26;

The right hereby confirmed dates from May 4th, 19 20;

The Point of Diversion is located in the NE ¼ NW ¼, Sec. 17, Tp. 52 N., R. 4 W., B.M. Kootenai County.

That the amount of water to which such right is entitled and hereby confirmed, for the purposes aforesaid, is limited to an amount actually needed and beneficially used for said purposes, and shall not exceed 45.74 cubic feet per second.

Description and location of use:

Range	Section	Forty-Acre Tract	No. Acres Described in Permit	No. Acres Actually Irrigated
51 N. 5 W.	2	SE¼ SE¼	23	23
	20	SW¼ SW¼	10	10
		SE¼ SW¼	40	40
	21	NE¼ NE¼	25	25
		NW¼ NE¼	20	20
		SW¼ NE¼	40	40
		SE¼ NE¼	40	40
		NE¼ NW¼	5	5
		NW¼ NW¼	25	25
		SW¼ NW¼	40	40
		SE¼ NW¼	40	40
		NE¼ SW¼	40	40
		NW¼ SW¼	40	40
		SW¼ SW¼	40	40
		SE¼ SW¼	40	40
		NE¼ SE¼	40	40
		NW¼ SE¼	40	40
		SW¼ SE¼	40	40
		SE¼ SE¼	40	40
	27	SW¼ NW¼	37	37
		SE¼ NW¼	9	9
	28	NE¼ NE¼	40	40
		NW¼ NE¼	40	40
		NE¼ NW¼	40	40
		NW¼ NW¼	40	40
	29	NE¼ NE¼	40	40
		NW¼ NE¼	40	40
		SW¼ NE¼	40	40
		SE¼ NE¼	40	40
		NE¼ SW¼	40	40
		NW¼ SW¼	30	30
		SW¼ SW¼	40	40
		SE¼ SW¼	30	30
		NE¼ SE¼	40	40
		NW¼ SE¼	40	40
		SW¼ SE¼	40	40
		SE¼ SE¼	40	40
	32	NE¼ NE¼	40	40
		NW¼ NE¼	40	40
		SW¼ NE¼	40	40
		SE¼ NE¼	40	40
		NE¼ NW¼	1	1
		NW¼ NW¼	27	27
		SE¼ NW¼	40	40
		NE¼ SW¼	40	40
		NW¼ SW¼	10	10
		SW¼ SW¼	10	10
		SE¼ SW¼	40	40
		NE¼ SE¼	40	40
		NW¼ SE¼	40	40
		SW¼ SE¼	40	40
		SE¼ SE¼	40	40
50 N. 5 W.	5	NE¼ NE¼	40	40
		NW¼ NE¼	40	40
		SW¼ NE¼	40	40
		SE¼ NE¼	40	40
		NE¼ NW¼	40	40
		NW¼ NW¼	23	23
		SW¼ NW¼	40	40
50 N. 5 W.	5 cont'd	SE¼ NW¼	40	40
		NE¼ SW¼	40	40
		NW¼ SW¼	40	40
		SW¼ SW¼	40	40
		SE¼ SW¼	24	24
		NE¼ SE¼	20	20
		NW¼ SE¼	34	34
		SW¼ SE¼	4	4
		Total ...	....2287 Acres	

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, as provided by the laws of Idaho.

WITNESS the seal and signature of the State ~~Reclamation Engineer~~ Commissioner of Reclamation, affixed at Boise, Idaho, this 13th day of September, 19 26

W. G. SWENDSEN

~~State Reclamation Engineer~~
Commissioner of Reclamation

By Geo. N. Carter
Assistant

STATE OF IDAHO)
) ss.
County of Ada)

I, Geo. N. Carter, State Reclamation Engineer of the State of Idaho, do hereby certify that the above and foregoing is a full, true and correct copy of Permit to Appropriate the Public Waters of the State of Idaho, No. 14757, issued to East Greenacres Irrigation District, as same appears of record in the Department of Reclamation of the State of Idaho, in Volume 6 of Permits, at Page No. 3397.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the State Department of Reclamation, at Boise, Idaho, this 27 day of August, 1959.

Geo. N. Carter
State Reclamation Engineer

[illegible]

State of Idaho

License and Certificate of Water Right

Water License No. 14797

To East Greenacres Irrigation District

Post Falls, Idaho

Source of Supply Upper and Lower Fish Lake otherwise known as Twin Lakes

Kootenai County

Amount 45.74 Sec. Ft.

Point of Diversion $NE\frac{1}{4}$ $NW\frac{1}{4}$, Sec 17,

Tp. 52 N., R. 4 W. B. M.

Place of Use T51N. T50N; Sec 2,20,21, 27,28,29,32,5; R 5 W.

Purpose Irrigation & Domestic use

Date of Priority May 4, 1920

Recorded September 13, 1926

in Book 6 of Licenses, Page 3397

EAST GREENACRES UNIT, RATHDRUM PRAIRIE PROJECT, IDAHO

COMMUNICATION

FROM

THE ASSISTANT SECRETARY OF THE INTERIOR

TRANSMITTING

THE REPORT OF THE SECRETARY ON THE EAST GREENACRES UNIT, RATHDRUM PRAIRIE PROJECT, IDAHO, PURSUANT TO THE PROVISIONS OF SECTION 9(a) OF THE RECLAMATION PROJECT ACT OF 1939 (53 STAT. 1187)

Department of Water Administration
APPLICANT'S
Exhibit 2
Date Admitted 3/24/83 KGA

OCTOBER 22, 1969.—Referred to the Committee on Interior and Insular Affairs and ordered to be printed with illustrations

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U.S. GOVERNMENT PRINTING OFFICE
35-720 O WASHINGTON : 1970

LETTER OF TRANSMITTAL

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C., October 16, 1969.

Hon. JOHN W. MCCORMACK,
Speaker of the House of Representatives,
Washington, D.C.

DEAR MR. SPEAKER: The report of the Secretary of the Interior on the East Greenacres Unit, Rathdrum Prairie Project, Idaho, is transmitted herewith as provided by section 9(a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

The report proposes a plan to provide a ground water irrigation supply to an area in northern Idaho which is now partially irrigated from surface water sources and to provide water for municipal and industrial uses. A total of 5,270 acres of land would be irrigated, including 1,770 acres which are now inadequately supplied. The existing storage capacity in Twin Lakes Reservoir would be relieved of excessive seasonal drawdown for irrigation water supply, and substantial fish and wildlife enhancement and recreation benefits would result from the consequent stabilization of the reservoir water surface. The plan of development is engineeringly feasible and economically justified.

The Secretary's proposed report on this project was transmitted to the affected States and interested Federal agencies for review as required by law and Presidential instructions. Comments received as a result of this review are attached to the report.

The report and copies of the comments received were submitted to the President on July 30, 1969. Enclosed is a copy of an October 13, 1969, letter from the Bureau of the Budget advising that there would be no objection to the submission of this report to the Congress. However, the letter points out that Kootenai County, in which the East Greenacres Unit is located, is no longer classified as a redevelopment area and that the benefits for area redevelopment should not, therefore, be credited to the unit. Elimination of those evaluated benefits would reduce the ratio of direct benefits to costs from 1.16 to 1 to 1.05 to 1.

It is recommended that construction of the East Greenacres Unit, Rathdrum Prairie Project, Idaho, be authorized as set forth in the attached report.

Sincerely yours,

JAMES R. SMITH,
Assistant Secretary of the Interior.

BUREAU OF THE BUDGET COMMENTS

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D.C., October 13, 1969.

Hon. WALTER J. HICKEL,
Secretary of the Interior,
Washington, D.C.

DEAR MR. SECRETARY: This is in reply to Assistant Secretary Smith's letter of July 30, 1969, transmitting your report on the East Greenacres unit, Rathdrum Prairie project, Idaho, and requesting advice as to the relationship of the proposal to the program of the President.

The proposed plan would develop ground water supplies for the purpose of irrigating 5,270 acres in Kootenai County, including 1,770 acres now irrigated by gravity diversion from Twin Lakes. The remaining 3,500 acres are not now irrigated. Under present operations the annual drawdown of Twin Lakes has an adverse impact on recreation and sport fishing opportunities. Development of ground water would permit lake levels to be stabilized thus enhancing these opportunities. The plan would also develop municipal and industrial water supply benefits. The total project construction cost is estimated at $4,965,000, exclusive of $365,000 of Federal Columbia River power system costs assigned to irrigation.

The economic evaluation of the proposed unit includes area redevelopment benefits. We note, however, that there is little likelihood that the unit will generate the benefits since Kootenai County is no longer designated as a redevelopment area. Consequently, we feel that it would be appropriate for the unit's direct benefit-cost ratio, estimated as 1.16 to 1, to be revised before your report is transmitted to the Congress. We understand that exclusion of the area redevelopment benefits will lower the ratio of direct benefits to costs, but that it will remain above unity.

Subject to this understanding, I am authorized by the Director of the Bureau of the Budget to advise you that there would be no objection to the submission of the report to the Congress from the standpoint of the administration's program. However, no commitment can be made at this time as to when any estimate of appropriation would be submitted for the construction of the East Greenacres unit, if authorized by the Congress, since this would be governed by the President's budgetary objectives as determined by the then prevailing fiscal situation.

Sincerely yours,

CARL H. SCHWARTZ, JR.,
Director, Natural Resources Programs Division.

REPORT OF THE SECRETARY OF THE INTERIOR

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C., July 30, 1969.

The PRESIDENT,
The White House,
Washington, D.C.
(Through Bureau of the Budget.)

DEAR MR. PRESIDENT: My report on a plan of development for the East Greenacres Unit, Rathdrum Prairie Project, Idaho, is transmitted herewith pursuant to the Reclamation Project Act of 1939 (53 Stat. 1187) and section III–E–3 of the procedures in S. Doc. 97, 87th Congress.

The proposed East Greenacres Unit is a multipurpose water and related land resources development involving irrigation, municipal and industrial water supply, conservation and development of the fish and wildlife resources, and enhancement of outdoor recreation opportunities. The unit is engineeringly feasible and economically justified.

The proposed report on the unit was transmitted to the States of the Columbia River Basin and to the interested Federal agencies for review as required by law and Presidential instructions. Copies of the review comments received, none of which are in opposition to the proposal, are attached to the report.

The report has been updated to reflect current cost estimates and interest rates. The economic analysis demonstrates the justification for this unit as a worthy investment of Federal funds.

I recommend that the East Greenacres Unit, Rathdrum Prairie Project, Idaho, be authorized for construction as set forth in the report. I shall appreciate having advice concerning the relationship of the unit to your program before transmitting the report to the Congress for its consideration and appropriate action as provided in the Reclamation Project Act of 1939.

Sincerely yours,

JAMES R. SMITH,
Assistant Secretary of the Interior.

REPORTS OF THE COMMISSIONER OF RECLAMATION

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington, D.C., July 28, 1969.

THE SECRETARY OF THE INTERIOR.

SIR: This is my report on the East Greenacres Unit, Rathdrum Prairie Project, Idaho. It is based on and includes our proposed report of June 13, 1967, which was approved and adopted on July 12, 1967, as the proposed report of the Secretary of the Interior. It also reflects cost estimates based on January 1969 prices and the effect of the current interest rate, 4⅞ percent, on the economic analysis.

Copies of the proposed report were transmitted on July 14, 1967, to the States of the Columbia River Basin and to the Secretary of the Army for review as required by the Flood Control Act of 1944 (58 Stat. 887), and to the State of Idaho for comments from the head of the agency exercising administration over the wildlife resources of that State as provided by the Fish and Wildlife Coordination Act. Copies of the report were also sent to the interested Federal agencies for review in accordance with procedures approved by the President. Comments have been received from all of the recipients except the States of Montana and Washington, which are not directly affected by the proposed development. Copies of the comments received are attached to, and made part of, this report.

The Governor of Idaho expressed unqualified endorsement of the proposed unit and hoped that it would be reported favorably to the Bureau of the Budget and to the Congress.

The Acting Chief of Engineers, Department of the Army, advised that the proposed plan does not conflict with existing or authorized projects or plans of the Corps of Engineers.

The Public Health Service, Department of Health, Education, and Welfare, recommended that water-level management be adopted to control mosquito production and that water supply and sanitary facilities be provided at the access areas at Twin Lakes. These recommendations have been discussed with the Bureau of Sport Fisheries and Wildlife. As indicated in the attached copy of our response to the Public Health Service, we find that a limited amount of water-level fluctuation can be adopted for mosquito control and that during preconstruction activities on the unit, the requirements for water supply and sanitary facilities can be determined in consultation with the affected interests and be accommodated in the plan of development as the forecasted use of the access areas may warrant.

As all of the comments received are either favorable or express no objection to the unit, it is not necessary to modify the proposed report as a result of the review.

In compliance with Executive Order No. 11296, flood hazards to facilities and lands of the East Greenacres unit have been evaluated. No protective measures appear to be necessary in this plan of development.

Since the proposed report was transmitted to the States and Federal agencies for review, a new interest rate formula has been promulgated for use in plan formulation and presentation of economic justification for Federal water resources development projects. A reevaluation statement dated April 1969, which reflects the interest rate then applicable and construction costs at January 1969 prices is attached to and made a part of this report.

The total project construction cost is now estimated at $4,965,000, an increase of $720,000 over the estimate presented in our proposed report. Benefit-cost ratios at 4⅝-percent interest are 1.74 to 1 for total benefits and 1.22 to 1 for direct benefits only. Those ratios, computed on the 4⅞-percent interest rate applicable since July 1, are 1.65 to 1 and 1.16 to 1 respectively.

I recommend that you approve and adopt this report as your report on the East Greenacres unit, Rathdrum Prairie project, Idaho, and that you transmit it, together with the attached documents, to the President, and subsequently to the Congress, in accordance with the Reclamation Project Act of 1939.

Respectfully,

FLOYD E. DOMINY, *Commissioner.*

Approved and adopted July 30, 1969.

JAMES R. SMITH,
Assistant Secretary of the Interior.

REEVALUATION STATEMENT (4⅝% INTEREST)—RATHDRUM PRAIRIE PROJECT, IDAHO, PRAIRIE DIVISION, EAST GREENACRES UNIT

PURPOSE

This study shows the effect of policy, procedural, and cost changes on the East Greenacres unit, Rathdrum Prairie project, since the Feasibility Report of May 1966, revised February 1967.

Summary

The principal changes affecting the feasibility report are: (1) use of construction costs based on January 1969 price levels, (2) use of 4⅝ percent interest rate in the benefit-cost analysis and the cost allocation study, and (3) use of 3.256 percent interest rate in amortizing the municipal and industrial water allocation and for computing interest on reimbursable fish and wildlife and recreation costs. Results of these changes are summarized in table 1.

TABLE 1.—SUMMARY OF CHANGES RESULTING FROM REANALYSIS

Item	Feasibility report May 1966, revised February 1967 (3⅛ percent interest) [1]	Reevaluation April 1969 (4⅝ percent interest) [2]
Project Costs:		
Construction	$4,245,000	$4,965,000
Irrigation power suballocation	365,000	365,000
Total	4,610,000	5,330,000
Annual operating costs	54,400	58,900
Cost allocation—project costs:		
Irrigation	4,122,000	4,842,000
Municipal and industrial water	151,000	150,000
Fish and wildlife enhancement	303,000	309,000
Recreation	34,000	29,000
Total	4,610,000	5,330,000
Annual Operating Costs:		
Irrigation	47,240	52,280
Municipal and industrial water	2,020	1,910
Fish and wildlife enhancement	4,630	4,330
Recreation	510	380
Total	54,400	58,900
Benefits:		
Irrigation:		
Total	444,800	438,800
Direct	263,200	286,200
Municipal and industrial water	9,900	10,900
Fish and wildlife enhancement	27,000	25,000
Recreation	2,300	2,300
Area redevelopment	23,100	33,200
Total benefits	507,100	510,200
Direct benefits	325,500	357,600
Annual equivalent Federal costs	183,100	239,900
Benefit-cost ratio, total benefits	2.70	1.74
Benefit-cost ratio, direct benefits	1.73	1.22
Repayment:		
Total reimbursable irrigation costs	4,122,000	4,842,000
Less irrigation power suballocation	365,000	365,000
Irrigation facilities	3,757,000	4,477,000
Repaid by irrigators	1,055,500	805,500
Percent payout by water users	(28)	(18)
Financial assistance required	2,701,500	3,671,500
From municipal and industrial revenues	77,000	76,000
From power revenues	2,624,500	3,595,500
Reimbursable recreation	950	1,350
Repaid by non-Federal public body	950	1,350
Reimbursable fish and wildlife enhancement	[3] 11,500	[3] 15,350
Repaid by non-Federal public body	[3] 11,500	[3] 15,350
Reimbursable municipal and industrial water costs	[3] 157,000	[3] 155,600
Repaid by water users	[3] 157,000	[3] 155,600

[1] Construction cost level, July 1964.
[2] Construction cost level, January 1969.
[3] Includes reimbursable interest during construction.

PROJECT COSTS

Project construction costs

The total project construction cost of $4,245,000 presented in the feasibility report dated May 1966 and revised February 1967, has been increased to $4,965,000. The cost increase results from indexing costs based on July 1964 price levels to reflect price levels as of January 1969. The new total project construction cost estimate is shown in the control schedule, PF–2, which follows. The total costs considered in the economic and financial analysis amount to $5,330,000. This includes the total project construction cost plus a suballocation of the commercial power allocation of the Federal Columbia River power system costs to irrigation, $365,000.

Annual operating costs

The annual operating costs for the East Greenacres Unit are now estimated to be $58,900. This estimate reflects the use of 4⅝ percent interest in the computation of replacements.

LEGEND: Types of Activity
Preconstruction and Other Work | Construction

LINE NO.	CLASS AND ACCOUNT	PROGRAM ITEM	QUANTITY	UNIT	ESTIMATED TOTAL 1/	TOTAL TO JUNE 30, 68	FISCAL YEARS First	Second	Third	Fourth	Fifth	BALANCE TO COMPLETE	ESTIMATED COMPLETION DATE	LINE NO.
1		IRRIGATION SERVICE LAND--FULL	3,970	Ac.						3,970 Ac.				1
2		MUNICIPAL AND INDUSTRIAL WATER	85	AF						85 AF				2
3														3
4	108	CONSTRUCTION PROGRAM								← Initial Water Available				4
5	.04	WELLS												5
6	.01	Well Cluster No. 1	25.2	cfs	350,000	25,000	25,000	32,000	266,000	267,000	4,000			6
7	.02	Well Cluster No. 2	20.6	cfs	497,000	13,000	13,000	70,000	283,000	134,000	4,000			7
8	.03	Well Cluster No. 3	15.5	cfs	415,000	11,000	11,000	71,000	173,000	144,000	3,000			8
9	.04	Well Cluster No. 4	22.0	cfs	478,000	12,000	12,000	70,000	188,000	203,000	4,000			9
10	.06	LATERALS												10
11	.01	Pipe Distribution System No. 1	10.1	mi.	847,200	25,000	13,000	99,000	195,000	537,200	7,000			11
12	.02	Pipe Distribution System No. 2	11.1	mi.	751,000	21,000	9,000	77,000	348,000	306,000	7,000			12
13	.03	Pipe Distribution System No. 3	6.7	mi.	450,000	11,000	2,000	48,000	226,000	173,000	4,000			13
14	.04	Pipe Distribution System No. 4	10.2	mi.	815,000	28,000	10,000	75,000	380,000	346,000	7,000			14
15	.10	GENERAL PROPERTY												15
16	.01	Permanent Operating Facilities			35,000	3,000	1,000	2,000	3,000	31,000				16
17	.02	Recreational Facilities--Twin Lakes Access Area			10,000	1,000	1,000	2,000	2,000	28,000				17
18		Service Facilities Construction & Salvage					2,000	25,000	2,000	2,000	40,000			18
19														19
20		TOTAL CONSTRUCTION COST			4,965,000	138,000	98,000	530,000	2,139,000	1,960,000	24,000			20
21														21
22		TOTAL PROJECT COST			4,965,000	138,000	98,000	530,000	2,139,000	1,960,000	40,000			22
23														23
24		Consolidated Expenditures and Credits			-140,000	-138,000	-73,000	-47,000	1,000	-21,000	-40,000			24
25														25
26		TOTAL EXPENDITURES			4,825,000		25,000	483,000	2,140,000	1,940,000	-16,000			26
27														27
28		TOTAL OBLIGATIONS			4,825,000		25,000	620,000	2,140,000	1,940,000	40,000			28
29														29
30														30
31														31
32		FUNDS REQUIRED					25,000	620,000	2,140,000	1,940,000	40,000			32
33														33

Notes:

1/ January 1969 price level.

Testing and minor rectification will continue from initial water delivery through December of fifth year.

Recommended: _____ (Operation Office Head) (Date)

Recommended: _____ (Regional Director) (Date)

Recommended: _____ (Asst. Comr. for PC & P) (Date)

Approved: _____ (Commissioner) (Date)

Revised: April 1969 (Date) SHEET 1 of 1 SHEETS

Form No. 9 — UNITED STATES — DEPARTMENT OF THE INTERIOR — BUREAU OF RECLAMATION — MARCH 1964

CONTROL SCHEDULE

RATHDRUM PRAIRIE PROJECT, IDAHO
SPOKANE CREEK/RISE UNIT

Numbers, Washington, November 1968 (OFFICE) (DATE) 1 (NUMBER)

☒ PRELIMINARY (NOT FOR CONSTRUCTION) ☐ FOR CONSTRUCTION ☐ AS-BUILT

ECONOMIC JUSTIFICATION

Benefits

Irrigation.—The annual irrigation benefits total $438,800 and consist of $286,200 in direct benefits and $152,600 indirect and public benefits. These values are the irrigation benefits derived for the feasibility report adjusted to reflect current procedures for treatment of alternative earnings and use of 4⅝ percent interest in adjusting for a 3-year lag in achieving full benefits.

Municipal and industrial water supply.—Municipal and industrial water supply benefits are now estimated to amount to $10,900. These benefits represent the cost of the most likely alternative for an equivalent water supply developed for the feasibility report, indexed to reflect current price levels and adjusted to reflect the use of a 4⅝ percent interest rate.

Fish and wildlife enhancement.—Annual equivalent fish and wildlife benefits amount to $25,000. This benefit reflects the use of a 4⅝ percent interest rate in determining the annual equivalent value of the benefits furnished by the Fish and Wildlife Service for the feasibility report.

Recreation.—Annual recreation benefits amount to $2,300. This is the same estimate used in the feasibility report.

Area redevelopment.—Area redevelopment benefits are estimated to amount to $33,200 annually. Benefits derived for the feasibility report were updated to reflect construction labor and operating wages based on January 1969 price levels and use of a 4⅝ percent interest rate in determining annual equivalent values.

Total annual benefits.—Annual benefits anticipated from development of the East Greenacres unit for a 100-year period of analysis at 4⅝ percent interest are summarized in the following tabulation.

Annual benefits	
Irrigation:	
Direct	$286, 200
Indirect and public	152, 600
Subtotal	438, 800
Municipal and industrial water	10, 900
Fish and wildlife enhancement	25, 000
Recreation	2, 300
Area redevelopment	33, 200
Total benefits	510, 200
Direct benefits	357, 600

Federal project costs associated with benefits

Federal project costs are summarized below.

Item	*Amount*
Total construction cost	$4, 965, 000
Less investigation	(138, 000)
Plus interest during construction	277, 000
Plus irrigation power suballocation	365, 000
Net Federal investment	5, 469, 000

Annual equivalent investment	$255, 700
Annual operating cost with development	58, 900
Less annual operating costs without development	(20, 700)
Annual net equivalent cost [1]	293, 900

[1] The annual operating costs used in the benefit-cost analysis represent the incremental operation, maintenance, and replacement costs associated with the proposed development.

Benefit-cost ratio

The ratio of benefits to costs for a 100-year period of analysis and 4⅝-percent interest rate is shown in the following tabulation.

Total benefits	$510, 200
Direct benefits	$357, 600
Annual costs	$293, 900
Ratio—Total benefits	1. 74
Ratio—Direct benefits	1. 22

COST ALLOCATION

The costs have been allocated in a manner similar to that followed in the preparation of the feasibility report.

Costs to be allocated

The costs to be allocated are summarized below.

Item	Facility costs	Annual operating costs
Specific costs: Irrigation	$365, 000	
Joint costs:		
Deep wells	1, 946, 000	
Distribution systems	2, 892, 000	$58, 700
O. & M. headquarters	95, 000	
Twin Lakes facilities	32, 000	200
Subtotal	4, 965, 000	58, 900
Total costs	5, 330, 000	58, 900
Interest during construction	277, 000	

Allocation of costs

Project cost estimates considered in the allocation have been updated to reflect price levels as of January 1969. As in the feasibility report the cost of irrigation pumping power has been treated as a specific cost to irrigation and the cost of access land and facilities at Twin Lakes which has been included specifically for recreation and fish and wildlife enhancement has been preallocated to the two functions. These allocated costs, derived by proportionate benefits, were then identified as separable costs for these functions and were used in the cost allocation analysis. The basic data used in the allocation are summarized in table 2. The allocation of costs is shown in table 3.

TABLE 2.—BASIC DATA FOR COST ALLOCATION

Item	Construction cost	Interest during construction	Annual equivalent costs [1] (100 years—4⅝ percent) Construction	Interest during construction	Operation, maintenance, replacements and power	Total
Multiple-purpose project: Total project costs	$5,330,000	$277,000	$249,230	$12,950	$58,900	$321,080
Single-purpose projects:						
Irrigation	5,230,000	272,000	244,550	12,720	58,000	315,270
Municipal and industrial water	83,000		3,300		7,600	10,900
Recreation	453,000	25,000	21,180	1,170	8,700	31,050
Fish and wildlife enhancement	453,000	25,000	21,180	1,170	8,700	31,050
Multiple-purpose project without:						
Irrigation	1,774,000	99,000	82,950	4,630	25,600	113,180
Municipal and industrial water	5,262,000	273,000	246,050	12,770	58,200	317,020
Recreation, fish and wildlife enhancement	5,298,000	275,000	247,730	12,860	58,700	319,290
Separable costs:						
Specific costs:						
Irrigation	365,000	[2]	17,070		[3]	17,070
Municipal and industrial water						
Recreation						
Fish and wildlife enhancement						
Total	365,000		17,070			17,070
Separable joint costs:						
Irrigation	3,191,000	178,000	149,210	8,320	33,300	190,830
Municipal and industrial water	68,000	4,000	3,180	180	700	4,060
Recreation	2,700		130			130
Fish and wildlife enhancement	29,300	2,000	1,370	90	200	1,660
Total	3,291,000	184,000	153,890	8,590	34,200	196,680
Total separable costs:						
Irrigation	3,556,000	178,000	166,280	8,320	33,300	207,900
Municipal and industrial water	68,000	4,000	3,180	180	700	4,060
Recreation [4]	2,700		130			130
Fish and wildlife enhancement [4]	29,300	2,000	1,370	90	200	1,660
Total	3,656,000	184,000	170,960	8,590	34,200	213,750

[1] Annual equivalent values for single-purpose municipal and industrial project are based on stage construction.
[2] Interest during construction was not computed on the irrigation pumping power charge of $365,000.
[3] Included in power rate.
[4] Separable costs for recreation and fish and wildlife enhancement ($32,000) were split between these 2 functions based on proportionate benefits.

TABLE 3.—COST ALLOCATION, SEPARABLE COST-REMAINING BENEFIT METHOD (100 YEARS AT 4⅝ PERCENT)

Item	Irrigation	Municipal and industrial water	Recreation	Fish and wildlife enhancement	Total
Total costs to be allocated:					
Construction					$5,330,000
Interest during construction					277,000
Operation, maintenance, replacements, and power					58,900
Annual equivalent values:					
Construction					249,230
Interest during construction					12,950
Operation, maintenance, replacements, and power					58,900
Total					321,080
Benefits	$438,800	$10,900	$2,300	$25,000	
Alternate costs	315,270	10,900	31,050	31,050	
Justifiable expenditure	315,270	10,900	2,300	25,000	353,470

TABLE 3.—COST ALLOCATION, SEPARABLE COST-REMAINING BENEFIT METHOD (100 YEARS AT 4⅝ PERCENT)—Continued

Item	Irrigation	Municipal and industrial water	Recreation	Fish and wildlife enhancement	Total
Separable costs:					
Specific:					
Construction	$17,070				$17,070
Interest during construction					
Operation, maintenance, replacements, and power					
Total	17,070				17,070
Separable joint:					
Construction	149,210	$3,180	$130	$1,370	153,890
Interest during construction	8,320	180		90	8,590
Operation, maintenance, replacements, and power	33,300	700		200	34,200
Total	190,830	4,060	130	1,660	196,680
Total separable:					
Construction	166,280	3,180	130	1,370	170,960
Interest during construction	8,320	180		90	8,590
Operation, maintenance, replacements, and power	33,300	700		200	34,200
Total	207,900	4,060	130	1,660	213,750
Remaining justifiable expenditure	107,370	6,840	2,170	23,340	139,720
Percent distribution	76.85	4.90	1.55	16.70	100
Remaining joint costs:					
Construction	$60,150	$3,840	$1,210	$13,070	$78,270
Interest during construction	3,350	210	70	730	4,360
Operation, maintenance, replacements, and power	18,980	1,210	380	4,130	24,700
Total	82,480	5,260	1,660	17,930	107,330
Total allocated costs:					
Construction	226,430	7,020	1,340	14,440	249,230
Interest during construction	11,670	390	70	820	12,950
Operation, maintenance, replacements, and power	52,280	1,910	380	4,330	58,900
Total	290,380	9,320	1,790	19,590	321,080
Total allocated costs: [1]					
Construction	4,842,000	150,000	29,000	309,000	5,330,000
Interest during construction	250,000	8,000	1,000	18,000	277,000
Operation, maintenance, replacements, and power	52,280	1,910	380	4,330	58,900

[1] Capitalized construction and interest during construction.

SUMMARY OF ALLOCATED COSTS

Project purpose	Total costs	Interest during construction	Annual operating costs
Irrigation	$4,842,000	$250,000	$52,280
Municipal and industrial	150,000	8,000	1,910
Fish and wildlife	309,000	18,000	4,330
Recreation	29,000	1,000	380
Total	5,330,000	277,000	58,900

REPAYMENT

Irrigation

Costs allocated to irrigation total $4,842,000. This amount includes the irrigation pumping power suballocation of $365,000 which will be repaid by the annual pumping power charge during the repayment period. The remaining reimbursable irrigation costs amount to

$4,477,000. Recommended irrigation water charges total $68,390 annually. After payment of the allocated annual operating costs of $52,280, irrigators could pay $16,110 annually on the irrigation construction obligation. In a 50-year repayment period irrigators would repay $805,500 or 18 percent of the irrigation obligation. Financial assistance in the amount of $3,671,500 would be needed to repay the reimbursable irrigation costs. Surplus revenues from municipal and industrial water would be available to pay about $76,000 of the irrigation obligation; therefore, financial assistance from power revenues would amount to $3,595,500.

Lands of the East Greenacres unit will be developed in two blocks: (1) the 1,770 acres of presently irrigated lands with a 3-year development period, and (2) the 3,460 acres of new lands with a 10-year development period. The financial assistance required for these two blocks, proportioned on an acreage basis, would be: (1) presently irrigated lands, $1,242,500, and (2) new lands, $2,429,000. Based on the proposed 50-year repayment schedule, financial assistance to the presently irrigated lands would need to be repaid by fiscal year 2029 and the new lands by fiscal year 2036.

It is proposed that costs allocated to irrigation which are beyond the ability of the irrigators to repay within the recommended repayment and development periods be returned to the Reclamation Fund within such periods from revenues derived by the Secretary of the Interior from the disposition of municipal and industrial water supply and from net power revenues from the Federal Columbia River Power System in accordance with provisions of Public Law 89–448 as amended by 89–561. The conditions prescribed by this legislation for the use of net power revenues from the Federal Columbia River Power System for irrigation assistance can be met by the East Greenacres Unit as shown below:

(1) *Maximum permissive aid.*—

Maximum allowable aid in 20 consecutive years, $600 million.

Block 1—Total authorized aid due fiscal year 2010 through fiscal year 2029, $318 million.

Block 2—Total authorized aid due fiscal year 2017 through fiscal year 2036, $275 million.

(2) *Net power revenues must be available.*—System payout studies indicate net revenues in the amount needed will be available.

(3) *Construction schedule must be arranged so that the assistance will not cause an increase in BPA power rates.*—The construction schedule for the East Greenacres unit as now contemplated is compatible with this requirement.

Municipal and industrial water

Costs allocated to this purpose amount to $150,000 for construction, $8,000 for interest during construction, and $1,910 for annual operations. In the allocation, interest during construction was computed at 4⅝ percent. In the repayment analysis the applicable rate for fiscal year 1969 is 3.256 percent. When adjusted for this rate the interest during construction amounts to $5,600.

All costs allocated to municipal and industrial water are reimbursable with interest. Using information developed for the feasibility report with respect to the number of turnouts, a short form payout

was made which shows that the costs for municipal and industrial water can be repaid within a 50-year period from the date of initial service, and that an additional $76,000 of revenue will accumulate through the 60th year which could be applied on financial assistance to irrigation. The 60-year period coincides with a 10-year development and a 50-year repayment period for irrigation on the new lands. Repayment is based on an annual rate per turnout of $41.70. Adjustments have been made for anticipated growth in number of users during the pay-out period.

Recreation and fish and wildlife enhancement

The repayment analysis for recreation and fish and wildlife enhancement is based on the cost-sharing provisions of Public Law 89–72. Thus, one-half of the separable construction costs ($16,000), associated interest during construction ($700) and all of the separable operating costs ($200), would be repayable by a non-Federal public body. Interest during construction for the repayment analysis was computed using a rate of 3.256 percent.

All of the joint construction costs ($306,000) and the balance of the separable costs ($16,000) would be nonreimbursable. Annual operating costs associated with joint facilities and allocated to these two functions ($4,510) would also be nonreimbursable. A summary of the cost-sharing analysis is shown in table 4.

TABLE 4.—REIMBURSABLE AND NONREIMBURSABLE COSTS FOR RECREATION AND FISH AND WILDLIFE ENHANCEMENT

[In dollars]

Item	Allocated costs		
	Total	Reimbursable	Nonreimbursable
Construction costs:			
Separable recreation	2,700	1,350	1,350
Separable fish and wildlife	29,300	14,650	14,650
Remaining joint recreation	26,300	----------	26,300
Remaining joint fish and wildlife	279,700	----------	279,700
Total	338,000	16,000	322,000
Reimbursable interest during construction:			
Recreation	----------	----------	----------
Fish and wildlife	700	700	----------
Total	700	700	----------
Total investment cost:			
Recreation	29,000	1,350	27,650
Fish and wildlife	309,700	15,350	294,350
Total	338,700	16,700	322,000
Annual operating costs:			
Separable recreation	0	0	----------
Separable fish and wildlife	200	200	----------
Remaining joint recreation	380	----------	380
Remaining joint fish and wildlife	4,130	----------	4,130
Total	4,710	200	4,510

Kootenai County has expressed willingness to assume the responsibility for administration and management of the land and facilities required for fish and recreation at Twin Lakes and for repayment of the reimbursable costs with interest under provisions of Public Law 89–72. A letter of intent from Kootenai County dated October 25, 1966, is appended to the feasibility report.

Cost and repayment summary

A summary of the unit costs and repayment of reimbursable costs is shown in the following tabulation:

Item	*Amount*
Total project costs	$5,330,000
Reimbursable costs:	
Irrigation:	
Irrigation power suballocation	365,000
Irrigation facilities	4,477,000
Subtotal	4,842,000
Fish and wildlife enhancement	14,650
Recreation	1,350
Municipal and industrial water	150,000
Total reimbursable	5,008,000
Nonreimbursable costs:	
Fish and wildlife enhancement	294,350
Recreation	27,650
Total nonreimbursable	322,000
Reimbursable interest during construction:	
Municipal and industrial water	5,600
Fish and wildlife enhancement	700
Recreation	Negligible
Repayment:	
Reimbursable irrigation	4,842,000
Less irrigation power suballocation	365,000
Irrigation facilities	4,477,000
Repaid by irrigators (18 percent payout)	805,500
Financial assistance required	3,671,500
From M. & I. revenues	76,000
From power revenues	3,595,500
Reimbursable fish and wildlife enhancement	[1] 15,350
Repaid by non-Federal public body	[1] 15,350
Reimbursable recreation	1,350
Repaid by non-Federal public body	1,350
Reimbursable municipal and industrial water costs	[1] 155,600
Repaid by water users	[1] 155,600

[1] Includes reimbursable interest during construction.

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington, D.C., June 13, 1967.

THE SECRETARY OF THE INTERIOR.

SIR: This is my proposed report on the East Greenacres Unit, Rathdrum Prairie Project, Idaho. It is based upon and includes the report of the regional director, dated May 1966 (Revised February 1967), and the appended reports of the Bureau of Sport Fisheries and Wildlife and National Park Service of this Department and the Public Health Service, Department of Health, Education, and Welfare.

The Unit lies in the "panhandle" of northern Idaho, near the city of Post Falls, Idaho. The plan of development is designed to serve the functions of irrigation, municipal and industrial water supply, con-

servation and development of fish and wildlife resources, and the enhancement of outdoor recreation opportunities. Area redevelopment benefits would accrue from the development, but no allocation of costs to that function is proposed. There is no need for flood control or water quality control as functions of the Unit. The Unit provides no opportunity for the development of hydroelectric power.

About 1,770 acres of the East Greenacres Unit now obtain an irrigation water supply by gravity diversion from Twin Lakes, a natural storage facility formed by connecting two bodies of water with a canal. The water supply from that source is limited in quantity and the conveyance system is unsatisfactory. Twin Lakes has been developed extensively for recreation and fishery purposes and the seasonal drawdown for irrigation water supply has engendered controversy and litigation over the years.

It is proposed to provide a new irrigation water supply to 5,270 acres in the East Greenacres Unit, including the 1,770 acres now under the Twin Lakes system, by pumping water from the extensive ground-water aquifer underlying the area. The area would be divided into four complexes, each of which would include wells and pumps, an elevated reservoir, and a closed pipe system to deliver water under pressure to the water users. Through joint use of the distribution system, water would be provided for domestic and livestock uses. A small well and pump in each system would meet all water requirements during the nonirrigation season.

Irrigation water would be delivered under sufficient pressure for sprinkler service to all lands. This method of service is efficient and conserves water. The comparatively thin mantle of topsoil over the entire area is underlain by porous, gravelly strata which accept and discharge water easily, thus making separate drainage facilities unnecessary.

Use of the ground-water supply for irrigation and domestic purposes will eliminate the annual drawdown of Twin Lakes, thereby permitting the lake levels to be stabilized and enhance the attractiveness for recreation and fish and wildlife purposes. The National Park Service and the Bureau of Sport Fisheries and Wildlife have considered and reported on the potentials for those purposes. As recommended by the Bureau of Sport Fisheries and Wildlife, two additional public access areas with boat ramps and parking areas would be provided. The Bureau of Outdoor Recreation finds that the proposed program for stabilization of Twin Lakes would be consistent with the objectives of the Idaho outdoor recreation plan.

The Public Health Service, Department of Health, Education, and Welfare, reviewed the plan of development from the standpoint of public health. A thorough plan to cover all contingencies in the use of the proposed distribution system for domestic water supply will be developed in consultation with the Idaho State Department of Health as recommended by the Service. The Service does not anticipate that the East Greenacres Unit would materially affect vector problems in the area. Precautions would be taken during the construction and operation of the Unit to control such problems should they arise.

Under present conditions the dry lands are used for wheat, small grain and forage crops, and usually lie fallow every other year. The dependable irrigation water supply with the Unit will encourage dairy

farming and the production of alfalfa, rotation pasture, small-grain nurse crops, and grass seed. Many of the water users operate part-time units, the average farm size being 29 acres. No difficulty in conforming to the acreage limitation provisions of Reclamation law is anticipated. The existing East Greenacres Irrigation District is willing to extend its boundaries to include the lands of the Unit which are not now included.

The estimated cost of constructing the works required for the East Greenacres Unit, at prices prevailing in July 1964, is $4,245,000. An assignment of $365,000 of the costs of the Federal Columbia River power system is made to the Unit for the power to pump the irrigation water supply. A tentative allocation of the construction and assigned costs, by the separable costs-remaining benefits method, results in the following:

Irrigation	$4, 122, 000
Municipal and industrial water supply	151, 000
Fish and wildlife	303, 000
Recreation	34, 000
Total	4, 610, 000

The annual equivalent of the Unit investment, plus annual operating cost, is $188,100.

Development of the Unit would result in the following annual benefits:

Irrigation	$444, 800
Municipal and industrial water supply	9, 900
Fish and wildlife	27, 000
Recreation	2, 300
Area redevelopment	23, 100
Total	507, 100

The ratio of annual benefits to annual costs for all benefits of the Unit is 2.70 to 1, using 3⅛ percent interest and a 100-year period of analysis. The ratio, using only direct benefits, is 1.73 to 1.

The costs allocated to irrigation, under Reclamation law, are to be repaid without interest in 50 years, after development periods of 3 years for presently irrigated land and 10 years for newly developed land. The costs allocated to municipal and industrial water supply are to be repaid with interest over 50 years. In accordance with the Federal Water Project Recreation Act (Public Law 89–72), one-half of the separable costs allocated to recreation and fish and wildlife enhancement and the costs of operating and maintaining the separable facilities for those purposes are to be borne by a non-Federal public body. By letter dated October 25, 1966, copy bound with the regional director's report, the Kootenai County Board of Commissioners indicated the intent of the county to agree to administer and to share in the costs of the facilities for recreation and fish and wildlife enhancement.

An annual water service charge of $13 per acre is proposed, as being within the ability of the irrigation water users to repay. This amount would pay the annual operation, maintenance, and pumping power costs and leave $21,110 annually to be applied toward the construction cost, or $1,055,500 over 50 years. Revenues from the irrigation pumping power charges at a rate of 1¼ mills per kilowatt-hour would amortize the $365,000 cost assignment to this purpose.

This leaves a balance of $2,701,500 of the irrigation cost allocation to be repaid from other sources.

The use of water for municipal and industrial purposes (domestic and livestock) is estimated at 69 acre-feet annually in the early years, growing to 85 acre-feet by the year 2020. Based on an annual charge of $42.35 per turnout, revenues would pay all operating costs, including pumping, the $151,000 allocation of construction costs, interest during construction, and interest on the unpaid balance at the presently certified rate of 3.225 percent for fiscal year 1967, and would accumulate a surplus of $77,000 by the end of the irrigation repayment period. The $77,000 surplus would be applied to retirement of the irrigation cost allocation. The repayment contract would provide for periodic reappraisals of actual water use to assure that all domestic water users are assessed the turnout charge.

All remaining costs allocated to irrigation not otherwise repaid ($2,624,500) would be charged to and returned from net power revenues of the Federal Columbia River Power System in accordance with provisions of Public Law 89–448, as amended by Public Law 89–561. Adequate revenues are in prospect under the conditions prescribed by those laws to provide the necessary financial assistance to the East Greenacres Unit.

The allocation of costs to fish and wildlife enhancement ($303,000) is composed of joint costs of $280,900 and separable costs of $22,100. The allocation of costs to recreation ($34,000) is composed of joint costs of $32,100 and separable costs of $1,900. In accordance with the Federal Water Project Recreation Act and the letter of intent from the Kootenai County Board of Commissioners, it is expected that the county will repay one-half of the separable costs to fish and wildlife enhancement and recreation ($11,050 and $950), plus interest during construction ($450) and will operate and maintain at its expense the facilities to be provided for those purposes.

The East Greenacres Unit is an engineeringly feasible and economically justifiable multiple-purpose reclamation development which should be authorized and constructed under reclamation law. It is urgently needed and strongly supported by the water users and an established and operating irrigation district is ready to enter into water service contracts as soon as the unit is authorized for construction. I therefore concur in the recommendations of the regional director set forth on pages 21–22 of his attached feasibility report.

I recommend that you approve and adopt this report as your proposed report on the East Greenacres Unit, Rathdrum Prairie Project, Idaho, and that you authorize me in your behalf to transmit copies to the States of the Columbia River Basin, to the Secretary of the Army, and to the other interested Federal agencies for review as required by the Flood Control Act of 1944 (58 Stat. 887), the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C., 661 et seq.), and procedures approved by the President on May 15, 1962 (S. Doc. 97, 87th Congress).

Respectfully,

FLOYD E. DOMINY, *Commissioner.*

Approved and adopted July 12, 1967.

STEWART L. UDALL,
Secretary of the Interior.

UNITED STATES DEPARTMENT OF THE INTERIOR
STEWART L. UDALL, Secretary

BUREAU OF RECLAMATION
FLOYD E. DOMINY, Commissioner

REGION 1
H. T. NELSON, Regional Director

RATHDRUM PRAIRIE PROJECT, IDAHO
EAST GREENACRES UNIT
MAY 1966 (Rev. Feb. 1967)

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
REGIONAL OFFICE, REGION 1,
Boise, Idaho, May 25, 1966.

To: Commissioner.
From: Regional Director, Region 1, Boise, Idaho.
Subject: Feasibility report—East Greenacres unit, Prairie Division, Rathdrum Prairie Project, Idaho.

This is my report outlining a plan for multipurpose development of the East Greenacres unit of the Rathdrum Prairie project in northern Idaho, near the Idaho-Washington State line. The development plan is designed to serve the functions of irrigation, municipal and industrial water, recreation and fish and wildlife enhancement, and would provide redevelopment benefits to the area.

Use of Twin Lakes water for irrigation does not, at present, maximize benefits to the area. Carriage and distribution system losses in the existing irrigation facilities are extremely high and cannot be economically reduced. Fluctuating lake levels limit the fish productivity of the lake, and low water periods adversely affect lake recreation use.

Since the Twin Lakes water supply is inadequate to meet all of the existing multipurpose needs of the area, the proposed plan is formulated on the basis of using underground water for irrigating project lands in lieu of the present diversions from Twin Lakes, thus maintaining the lake at a relatively constant level for the benefit of recreation and fish and wildlife enhancement.

Although the recent dispute between local recreation interests and the irrigators regarding the legal operating levels of Twin Lakes was ruled in favor of the irrigators, it emphasizes the importance of a development plan which would provide additional water for the other multipurpose needs of the area.

A cooperative agreement among the interested agencies and the East Greenacres Irrigation District, with review and concurrence by the State engineer, will be executed with the objective of assuring a relatively constant lake level that would create the total benefits to recreation and fish and wildlife as a part of the multipurpose development aspects of the plan. Water would be pumped from the extensive ground water aquifer underlying the project lands into elevated steel regulating reservoirs, and would be distributed in buried pipe systems under pressure for sprinkler irrigation and for municipal and industrial purposes through joint use of the distribution facilities. The existing gravity irrigation system would be abandoned. Under present conditions multipurpose use of the water resources of the area is restricted. The irrigation district needs to expand and spread operating costs over a larger acreage base for an economic and efficient operation. The proposed plan would permit such changes. Some 3,500 acres of new irrigable lands would be provided full irrigation service in addition to about 1,800 acres of presently irrigated lands. The stabilized water levels of Twin Lakes, together with project enhancement features for recreation and fish and wildlife, would add substantially to the economic stability of the project area.

The size and scope of the proposal is the maximum justifiable development that would meet both the short- and long-term needs of the area. The plan has economic justification, as benefits would exceed associated Federal costs by a ratio of 2.70 to 1. Irrigation water users can repay about 28 percent of the irrigation obligation. The municipal and industrial water users can repay 100 percent of their allocated costs with interest, and in addition, could contribute toward financial assistance to irrigation. Thus, the proposal appears to be a desirable undertaking.

Although construction of East Greenacres unit would provide irrigation for only about 15 percent of the irrigable lands in the Rathdrum Prairie, it represents the full extent of local interest in and support for development at this time. The project is timely, fulfills the basic needs of the area, removes a conflict of interest in use of Twin Lakes, and in no way would prevent further basin development. Ample water from underground sources is available whenever interest is sufficient to warrant further development.

There is strong support for the development plan among the landowners, and local and State organizations and agencies. The East Greenacres irrigation district has been in operation since 1921, and private irrigation development in the area dates back to the turn of the century. Excessively high canal and distribution system losses, and in many years an inadequate supply of late season water, have been persistent problems.

Studies were begun by the Bureau of Reclamation in 1958, but were halted in 1960 by litigation between the Lakeshore Owners' Association interested in using the lake for recreation, and the irrigation district regarding operating levels of Twin Lakes. Following settlement, and as a result of renewed landowner interest, the project investigation was resumed in 1963. At a public meeting in February 1964, potential water users voted almost unanimously in favor of the project development plan.

AUTHORITY

This report is authorized to be made by the Federal Reclamation Laws (act of June 17, 1902, 32 Stat. 388 and acts amendatory thereof or supplementary thereto).

ACKNOWLEDGMENTS

The following Federal agencies have given valuable assistance during the investigation necessary for this report: Fish and Wildlife Service, National Park Service, Geological Survey, Bonneville Power Administration, Department of the Interior; and the Public Health Service, Department of Health, Education, and Welfare. State, county, and local agencies that gave assistance were: Washington Water Power Co., Kootenai Electric Cooperative, Idaho State Department of Reclamation, East Greenacres Irrigation District, and McGuire Domestic Water Associates, Inc.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

It is concluded that:

(1) The development plan for the East Greenacres Unit is designed to serve the multipurpose functions of irrigation, municipal and indus-

trial water supply, recreation, and fish and wildlife enhancement. Project construction would not preclude additional future development of the area's remaining land and underground water resources.

(2) The plan has engineering feasibility; it also has economic justification, as indicated by a benefit-cost ratio of 2.70 to 1.

(3) The ground-water supply is adequate to meet irrigation and municipal and industrial water requirements.

(4) Discontinued use of Twin Lakes as an irrigation supply permits stabilization of the water levels of the lake, thus providing recreation and fish and wildlife enhancement.

(5) There is strong local interest in and support for the multipurpose development plan. The East Greenacres Irrigation District is willing to expand its boundaries to include all interested landowners, and to change its source of water supply from Twin Lakes to the underground aquifer beneath the area.

(6) All reimbursable irrigation construction costs could be repaid in a 50-year period, following a 10-year development period for full service lands and a 3-year development period for presently irrigated lands. Irrigators could repay about 28 percent of the irrigation allocation, and the balance could be repaid from municipal and industrial revenues to the extent available and from revenues derived by the Secretary of the Interior from the sale of power from the Federal Columbia River power system. The municipal and industrial water users could fully repay the costs allocated to this function with interest during a 50-year period, and in addition, would create $77,000 in revenues which could assist with payment of the irrigation costs.

(7) Area redevelopment benefits would accrue in the area from construction of the proposed development, even though no allocation of costs to area redevelopment is proposed.

Recommendations

It is recommended that:

(1) The multipurpose plan for development of the East Greenacres unit be authorized for construction by the Secretary of the Interior substantially in accord with the plans set forth in this report, with such modifications, omissions, or additions as the Secretary of the Interior may find proper and necessary to carry out the purposes of the plan under the provisions of Federal reclamation laws.

(2) The Secretary be authorized, as part of the unit, to construct, operate, and maintain or otherwise provide for public outdoor recreation and fish and wildlife enhancement facilities, to acquire or otherwise make available such adjacent lands or interests therein as are necessary for public outdoor recreation or fish and wildlife use, and to provide for public use and enjoyment of project lands, facilities, and water areas in a manner coordinated with the other purposes of the division; costs allocated to these functions be subject to provisions of the Federal Water Project Recreation Act (Public Law 89–72); and the land and facilities required for these functions be administered, operated, and maintained by appropriate local or State agencies pursuant to agreements.

(3) Additional detailed studies of fish and wildlife resources affected by the project be conducted as necessary, after the project is authorized, in accordance with section 2 of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), and such

reasonable modifications in the authorized project facilities be made by the Secretary of the Interior as he may find appropriate for the conservation, improvement, and development of these resources.

(4) The period provided in subsection (d), section 9, of the Reclamation Project Act of 1939 (53 Stat. 1187) for repayment of construction costs properly chargeable and assigned to be repaid by the irrigators, be extended to 50 years (exclusive of development period of 10 years for full service lands and 3 years for presently irrigated lands) or to as near that number of years as is consistent with the adoption and operation of a variable repayment formula. The water users repayment contracts shall contain appropriate provisions permitting the repayment requirements to be examined at 5-year intervals and adjusted, as necessary, to reflect changes from irrigation to municipal and industrial uses, as determined by land use surveys to be conducted by the Bureau for this purpose. Such contracts shall also contain provisions concurred in by the State of Idaho in which the water-right holders provide their consent for Twin Lakes water to be used to maintain the lake level as near constant as possible for recreation and fish and wildlife enhancement.

(5) Costs allocated to irrigation in excess of the amount determined by the Secretary to be within the ability of the irrigators to repay within the repayment and development periods herein specified shall be returned to the Reclamation Fund within such periods from revenue derived by the Secretary of the Interior from (1) the disposition of project municipal and industrial water supply, and (2) from Federal power revenues in accordance with the provisions of section 2 of the act of June 14, 1966 (80 Stat. 200, as amended by section 6 of the act of September 7, 1966 (80 Stat. 707). Power and energy for the operation of the project pumping and electrical facilities be reserved from the Federal Columbia River Power System at charges to the water users as established by the Secretary.

(6) Project waters and Federal lands, including leases, if any, in the area be open to public use for hunting and fishing so long as title to the lands and structures remains in the Federal Government, except for sections reserved for safety, efficient operation, or protection of public property, and sections reserved for conservation development and improvement of fish and wildlife resources.

H. T. NELSON, *Regional Director.*

STATISTICAL SUMMARY

East Greenacres Unit

RATHDRUM PRAIRIE PROJECT, IDAHO, PRAIRIE DIVISION

LOCATION

East Greenacres Unit lies just northwest of the city of Post Falls in northern Idaho.

FUNCTIONS

The development plan is designed to serve the functions of irrigation, municipal and industrial water supply, recreation, and fish and wildlife enhancement. Area redevelopment benefits would accrue from construction of the project, but no allocation of costs to area redevelopment is proposed.

LANDS

A total of 5,270 acres would be provided irrigation service, of which 3,460 acres are dry irrigable lands, 1,770 acres irrigated irrigable lands, and 40 acres are 6W water right lands, all of which will receive a full water supply.

PLAN

Water for irrigation and municipal and industrial uses would be pumped from ground water in lieu of the present gravity diversions from Twin Lakes. The water would be pumped from four well complexes into elevated steel regulating reservoirs with float controls for automatic pump operation, and would flow by gravity pressure into four buried pipe distribution systems. Municipal and industrial water for domestic and livestock uses would be provided through joint use of the distribution systems.

This change in operation would permit Twin Lakes to be used exclusively for recreation and fish and wildlife enhancement. Two new public access areas would be acquired and boat ramps and parking facilities developed to accommodate the anticipated increase in recreation and fishery uses of the lake. This would eliminate possible future controversy between the lakeshore owners and the East Greenacres Irrigation District over the operating levels of the lake.

COSTS

Item	Construction costs (prices—July 1964)	Annual operating cost
Wells	$1,560,000	----------
Distribution system	2,585,000	----------
Operation and maintenance headquarters	76,000	----------
Subtotal	4,221,000	$54,200
Twin Lakes access areas	24,000	200
Total	4,245,000	54,400

ALLOCATION OF COSTS

Purpose	Total costs	Interest during construction	Annual operating cost
Irrigation	[1] $4,122,000	$144,000	$47,240
Municipal and industrial	151,000	6,000	2,020
Fish and wildlife	303,000	12,000	4,630
Recreation	34,000	1,000	510
Total	4,610,000	163,000	54,400

[1] Includes $365,000 of assigned pumping power costs.

Benefits and costs

Annual benefits (100-year period):	
Irrigation	$444,800
Municipal and industrial	9,900
Fish and wildlife	27,000
Recreation	2,300
Area redevelopment	23,100
Total	507,100
Annual equivalent costs:	
Net Federal investment, 100-year period at 3⅛ percent interest	152,300
Annual operating costs with development	54,400
Less operating costs without development	18,600
Annual net equivalent costs	188,100

Ratio of benefits to costs:
Total benefits, 2.70 to 1; direct benefits, 1.73 to 1.

REPAYMENT

Development period:
Presently irrigated lands, 3 years.
New lands, 10 years.

Repayment summary

Item:	Amount
Reimbursable costs:	
Irrigation:	
Irrigation power suballocation	$365,000
Irrigation facilities	3,757,000
Subtotal	4,122,000
Municipal and industrial water	151,000
Fish and wildlife	11,050
Recreation	950
Total reimbursable	4,285,000
Nonreimbursable costs:	
Fish and wildlife	291,950
Recreation	33,050
Total nonreimbursable	325,000
Total costs	4,610,000
Reimbursable interest during construction:	
Municipal and industrial water	6,000
Fish and wildlife	450
Recreation	Negligible

Repayment summary—Continued

Repayment of reimbursable costs:	*Amount*
Reimbursable irrigation	$4,122,000
Less irrigation power suballocation	365,000
Irrigation facilities	3,757,000
Repaid by irrigators	1,055,000
Percent payout	28
Financial assistance required from:	
M & I revenues	77,000
Power revenues	2,624,500
Reimbursable fish and wildlife enhancement	[1] 11,500
Repaid by non-Federal public body	[1] 11,500
Reimbursable recreation	950
Repaid by non-Federal public body	950
Reimbursable M & I water	[1] 157,000
Repaid by water users	[1] 157,000

[1] Includes reimbursable interest during construction.

IRRIGATION

[Lands in acres]

Land class	Irrigated	Nonirrigated	Total
1	0	0	0
2	30	270	300
3	1,740	3,190	4,930
Subtotal	1,770	3,460	5,230
6W	40	0	40
Total service area	1,810	3,460	5,270

Requirements:
Crop irrigation requirements, 1.46 acre-feet/irrigable acre.
Average farm delivery requirements, 2.25 acre-feet/irrigable acre.
Average pumping requirement, 2.42 acre-feet/irrigable acre.
Annual pumping requirement, 12,800 acre-feet.

MUNICIPAL AND INDUSTRIAL WATER

Domestic requirement:
50 gallons per capita per day or 0.2 acre-foot per dwelling unit per year.
Total annual:
1965—33 acre-feet.
2020—49 acre-feet.
Livestock requirement:
Total annual for dairy operations and drinking water for livestock—36 acre-feet.

PROJECT FEATURES

Pumping installations:
Wells: 19 total, ranging from 6 to 22 inches in diameter.
Well depths: 230 to 365 feet.
Irrigation:
Pumps: 1 at each well, capacity 1,500 to 3,800 g.p.m.
Motors: 1 at each well, size 175 to 500 horsepower.
Municipal and industrial:
Pumps: 1 in each 6-inch well, capacity 20 to 38 g.p.m.
Motors: 1 at each well, size 3 to 5 horsepower.

Regulating reservoirs:
Number: 4 total, one for each distribution system.
Size: 75,000 gallons each, 22 feet deep by 28 feet in diameter.
Type: Steel, elevated from 105 to 140 feet above ground level.
Distribution system:
Number of layouts: 4 separate systems, each serving from 1,010 to 1,645 acres.
Pipe: Protected, ranging from 4 to 30 inches in diameter and totaling 40 miles.
Farm delivery capacity: 6.4 g.p.m. per acre.
Transmission facilities: No Federal lines; power would be wheeled by Kootenai Electric Cooperative from Bonneville Power Administration's Prairie Substation. All metering and transformation facilities would be furnished by the Cooperative.
Public access areas: Two areas, each with boat-launching ramp and space for 25 cars and trailers would be provided at Twin Lakes for recreation and fish and wildlife enhancement.

GENERAL DATA

Source of water, ground water aquifer (Based on August 1964 data, depth to ground water ranges from 130 to 230 feet.)
Average frost-free period, 150 days.
Growing season, 200 days.
Irrigation season, May-September.
Elevation of irrigable lands, 2100-2220 feet.

REMARKS

The potential water users voted almost unanimously in favor of the proposed development in a February 1964 meeting. Their enthusiasm was due mainly to inclusion of municipal and industrial water as a project purpose and an adequate and efficient project water supply and distribution system.

The East Greenacres Irrigation District, presently assessing about 1,500 acres, is willing to extend its boundaries to include all interested landowners, and to change its source of water supply from Twin Lakes to the underground aquifers beneath the area.

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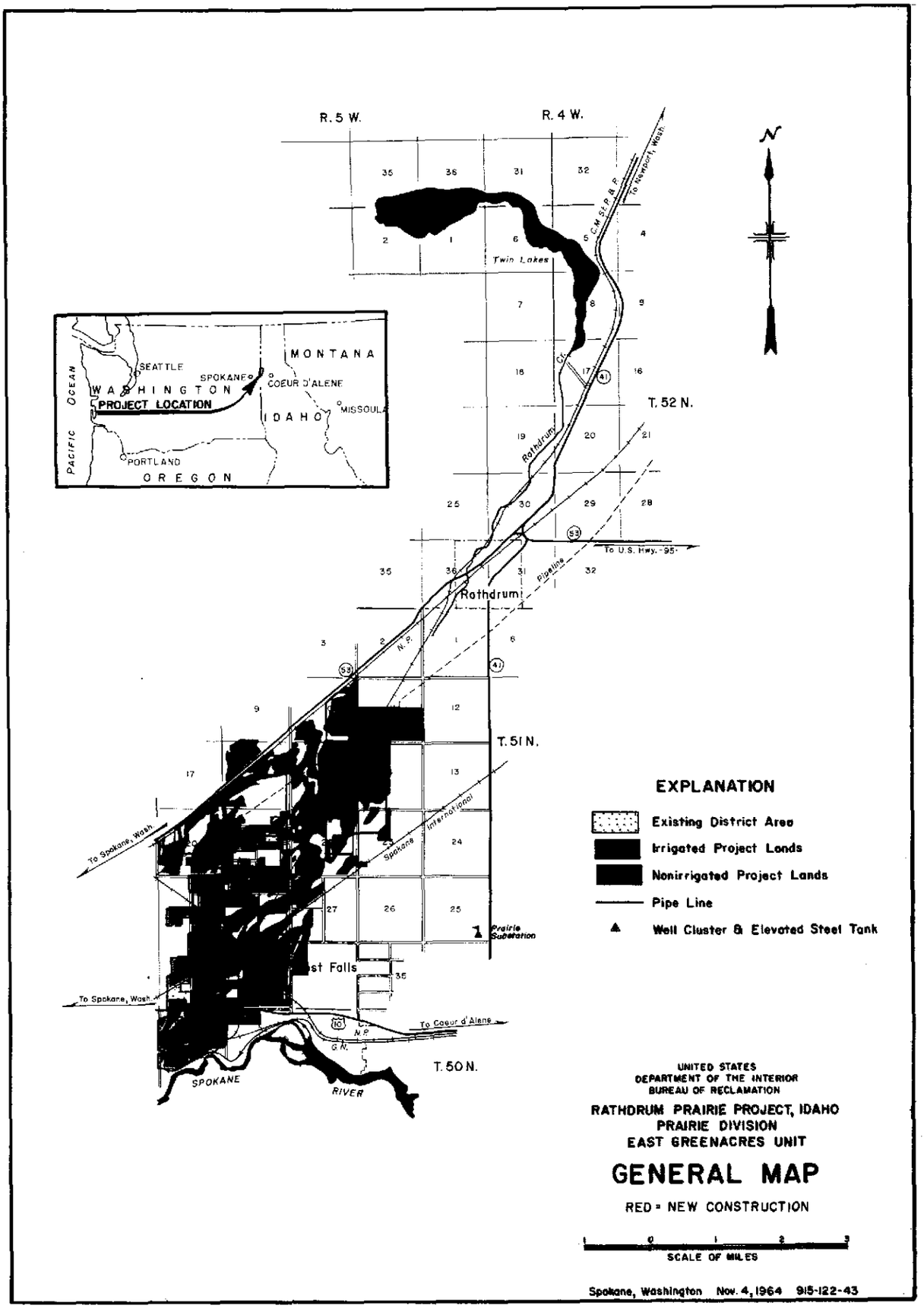
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C.M.St.P.&P.
Twin Lakes
T. 52 N.
Rathdrum
To U.S. Hwy. - 95
Pipeline
Rathdrum
N.P.
T. 51 N.
To Spokane, Wash.
Spokane International
Prairie Substation
To Spokane, Wash.
To Coeur d'Alene
N.P.
G.N.
T. 50 N.
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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
RATHDRUM PRAIRIE PROJECT, IDAHO
PRAIRIE DIVISION
EAST GREENACRES UNIT
GENERAL MAP
RED = NEW CONSTRUCTION
SCALE OF MILES
Spokane, Washington Nov. 4, 1964 915-122-43

CHAPTER I. GENERAL DESCRIPTION

General Area

Rathdrum Prairie is a relatively flat, open area at the western edge of Kootenai County in the Idaho panhandle.

PHYSICAL FEATURES

The dominant physiographic feature of this portion of Idaho is the Purcell Trench, a broad structural and erosional trough that extends northward from Coeur d'Alene Lake far into Canada. Between Lakes Coeur d'Alene and Pend Oreille the trench tapers from 17 miles to 1 mile wide. Project lands range in elevation from 2,100 to 2,220 feet. Near the Idaho-Washington line, Rathdrum Prairie merges into the Spokane Valley plain. The prairie is bounded in some places by escarpments 200 feet high. In other places, it abuts mountain slopes with local relief as great as 3,700 feet.

The project area, although comparatively flat in appearance, is characterized by gentle undulations and a general slope toward the southwest. Soils of Rathdrum Prairie as a whole are similar in characteristics, but vary in quality. Because they are porous, drainage is excellent. They are medium in texture, gravelly, shallow to moderately deep, and some are covered by surface cobble and boulders. The variation in quality is from soil depth, gravel content, and surface cover of cobbles or boulders.

CLIMATE

Area climate is subhumid and is suitable for growing a wide range of crops. Annual precipitation averages about 20 inches, but is deficient during the growing season. Normally less than 6 inches of precipitation occur during the irrigation season (May through September). July and August are particularly dry, averaging less than an inch of rainfall each month.

Summer days are sunny and warm, but nights are rather cool. The average daily maximum temperature for July and August is about 84° and the average daily minimum for these months is about 52°, with a mean of about 68°. The frost-free period generally ranges from about 150 to 160 days, but the growing season for hardy crops is almost 200 days. Prevailing winds are from the southwest and are generally moderate in intensity.

ECONOMIC FEATURES

Population density of the area is light, with major concentrations in nearby cities—Post Falls on the Spokane River at the southern boundary of East Greenacres Unit, had a 1960 population of 1,980; Rathdrum, just northeast of the unit, had 710; Coeur d'Alene, 10 miles east, had 14,290; and Spokane, Wash., 25 miles west, had 181,600.

Agriculture, forest industries, mining, aluminum processing, and tourist trade contribute to the economy of the area. Many families obtain a major portion of their income from full- or part-time employment at off-farm jobs, rather than from the land.

Nearby industrial development is largely confined to lumbering operations around Coeur d'Alene and Post Falls, and at the Kaiser Aluminum & Chemical Corp. aluminum rolling mill at Trentwood in the Spokane Valley.

Agricultural processing plants include three creameries in Coeur d'Alene, a cannery at Post Falls, and a small meatpacking plant midway between the two cities. Service industries—such as retail and wholesale businesses, repair, and personal services—are centered in Coeur d'Alene and Spokane.

On the dry farms, cropland is commonly fallowed every other year with small grains being the principal crop. Most of the irrigated lands are farmed in small tracts, the chief enterprises being dairying, livestock and poultry, grass seed, fruit, and truck gardens.

The silver-lead-zinc-producing area near Wallace and Kellogg, 50 miles to the southeast, provides a market for farm produce and is a factor in business activity at Coeur d'Alene.

During summer, many tourists, as well as residents of Spokane and other nearby communities, are attracted to numerous lakes in the vicinity by the recreational opportunities. Development of summer homes on all lakes has increased rapidly the last few years.

Rathdrum Prairie and its communities have excellent transportation facilities. Four railroads, one airline, and several bus and motor freight lines serve the area. Two Federal and two State highways, as well as numerous county roads, traverse the general area.

Electric power in the area is distributed by Washington Water Power Co. and the Kootenai Electric Cooperative. Telephone service is furnished by General Telephone Co. of the Northwest.

Rathdrum Prairie Project

Rathdrum Prairie project consists of two divisions—the Prairie Division with 35,500 acres of irrigable lands and the Eastern Division with about 3,200 irrigable acres. The Prairie Division includes two developed units serving a total of 5,000 acres. The Post Falls unit, with an irrigable area of 3,500 acres, was constructed in 1945 as a War Foods project; East Greenacres Irrigation District was organized in about 1910 and presently assesses 1,500 acres. The remaining 30,500 irrigable acres of the Prairie Division are mostly in dry-farmed grains, except for a few acres irrigated from private wells.

The Eastern Division formerly consisted of three units—Avondale, Dalton Gardens, and Hayden Lake; however, in 1953 Avondale and Dalton Gardens were redesignated as separate projects, leaving Hayden Lake as the sole unit in the division. These units were privately developed in the early 1900's, and were rehabilitated by the Bureau of Reclamation in 1954 and 1956. They are similar, in that all pump water from Hayden Lake into pressure-pipe distribution systems for sprinkler irrigation.

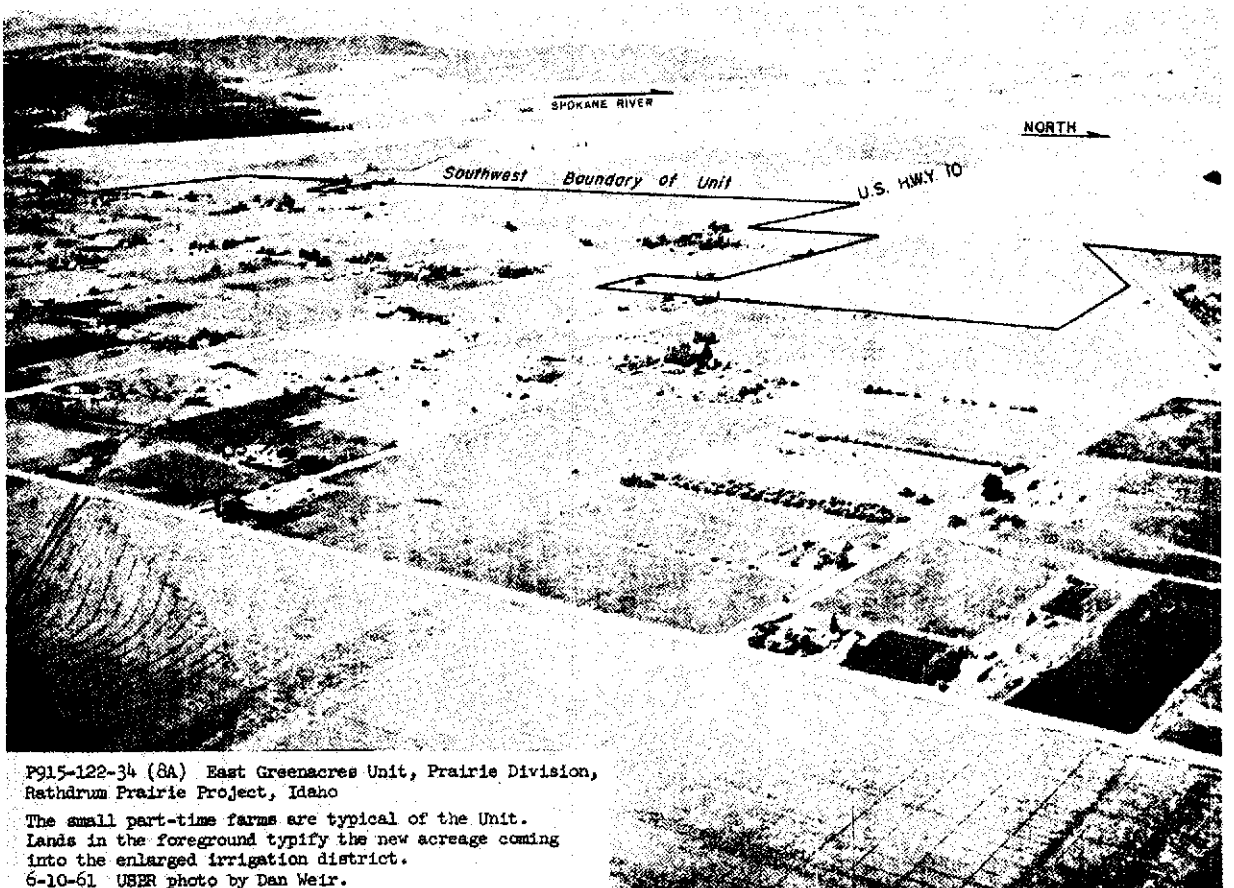
East Greenacres Unit Area

The East Greenacres Unit comprises an area about 3 miles in an east-west direction by about 5 miles in a north-south direction in the western portion of the Prairie Division. The southern boundary is the Spokane River and the city of Post Falls. The northern boundary is a northeast-southwest diagonal line formed by Idaho State Highway 53 and the Northern Pacific Railway. A typical view of the Unit area is shown in the photograph on the following page (photo No. P915–122–34). There are no perennial streams in the Unit, but to the northeast, Rathdrum Creek, the outlet for Twin Lakes, meanders for 5 miles in a southwesterly direction before disappearing into the gravel outwash of the prairie plain.

Twin Lakes is located some 10 miles north of the East Greenacres Irrigation District. It is shaped in the form of a crescent and is about 5 miles long and ½ mile wide. The lake originally was two natural bodies of water until after the turn of the century when control works at the lower lake outlet and a carriage and distribution system were constructed to store and convey the water for use by the district. Since that time the lake has been used for irrigation. The lake surface can be controlled through a range of about 10.4 feet with the outlet works constructed by the district in 1907.

Most of the property around the lake has been developed for homesites and resorts. The lake is within 1-hour driving distance of Spokane and Coeur d'Alene.

From its inception as an irrigation district around 1905, East Greenacres has reduced its acreage from an originally conceived area of nearly 3,000 acres to the presently assessed area of 1,500 acres. Changing economy, an inadequate and inefficient water supply system, and costly maintenance have forced the district into its present status, although it has managed to remain solvent and has no outstanding indebtedness.



P915-122-34 (8A) East Greenacres Unit, Prairie Division, Rathdrum Prairie Project, Idaho

The small part-time farms are typical of the Unit. Lands in the foreground typify the new acreage coming into the enlarged irrigation district.
6-10-61 USBR photo by Dan Weir.

INVESTIGATIONS

PREVIOUS INVESTIGATIONS

The following previous investigations have dealt with the East Greenacres area:

(1) Rathdrum Prairie project, Idaho, by H. W. Bashore, 1932.
(2) Rathdrum Prairie project, Idaho, by H. G. Sloan, 1939.
(3) Rathdrum Prairie project, Idaho, Prairie Division, 1952 (revised 1954) presenting a plan for irrigation development of 35,500 acres, largely by pumping from ground water.
(4) Rathdrum Prairie project, Idaho, East Greenacres unit, May 1960 feasibility studies. Investigation ceased, pending outcome of litigation between the lakeshore owners association and the irrigation district regarding the operating levels of Twin Lakes.

PRESENT INVESTIGATION

During the interim between the instigation and settlement of the litigation—new concepts, increased owner interest, and interest for a larger project occurred. Contributing factors were the authorization and progress on the nearby Spokane Valley project and the possibility of including municipal and industrial water, and recreation and fish and wildlife enhancement as project functions.

Following the settlement of the litigation and as a result of renewed landowner interest, the present study was started as a part of fiscal year 1964 investigation program.

CHAPTER II. PROBLEMS AND NEEDS

The recent dispute over the operating levels of Twin Lakes (*Lakeshore Owners Association* v. *East Greenacres Irrigation District*) emphasizes the needs in the area for additional water.

Twin Lakes water has been used for irrigation since about the turn of the century. However, water losses in the existing conveyance and distribution system are extremely high, and in many years the available supply of late season water is inadequate for sustained high production of the crops grown. The irrigation system losses cannot be economically reduced to provide additional water.

Present operations at Twin Lakes result in widely fluctuating water levels. These conditions adversely affect the recreation and fishery potential of the lake. The irrigation district needs to expand its acreage to spread operating costs over a larger base; it also needs more efficient and adequate irrigation facilities, and a municipal and industrial water supply and distribution system suitable for domestic purposes. In addition, stabilized water levels are needed on Twin Lakes to enhance the fishery and permit better lake recreation use.

CHAPTER III. IRRIGATION

LANDS

East Greenacres lands occupy the lower portion of Rathdrum Prairie. They slope generally from the northeast to the southwest, dropping about 120 feet in elevation. On the whole, the lands are moderately level.

SOILS

Most common soil type in the unit is Garrison gravelly loam and a cobbly phase of this type. It has 8 to 12 inches of dark brown gravelly loam on the surface, grading to a light brown gravelly loam that extends to a depth of 24 to 36 inches. The underlying material is unconsolidated sand, gravel, and cobble, several hundred feet in depth. Even though the soils are gravelly, their water-holding capacity is moderately good, and the organic content is relatively high. The gravel interferes with, but does not prohibit, production of cultivated crops. It does tend to accumulate on the surface with cultivation. The soils seem best adapted to grass production for seed or forage. Laboratory analyses show no concentration of soluble salts and a slightly acid to neutral reaction. The porous understrata provide excellent drainage conditions. In over 60 years of irrigation farming, no alkalinity or salinity problems have developed, and none are expected in the future. The new ground water supply is low in sodium, boron, and total salts, and no soil problems are expected with its use. Ground water has been used successfully for many years on adjacent lands with no indication of soil deterioration.

TOPOGRAPHY

The relief is mostly smooth with some scattered, moderately irregular or steep slopes. These irregularities have caused difficulties in gravity irrigation, but would not be troublesome under sprinkler irrigation.

DRAINAGE

Expanded irrigation would not create drainage problems. The thin soil mantle underlain by coarse glacial outwash material provides excellent drainage. Excessive water percolates rapidly through the soil and unconsolidated substratum. No drainage problems have been encountered in irrigation farming on the prairie to date, and none are expected to develop in the future.

LAND CLASSIFICATION

A detailed land classification was made to determine the suitability of the lands for sustained profitable production under sprinkler irrigation. Soil characteristics, including gravel content, depth, and coarse texture are the principal factors affecting land suitability. Stoniness presents a problem in a part of the area.

Specifications

Specifications setting forth requirements for the various land classes are similar to those used and proven suitable on nearby projects with similar lands in Washington and Idaho.

LAND CLASSES

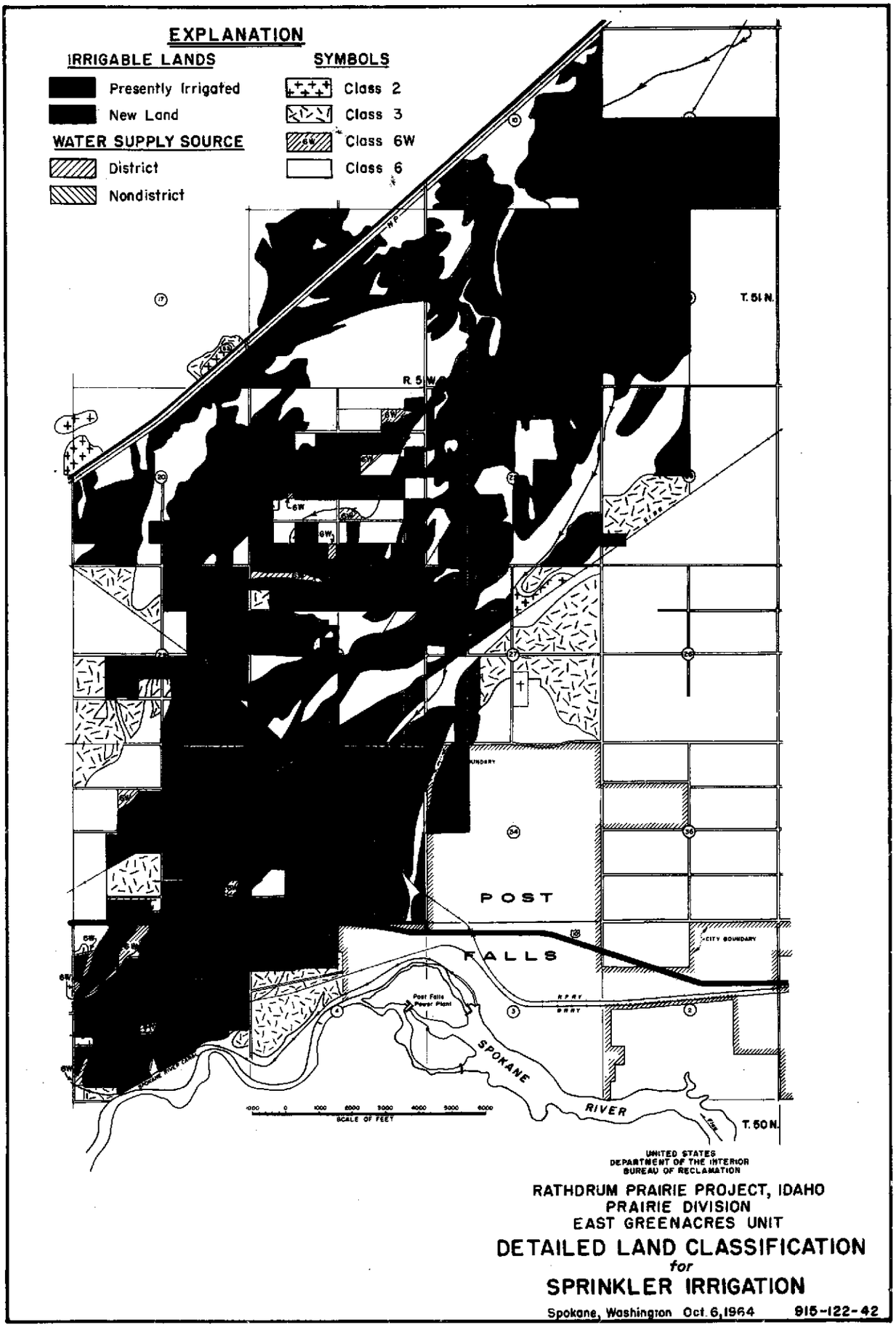
In the overall East Greenacres area, 6,180 acres were classified as suitable for irrigation. However, the irrigable area to be served would be limited to 5,230 acres because some owners outside the irrigation district boundaries do not wish to participate in the development. The irrigable lands are shown in color on drawing 915–122–42.

Class 1 and 2 lands

There are no class 1 lands, and there are only 300 acres of class 2. The class 2 lands are superior in quality to the other irrigable lands because of greater soil depth and slightly less gravel. In other characteristics they are similar to class 3 lands and, being intermixed with class 3 lands, would have similar use and management.

Class 3 lands

There are 4,930 acres designated as class 3 lands. The soils have a fair depth, favorable organic matter content and texture except for the gravel content. In their natural condition, nearly all class 3 lands had cobble, stone, and in places, boulders on the surface. Most lands have been cleared, but in some places up to 10 cubic yards per acre remain. About half of class 3 lands are smooth and the remainder have moderate irregularities that interfere with gravity irrigation. Under sprinkler irrigation, these irregularities do not hamper irrigation operations.



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

RATHDRUM PRAIRIE PROJECT, IDAHO
PRAIRIE DIVISION
EAST GREENACRES UNIT

DETAILED LAND CLASSIFICATION
for
SPRINKLER IRRIGATION

Spokane, Washington Oct. 6, 1964 915-122-42

Class 6 lands

There are 1,370 acres of class 6 nonarable lands intermixed within the irrigable lands. Roads and other rights-of-way occupy an additional 420 acres.

Class 6W lands

The 40 acres classified as 6W are similar to other class 6 land except they have a water right and are paying irrigation assessments for water served by the district. They lie in scattered bodies throughout the irrigation district and are commonly surrounded by irrigable and presently irrigated lands. The heavy cover of cobble and boulders make these lands untillable; however, with irrigation, forage is produced. The payment of water assessments establishes a right for continuation of service. With abandonment and replacement of the existing system, any continued service must be with project facilities. The addition of these lands to the 5,230 acres of irrigable lands makes a total service area of 5,270 acres. These 40 acres of class 6W land will be furnished irrigation service and a full water supply.

SUMMARY

In determining the irrigable acreage, all public rights-of-way were excluded, as well as all lands not meeting irrigable requirements. No lands would be taken out of production by the buried pipe distribution system. Adequate roads serve the area so that no additional rights-of-way are needed for this purpose or for drainage facilities. Table 1 summarizes the land classification.

TABLE 1.—ACREAGE SUMMARY

Land class	Assessed [1]		Nonassessed		Total
	Irrigated	Dry	Irrigated	Dry	
Class 1	0	0	0	0	0
Class 2	20	0	10	270	300
Class 3	1,350	0	390	3,190	4,930
Subtotal	1,370	0	400	3,460	[2] 5,230
Class 6W	40	0	0	0	40
Rights-of-way		70	0	350	420
Other		20	0	1,350	1,370
Subtotal	40	[3] 90	0	1,700	1,830
Unit totals	1,410	90	400	5,160	7,060

[1] Assessed by East Greenacres Irrigation District.
[2] Total irrigable.
[3] It is assumed that these lands would not be assessed in future.

Water Requirements

IRRIGATION

Water requirements consist of annual and peak requirements. The estimated annual requirement of 12,800 acre-feet for irrigation is the average amount of water that would be pumped each season. The estimated peak requirement of 78 cubic feet per second was used to determine the capacity of the pumping plants and distribution systems.

Consumptive use

Average annual consumptive use of water for alfalfa and general crops was estimated by the Lowry-Johnson and Blaney-Criddle methods to be 2.23 feet.

The crop irrigation requirement is computed by deducting effective precipitation from the annual consumptive use. Weather records for the 10-year critical period of 1931–1940 were used to estimate effective precipitation of 0.77 foot. The resulting annual average crop irrigation requirement is 1.46 feet.

Farm irrigation efficiencies

Farm irrigation efficiency varies with different methods of irrigation, such as surface or sprinkler, different crops; and variations in land characteristics such as slope, soil depth, permeability, and moisture-holding capacity.

The soils are uniform in characteristics and were grouped in one water-requirement class. Over a broad area slopes are gentle, but most fields have some undulations or other irregularities that are difficult to correct by grading without damaging the shallow soils. For this reason, and because the soils have a rapid infiltration rate, sprinkling has proven to be the most desirable method of applying water.

Analyses of saturated soils show that the available soil moisture in a 3-foot depth of soil ranges between 4 and 5.5 inches. It is estimated that 2.4 inches of this moisture is usable between irrigation applications, and that the average irrigation efficiency would be 65 percent.

Farm delivery

An annual farm delivery requirement of 2.25 acre-feet per acre, based on present water deliveries to operating units in the vicinity, was adopted for the East Greenacres unit. This is the same value as estimated using the Lowry-Johnson and Blaney-Criddle methods.

Peak farm delivery requirement was estimated independently of the annual requirement. It is based on estimated usable soil moisture-holding capacity and consumptive use between irrigations during peak-use periods. The peak farm delivery requirement is estimated at 6.4 gallons per minute per acre, 0.34 acre-inch per day per acre, or 1 cubic foot per second for 70 acres.

Pumping requirements

The distribution system would consist of pressure pipe and elevated steel regulating tanks. Losses would be small and would average about 7 percent over the irrigation season. Losses of this amount result in an annual pumping requirement of about 2.42 acre-feet per acre or 12,800 acre-feet annually. Peak pumping requirements allowing for a loss in the system of 3 percent in the peak-use period for irrigation would be 6.6 gallons per minute per acre, or about 78 cubic feet per second for the Unit. Seasonal distribution of pumping requirements are shown as follows:

IRRIGATION PUMPING REQUIREMENTS

	Percent	Requirement (acre-feet)
Month:		
May	11	1,410
June	17	2,180
July	30	3,840
August	30	3,840
September	12	1,530
Total	100	12,800

AGRICULTURAL ECONOMY

Dairy farming and the production of grass seed are important segments of the area economy. The numerous part-time irrigated farms in the district are used in producing livestock, livestock products, and garden crops as food for the farm family.

PRESENT AND ANTICIPATED ECONOMY

Types of farms

Dairy farming is the typical full-time operation in the irrigated area. Some increase in dairying is expected with development. Hay and pasture crops would predominate because of their adaptability to the gravelly soils. A small increase in specialized grass seed farms would be expected on the new lands that have been in dry-farmed wheat.

Land ownerships

There are 181 ownerships in the unit, averaging about 29 acres per owner. Eight owners have more than 160 acres, but only one has more than 320. Table 2 summarizes the ownership information.

TABLE 2.—SIZE AND NUMBER OF OWNERSHIPS TO RECEIVE IRRIGATION SERVICE

Farm size group	Number of ownerships	Percent of ownerships	Total acres	Percent of acreage
0 to 4.9 acres	63	34.8	229.8	4.5
5 to 19.9 acres	78	43.1	857.6	16.2
20 to 39.9 acres	16	8.9	559.8	10.6
40 to 79.9 acres	7	3.9	417.6	7.9
80 to 119.9 acres	4	2.2	367.8	7.0
120 to 159.9 acres	5	2.8	704.7	13.4
160 to 199.9 acres	2	1.1	373.9	7.1
200 to 239.9 acres	3	1.7	672.6	12.8
240 to 279.9 acres	1	.5	276.3	5.2
280 to 320 acres	1	.5	310.9	5.9
Over 320 acres	1	.5	495.4	9.4
Total	181	100.0	5,266.4	100.0

Crop distribution

The anticipated crop distribution with and without development is presented in table 3. Wheat, small grain, and forage crops are representative of future land use without development. With development, representative crops would be alfalfa, rotation pasture, small grain nurse crops, and grass seed on the larger specialized farms.

TABLE 3.—PROJECTED NORMAL LAND USE WITHOUT AND WITH PROJECT DEVELOPMENT

Land use	Without development (acres)			With development	
	Dry	Irrigated	Total	Irrigated (acres)	Percent
Irrigable land:					
Alfalfa		530	530	2,150	41
Rotation pasture		300	300	1,190	23
Bluegrass seed		470	470	990	19
New seeding		(70)	(70)	(290)	(6)
Small grain	1,750	190	1,940	570	11
Summer fallow	1,750		1,750		
Nonproductive	160	80	240	330	6
Total, irrigable	3,660	1,570	5,230	5,230	100
Class 6W		40	40	40	
Unit total	3,660	1,610	5,270	5,270	

Crop yields

Crop yields on the presently dry irrigable lands consist of about 25 bushels of winter wheat under an alternate crop-summer fallow system of farming. Projected crop yields with irrigation under the full water supply condition are as follows:

Alfalfa hay, 3.0 tons.
Barley, 4.5 bushels.
Rotation pasture, 8.0 animal unit months.
Grass seed, 800 pounds.

Farm market outlets

Ample transportation, marketing, and processing facilities are available and are capable of expanding to handle the expected increase in farm commodities.

REPRESENTATIVE FARM BUDGETS

Farm budgets of representative farms were developed for use in estimating payment capacity and irrigation benefits. The organization and financial returns on the 3,660 acres of presently dry irrigable land are depicted by the representative 960-acre wheat farm as summarized in table 4. Also shown in this table are the organization and financial returns on a 120-acre irrigated dairy farm with full water supply.

Prices used have been projected to reflect the levels expected to prevail over the period of analysis. The projections are based on an all-product index of 250 for prices received and 265 for prices paid (1910–14=100).

PAYMENT CAPACITY

Under the proposed plan of development for the East Greenacres Unit a new source of irrigation water and a new irrigation distribution system will be provided for all lands, both those presently irrigated and those presently dry. Consequently, project investment and annual operating costs identified in this report relate to full irrigation service. For this reason, the payment capacity of all irrigable lands in the East Greenacres service area has been computed on the basis of full irrigation service. Inasmuch as the irrigable lands are predominantly of class 3 quality and dairy farming is expected to be the dominant

type of farming, the estimated payment capacity for the East Greenacres Unit has been derived from the farm budget for the representative 120-acre dairy farm summarized in table 4. The labor-management method of analysis was used. As derived by this method, payment capacity represents the residual income available for water charges after payment of farm expenses and after deducting equity accumulation, value of operator and family labor, and management return from the gross farm income. The following tabulation shows the derivation of the irrigators' payment capacity using the representative farm budget for the 120-acre dairy farm.

TABLE 4.—FARM ORGANIZATION AND FINANCIAL SUMMARY FOR REPRESENTATIVE FARMS

Item		960-acre dryland wheat farm (1) [1]	120-acre irrigated dairy farm (3) [1]
Land use:			
Alfalfa hay	acres		64
Barley—nurse crop	do		17
Winter wheat	do	460	
Summer fallow	do	460	
Rotation pasture	do		32
Farmstead and waste	do	40	7
Total		960	120
Livestock: Dairy cows	number	0	36
Farm investment	dollars	101,950	58,960
Farm income:			
Crops	do	18,377	670
Livestock	do		1,689
Livestock products	do		15,919
Farm perquisites	do	837	963
Total		19,214	19,241
Farm expenses:			
Interest on investment	dollars	4,078	2,358
Hired labor	do		2,018
Taxes	do	1,252	830
Other	do	10,510	7,871
Total		15,840	13,077
Net farm income		3,374	6,164

[1] Farm budget number.

Item:	*Amount*
Gross farm income	$19,241
Less farm expenses (including interest)	13,077
Net farm income	6,164
Less equity accumulation	590
Less family and operators labor return	3,272
Less management return	616
Payment capacity, total	1,686
Payment capacity, per acre	14.05

Recommended water charge

A $13 per acre water charge is recommended for irrigation service to full service and supplemental service lands. This would allow the water users about 10 percent contingency allowance. A uniform charge for all irrigable lands regardless of present irrigation status is

considered to be equitable because under the recommended plan of development a complete new irrigation system will be constructed which will provide sprinkler service to all lands. The small acreage of class 6W lands will continue to receive irrigation service, will receive a full water supply, and will be assessed the unit's average annual operating costs. Total annual irrigation water charges ($68,350) for 5,230 acres of irrigable lands and 40 acres of class 6W lands are derived as follows:

5,230 acres at $13	$67, 990
40 acres (6W) at $9	360
Total (rounded)	68, 350

Farm family disposable income

The disposable income available to the farm operator and his family on the representative farm used in the payment capacity analysis is expected to be approximately $5,190. This amount conforms favorably with the median income received by farm families in the irrigated West in recent years. The derivation of disposable income is shown below:

Net farm income	$6, 164
Plus interest on investment (4 percent)	2, 358
Less debt service (3 percent)	1, 769
Less recommended water charge (120 acres at $13)	1, 560
Disposable income	5, 193

DEVELOPMENT PERIOD

A 10-year development period is needed to make necessary adjustments for irrigation farming on the new lands. During this period farm operators would establish crop rotations, change farm and field layouts, erect farm buildings, and purchase farm machinery and equipment. Landowners would be assessed project operating costs but nothing on construction costs. A 3-year development period is recommended for the presently irrigated areas to permit water users to install properly designed farm sprinkler systems and acquire skill in their operation.

IRRIGATION BENEFITS

Annual equivalent irrigation benefits are estimated to be $444,800. This total, which is based on the value of increased production of goods and services attributable to project development, includes direct, indirect, and public benefits. The increase in net farm income with project development is the basis for direct benefits. Indirect benefits are measured as the profits from processing and marketing additional agricultural products and from increased business activity from the increased purchases by farmers for goods and services used for farm production and family living purposes. Improvements in community facilities as represented by increased property taxes collected from project water users constitute public benefits.

The benefit evaluations were made for a 100-year period of analysis which is the estimated useful life of the major project facilities. The basic approach in the identification of irrigation benefits was to develop projections of agricultural production, income and expenses under long-term future conditions with and without the project. The projections for both the with and without project conditions reflect the effects of technological advances in farming anticipated by the economic midpoint of the 100-year period of analysis. This adjustment was made by applying growth indexes to farm income and farm expense items derived from representative farm budgets based on current input-output relationships.

The with project condition analyzed assumed sprinkler irrigation service with a full water supply for the 5,230 acres of irrigable land in the unit. Two farm budgets were utilized in developing projections of the with project conditions. One budget was the same as for the 120-acre irrigated dairy farm used in the payment capacity analysis. The other budget developed was for a 240-acre irrigated farm producing grass seed.

Under the without project conditions, three situations were identified and analyzed: (1) lands presently dry; (2) irrigated lands now served by gravity diversion from Twin Lakes; and (3) irrigated lands now served through private systems utilizing ground water. A farm budget was prepared for each of these situations. The lands presently dry were represented by the 960-acre dry land wheat farm discussed previously. The future without situation for lands presently served by gravity diversion from Twin Lakes was analyzed by determining the amount of land that could be furnished a full supply with existing facilities and developing a farm budget representative of this situation. Inasmuch as the existing irrigation is accomplished by means of facilities that would continue to be serviceable without replacement, the without situation for lands in this category was considered to apply for the full period of analysis.

In the case of the 400 acres now irrigated from wells through private systems, it was considered that these systems would become inoperational at some future date without replacement. Taking into account the present age of these systems and the probable date of project construction, it was concluded that the systems would become inoperational approximately 15 years after construction of the East Greenacres unit facilities. Consequently, in deriving project irrigation benefits for these lands benefits were claimed only for the remaining period of analysis.

The annual equivalent irrigation benefits of $444,800 itemized below have been adjusted to reflect the delay in accrual of full production on the 3,460 acres of full service land as well as for the 15-year lag in benefit accrual discussed above.

Annual equivalent benefits	
Direct benefits	$263, 200
Indirect benefits	132, 100
Public benefits	49, 500
Total	444, 800

CHAPTER IV. MUNICIPAL AND INDUSTRIAL WATER

The water users have requested the inclusion of facilities that would provide water for a domestic supply and to meet annual livestock requirements. Thus, the municipal and industrial requirements used in this analysis are: (1) water for domestic purposes within the home, and (2) water needed for livestock operations. The amount of water estimated for these purposes would be comparatively small in relation to the requirement for irrigation and would not materially affect the overall pipe size requirements of the project or the operating costs during the irrigation season. However, small wells and pumps would be needed during the nonirrigation season to supply water for these municipal and industrial requirements.

The Public Health Service, in its letter of October 14, 1964 (copy appended) emphasizes the need of the water supply system to meet sanitary requirements in providing water for domestic use. They also point out that the system must be operated in accordance with the local regulations for public water supplies.

Present Situation

Water needed within the unit for domestic purposes and livestock operations is now obtained from individual wells, and from wells of the McGuire Domestic Water Association near Post Falls which provides service to a number of small part-time farm units. These systems are now outdated and cannot be economically expanded to meet future requirements.

Population Projections

Population projections indicate that the number of people requiring a domestic water supply by year 2020 will increase about 50 percent. Future projections are shown in the following tabulation:

Year:	*In area*
1965	580
1990	690
2020	850

Domestic Requirements

Recorded water deliveries made by the McGuire Domestic Water Association show that an average of about 50 gallons per capita per day were needed to meet the household requirements of the participants. These data were used in estimating the domestic water requirements for the East Greenacres Unit, and correspond very closely with the per capita use by members of the domestic water system on the Lewiston Orchards Project and by the residents of the Spokane city water districts in nonsprinkling periods. The requirements are

the same as provided in the plan of development for the domestic water supply for the Spokane Valley Project.

Using an estimated domestic water requirement of 50 gallons per capita per day and 3.5 people per household, the demand would amount to 0.2 acre-foot per household per year and a total requirement of about 33 acre-feet annually for the present number of households in the unit. With the future increase in the number of homes estimated to continue at the same rate as during the past 13 years, or an average of 0.72 percent per year, the average annual increase in domestic requirements would be 0.28 acre-foot with a total annual requirement of 49 acre-feet by the year 2020.

The total maximum demand on the four small wells and pumps for nonirrigation season water would be approximately 110 gallons per minute.

Livestock Requirements

The total livestock water requirements were estimated to be about 36 acre-feet annually with development. These requirements include water needed for sanitary uses in the dairy operations, and drinking water for dairy cattle and other types of livestock in the unit.

Benefits

Benefits from municipal and industrial water are estimated at $9,900 annually. These benefits represent the costs of obtaining equivalent service from the most likely alternative that could be constructed without the proposed development. In the area where farmsteads are in close proximity, the present community water system was considered the most likely alternative. Investment costs included some additional pipelines to enlarge and improve the service, and operating costs were increased to provide adequate replacement to maintain the system indefinitely. In the remainder of the area, a well and pressure system to serve each group of three farmsteads was assumed. Appropriate adjustments were made to satisfy expected future requirements.

CHAPTER V. FISH AND WILDLIFE AND RECREATION

The fish and wildlife and recreation potential of Twin Lakes, a component of the East Greenacres unit, has been evaluated and reported on by the Fish and Wildlife Service in its report of August 1964 (copy appended), and by the National Park Service in its letter report of September 1964 (copy appended).

Twin Lakes, about 4 miles north of Rathdrum, Idaho, is within 1-hour driving distance from Spokane, Coeur d'Alene, and several other smaller cities. The lake is actually two bodies of water connected by a canal and is about 5 miles long and half a mile wide. Timber extends to the edge of the lake, and most of the shoreline is either developed or under development for homesites and resorts.

The lake is presently used as an irrigation reservoir for East Greenacres Irrigation District, but under the proposed plan, diversions would be discontinued to provide more stable lake levels for recreation and fish and wildlife enhancement. This change in operation would fulfill the recommendations of the National Park Service and Fish and Wildlife Service. The Idaho State Fish and Game Commission concurred in these recommendations. Maintenance of the stable lake level could be made with the existing control structure on Rathdrum Creek, the outlet for Twin Lakes. The level would be held as near elevation 2316.2 as possible, with drawdown occurring only as needed to control spring runoff. Average annual fluctuations of 1.4 feet, and maximum fluctuations of about 3.6 feet are anticipated. Two public access areas with boat ramps are available on Twin Lakes. However, during low water periods, the ramps are out of the water and launching is difficult. Also, parking space is inadequate. To fully utilize the enhanced fishing and recreation opportunities resulting from stable lake levels, two additional public access areas, each with boat ramp and adequate parking, would be provided at an estimated cost of $9,250 each.

Fish and Wildlife

Kootenai County has expressed a willingness to assume the responsibility for administration and management of the access areas and facilities required for fishing and recreation at Twin Lakes and for repayment of reimbursable costs under provisions of Public Law 89–72. Fishery management and fish stocking in Twin Lakes would be the responsibility of the Idaho Fish and Game Department. Annual stocking cost during the 100-year period of analysis would be $5,400 either with or without the project.

The Fish and Wildlife Service reports that no significant effects on big game and fur animals are expected with the project. Also, there would be little change in upland-game bird or waterfowl populations.

BENEFITS

Total fishery benefits would amount to $27,000 annually.

Improved fish habitat and ease of boat launching throughout the fishing season would increase the total use of existing public access areas by 1,000 angler-days annually. Provision of two new public access areas would also increase the use by 3,000 angler-days. Because of the improved quality and attractiveness of the fishery, the value per angler-day of use would be doubled, or $2 per day. The total value of benefits associated with access areas would amount to $8,000 annually.

Stabilizing the water level in Twin Lakes would also result in increasing the average angler-use from 12,000 fisherman-days in the initial year of project development to 36,000 fisherman-days ultimately. The annual equivalent value of this increased fisherman-day use would be $19,000.

Recreation

A stabilized lake level and addition of public access areas would increase use of the lake for recreation. The present use pattern is not expected to change appreciably with project development, but the increase in use would occur at a moderate rate.

BENEFITS

Total average recreation benefits would amount to $2,300 annually. These benefits are based on estimated annual visitor-day use of 1,000 for general recreation, and 3,000 visitor-day use for recreation incidental to fishing.

The fish and wildlife and recreation benefits are premised on the conditions that the water in Twin Lakes would be maintained as near as possible at a constant level, as proposed in the plan of development for East Greenacres Unit.

Before the start of construction, the State of Idaho should provide assurance that Twin Lakes would not be used for irrigation in the future so that the lake level could be maintained for recreation and fish and wildlife enhancement.

CHAPTER VI. AREA REDEVELOPMENT

Kootenai County has been designated a redevelopment area, based on the Area Redevelopment Act of 1961. Construction, operation, and maintenance of the project, and the additional employment opportunities stemming from the development, would directly enhance the economy of the area. Measurable benefits result from the extent unemployment and underemployment are relieved. Included in the analysis are wages paid for project construction, operation and maintenance, and increased hired farm labor. Although benefits accrue, area redevelopment is not a project purpose, and costs were not allocated to this function.

BENEFITS

CONSTRUCTION WAGES

The Idaho State Department of Employment Security provided information on the extent of unemployment in the local labor market that could be employed in project construction. Of the 58 man-years of construction labor required, about 30 could be performed by local workers with a total wage value of $208,400. The annual equivalent benefit for a 100-year period of analysis at 3⅛ percent interest is $6,800.

OPERATION AND MAINTENANCE

Salaries and wages of permanent operating personnel are estimated at $17,000 annually. The effects on unemployment were limited to 20 years from the beginning of construction, with a declining scale of values reaching zero in the 21st year. The annual equivalent value of this employment spread over a 100-year period of analysis is computed at $4,200.

HIRED FARM LABOR

Increased wages paid to hired farm labor, minus the indirect irrigation benefits claimed for farm labor, amount to an annual equivalent value of $12,100.

SUMMARY

Total annual benefits attributable to the project by reducing unemployment and underemployment in the local area amount to $23,100.

Item:	*Annual benefit*
Construction labor wages	$6,800
Operation and maintenance salaries and wages	4,200
Other employment—hired farm labor	12,100
Total	23,100

CHAPTER VII. WATER

Water Supply

GROUND WATER GEOLOGY

In early Tertiary time, drainage from the Clark Fork and Priest River systems was south through Rathdrum Prairie, then west through the Spokane Valley. Miocene-age basalt flows blocked the southward flowing rivers, forming lakes where silts and clays were deposited. Later flows buried the sediments. By the end of Tertiary time, the rivers had reestablished their former courses and removed all but remnants of the basalt and sediments.

During the Pleistocene ice ages, a thick layer of till and outwash was deposited over hundreds of square miles on Rathdrum Prairie and Spokane Valley. These sediments are the aquifer supplying the water for the project. Well logs and gravel outcrops throughout the area show that the drift is largely clean gravel. Because few of the wells penetrate to bedrock, the cross section of the aquifer is unknown. However, wells and seismograph studies show that in many places the depth to bedrock is several hundred feet. High yields from wells and the disappearance of streams into the prairie prove that the gravels are very permeable.

GROUND WATER RECHARGE

Studies indicate that approximately 800,000 acre-feet are contributed annually to recharge the ground water aquifer. The minimum flow of this aquifer at the eastern edge of the project area is estimated at 600 cubic feet per second. The source of this water is direct rainfall on the prairie and surrounding hills, seepage from lakes and irrigation, and seepage from the Spokane River and other streams.

WATER TABLE FLUCTUATIONS

The annual water level fluctuations range from 3 to 10 feet, generally reaching a high point between May and August and a low point between November and February. In addition to this annual fluctuation, there is a long-term fluctuation that corresponds to variations in year-to-year recharge. This fluctuation amounts to more than 30 feet from the low-water levels in 1931–32 to the high-water levels in 1950.

DEPTH TO WATER

Depth to water in the project area ranged from 130 to 230 feet in August 1964. The depth generally increases from west to east, being greatest near the northeast corner. East of the project, depth to water continues to increase up-valley until depths in excess of 300 feet are found east of Twin Lakes.

WATER QUALITY

Analyses of ground-water samples taken from wells in the valley over a period of years show that the ground water is satisfactory for irrigation. Both surface and ground water have been used for irrigation since the turn of the century with no harmful effects.

The water is moderately hard, but is satisfactory for domestic purposes without treatment. It also is considered satisfactory for domestic purposes without chlorination, and is presently being used in the Rathdrum Prairie and Spokane Valley areas by over 30 separate domestic systems. The city of Spokane has chlorinated its supply since 1933, but is the only system doing so. The city wells are near the Spokane River in a reach where the water table is greatly influenced by the elevation of the river, and interflow occurs between the two bodies of water. The project area does not have this interflow problem as the wells would not be near the river.

WATER RIGHTS

Application for permits to pump the total water supply of 12,900 acre-feet annually from ground water, at a peak rate of about 78 cubic feet per second, should be made to the Idaho State Department of Reclamation before development of the project well system.

TWIN LAKES WATER RIGHT

Litigation between the lakeshore owners of Twin Lakes and the irrigation district regarding the legal operating levels of Twin Lakes ended with a court order on February 20, 1961. This order set the maximum lake level at 11.5 feet as measured on the gage at the lake outlet and confirmed the district's right to divert 45.74 cubic feet per second from the lakes which provide the district with its traditional supply.

The water level of Twin Lakes, under the plan of development, would be maintained at as near a constant level as possible for the benefit of recreation and fish and wildlife enhancement.

A cooperative agreement among the interested agencies and the irrigation district, with review and concurrence by the State of Idaho, would be needed prior to project construction to provide assurance that the total benefits would accrue to the area from the multipurpose development aspects of the plan.

WATER UTILIZATION

PRESENT

The East Greenacres Irrigation District was originally designed for gravity irrigation of about 3,000 acres with a water supply from Twin Lakes. Delivery of an adequate supply to this acreage proved to be impossible, due to excessively high losses in the conveyance and distribution system and the water supply available. The district was reduced to the currently assessed area of 1,500 acres. Although these lands were originally irrigated by gravity application, district records show that about 43 percent of the currently assessed acreage is now sprinkler irrigated by pumping from the open distribution system.

The water supply available in Twin Lakes, generally, has been adequate for the 1,500 acres. However, in extremely dry years, it has been necessary to use maximum drawdown in the lake to minimize irrigation shortages. Excessive losses in the conveyance and distribution system together with the supply of storage water available has been a major problem in providing an adequate late season water supply in many years.

Shortages that would have been experienced on the district lands in a 41-year period such as 1922–62 were estimated to average about 3 percent per year, with a maximum annual shortage of 41 percent. Shortages would have occurred in the latter part of the irrigation season in about one-quarter of the years. These estimates are based on the available district records of lake levels, releases into Rathdrum Creek, monthly distribution, deliveries, and present operating conditions and criteria, together with estimates of inflow to the lake, losses, and requirements.

Conflicts have developed between the district and lakeshore home owners because of the drawdown in the lake, primarily in July and August, required to provide water for irrigation. Litigation between the parties resulted in the court order which assured the district of its historical water supply. Even so, the district is still faced with an inefficient irrigation system with no possibility of expansion, and a bad public relationship with the home owners and lake users because of the maximum drawdown during July and August.

WITH DEVELOPMENT

The project water supply with development would be pumped from the aquifer beneath the irrigable lands in lieu of diversions from Twin Lakes. Total pumping requirements for irrigation of 5,270 acres, and for municipal and industrial water (stock water and domestic water), amount to about 12,900 acre-feet annually, with a peak pumping requirement of 78 cubic feet per second. This would provide a full supply of water to the Unit with no shortages. The total requirement of 12,900 acre-feet is small compared to the total estimated inflow which enters the aquifer. Thus, development of East Greenacres Unit would have little effect on total ground water supplies.

CHAPTER VIII. PLANS AND ESTIMATES

Project Facilities

The project would consist of four separate water supply and distribution systems, each consisting of a cluster of deep wells, an elevated steel regulating reservoir, and a buried pipe pressure distribution system; and two public access areas at Twin Lakes. Drawing 915–D–1 shows the system layout.

DEEP WELL COMPLEXES

Four wells at complexes I, II, and IV and three wells at complex III would provide the flexibility necessary to meet varying irrigation demand. A small well would also be provided at each complex to deliver water for domestic and livestock use during the nonirrigation season. Wells would be cased and screened. Diameters would be 20 to 22 inches for irrigation wells and 6 inches for the small wells.

Pump capacities for the irrigation wells would range from 1,500 to 3,800 gallons per minute and the corresponding motor sizes would vary from 175 to 500 horsepower. The small pumps would deliver from 20 to 38 gallons per minute, with motor sizes ranging from 3 to 5 horsepower.

Float controls in a 75,000-gallon, elevated steel regulating reservoir would provide automatic pump operation at each complex. The steel tanks would be 22 feet deep and 28 feet in diameter and range in height from 105 to 140 feet.

Each well complex would require acquisition of about 4 acres of land. This would allow a 75-foot spacing between large wells to minimize interference and 150 feet from the wells to adjacent property lines to prevent possible contamination.

DISTRIBUTION SYSTEMS

The distribution systems would consist of 40 miles of pipe, up to 30 inches in diameter, buried 4 feet to prevent freezing during winter operation. The local corrosive potential indicates pipe should be mortar coated and lined. Lines would be looped where required to equalize pressures. Sectionalizing gate valves would permit shutting off portions of the system for repair without disrupting service to the entire area.

During a period of maximum demand, system capacity would be adequate to supply a farm delivery of 6.4 gallons per minute per acre on a continuous flow basis. Pressure would be adequate to provide 35 pounds per square inch at the high point of each farm.

Deliveries would be made to each ownership, with additional turnouts to tracts divided by a road or railroad. Large ownerships would be

provided a turnout to each 40 acres. Domestic turnouts have not been included as a project cost, and would be installed at the users' expense as needed.

Several railroad, highway, and county road crossings, including three Interstate 90 crossings, would be required. Most pipelines would be along public roads and no right-of-way costs would be involved. An easement would be acquired for pipelines passing through private property.

DRAINAGE

There is no drainage problem in the project area as all surface water readily infiltrates and contributes to ground water. Drainage facilities would not be required.

TWIN LAKES ACCESS AREAS

Two new public access areas would be constructed at Twin Lakes. Each would have a boat ramp and parking area for 25 cars and trailers. Cost estimates covering these facilities were prepared by the Fish and Wildlife Service.

SERVICE FACILITIES

Office space, utilities, and housing are available about 10 miles east of the unit at Coeur d'Alene, which could serve as headquarters for both contractor and government personnel.

PERMANENT OPERATING FACILITIES

Following construction, the project would be operated and maintained from headquarters consisting of an office building and combination shop and garage to be constructed at well complex II, which is centrally located and not over 4.5 road miles from the most distant district boundary. Office furniture, transportation equipment, and tools necessary to operate and maintain the project would be provided.

Construction Plans and Costs

CONSTRUCTION SCHEDULE

A 3-year construction period, preceded by a year of advance planning and followed by 1 year of testing, would be required.

Activities scheduled the first year are: completion of advance planning; negotiation of the repayment contract; and establishing the Bureau field office.

During the second year, field data for use in preparing designs and specifications on the wells and lateral systems would be gathered, and a contract would be awarded for drilling the wells.

The well drilling would be completed the third year, and a contract to construct the lateral systems would be let. Construction would start on the operation and maintenance buildings.

The fourth year, the pumps and motors would be installed, the Twin Lakes access areas would be constructed, other work in progress would be completed, the first delivery of water would be made and testing and minor rectification work would be started. Testing and

minor rectification would be completed early in the fifth fiscal or final construction year.

The control schedule shows by property account the estimated fund requirement for each year.

CONSTRUCTION COSTS

Total cost of constructing the unit, including $125,400 investigations cost to June 30, 1965, is estimated at $4,245,000 based on July 1964 prices. This includes $24,000 to develop the Twin Lakes public access areas. The costs by property account are shown on the DC–1 summary sheets.

OPERATION AND MAINTENANCE PLANS AND COSTS

OPERATING PLAN

The East Greenacres Irrigation District would operate the project facilities. The district has a three-man board of directors, and would employ a manager to supervise operations, one full-time maintenance man, and a part-time secretary-treasurer. Routine maintenance work would be performed by part-time labor during the nonirrigation season.

Pumping units would operate automatically, requiring manual restarts only in case of emergency shutdowns. Farm turnouts would be metered and would be operated on a demand basis. Two-way radios installed in district vehicles would permit efficient headquarters direction at all times.

All power would be obtained from Bonneville Power Administration at Prairie Substation (about 3 miles east of the unit) and wheeled over Kootenai Electric Cooperative facilities to the well complexes. The cooperative has an existing intertie at the substation.

The wheeling contract would cover the total irrigation and domestic load, with all metering and transformation facilities at each complex provided by the cooperative.

The Fish and Wildlife Service has indicated that operation and maintenance of the Twin Lakes public access areas would be by the Idaho Fish and Game Department. The same department would be responsible for fishery management and fish stocking in Twin Lakes.

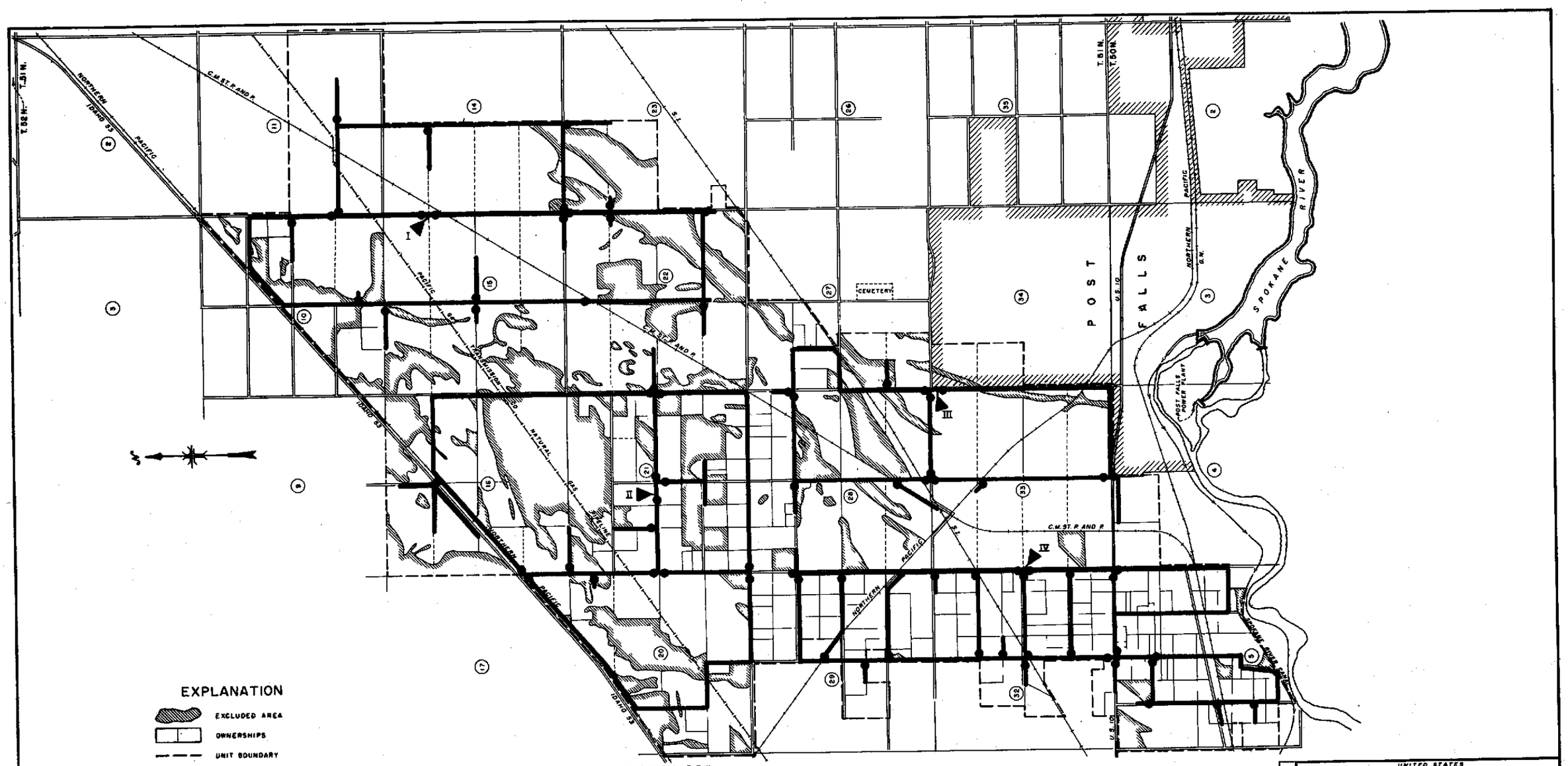
OPERATION, MAINTENANCE, AND REPLACEMENT COSTS

The annual cost of operating and maintaining the irrigation district's facilities would consist of the costs for personnel, administration, supplies, equipment, special maintenance, power, and wheeling. These total an estimated $54,200 annually. The cost of operating and maintaining domestic turnouts is not included in the estimate and would be an additional cost to the water user.

The cost for operating and maintaining Twin Lakes access areas is estimated at $200 annually.

Power

The power wheeled by Kootenai Electric Cooperative would be metered at the wells and 5-percent losses added to determine the



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
RATHDRUM PRAIRIE PROJECT
EAST GREENACRES UNIT-IDAHO

WELL SYSTEMS I, II, III, IV
LAYOUT-FEASIBILITY PLAN

DRAWN: D.L. SUBMITTED: J.A. Maudry
TRACED: R.L.S. RECOMMENDED: R.E. Nyquist
CHECKED: [illegible] APPROVED: O.E. Meier
CHIEF, ENGINEERING DIVISION

DENVER, COLORADO, AUGUST 3, 1964

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charges at Prairie substation. Annual energy requirements for irrigation pumping will average about 7,941,000 kilowatt-hours. It is anticipated that energy for the unit's irrigation pumping will be reserved from the Federal Columbia River power system. The annual energy requirement of about 45,690 kilowatt-hours for other than irrigation pumping would be made available at the Prairie Substation at Bonneville Power Administration's E–5 rate.

The total power cost for irrigation and domestic pumping including wheeling is estimated to be $17,700.

Reserve fund

A reserve fund of $40,000 would be accumulated at the rate of $4,000 a year. The fund then would be maintained throughout the repayment period to provide for emergency maintenance, replacements, or extraordinary repairs.

7-1720
(6-62)
Bureau of Reclamation

EAST GREENACRES UNIT

BASIC ESTIMATE DC-I SUMMARY

Feasibility Estimate

PROJECT RATHDRUM PRAIRIE, IDAHO
Date of Estimate November, 1964
Prices as of July, 1964
Sheet 1 of 2 sheets

Prepared by UCDO

Previous Estimate Prices as of

PROPERTY CLASS	PROPERTY IDENTIFICATION	PROPERTY ACCOUNT	PROPERTY DESCRIPTION	LABOR AND MATERIALS BY CONTRACTOR COST	MATERIALS AND EQUIPMENT BY GOVERNMENT COST	LABOR BY GOVERNMENT FORCES COST	FIELD COST PROPERTY ACCOUNT	TOTAL FIELD COST IDENTIFIED PROPERTY	SERVICE FACILITIES IDENTIFIED PROPERTY	INVESTGNS ENGR'G. AND OTHER COST IDENTIFIED PROPERTY	TOTAL COST IDENTIFIED PROPERTY	TOTAL COST PROPERTY CLASS	TOTAL COST IDENTIFIED PROPERTY
1			2	3	4	5	6	7	8	9	10	11	12
04			DEEP WELLS									1,560,000	
	01		WELL CLUSTER NO. 1					340,000	940	109,060	450,000		
		30	LAND AND RIGHTS	3,000			3,000						
		33	STRUCTURES AND IMPROVEMENTS	14,000			14,000						
		36	WATERWAYS	171,000			171,000						
		40	PUMPS AND MOTORS	132,000			132,000						
		48	ACCESSORY ELECTRIC EQUIPMENT	20,000			20,000						
	02		WELL CLUSTER NO. 2					300,000	830	96,170	397,000		
		30	LAND AND RIGHTS	1,500			1,500						
		33	STRUCTURES AND IMPROVEMENTS	14,000			14,000						
		36	WATERWAYS	158,000			158,000						
		40	PUMPS AND MOTORS	106,500			106,500						
		48	ACCESSORY ELECTRIC EQUIPMENT	20,000			20,000						
	03		WELL CLUSTER NO. 3					250,000	680	79,320	330,000		
		30	LAND AND RIGHTS	3,000			3,000						
		33	STRUCTURES AND IMPROVEMENTS	10,000			10,000						
		34	WATERWAYS	140,000			140,000						
		40	PUMPS AND MOTORS	84,000			84,000						
		48	ACCESSORY ELECTRIC EQUIPMENT	13,000			13,000						
	04		WELL CLUSTER NO. 4					290,000	800	92,200	383,000		
		30	LAND AND RIGHTS	3,000			3,000						
		33	STRUCTURES AND IMPROVEMENTS	14,000			14,000						
		36	WATERWAYS	153,000			153,000						
		40	PUMPS AND MOTORS	100,000			100,000						
		48	ACCESSORY ELECTRIC EQUIPMENT	20,000			20,000						
06			LATERALS									2,585,000	
	01		PIPE DISTRIBUTION SYSTEM NO. 1					560,000	1,470	199,530	761,000		
		30	LAND AND RIGHTS	10,400			10,400						
		36	WATERWAYS	471,600			471,600						
		37	LATERAL STRUCTURES	78,000			78,000						
	02		PIPE DISTRIBUTION SYSTEM NO. 2					500,000	1,320	179,680	681,000		
		30	LAND AND RIGHTS	6,700			6,700						
		36	WATERWAYS	419,300			419,300						
		37	LATERAL STRUCTURES	74,000			74,000						
	03		PIPE DISTRIBUTION SYSTEM NO. 3					300,000	790	107,210	408,000		
		30	LAND AND RIGHTS	5,600			5,600						
		36	WATERWAYS	215,400			215,400						
		37	LATERAL STRUCTURES	79,000			79,000						

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(6-62)
Bureau of Reclamation

EAST GREENACRES UNIT

BASIC ESTIMATE DC-1 SUMMARY

Feasibility Estimate

Prepared by UCDO

PROJECT RATHDRUM PRAIRIE, IDAHO
Date of Estimate November, 1964
Prices as of July, 1964
Sheet 2 of 2 sheets

Previous Estimate Prices as of

PROPERTY CLASS	PROPERTY IDENTIFICATION	PROPERTY ACCOUNT	PROPERTY DESCRIPTION	LABOR AND MATERIALS BY CONTRACTOR COST	MATERIALS AND EQUIPMENT BY GOVERNMENT COST	LABOR BY GOVERNMENT FORCES COST	FIELD COST PROPERTY ACCOUNT	TOTAL FIELD COST IDENTIFIED PROPERTY	SERVICE FACILITIES IDENTIFIED PROPERTY	INVESTIGATIONS ENGR'G. AND OTHER COST IDENTIFIED PROPERTY	TOTAL COST IDENTIFIED PROPERTY	TOTAL COST PROPERTY CLASS	TOTAL COST IDENTIFIED PROPERTY
1			2	3	4	5	6	7	8	9	10	11	12
02			LATERALS (CONTINUED)										
	04		PIPE DISTRIBUTION SYSTEM NO. 4					540,000	1,420	193,580	735,000		
		30	LAND AND RIGHTS	1,400			1,400						
		36	WATERWAYS	387,000			387,000						
		37	LATERAL STRUCTURES	151,600			151,600						
15			GENERAL PROPERTY									100,000	
	01		PERMANENT OPERATING FACILITIES					58,500	80	17,420	76,000		
		30	LAND AND RIGHTS	1,500			1,500						
		33	STRUCTURES AND IMPROVEMENTS	27,800			27,800						
		72	OFFICE FURNITURE AND EQUIPMENT	2,400			2,400						
		73	TRANSPORTATION EQUIPMENT	11,400			11,400						
		75	SHOP EQUIPMENT	1,200			1,200						
		77	TOOLS AND WORK EQUIPMENT	10,000			10,000						
		78	COMMUNICATION EQUIPMENT	4,200			4,200						
	02		RECREATIONAL FACILITIES--TWIN LAKES ACCESS AREA					18,500	170	5,330	24,000		
		30	LAND AND RIGHTS	8,000			8,000						
		33	STRUCTURES AND IMPROVEMENTS	10,500			10,500						
			TOTAL CONSTRUCTION COST					3,157,000	8,500	1,079,500	4,245,000	4,245,000	
			TOTAL PROJECT COST									4,245,000	

LEGEND: Types of Activity

Preconstruction — Construction

LINE NO	CLASS AND ACCOUNT	PROGRAM ITEM	QUANTITY	UNIT	ESTIMATED COST 1/	TOTAL TO JUNE 30, -66	FISCAL YEARS First	Second	Third	Fourth	Fifth	BALANCE TO COMPLETE	ESTIMATED COMPLETION DATE	LINE NO
	1	2	3	4	5	6	7	8	9	10	11	14	15	
1		IRRIGATION SERVICE LAND--FULL	5,270	Ac.						5,270 Ac.				1
2		MUNICIPAL AND INDUSTRIAL WATER	85	AF						85 AF				2
3														3
4	136	CONSTRUCTION PROGRAM									Initial Water Available			4
5	.06.01	Well Cluster No. 1	25.2	cfs	450,000	13,300	19,600	91,000	148,000	173,750	1,900			5
6	.06.02	Well Cluster No. 2	20.0	cfs	397,000	11,700	18,200	75,000	144,000	141,500	1,600			6
7	.06.03	Well Cluster No. 3	15.5	cfs	336,000	9,700	13,000	73,000	123,000	110,700	1,400			7
8	.06.04	Well Cluster No. 4	20.0	cfs	383,000	11,300	15,000	79,000	139,000	135,000	3,700			8
9	.06.01	Pipe Distribution System No. 1	10.3	mi.	761,000	22,500	22,000	92,000	247,500	260,000	77,500			9
10	.06.02	Pipe Distribution System No. 2	11.1	mi.	661,000	20,100	8,000	77,000	213,000	256,000	6,500			10
11	.06.03	Pipe Distribution System No. 3	8.7	mi.	408,000	12,600	5,000	48,000	186,000	155,000	13,000			11
12	.06.04	Pipe Distribution System No. 4	13.0	mi.	739,000	21,700	10,000	78,000	340,000	273,000	11,000			12
13	.15.01	Permanent Operating Facilities			76,000	2,400	600	2,400	8,000	43,000				13
14	.15.02	Recreational Facilities--Twin Lakes Access Area			24,000	700	500		2,000	20,900				14
15		Service Facilities Depreciation & Salvage							5,000	5,000	-10,000			15
16														16
17		TOTAL CONSTRUCTION COST			4,885,000	125,400	36,600	620,000	1,755,000	1,618,000	30,000			17
18														18
19		TOTAL PROJECT COST			4,885,000	125,400	36,600	620,000	1,755,000	1,618,000	30,000			19
20														20
21		Consolidated Expenditures and Credits			-130,000	-125,400	-1,600	-10,000	-3,000		10,000			21
22														22
23		TOTAL EXPENDITURES			4,115,000		35,000	610,000	1,752,000	1,618,000	40,000			23
24														24
25		TOTAL OBLIGATIONS			4,115,000		35,000	610,000	1,752,000	1,618,000	40,000			25
26														26
27														27
28														28
29		FUNDS REQUIRED					35,000	610,000	1,752,000	1,618,000	40,000			29
30														30
31														31
32														32
33														33

Notes: 1/ July 1966 price level.

Testing and minor rectification will continue from initial water delivery through December of fifth year. Estimated cost is $60,000 broken down to $30,000 for fourth year and $30,000 for fifth year.

Recommended: _____ (Operating Office, Head) _____ (Date)

Recommended: _____ (Regional Director) _____ (Date)

Recommended: _____ (Asst. Comm. of P.C.D.) _____ (Date)

Approved: _____ (Commissioner) _____ (Date)

Revised: 6/8/66 (Date) SHEET 2 OF 2 SHEETS

Form No. 7 — UNITED STATES — DEPARTMENT OF THE INTERIOR — BUREAU OF RECLAMATION

CONTROL SCHEDULE

BOISE-PAYETTE PROJECT, IDAHO
BASE CONSTRUCTING UNIT

Boise, Idaho (Office) — November 1966 (Date) — 1 (Schedule)

☒ Regional Recommendations ☐ Water Conservation ☐ Construction ☐ Other

CHAPTER IX. PLAN FORMULATION

Plan formulation studies involved the determination of the size and scope of the maximum justifiable development that would meet both short- and long-term needs of the area. In evaluating the problems, needs, and resources, the possibility of serving four potential purposes became apparent. The first step in plan formulation then involved a detailed appraisal of the requirements for each purpose and the associated benefits and direct costs. On the basis of this information, together with other information on project costs, the East Greenacres unit was sized to include as much of each purpose as could be supported by formulation procedures.

The Bureau of Reclamation published a plan in 1954 for development of 35,500 acres of irrigable lands in Rathdrum Prairie. Since that time only three small units have been rehabilitated because interest has been insufficient for the entire project. With investigations and authorization of Spokane Valley project, local interest increased in East Greenacres unit, and the investigation shows that the four functions to be served is the fullest multipurpose extent presently possible. Moreover, this would in no way preclude continued development of Rathdrum Prairie, or for that matter, future comprehensive development of the overall Spokane River Basin.

The resulting plan includes (1) a full sprinkler-pressure water supply for the unit lands, (2) a municipal and industrial water supply for project landowners through joint use of the distribution system, and (3) recreation and fish and wildlife enhancement at Twin Lakes as a result of more stabilized lake levels and improved public access. Although area redevelopment is not a project purpose, benefits would accrue since Kootenai County is designated as a redevelopment area.

Irrigation

The existing gravity irrigation conveyance and distribution system serving the 1,410 acres of irrigated lands from Twin Lakes would be replaced because: (1) losses are excessively high; (2) cost of rehabilitating the system to cut seepage losses would be prohibitive; and (3) a small project could not justify two types of systems—open canal for water-right lands and ground-water pumping for full service lands.

In a previous investigation which was halted by litigation over use of water from Twin Lakes, several alternative plans were considered. One plan would have rehabilitated the present system to provide a full water supply for 1,600 acres, but was infeasible because of a benefit-cost ratio of only 0.39 to 1. Another plan would have used the present system and supplemented it with ground-water pumping to irrigate 3,220 acres; this was barely feasible with a benefit-cost ratio of 1.01 to 1. This led to the adoption of a third plan that would have abandoned the gravity diversion and distribution system for ground-

water pumping under sprinkler pressure for 3,220 acres. From 1960 to 1964, increased local interest made it possible to expand the project to 5,270 acres.

Irrigation benefits were estimated through use of farm budgets for without and with situations. A dryland-wheat farm represented the without condition for the new lands; a dairy farm represented the with condition for water-right lands. In the latter, a 120-acre farm for class 3 lands was used, because only 8 percent of the project area considered in formulation studies was class 2 land. There is no class 1.

Municipal and Industrial Water

With adoption of the plan for ground-water pumping and buried-pipe distribution system, the landowners asked for inclusion of a water supply and facilities to furnish water for domestic use and livestock during the winter months. The additional water needed for domestic and livestock uses would not increase distribution-pipe sizes and the costs would be relatively low. Irrigation pumps would have ample capacity to deliver the domestic water supply during the irrigation season with no appreciable increase in cost. To avoid the heavy demand charge for operating the large pumps during winter months, a small pump and well would be installed at each complex. The estimated savings in annual operating costs would more than offset annual equivalent investment costs of the small pumps.

Fish and Wildlife and Recreation

Stabilization of Twin Lakes water level with project development would improve the fish habitat and increase visitor days for fishing and general recreation. The annual increase in benefits as estimated by the Fish and Wildlife and National Park Services would be $26,000 for fishing and $1,300 for recreation. These benefits would accrue at no additional cost to the project.

However, further studies by the two agencies showed that provision of two new public access areas with boat ramps and parking space would increase benefits for fishing to $27,000 and recreation to $2,300. Annual equivalent costs of construction would be about $600 and annual operating costs, $200. Because the incremental benefit-cost ratio is favorable, 10.6 to 1, the access areas were included in the development plan. The development would have no significant effect on wildlife.

CHAPTER X. FINANCIAL ANALYSIS

Economic Justification

Development of East Greenacres unit has economic justification. Benefits would exceed associated Federal costs by a ratio of 2.70 to 1 over a 100-year period of analysis at 3⅛ percent interest. Irrigation water users can be expected to pay about 28 percent of their allocated costs; municipal and industrial users, 100 percent, and in addition, they could contribute about $77,000 financial assistance to irrigation.

BENEFITS

Annual benefits that would accrue with project development are:

Annual benefits, 100-year period

Source of benefit:	
Irrigation	$444,800
Municipal and industrial water	9,900
Fish and wildlife	27,000
Recreation	2,300
Area redevelopment	23,100
Total	507,100

COSTS

Total cost of the proposed development is estimated to be $4,610,000. This amount includes $4,245,000 to construct project facilities and $365,000 for irrigation pumping power costs. This latter amount represents an irrigation pumping power suballocation of the Federal Columbia River power system. Interest during construction would amount to $163,000 and the total annual operating costs are estimated to be $54,400.

Costs associated with benefits

The net Federal investment associated with development is obtained by deducting investigation costs to June 1965 as sunk costs, and adding interest during construction. Annual equivalent investment costs, for comparison with average annual benefits, are obtained by amortizing the net Federal investment over 100 years at 3⅛ percent interest. The annual operating costs used in the benefit-cost analysis represent the incremental operation, maintenance and replacement costs associated with the proposed development. The derivation of annual equivalent values is summarized as follows:

Federal investment

Construction cost	$4,245,000
Less investigation costs	125,400
Plus interest during construction	163,000
Plus irrigation power suballocation	365,000
Net Federal investment	4,647,600

Annual equivalent costs	
Net Federal investment	$152,300
Annual operating costs with development	54,400
Less operating costs without development	18,600
Annual net equivalent costs	188,100

BENEFIT-COST COMPARISON

Total annual benefits of $507,100 exceed total annual equivalent costs of $188,100 by a ratio of 2.70 to 1. Based on direct benefits only, the ratio is 1.73 to 1.

Cost Allocations

The proposed development would serve the purposes of irrigation, municipal and industrial water, fish and wildlife, and recreation. The separable costs-remaining benefit method of cost allocation was used to distribute an equitable share of the unit costs to each of the functions. The allocation was based on a 100-year period of analysis using an interest rate of 3⅛ percent.

COSTS TO BE ALLOCATED

Costs to be allocated include (1) construction and suballocated irrigation pumping power costs, (2) interest during construction, and (3) annual operating costs. These costs are summarized as follows:

Item	Total costs	Interest during construction	Annual operating cost
Specific costs: Irrigation	$365,000		
Joint costs:			
Deep wells	1,560,000		
Distribution systems	2,585,000		$54,200
O. & M. headquarters	76,000		
Twin Lakes facilities	24,000		200
Subtotal	4,245,000	$163,000	54,400
Total costs	4,610,000	163,000	54,400

ALLOCATION OF COSTS

In the separable costs-remaining benefits method, single-purpose alternatives and separable costs for each purpose are required. Single-purpose alternative facilities must provide equivalent service to that of the multipurpose project. Justifiable expenditures for a purpose are the benefits or single-purpose costs, whichever is less. Separable costs for a purpose are the cost of facilities constructed specifically for the purpose plus the added cost of joint-use facilities that would change in size or design with the purpose added. In this analysis, two types of separable costs were considered; first, the cost of irrigation pumping power which has been treated as a specific cost to irrigation; and second, the cost of access land and facilities at Twin Lakes which has been included specifically for recreation and fish and wildlife enhancement. Since the latter costs have been charged to two functions, a preallocation was made to distribute these costs to the two

functions. These allocated costs, derived by proportionate benefits, were then identified as separable costs for these functions and were used in the cost allocation analysis. The basic data used in the allocation are summarized in table 5. The allocation of costs is shown in table 6.

SUMMARY OF ALLOCATED COSTS

Project purpose	Total costs	Interest during construction	Annual operating costs
Irrigation	$4,122,000	$144,000	$47,240
Municipal and industrial	151,000	6,000	2,020
Fish and wildlife	303,000	12,000	4,630
Recreation	34,000	1,000	510
Total	4,610,000	163,000	54,400

TABLE 5.—BASIC DATA FOR COST ALLOCATION

[Amounts in dollars]

Item	Construction cost	Interest during construction	Annual equivalent costs [1] (100 yrs.—3⅛ percent) Construction	Interest during construction	Operation, maintenance, replacements and power	Total
Mutliple-purpose project: Total project costs	4,610,000	163,000	151,020	5,340	54,400	210,760
Single-purpose projects:						
Irrigation	4,525,000	159,700	148,240	5,230	53,600	207,070
Municipal and industrial water	71,000		1,800		7,100	8,900
Recreation	362,000	13,900	11,860	460	8,000	20,320
Fish and wildlife enhancement	362,000	13,900	11,860	460	8,000	20,320
Multiple-purpose project without:						
Irrigation	1,529,000	58,700	50,090	1,920	23,600	75,610
Municipal and industrial water	4,549,000	160,700	149,020	5,260	53,700	207,980
Recreation, fish and wildlife enhancement	4,586,000	162,100	150,230	5,310	54,200	209,740
Separable costs:						
Specific costs:						
Irrigation	365,000	[2]	11,950		[3]	11,950
Municipal and industrial water	[4]	[4]	[4]	[4]	[4]	[4]
Recreation	[4]	[4]	[4]	[4]	[4]	[4]
Fish and wildlife enhancement	[4]	[4]	[4]	[4]	[4]	[4]
Total	365,000		11,950			11,950
Separable joint costs:						
Irrigation	2,716,000	104,300	88,980	3,420	30,800	123,200
Municipal and industrial water	61,000	2,300	2,000	80	600	2,680
Recreation	1,900		70			70
Fish and wildlife enhancement	22,100	900	720	30	200	950
Total	2,801,000	107,500	91,770	3,530	31,600	126,900
Total separable costs:						
Irrigation	3,081,000	104,300	100,930	3,420	30,800	135,150
Municipal and industrial water	61,000	2,300	2,000	80	600	2,680
Recreation [5]	1,900		70			70
Fish and wildlife enhancement [5]	22,100	900	720	30	200	950
Total	3,166,000	107,500	103,720	3,530	31,600	138,850

[1] Annual equivalent values for single-purpose municipal and industrial project are based on stage construction.
[2] Interest during construction was not computed on the irrigation pumping power charge of $365,000.
[3] Included in power rate.
[4] None.
[5] Separable costs for recreation and fish and wildlife enhancement ($24,000) were split between these 2 functions based on proportionate benefits.

TABLE 6.—COST ALLOCATION—SEPARABLE COST-REMAINING BENEFIT METHOD, EAST GREENACRES UNIT

Item	Irrigation	Municipal and industrial water	Recreation	Fish and wildlife enhancement	Total
Total costs to be allocated:					
Construction					$4,610,000
Interest during construction					163,000
Operation, maintenance, replacements, and power					54,400
Annual equivalent values:					
Construction costs					151,020
Interest during construction					5,340
Operation, maintenance, replacements, and power					54,400
Total					210,760
Benefits	$444,800	$9,900	$2,300	$27,000	
Alternate costs	207,070	8,900	20,320	20,320	
Justifiable expenditure	207,070	8,900	2,300	20,320	238,590
Separable costs:					
Specific:					
Construction	11,950				11,950
Interest during construction					
Operation, maintenance, replacements, and power					
Total	11,950				11,950
Separable joint:					
Construction	88,980	2,000	70	720	91,770
Interest during construction	3,420	80		30	3,530
Operation, maintenance, replacements, and power	30,800	600		200	31,600
Total	123,200	2,680	70	950	126,900
Total separable:					
Construction	100,930	2,000	70	720	103,720
Interest during construction	3,420	80		30	3,530
Operation, maintenance, replacements, and power	30,800	600		200	31,600
Total	135,150	2,680	70	950	138,850
Remaining justifiable expenditure	71,920	6,220	2,230	19,370	99,740
Percent distribution	72.10	6.24	2.24	19.42	100
Remaining joint costs:					
Construction	34,100	2,950	1,060	9,190	47,300
Interest during construction	1,310	110	40	350	1,810
Operation, maintenance, replacements, and power	16,440	1,420	510	4,430	22,800
Total	51,850	4,480	1,610	13,970	71,910
Total allocated costs:					
Construction	135,030	4,950	1,130	9,910	151,020
Interest during construction	4,730	190	40	380	5,340
Operation, maintenance, replacements, and power	47,240	2,020	510	4,630	54,400
Total	187,000	7,160	1,680	14,920	210,760
Total allocated costs: [1]					
Construction	4,122,000	151,000	34,000	303,000	4,610,000
Interest during construction	144,000	6,000	1,000	12,000	163,000
Operation, maintenance, replacements, and power	47,240	2,020	510	4,630	54,400

[1] Capitalized construction and interest during construction.

REPAYMENT

The project costs, interest during construction, and annual operating costs allocated to each function are considered in the repayment analysis. Irrigation costs are reimbursable without interest, municipal and industrial water costs are reimbursable with interest, and recreation and fish and wildlife enhancement costs are subject to cost sharing under provisions of Public Law 89–72.

IRRIGATION

Costs allocated to irrigation total $4,122,000. This amount includes the irrigation pumping power suballocation of $365,000, which will be repaid by the annual pumping power charge during the repayment period. The remaining reimbursable irrigation costs amount to $3,757,000. Recommended irrigation water charges total $68,350 annually. After payment of the allocated annual operating costs of $47,240, irrigators could pay $21,110 annually on the irrigation construction obligation. In a 50-year repayment period, irrigators would repay $1,055,500 or 28 percent of the irrigation obligation. Financial assistance in the amount of $2,701,500 would be needed to repay the reimbursable irrigation costs. Surplus revenues from municipal and industrial water would be available to pay about $77,000 of irrigation obligation; therefore, financial assistance from power revenues would amount to $2,624,500.

Lands of the East Greenacres unit will be developed in two blocks: (1) the 1,770 acres of presently irrigated lands with a 3-year development period, and (2) the 3,460 acres of new lands with a 10-year development period. The financial assistance required for these two blocks, proportioned on an acreage basis, would be: (1) presently irrigated lands, $892,000; and (2) new lands, $1,732,500. Based on the proposed 50-year repayment schedule, financial assistance to the presently irrigated lands would need to be repaid by fiscal year 2028 and the new lands by fiscal year 2035.

It is proposed that costs allocated to irrigation which are beyond the ability of the irrigators to repay within the recommended repayment and development periods be returned to the reclamation fund within such periods from revenues derived by the Secretary of the Interior from the disposition of municipal and industrial water supply and from net power revenues from the Federal Columbia River Power System in accordance with provisions of Public Law 89–448 as amended by 89–561. The conditions prescribed by this legislation for the use of net power revenues from the Federal Columbia River Power System for irrigation assistance can be met by the East Greenacres Unit as shown below:

(1) *Maximum permissive aid:* Maximum allowable aid in 20 consecutive years, $600 million; total authorized aid due fiscal year 2016 through 2035, $387 million.

(2) *Net power revenues must be available:* System payout studies indicate net revenues in the amount needed will be available.

(3) *Construction schedule must be arranged so that the assistance will not cause an increase in BPA power rates.* The construction schedule for the East Greenacres Unit as now contemplated is compatible with this requirement.

MUNICIPAL AND INDUSTRIAL WATER

Costs allocated to this purpose amount to $151,000 for construction, $6,000 for interest during construction, and $2,020 for annual operations. In the allocation, interest during construction was computed at 3⅛ percent. In the repayment analysis the applicable rate for fiscal year 1965 is 3.222 percent. However, this adjustment does not change interest during construction from the amount allocated when rounded to the nearest $100.

Payout schedule

All costs allocated to municipal and industrial water are reimbursable with interest. The payout schedule (table 7) shows that the costs for municipal and industrial water can be repaid within a 50-year period from the date of initial service, and that an additional $77,000 of revenue will accumulate through the 60th year which could be applied on financial assistance to irrigation. The 60-year period coincides with a 10-year development and a 50-year repayment period for irrigation on the new lands. Repayment is based on an annual rate per turnout of $42.35. Adjustments have been made for anticipated growth in number of users during the payout period.

Table 7.--Municipal and industrial water payout schedule

East Greasewood Unit

Year of Analysis	No. of Turnouts	Rate per Turnout	Gross Revenues	Annual OM&R	Net Revenues	Interest @ 3.222%	Paid on Principal	Unpaid Balance	Available Financial Assistance
0								$157,000	
1	178	$42.35	$ 7,538	$ 2,020	$ 5,518	$ 5,059	$ 459	156,541	
2						5,044	474	156,067	
3						5,028	490	155,577	
4						5,013	505	155,072	
5						4,996	522	154,550	
6						4,980	538	154,012	
7						4,962	556	153,456	
8						4,944	574	152,882	
9	178		7,538		5,518	4,926	592	152,290	
10	191		8,089		6,069	4,907	1,162	151,128	
11						4,869	1,200	149,928	
12						4,831	1,238	148,690	
13						4,791	1,278	147,412	
14						4,750	1,319	146,093	
15						4,707	1,362	144,731	
16						4,663	1,406	143,325	
17						4,618	1,451	141,874	
18						4,571	1,498	140,376	
19	191		8,089		6,069	4,523	1,546	138,830	
20	204		8,639		6,619	4,473	2,146	136,684	
21						4,404	2,215	134,469	
22						4,333	2,286	132,183	
23						4,259	2,360	129,823	
24						4,183	2,436	127,387	
25						4,104	2,515	124,872	
26						4,023	2,596	122,276	
27						3,940	2,679	119,597	
28						3,853	2,766	116,831	
29	204		8,639		6,619	3,764	2,855	113,976	
30	227		9,613		7,593	3,672	3,921	110,055	
31						3,546	4,047	106,008	
32						3,416	4,177	101,831	
33						3,281	4,312	97,519	
34						3,142	4,451	93,068	
35						2,999	4,594	88,474	
36						2,851	4,742	83,732	
37						2,698	4,895	78,837	
38						2,540	5,053	73,784	
39						2,377	5,216	68,568	
40						2,209	5,384	63,184	
41						2,036	5,557	57,627	
42						1,857	5,736	51,891	
43						1,672	5,921	45,970	
44						1,481	6,112	39,858	
45						1,284	6,309	33,549	
46						1,081	6,512	27,037	
47						871	6,722	20,315	
48						654	6,939	13,376	
49						431	7,162	6,214	$ 0
50						200	6,214	0	1,179
51						0	0	0	7,593
52									
53									
54									
55									
56									
57									
58									
59									
60	227	$42.35	9,613	2,020	7,593	0	0	0	7,593
Total	xxx	xxx	$533,125	$121,200	$411,925	$177,816	$157,000	xx	77,109

RECREATION AND FISH AND WILDLIFE ENHANCEMENT

The repayment analysis for recreation and fish and wildlife enhancement is based on the cost-sharing provisions of Public Law 89–72. Thus, one-half of the separable construction costs ($12,000), associated interest during construction ($450), and all of the separable operating costs ($200), would be repayable by a non-Federal public body.

All of the joint construction costs ($313,000) and the balance of the separable costs ($12,000) would be nonreimbursable. Annual operating costs associated with joint facilities and allocated to these two functions ($4,940) would also be nonreimbursable. A summary of the cost-sharing analysis is shown in table 8.

TABLE 8.—REIMBURSABLE AND NONREIMBURSABLE COSTS FOR RECREATION AND FISH AND WILDLIFE ENHANCEMENT

Item	Allocated costs		
	Total	Reimbursable	Nonreimbursable
Construction costs:			
Separable recreation	$1,900	$950	$950
Separable fish and wildlife	22,100	11,050	11,050
Remaining joint recreation	32,100		32,100
Remaining joint fish and wildlife	280,900		280,900
Total	337,000	12,000	325,000
Reimbursable interest during construction:			
Recreation			
Fish and wildlife	450	450	
Total	450	450	
Total investment cost:			
Recreation	34,000	950	33,050
Fish and wildlife	303,450	11,500	291,950
Total	337,450	12,450	325,000
Annual operating costs:			
Separable recreation			
Separable fish and wildlife	200	200	
Remaining joint recreation	510		510
Remaining joint fish and wildlife	4,430		4,430
Total	5,140	200	4,940

Kootenai County has expressed willingness to assume the responsibility for administration and management of the land and facilities required for fishing and recreation at Twin Lakes and for repayment of the reimbursable costs with interest under provisions of Public Law 89–72. A letter of intent from Kootenai County dated October 25, 1966, is appended.

COST AND REPAYMENT SUMMARY

A summary of the unit costs and repayment of reimbursable costs is shown in the following tabulation:

Item	*Amount*
Reimbursable costs:	
Irrigation:	
Irrigation power suballocation	$365, 000
Irrigation facilities	3, 757, 000
Subtotal	4, 122, 000
Fish and wildlife enhancement	11, 050
Recreation	950
Municipal and industrial water	151, 000
Total reimbursable	4, 285, 000
Nonreimbursable costs:	
Fish and wildlife enhancement	291, 950
Recreation	33, 050
Total nonreimbursable	325, 000
Total costs	4, 610, 000
Reimbursable interest during construction:	
Municipal and industrial water	6, 000
Fish and wildlife enhancement	450
Recreation	Negligible
Repayment:	
Reimbursable irrigation	4, 122, 000
Less irrigation power suballocation	365, 000
Irrigation facilities	3, 757, 000
Repaid by irrigators	1, 055, 500
Percent payout	28
Financial assistance required	2, 701, 500
From M & I revenues	77, 000
From power revenues	2, 624, 500
Reimbursable fish and wildlife enhancement	[1] 11, 500
Repaid by non-Federal public body	[1] 11, 500
Reimbursable recreation	950
Repaid by non-Federal public body	950
Reimbursable municipal and industrial water costs	[1] 157, 000
Repaid by water users	[1] 157, 000

[1] Includes reimbursable interest during construction.

CHAPTER XI. SUPPLEMENTAL ANALYSIS

SECTION I—SENATE RESOLUTION 148

The following supplemental information is presented in two sections: (1) to meet the requirements of Senate Resolution 148, 85th Congress, first session; and (2) to evaluate the economic and social impacts of the development as requested by the chairman of the Senate Committee on Interior and Insular Affairs and the chairman of the Subcommittee on Irrigation and Reclamation.

PROJECT DESCRIPTION AND ECONOMIC LIFE

A summary of facilities, costs, plan of operation, and economic and financial analysis is covered in the statistical summary.

The economic life of East Greenacres Unit would be at least 100 years. Provisions have been made in the annual operating costs to maintain the system throughout the economic life of the project..

ESTIMATED CONSTRUCTION AND ANNUAL COSTS

Estimated construction and annual operating costs for the unit are described in the section on plans and estimates.

RATIO OF TANGIBLE BENEFITS TO TANGIBLE COSTS

Tangible benefits and costs for the 100-year period of analysis are presented in the financial analysis section of the report. The benefit-cost ratio for the 100-year period of analysis is 2.70 to 1, and for the 50-year period of analysis is 2.30 to 1. The ratio of direct benefits to costs for the 100-year period of analysis is 1.73 to 1.

INTANGIBLE BENEFITS

The increased availability of large quantities of water under pressure would be a significant benefit to fire-control operations. With organization of a properly equipped fire district, some reduction in fire insurance rates could be expected. In addition, fire prevention would be enhanced through irrigation of green crops in the normally dry, hazardous, midsummer season.

Other important intangible benefits include:

(*a*) Stabilization of the economy by reducing fluctuations in farm production.

(*b*) Increased farming opportunities and a higher standard of living for the farm operators.

(*c*) Increased well-being of the families living in the area on rural homesites and part-time farms.

FEASIBILITY AND COST OF CAPACITY FOR CURRENT AND FUTURE USE

The project is designed to satisfy present and foreseeable future water requirements of the area. The plan includes all recommendations of cooperating Federal agencies responsible for water resource development. In satisfying the requirements and recommendations, all of the resources would be developed to the present economic limit. However, construction of East Greenacres Unit would not preclude further development of Rathdrum Prairie.

ALLOCATION OF COSTS

Project costs have been allocated for both a 50- and 100-year period of analysis using the following three methods:

(*a*) Separable costs-remaining benefits.
(*b*) Priority of use.
(*c*) Incremental cost.

The allocations are summarized in table 9.

TABLE 9.—SUMMARY OF ALLOCATIONS

[In dollars]

Item	Irrigation	Municipal and industrial	Fish and wildlife	Recreation	Total
100-year period of analysis:					
Separable cost-remaining benefits:					
Construction	4,122,000	151,000	303,000	34,000	4,610,000
Interest during construction	144,000	6,000	12,000	1,000	163,000
Annual O.M.R. & P	47,240	2,020	4,630	510	54,400
Priority of use:					
Construction	4,127,000	0	434,000	49,000	4,610,000
Interest during construction	144,000	0	17,000	2,000	163,000
Annual O.M.R. & P	48,210	0	5,560	630	54,400
Incremental cost:					
Construction	4,525,000	61,000	1,900	22,100	4,610,000
Interest during construction	159,800	2,300	----------	900	163,000
Annual O.M.R. & P	53,600	600	----------	200	54,400
50-year period of analysis:					
Separable cost-remaining benefits:					
Construction	4,220,000	145,000	213,000	32,000	4,610,000
Interest during construction	148,000	6,000	8,000	1,000	163,000
Annual O.M.R. & P	48,770	1,930	3,210	490	54,400
Priority of use:					
Construction	4,291,000	0	276,000	43,000	4,610,000
Interest during construction	151,000	0	11,000	1,000	163,000
Annual O.M.R. & P	50,310	0	3,540	550	54,400
Incremental costs:					
Construction	4,525,000	61,000	22,100	1,900	4,610,000
Interest during construction	159,800	2,300	900	----------	163,000
Annual O.M.R. & P	53,600	600	200	----------	54,400

DESCRIPTION OF LOCAL PARTICIPATION

There is strong support for the project plan of development from local organizations, landowners, and State agencies. Farmers of the unit area cooperated in furnishing information on their farm operations needed in appraising the value of irrigation development in the area.

Bureau of Reclamation investigations were halted in 1960 pending the outcome of litigation between the lakeshore owners' association and the irrigation district regarding the operating levels of Twin Lakes. Following the settlement of the litigation, and with continued landowner interest, the unit investigation was renewed in 1963. At a public meeting February 1964 the potential water users almost unanimously voted in favor of irrigation development.

ESTIMATED SCHEDULE OF REPAYMENT

Costs allocated to irrigation are reimbursable without interest. Costs allocated to municipal and industrial water are reimbursable with interest. The repayment analysis for fish and wildlife and recreation enhancement is based on the cost-sharing provisions of Public Law 89–72. In accordance with criteria set forth in the law, one-half of the separable construction costs, associated interest during construction, and all of the separable operating costs would be repayable by a non-Federal public body. The balance of the separable costs and all of the remaining joint costs allocated to fish and wildlife and recreation enhancement would be assumed by the Federal Government and be nonreimbursable.

Repayment summaries of reimbursable costs allocated to irrigation, and municipal and industrial water by each method of allocation are presented in tables 10 and 11.

TABLE 10.—SUMMARY OF IRRIGATION REPAYMENT

(Amounts in dollars)

Item	Allocated costs [1]	Payment capacity [2]	Annual O.M.R. & P.	Amortization capacity	Construction repayment 50 years	Assistance required	Percent payout
100-year period:							
Separable cost-remaining benefits	3,757,000	68,350	47,240	21,110	1,055,500	2,701,500	28
Priority of use	3,762,000	68,350	48,210	20,140	1,007,000	2,755,000	27
Incremental cost	4,160,000	68,350	53,600	14,750	737,500	3,422,500	18
50-year period:							
Separable cost-remaining benefits	3,855,000	68,350	48,770	19,580	979,000	2,876,000	25
Priority of use	3,926,000	68,350	50,310	18,040	902,000	3,024,000	23
Incremental cost	4,160,000	68,350	53,600	14,750	737,500	3,422,500	18

[1] Excludes irrigation power suballocation of $365,000, which will be repaid by annual power charge.
[2] 5,230 acres of irrigable land paying $13 plus 40 acres 6W land paying only annual operating costs of about $9 an acre.

TABLE 11.—REPAYMENT SUMMARY FOR MUNICIPAL AND INDUSTRIAL WATER

(Amounts in dollars)

Item	Repayment period (years)	Annual payments			Total	
		Capital	Operating	Total	Interest	Principal
100-year period:						
Separable cost-remaining benefit	1–9	5,518	2,020	7,538		
	10–19	6,069	2,020	8,089		
	20–29	6,619	2,020	8,639		
	30–50	7,593	2,020	9,613		
Total					177,816	157,000
Incremental costs	1–9	2,248	600	2,848		
	10–19	2,456	600	3,056		
	20–29	2,664	600	3,264		
	30–50	3,032	600	3,632		
Total					71,800	63,300
Priority of use		0	0	0		
50-year period:						
Separable cost-remaining benefit	1–9	5,306	1,930	7,236		
	10–19	5,834	1,930	7,764		
	20–29	6,363	1,930	8,293		
	30–50	7,298	1,930	9,228		
Total					171,980	151,000
Incremental costs	1–9	2,248	600	2,848		
	10–19	2,456	600	3,056		
	20–29	2,664	600	3,264		
	30–50	3,032	600	3,632		
Total					71,800	63,300
Priority of use		0	0	0		

PROBABLE EFFECTS OF THE DEVELOPMENT ON STATE AND LOCAL GOVERNMENTS

Project development would have negligible effect on local, county, and State governments because the project area involves less than 2 percent of all farmlands in Kootenai County. The increased costs to local, county, and State governments would accrue from additional services required in providing (*a*) increased educational facilities, (*b*) added fire and police protection, and (*c*) additional health services and other public accommodations. Increased State income taxes would meet these financial requirements.

Increased costs for public services would not be burdensome because project development would enhance the tax base in the area. An increase of farm property tax revenues would amount to about $23,000 annually. Additional tax revenues would accrue from increased business activity and economic expansion in the surrounding area.

INVESTIGATIONS AND CONSTRUCTION SCHEDULES

The development has not been previously authorized; therefore, adjustments in estimates of fund requirements or previously authorized amounts are not involved in this analysis. The schedule of fund requirements is shown in control schedule, Form PF–2, included in the plans and estimates section.

SECTION II—ECONOMIC AND SOCIAL IMPACTS

Construction of the East Greenacres unit would aid the expansion of the economy of the project area, Kootenai County, and surrounding areas. A marked upswing in business activity would be expected during the construction period. Employment would increase, and local trades, supply organizations, and businesses would experience a rise in demand for goods and services. Of prime importance would be the long-range effect of increased agricultural development and related activities after the project is in operation.

BASIS FOR MEASURING IMPACTS

The impact of increased farm income generated by irrigation is enhanced by the effects on linked and derivative industries. Linked industries are closely tied to the basic industry because they give time, place, and form utility to the raw products. Derivative industries are trade and service establishments that supply the various goods and services required by the local population and business organizations. Measurement of this impact is based on significant relationships of employment and income between agriculture and the linked and derivative industries.

ECONOMIC IMPACTS

With project development, every dollar of income to agriculture would generate additional income in the range of $2 to $2.70 in the linked and derivative industries. The total economic impact generated by agriculture would be 3.35 times the increase in cash farm sales with project development or about $1.9 million annually.

APPENDED MATERIALS

Department of the Interior:
Fish and Wildlife Service, Portland, Oreg.
Letter of August 30, 1965
Report dated August 10, 1964
National Park Service, Portland, Oreg.
Report dated September 25, 1964
Department of Health, Education, and Welfare:
Public Health Service, Portland, Oreg.
Letter dated September 28, 1965
Letter dated October 14, 1964
Public Health Service, Atlanta, Ga.
Report dated January 1965
Kootenai County Board of Commissioners:
Letter dated October 25, 1966

REPORT OF THE DEPARTMENT OF THE INTERIOR

DEPARTMENT OF THE INTERIOR,
FISH AND WILDLIFE SERVICE,
BUREAU OF SPORT FISHERIES AND WILDLIFE,
Portland, Oreg., August 30, 1965.

Memorandum.
To: Regional Director, Bureau of Reclamation, Boise, Idaho.
From: Regional Director, Bureau of Sport Fisheries and Wildlife, Portland, Oreg.
Subject: East Greenacres Unit, Prairie Division, Rathdrum Prairie project, Idaho (your July 23, 1965, memorandum, refer: 730).

We have reviewed your preliminary report and are pleased that project modifications which will result in fishery enhancement are included in your plans and recommendations for East Greenacres Unit.

Fishery benefit estimates provided in our August 10, 1964 report, and included in your report, are unadjusted average annual figures. Some of the other project benefits in your report appear to be valued on an annual equivalent basis. You may wish to convert fishery benefit values to annual equivalents. Trends related to our reported average annual benefits are explained below for your possible use.

A. The 1,000 fisherman-day increase in annual use (with the project without extra access) would be constant at 1,000 days, valued at $2,000, from year 1 through year 100 of project life.

B. A $1 increase in fisherman-day value will occur with the project for each of the 24,000 days of average annual use which would be expected with or without the project. The 24,000 day average annual use figure derives from a straight-line increase from 12,000 fisherman-days of use in the initial year of project life to 36,000 fisherman-days in the 100th year.

C. As in A. the 3,000 fisherman-day increase in average annual use additional to A. and B. benefits (with the project with two new access facilities) would be constant at 3,000 days, valued at $6,000, from year 1 through year 100 of project life.

Please advise if additional information is needed.

PAUL T. QUICK.

DEPARTMENT OF THE INTERIOR,
FISH AND WILDLIFE SERVICE,
BUREAU OF SPORT FISHERIES AND WILDLIFE,
Portland, Oreg., August 10, 1964.

Memorandum.
To Regional Director, Bureau of Reclamation, Boise, Idaho.
From Acting Regional Director, Bureau of Sport Fisheries and Wildlife, Portland, Oreg.
Subject: East Greenacres unit, Prairie Division, Rathdrum Prairie project, Idaho.

This is our detailed report evaluating effects your unauthorized East Greenacres unit, Rathdrum Prairie project, Idaho, would have on fish and wildlife resources. It has been prepared under the authority and in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

We provided you preliminary comments on effects the subject project would have on fish and wildlife in our report, entitled "Preliminary Report, East Greenacres Unit, Prairie Division, Rathdrum Prairie Project, Idaho," dated February 17, 1960. In connection with your present feasibility studies, preliminary fishery information was provided your Bureau by memorandum dated December 1, 1963. This information pertained to possible fishery benefits arising from stabilized water levels in Twin Lakes.

The Idaho Fish and Game Department has reviewed and concurred in this report as indicated in a letter from Director John R. Woodworth dated August 3, 1964, a copy of which is attached. Your Upper Columbia development office, Spokane, Wash., and the Idaho Fish and Game Department provided information used during the preparation of this report.

East Greenacres unit lies just northwest of Post Falls, Idaho, in west-central Kootenai County. The unit lands would comprise a total of 5,270 acres of irrigable land, 1,450 acres of which are presently irrigated by the East Greenacres Irrigation District. Without project development, about 70 percent of the land is classed as dry-farmed wheatland. Most of the remainder consists of irrigated cropland producing alfalfa, pasture, grass seed, and truck crops.

Twin Lakes, located about 4 miles north of Rathdrum, Idaho, is presently used as an irrigation reservoir for the East Greenacres Irrigation District. The lake is actually two bodies of water connected by a canal and is approximately 5 miles long and from ¼- to ½-mile wide. Forested lands extend to the water's edge, and most of the shoreline is either developed or now under development for homesites and resorts.

Present plans for East Greenacres unit would discontinue use of Twin Lakes for a supply of irrigation water. Well water would be pumped from an extensive ground-water aquifer underlying the project area. This is not expected to significantly affect the water table underlying Rathdrum Prairie. A pressure pipe distribution system would deliver water under sprinkler pressure to the farm units. Water would also be provided for municipal and industrial use, if determined feasible.

With project development, most of the present nonirrigated land would be put into irrigated alfalfa, pasture, and grass-seed production.

The project would also provide for stabilized lake levels in Twin Lakes, if determined beneficial to fish resources and recreational interests. This stabilization would be accomplished through operation of the existing control structure on Rathdrum Creek, the outlet for Twin Lakes. Water levels would be maintained as near elevation 2,316.2 as possible, with drawdown occurring only as needed to handle spring runoff.[1] Average annual fluctuations of about 1.4 feet, and extreme fluctuations of approximately 3.6 feet, are anticipated.

[1] All elevations are in feet and refer to mean sea-level datum.

Fish

Twin Lakes is stocked by Idaho Fish and Game Department with about 6,000 legal-sized rainbow trout annually. In addition, populations of cutthroat trout, kokanee, largemouth bass, black crappies, yellow perch, bluegills, and brown bullheads are present. The lake supports a year-round fishery. The fisheries of the outlet and inlet streams are minor.

Two public access areas with concrete-slab boat ramps are available on Twin Lakes. However, during low-water periods in the summer, the boat ramps are out of the water, and launching is difficult. Parking space for automobiles is inadequate.

Without the project, annual average use during the 100-year period of project analysis is expected to be about 24,000 angler-days.

With the project, stabilized lake levels in Twin Lakes would provide better conditions for natural spawning of game fish, increase aquatic food production and plant growth, and also provide cooler water temperatures. This would improve the quality of the fishery. In addition, the existing public boat-launching facilities would be operable throughout the year.

Improved fish habitat and ease of boat launching throughout the year with the project would increase total angler-days of use by 1,000 annually. In addition, the per angler-day value would double because of the improved quality and attractiveness of the fishery. The project would provide average annual enhancement, valued at $26,000.

If additional public access areas were provided, another 1,500 angler-days of use per area would be realized annually. Cost of land acquisition for each public access area would be about $4,000. Construction of a boat ramp and development of a parking area adequate to handle 25 cars and trailers would cost about $5,250. Annual operation and maintenance cost would be about $100. It is felt that two such access areas would be inadequate to handle anticipated fisherman demand. The additional 3,000 angler-days that would be provided annually are valued at $6,000. The Idaho Fish and Game Department has advised they would provide for operation and maintenance costs for the access and parking areas through cooperative agreement with the State of Idaho Department of Public Lands, Division of Parks.

Our evaluation of Twin Lakes fishery benefits is based upon present project plans to maintain lake levels as near elevation 2,316.2 as possible. Any major change in this plan would affect our present evaluation. However, there may be occasions when it would be desirable from a fishery management standpoint to alter the lake levels. This should be determined cooperatively by Bureau of Reclamation and Idaho Fish and Game Department.

The Idaho Fish and Game Department would be responsible for fishery management and fish stocking in Twin Lakes, and associated costs would be borne by that agency. Annual stocking cost during the 100-year period of analysis would be about $5,400 either without or with the project.

Since it is anticipated that there would be a substantial increase in all recreational uses on Twin Lakes, a zoning plan should be devised to insure that certain areas or periods of time would be available for fishing, hunting, and other wildlife purposes without conflicting with other recreational uses.

Wildlife

White-tailed deer occasionally use East Greenacres unit lands; however, most use occurs in the more heavily forested areas adjoining the unit. A few elk are also found on adjacent forested lands. Big-game hunting on project lands is insignificant.

Upland-game species inhabiting the area are ring-necked pheasants, mourning doves, blue and ruffed grouse, and gray partridges. Fur animals present are muskrats, beavers, and minks. Neither of these groups supports a significant harvest because of low population densities on project lands.

Although there is some waterfowl use on Twin Lakes, it is considered of minor importance. Possibly one or two pairs of ducks nest along Rathdrum Creek. Waterfowl hunting on Twin Lakes is negligible, and no man-days of use are assigned.

No significant effects on big game and fur animals are expected with the project. There would be little change in upland-game bird or waterfowl populations.

Recommendations

It is recommended:

1. That the report of the regional director, Bureau of Reclamation, include the conservation, improvement, and development of fish and wildlife resources among the purposes for which the East Greenacres unit may be authorized.

2. That two additional public access areas be acquired and developed by the project. It is estimated that the total cost of each area would be about $9,250. Annual operation and maintenance costs would be a responsibility of the Idaho Fish and Game Department.

3. That the water level of Twin Lakes be stabilized as near elevation 2,316.2 as possible, except when determined cooperatively by the Bureau of Reclamation and Idaho Fish and Game Department that water level of the lake be altered in the interest of fishery management without being detrimental to the project.

4. That a zoning plan be developed in connection with overall planning for East Greenacres unit, and specifically with regard to Twin Lakes, to insure that certain areas (or certain periods) would be available for fishing, hunting, and other wildlife purposes without conflict with general recreation. Such a plan would be developed cooperatively by the Idaho Fish and Game Department, the Bureau of Reclamation, the National Park Service, and the Bureau of Sport Fisheries and Wildlife.

5. That the following language be incorporated in the recommendations of the Report of the Regional Director, Bureau of Reclamation:

(*a*) "That additional detailed studies of fish and wildlife resources affected by the project be conducted as necessary, after the project is authorized, in accordance with section 2 of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), and that such reasonable modifications in the authorized project facilities be made by the Secretary of the Interior as he may find appropriate for the conservation, improvement, and development of these resources.

(*b*) "That Federal lands and project waters in the project area be open to public use for hunting and fishing except for sections reserved for conservation, development, and improve-

ment of fish and wildlife or for safety, efficient operation, or protection of public property.

(c) "That leases of Federal land in the project area reserve the right of public use of such land for hunting and fishing."

Please advise us of your views regarding our recommendations. We request notification of any changes in project plans in order that we may revise our report if necessary.

RICHARD E. GRIFFITH.

STATE OF IDAHO,
FISH AND GAME DEPARTMENT,
Boise, Idaho, August 3, 1964.

THE REGIONAL DIRECTOR,
Bureau of Sport Fisheries and Wildlife,
Portland, Oreg.

DEAR SIR: We have reviewed your proposed detailed report on the effects of unauthorized East Greenacres unit, Rathdrum project, Idaho, on fish and wildlife resources submitted to us on July 10, 1964.

As stated previously, we find it difficult to rationalize an estimate of angler use over a period of 100 years in any fishery. We do agree that increased stabilization of water level in Twin Lakes will be of benefit to the fishery.

We will be able to provide for the operation and maintenance costs for the suggested access and parking areas through cooperative agreement with the State of Idaho Department of Public Lands, Division of Parks. We recommend that you include construction of these two access areas in the project recommendations, as proposed in your report draft of April 21, 1964.

With the above exceptions, we concur with your report and appreciate the opportunity to comment at this time.

Sincerely,

JOHN R. WOODWORTH, *Director.*

DEPARTMENT OF THE INTERIOR,
NATIONAL PARK SERVICE,
Portland, Oreg., September 25, 1964.

Memorandum.

To: Regional Director.

From: Chief, Office of Cooperative Activities, Portland.

Subject: Revised letter report on the recreation aspects of the proposed East Greenacres unit, Rathdrum Prairie project, Idaho.

The Area Engineer, Upper Columbia Development Office, Bureau of Reclamation, by letter dated December 6, 1963, requested that we reconsider the recreation potentialities of Twin Lakes, a component of the East Greenacres unit, Rathdrum Prairie project, Idaho. The Bureau's request is based on the availability of information regarding land ownership and existing development not available at the time of our letter report of October 22, 1963.

This reanalysis is based on information contained in our previous report; the Area Engineer's letter of December 6, 1963, relative to ownership and developments; maps and aerial photographs furnished by the Bureau of Reclamation; and information on land costs as provided in a letter from the Bureau's Upper Columbia Development

Office dated February 3, 1964. Also taken into account in this reanalysis is information pertaining to hunting and fishing aspects of the project as presented in the report of the Bureau of Sport Fisheries and Wildlife dated August 1964. That data also was unavailable at the time of our previous report, because the Bureau of Sport Fisheries and Wildlife studies had not been completed.

Upper and lower Twin Lakes are located in Kootenai County, Idaho, 50 miles northeast of Spokane and 30 miles northwest of Coeur d'Alene, and other nearby communities within a 1-hour driving distance. The character of Twin Lakes, competing recreation opportunities elsewhere, travel routes, and primary recreation attraction are such that only normal or moderately increased recreation use will occur. The present day-use pattern will probably not change appreciably as a result of stabilization of the water surface.

The Bureau of Sport Fisheries and Wildlife has reported that with stabilization of the lakes, fishing use will increase 1,000 angler days annually with present access facilities. With the provision of two additional access points, annual fishing use will increase on the average for the life of the project another 3,000 angler-days. That agency estimates the total cost of providing the two additional fishing accesses at $18,500, of which $8,000 would be for land acquisition. Annual operation and maintenance would be $100, with the Idaho Department of Fish and Game providing the funds through cooperative agreement with the Idaho Department of Public Lands, Division of Parks.

General recreation use would be restricted by the lack of space for such activities as picnicking, camping, and associated activities. Since the project does not involve any land around Twin Lakes and the shoreline is in private ownership, except for the fishing access sites, it is concluded that the acquisition of land and existing homes, plus the construction of public-use facilities, would not be economically feasible. Therefore, no land acquisition nor facilities are recommended. It is recognized that some increased general recreation use will occur with the provision of additional accesses for fishing. Such use and the benefits to general recreation resulting from the stabilization of the lakes are estimated as follows throughout the average life of the project:

Type	Visitor days	Unit value	Benefit
Estimated use with present access:			
General recreation	1,000	$0.80	$800
Recreation use incidental to fishing	1,000	.50	500
Total	2,000		1,300
Estimated use with 2 additional accesses:			
General recreation	1,000	.80	800
Recreation use incidental to fishing	3,000	.50	1,500
Total	4,000		2,300

The recreation unit values have been determined in accordance with the provisions contained in Senate Document No. 97, Supplement No. 1, titled "Evaluation Standards for Primary Outdoor Recreation Benefits" dated June 4, 1964.

DANIEL F. BURROUGHS.

REPORT OF THE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
PUBLIC HEALTH SERVICE,
September 28, 1965.

Mr. H. T. NELSON,
Regional Director, Regional Office, Region 1, Bureau of Reclamation, Boise, Idaho.

DEAR MR. NELSON: Reference is made to our letter of September 20, 1965, which contains our comments on your preliminary report entitled, "East Greenacres Unit, Prairie Division, Rathdrum Prairie Project, Idaho," dated June 1965. In this letter we indicated that comments on vector problems would be forwarded to your office as soon as these were received from the Public Health Service, Communicable Disease Center, Greeley, Colo.

The Communicable Disease Center, in cooperation with the Idaho State Department of Health, has completed their review of your preliminary report on Rathdrum Prairie project and has prepared the following statement:

"It is not anticipated that development of the proposed East Greenacres unit would materially affect vector problems in the area. The pipe delivery system, sprinkler-type irrigation, and excellent natural drainage of the area would largely preclude the creation of significant mosquito breeding areas that are frequently associated with seepage and leakage from open canals and ditches. In the event that there are any situations associated with the proposed project which would be conducive to ponding and mosquito production, it is suggested that the Bureau of Reclamation contact the Idaho State Department of Health for specific information on corrective measures."

At the suggestion of the Communicable Disease Center, we have enclosed three copies of a brochure entitled, "Prevention and Control of Vector Problems Associated With Water Resources," which provides general information on vector problems associated with irrigation developments and recommended control measures.

If we can be of further assistance on this project, please let us know.

Sincerely,

W. W. TOWNE,
Director, Columbia River Basin Project.

PUBLIC HEALTH SERVICE,
WATER SUPPLY AND POLLUTION CONTROL
PROGRAM, PACIFIC NORTHWEST,
Portland, Oreg., October 14, 1964.

MR. RUPERT B. SPEARMAN,
Area Engineer, Bureau of Reclamation,
Spokane, Wash.

DEAR MR. SPEARMAN: This is in response to your request for comment on the public health aspects of the proposed East Greenacres unit, Prairie Division, Rathdrum Prairie project, Idaho.

We note, from your description of this project, that East Greenacres unit is located about 10 miles west of Coeur d'Alene, Idaho, and 25 miles east of Spokane, Wash., and consists of a 14-square-mile segment of Rathdrum Prairie, in Kootenai County, Idaho.

You indicate that the East Greenacres Irrigation District serves about 1,500 acres of the unit at the present time and that, under the proposed plan, facilities would be constructed to irrigate 5,266 irrigable acres and provide domestic water for all unit landowners. The water supply would be pumped from the ground water aquifer underlying Rathdrum Prairie and distributed at sprinkler pressure through protected buried pipe.

We understand also that four separate systems, each consisting of a well complex and buried-pipe lateral system, would serve the unit. Each well complex would be a fenced outdoor installation with three drilled wells and an elevated reservoir. Ownership would be provided with metered turnouts. We note your count of 164 residencies in the unit at present, with an expected increase to 244 homes by the year 2020.

Because the system, though primarily designed for irrigation, would provide water for domestic purposes, it is imperative that it be operated in accordance with local regulations for public water supplies. Aside from sanitary considerations, we note, for example, that the system would be operated for irrigation during the months of May through September, and wonder what provisions would be made for the other months of the year?

A thorough plan to cover all contingencies in the use of the proposed system for domestic water supply should be developed. We recommend, therefore, that the Idaho State Department of Health, Statehouse, Boise, Idaho, be consulted for this purpose.

If we can be of further assistance in this matter, please let us know.

Sincerely yours,

JAMES L. AGEE,
Acting Officer-in-Charge.

Prevention and Control of Vector Problems Associated With Water Resources

[Report of the Public Health Service, Communicable Disease Center, Technology Branch, Atlanta, Ga., January 1965]

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I. INTRODUCTION

Great expansion in the development of water resources has occurred during the last two decades in an effort to meet the needs of the Nation's growing population. This expansion will undoubtedly continue at an accelerated rate in order to keep pace with increasing demands for water, particularly for irrigation agriculture and to meet the needs of rapidly growing industry. It is now recognized that a wide range of interests must be given full consideration in the development and utilization of water resource projects in order to assure maximum benefits to the greatest number of people. One of these interests involves the prevention and control of insects which create public health hazards.

This pamphlet is limited to discussions of the various aspects of vector problems of public health importance associated with water resource development. In these discussions, vectors are considered as species which carry human disease organisms or which affect man's comfort, mental equanimity, and economic welfare.

It has been repeatedly demonstrated that water resource projects, especially impoundments and irrigation developments, create insect-vector problems unless appropriate prevention and control measures are provided. The effective prevention and control measures that were developed and incorporated into the design, construction, and operation of TVA projects and other impoundments throughout the Southeast played a major role in suppressing malaria in this country. In contrast, relatively little attention has been devoted to the prevention and control of other types of vector problems associated with water resource developments. As a consequence, the rapid expansion of irrigation and other water resource projects has usually been accompanied by proportionate increases in aquatic habitats favorable for the production of insects of public health importance. Mosquitoes are the most important of these insects although other groups such as deer flies, horse flies, black flies, biting midges, and the nonbiting chironomids are often involved.

The public health importance of insect problems associated with water resource developments is increasing due to (1) the rapid increase in populations in existing irrigated areas where little or no attention has been given to control or prevention of vectors, (2) manmade aquatic habitats created by construction of new projects, (3) the increasing exposure of man to insects of public health importance due to expanded public use of water-related recreational areas, (4) the development of insecticidal resistance, and (5) public demand for a more healthful environment. It is therefore urgent that programs for the prevention and control of insect-vector problems keep pace with the various other matters involved in the development and utilization of water and land resources.

II. PUBLIC HEALTH AND ECONOMIC IMPORTANCE OF VECTOR PROBLEMS

Several groups of arthropods and rodents associated with the development and utilization of water resources may create serious public health and economic problems. These include species that are vectors of disease organisms and species that serve as reservoirs of these organisms or otherwise interfere with man's health and welfare.

Approximately a dozen species of mosquitoes of public health and economic importance may be produced in habitats associated with irrigation, impoundments, and other water resource developments. Encephalitis, commonly known as sleeping sickness or brain fever, is now the most important mosquito-borne disease in the United States. Mosquitoes obtain the encephalitis viruses from birds and then transmit them to other host animals including horses and humans. There are no effective chemotherapeutic measures known for preventing or treating human cases, and some individuals, particularly children, who recover from encephalitis often suffer permanent disability. Three principal types of mosquito-borne encephalitis occur in the United States. Eastern encephalitis (EE) occurs mainly in the Atlantic and Gulf States from New Hampshire to Texas, but sometimes extends as far inland as Wisconsin. St. Louis encephalitis (SLE) occurs chiefly west of Mississippi River and in several of the Central States and Florida. The third type, Western encephalitis (WE) is confined primarily to the States west of the Mississippi River.

Culiseta melanura and several species of *Aedes* mosquitoes are believed to be involved in the transmission of EE. The principal vector of both WE and SLE in the Far West is *Culex tarsalis*, a mosquito which is widely distributed west of the Mississippi River. In the Central States, mosquitoes of the *Culex pipiens-quinquefasciatus* complex are believed to be important in the transmission of SLE. In Florida, *Culex nigripalpus* is recognized as a vector of SLE. *Aedes* and other mosquitoes may also be involved as secondary vectors of encephalitis. Both Western and St. Louis encephalitis are endemic in many western areas, and outbreaks of WE among horses and of WE and SLE among humans have been rather widespread. In recent years, outbreaks of encephalitis have occurred in irrigated areas in the Texas High Plains (1956–64), Intermountain States (1957 and 1964), Lower Rio Grande Valley (1957), Utah and New Mexico (1958), and Wyoming (1960).

The occurrence of malaria outbreaks as a result of improperly prepared reservoirs in the southeastern States is well documented. Malaria has also been associated with irrigation in several States including California, New Mexico, Texas, and in the rice-growing areas of the Mississippi Delta. This disease has been almost eradicated from the United States; and at present, there is no significant malaria transmission anywhere in the Nation. The malaria vectors (*Anopheles quadrimaculatus* in the East and *Anopheles freeborni* in the West) are still prevalent in some areas where favorable habitats are present. These mosquitoes constitute a potential hazard for the establishment of new foci of malaria transmission, particularly in situations where the disease may be reintroduced from foreign countries. This was well illustrated at Lake Vera in California during the summer of 1952, where 35 cases of malaria occurred among Camp Fire Girls. The source of their infections was traced to a soldier who had an attack of malaria while camping at the lake.

Aedes vexans, Aedes dorsalis, Aedes nigromaculis, and several other mosquitoes which cause severe biting annoyance to man and domestic animals are produced in habitats associated with irrigation and other water resource projects. These mosquitoes often create public health problems aside from the transmission of specific diseases. Such health hazards are illustrated by the results of surveys made by the U.S.

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Public Health Service in irrigated areas in northern Montana. In three-fourths of the families surveyed, mosquitoes severely annoyed both adults and children and interfered with their normal outdoor activities during the summer months. Mosquito bites caused some degree of injurious reaction in 8 out of 10 people interviewed; and in one section, 40 percent of the individuals examined by the physician showed evidence of secondary infection of mosquito bites. Some individuals, particularly children, frequently required medical attention and sometimes even hospitalization for treatment of secondary infections and allergic reactions caused by mosquito bites.

In addition to their public health importance, mosquitoes often create other serious problems in both rural and urban areas. Their vicious biting reduces the efficiency of farmworkers and sometimes hinders the harvesting of crops. Dense populations of attacking mosquitoes have been reported to kill livestock. The constant attacks of even moderate populations of these insects may reduce the vitality of farm animals and prevent proper feeding, thereby causing reduced weight gains and lower milk and egg production. Mosquitoes are vectors of encephalitis, anaplasmosis, fowl pox, and several other important diseases of animals. These diseases kill large numbers of farm animals each year. Together, mosquito annoyance and mosquito-transmitted diseases undoubtedly result in losses of millions of dollars to farmers every year.

Large numbers of biting mosquitoes also cause serious economic losses by reducing the efficiency of industrial workers, lessening the value of real estate, restricting outdoor recreational activities, and reducing attendance at outdoor business establishments such as drive-in theaters and eating places.

The economic magnitude of the irrigation mosquito problem is illustrated by expenditures for abatement of these insects. For example, in California over $6 million is spent annually to control mosquitoes, and it has been estimated that at least twice this amount would be required to provide adequate control throughout the State. The major portion of this mosquito control is carried out in irrigated areas. Approximately $200,000 is spent each year for mosquito abatement in a few irrigated areas in Utah. Many urban communities in other western irrigated areas spend large sums of money each season for chemical control to provide partial protection from mosquitoes. Individual families also spend sizable amounts of money each summer for household sprays, mosquito repellents, livestock sprays, and medicine for treatment of mosquito bites. The total cost of controlling irrigation mosquitoes, together with the other serious economic losses they cause, runs into many millions of dollars each year. Thus, mosquitoes are a major economic liability in many irrigated areas.

III. NATURE AND EXTENT OF VECTOR PROBLEMS

Vector problems primarily concern mosquitoes and their biology; however, other aquatic insects, terrestrial arthropods, or rodents are sometimes involved.

Biology of mosquitoes

This discussion is intended to provide only basic information concerning some of the more pertinent biological characteristics of mosquitoes commonly associated with water resource developments.

These mosquitoes represent four important genera or groups: *Anopheles, Culex, Aedes,* and *Psorophora.* All mosquito species have four distinct stages in their life cycle: the egg, the larva ("wiggler"), the pupa ("tumbler"), and the adult (Fig. 1). A characteristic common to all mosquitoes is that they live in water continuously from the time the eggs hatch until the adults emerge. The aquatic stages generally occur in shallow water with an abundance of vegetation and flotage and where they are protected from wave action. They do not occur in the deep open waters of lakes, ponds, or streams.

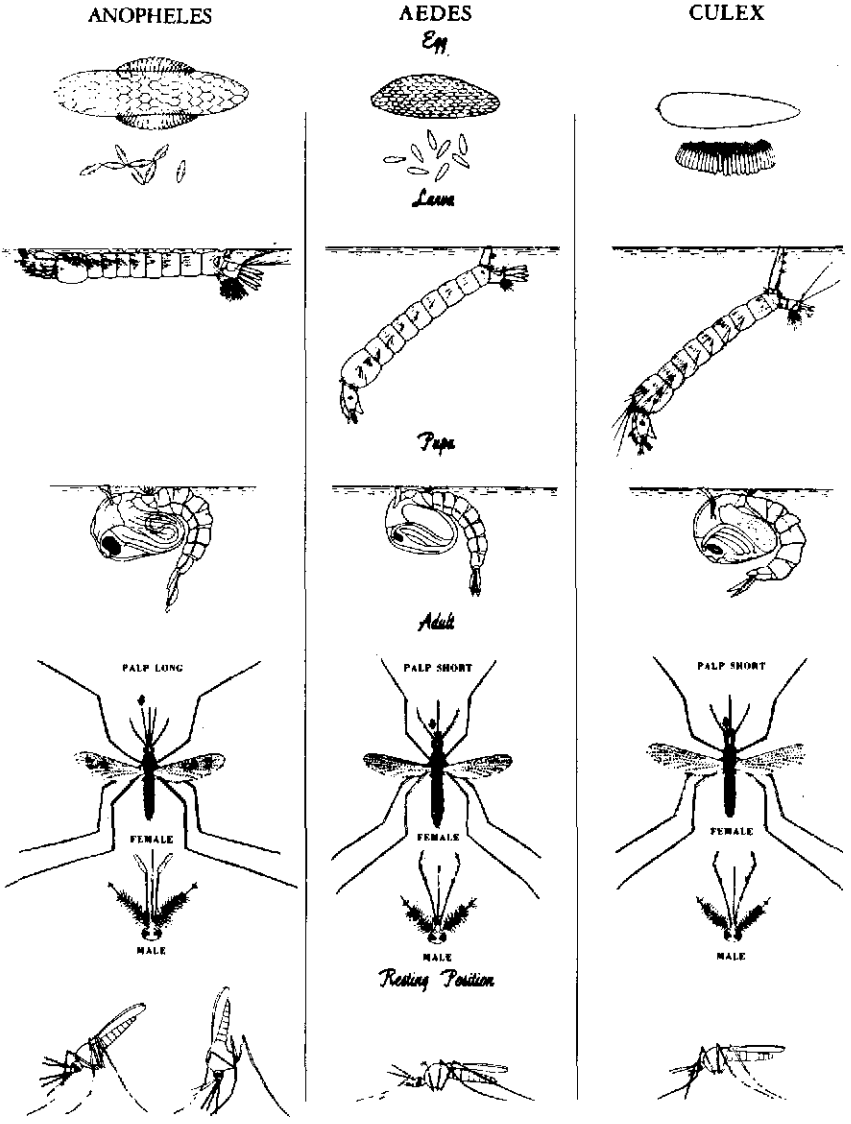


Figure 1. Characteristics of Anophelines and Culicines

On the basis of egg-laying habits, mosquitoes may be divided into temporary-water and permanent-water species. The *Aedes* and *Psorophora* are temporary-water breeders which deposit their eggs on the moist soil of areas where surface water has receded. Hatching of the eggs is stimulated by subsequent floodings. The eggs may remain dormant for long periods, sometimes for several years if conditions are unfavorable for hatching. Normally, the eggs hatch more or less simultaneously soon after they are flooded. In contrast, the *Anopheles* and *Culex* usually lay their eggs on the surface of permanent and semi-permanent bodies of water. The eggs usually hatch within a few days after oviposition. For both the temporary-water and permanent-water mosquitoes, time between hatching of eggs and emergence of adults varies with species and environmental conditions, especially water temperature. Development of the aquatic stages may be completed in as little as four days in hot weather, while several weeks may be required in cool weather. *Aedes* and *Psorophora* mosquitoes generally develop more rapidly than the *Anopheles* and *Culex*.

Adult mosquitoes mate soon after emergence, and the females begin seeking blood meals, which most species require before laying eggs. The biting habits of adult mosquitoes vary with species. *Anopheles* and *Culex* mosquitoes feed mainly at night, while *Aedes* and *Psorophora* species feed both at night and in the daytime. Most species exhibit a peak of biting activity during the 1- or 2-hour period immediately after sundown. The *Aedes* and *Psorophora* species are aggressive and vicious biters of both man and livestock. *Culex tarsalis*, a vector of encephalitis, feeds readily on a wide range of hosts including man, wild and domestic birds, and livestock.

The flight range of mosquitoes varies widely with species and environmental conditions. The direction and distance of travel are greatly influenced by availability of food, shelter, and wind conditions. In many areas availability of food is probably the most important factor influencing the movement of mosquitoes. Generally, if an adequate food supply is close to the production sites, adult mosquitoes will not travel far from their sources. On the other hand, mosquitoes may travel several miles when adequate food supplies are not available nearer their larval habitats. The normal flight range of the *Anopheles* and *Culex* mosquitoes was formerly considered to be about 1 mile; however, recent studies have shown that certain species such as *C. tarsalis* may travel several miles. Most *Aedes* and *Psorophora* species are strong fliers and are known to range several miles from their larval habitats.

Other aquatic insects

Several other groups of aquatic insects may be produced in habitats associated with water resource projects in sufficient numbers to create public health and economic problems. Deer flies and horse flies (*Tabanidae*) are produced along the margins of impoundments and in seeps and marshes in irrigated areas. These insects are vicious biters of both man and livestock and are sometimes involved in the transmission of diseases such as tularemia and anthrax. Some species of small gnats of the family *Ceratopogonidae* are also vicious biters and often produce severe reactions and vesicular lesions. These gnats are produced in damp areas of many irrigated valleys, as well as salt marshes and other wetland areas. In certain areas, black flies (*Simuliidae*) plague both man and livestock with their irritating and painful bites.

They are normally produced in streams but sometimes occur in large numbers in irrigation conveyance systems. The small nonbiting midges (*Tendipedidae*) and the phantom midges (*Chaoborinae*) are another group of pestiferous insects which may be produced in impounded water. These insects are attracted to lights in tremendous numbers and cause severe human annoyance. An example is the Clear Lake gnat, *Chaoborus astictopus*, which creates serious problems at the resort areas in Lake County, Calif.

Terrestrial arthropods and rodents

Each summer many millions of people who visit picnic sites, campgrounds, cabins, and other water-related recreational facilities along the shores of reservoirs are often exposed to terrestrial arthropods such as ticks, mites (chiggers), fleas, and flies as well as rodents including ground squirrels, rats, mice, and chipmunks. The public health importance of these arthropods and rodents involves a number of human diseases including Rocky Mountain spotted fever, Colorado tick fever, tularemia, relapsing fever, tick paralysis, typhus, plague, bacillary dysentery, and typhoid. In addition, the bites of certain arthropods cause considerable irritation, discomfort, and annoyance.

IV. VECTOR PREVENTION AND CONTROL IN RELATION TO THE DEVELOPMENT AND UTILIZATION OF WATER RESOURCES

Water resource projects, especially impoundments and irrigation developments, invariably create a variety of manmade aquatic habitats favorable for the production of insects of public health importance. Experience has shown that if proper consideration is given to vector problems during the initial stages of project planning, adequate provision can be made for prevention or control measures that will minimize health hazards. It is therefore essential that vector prevention and control be planned and "built into" each new project and that it be compatible with the primary functions of the project, such as irrigation, navigation, hydroelectric power, and flood control. As a basic principle, the project sponsor, whether an agency, group, or individual, should be responsible for providing adequate vector prevention and control measures for water resource developments. For public-use developments, the planning, construction, and operating agencies or groups should have this responsibility; while for private developments, the land owner and/or operator should be responsible. The determination of public health requirements, including vector prevention and control measures, is usually the responsibility of the appropriate local, State, or Federal health agencies. These agencies should provide the construction and operating agency, group, or individual with appropriate plans and specifications for vector prevention and control.

A balanced program of naturalistic and source reduction measures adapted to the overall functions of the project provides the most effective control of vector problems, and over a period of years such measures are more economical than repetitive control measures. Chemical control measures are often needed to supplement these measures because the water in certain types of aquatic habitats, such as rice fields, obviously cannot be eliminated. Likewise, other types of vector sources may be reduced in size but not completely eliminated.

Insecticides are also employed to provide temporary control in emergency situations, such as encephalitis outbreaks. Chemical control in some sections of the country has been complicated by the fact that certain vector species have developed high levels of resistance to the chlorinated hydrocarbon and organophosphorus insecticides. The selection of an insecticide and its method of application should be based upon careful evaluation of a number of factors including cost, effectiveness, size and type of area to be treated, and its toxicity to fish, wildlife, domestic animals, and humans.

Vector problems associated with impoundments and the methods for solving these problems are usually different from those related to irrigation. These two types of water resource developments are the most important from the standpoint of vector problems and are discussed separately in the following sections. The discussions are limited primarily to the prevention and control of mosquitoes, the most important group of aquatic vectors associated with impoundments and irrigation. Many of the prevention and control measures for mosquitoes are equally effective against other aquatic vectors.

Mosquito prevention and control for impoundments

Manmade impoundments range in size from large reservoirs covering thousands of acres to small farm ponds of less than an acre. Among the various types are multipurpose reservoirs built for power generation and/or flood control, navigation, irrigation, and related uses; municipal and industrial water supply impoundments; recreational lakes; fish and waterfowl impoundments; floodwater detention reservoirs; log storage ponds; farm ponds; and waste stabilization lagoons.

Mosquito producing conditions are basically similar for the various types of impoundments but may vary greatly in magnitude. These conditions include emergent vegetation and/or floating debris in shallow water areas which are protected from wave action; undrained depressions, borrow pits, sloughs, marshes within the summer fluctuation zone, and rising or constant pool levels which cause the water to remain in the marginal vegetation for extended periods during the mosquito production season. It is almost axiomatic that reservoirs and ponds which are free of vegetation and flotage do not produce mosquitoes.

Malaria mosquitoes, *A. quadrimaculatus*, are frequently produced in impoundments which have protected shallow water areas with emergent vegetation and flotage. Such habitats may also produce several species of *Culex* mosquitoes, such as *C. tarsalis*, which like the *Anopheles* deposit their eggs on the surface of the water. Several species of *Aedes* and *Psorophora* mosquitoes, which deposit their eggs on moist soil, are produced in marginal areas of reservoirs and ponds that have fluctuating water levels. *Aedes vexans* is one of the most common and widespread of these species.

It is often difficult to control mosquito production on impoundments which are not properly prepared prior to impoundage. The principal preimpoundage measures for mosquito control include clearing of the basin; removal of vegetation from the fluctuation zone; and drainage for depressions, sloughs, and marshes within the summer fluctuation zone. Permanent shoreline improvement measures such as deepening and filling have been very effective in prevent-

ing mosquito production on TVA reservoirs throughout the Tennessee Valley. In order to preserve the effectiveness of permanent preventive measures, it is essential that reservoirs and ponds be properly maintained after they have been impounded. Of paramount importance is the fact that maximum mosquito control benefits from water level management can be realized only when impoundments have been properly prepared and maintained. Several phases of water level control, particularly flood surcharge, constant level pool, cyclical fluctuation, and/or seasonal recession can sometimes be adapted to various types of impoundments in order to minimize conditions favorable for mosquito production. A particular phase may be used to control vegetation and flotage which is favorable for mosquito production, or it may be used primarily to destroy mosquito larvae.

Conflicts sometimes arise between fish and wildlife conservation and mosquito control interests. They are frequently related to drainage and the use of insecticides and occasionally concern water level management and vegetation control (reservoir clearing). Experience with TVA impoundments has demonstrated that fish and wildlife conservation and mosquito control interests are not always antagonistic and that a cooperative approach to problems often results in the development of mutual benefits. As a general principle, wildlife conservation areas that have a high mosquito production potential should not be located within flight range of recreational areas or other human population centers.

Recreational areas, especially those with facilities for overnight occupancy, should be located along sections of the reservoir which have the lowest aquatic vector production. In selecting recreational sites, proper consideration should also be given to terrestrial vector problems. Thus, site selection for recreational areas should be based on a careful analysis of both aquatic and terrestrial vector problems. When necessary, full provision should be made for the prevention and control of both types of vector problems.

Mosquito prevention and control for irrigated areas

Some of the most rapid expansion in water resources development in recent years has been in the field of irrigation. This is particularly true in the 17 Western States where the total acreage of irrigated land increased from 17 million acres in 1939 to more than 30 million acres in 1959. Even in the East, supplemental irrigation is expanding rapidly. The rapid expansion in the development of irrigation, particularly in the West, has been accompanied by proportionate increases in the production of mosquitoes which are now creating serious public health problems in many areas.

Experience has shown that manmade aquatic habitats are usually responsible for excessive mosquito populations in irrigated areas. Natural mosquito sources occur in most irrigated areas, but usually the manmade sources are by far the most important. Mosquito production occurs in both on-field and off-field aquatic habitats. Conditions favorable to mosquito production are caused by poor irrigation and drainage practices including inadequate seepage prevention and control measures; poor land preparation; use of field layouts and irrigation methods that do not fit land, crops, and water supply; application of water in excess of crop requirements; inadequate drainage systems for removal and disposal of waste water; and poor mainte-

nance of distribution and drainage systems. Mosquito sources on irrigated fields have been found to occur most often on fields used for pastures, hay meadows, and other close-growing forage crops on which water is frequently ponded long enough for mosquito larvae to mature. The greatest total acreage of on-field mosquito production for the entire West probably occurs on irrigated pastures, wild hay meadows, and rice fields. The major off-field mosquito sources include marshes, roadside ditches, borrow pits, wasteland, and various other undrained areas which are flooded by seepage and waste irrigation water.

The faulty irrigation and drainage practices that create man-made mosquito sources also result in serious soil and water problems such as excessive water losses, waterlogging, salt and alkali accumulations, damaged soil structure, leaching of plant nutrients, soil erosion, and reduced crop yields. The ultimate solution to mosquito problems associated with irrigation must be based upon source reduction measures which are aimed at preventing, eliminating, or reducing mosquito-producing areas. Practical measures for preventing and eliminating mosquito production associated with irrigation involve the use of good conservation practices which insure high crop yields without excessive water losses or decreased soil productivity. Experience has shown that the agricultural benefits derived from these practices usually greatly exceed the cost of applying them. The prevention and control of mosquitoes and mosquito-borne diseases is an additional benefit which greatly strengthens the justification for using good irrigation and drainage practices.

Legal considerations in vector control

Almost every State has statutory provisions concerning the correction of nuisances or health hazards associated with insanitary conditions. Under these statutes, the abatement of public health problems associated with mosquitoes, flies, and other vectors is usually implied although it is not always specifically expressed. Most State and local health departments have general rules and regulations which may be used for the correction of public health hazards caused by various vectors. Effective regulation is generally provided when the extent of the problem is limited, when there are only a few violations, and when the property owners are able to undertake the necessary corrective measures. However, specific legislation is usually required for the prevention and control of serious problems that extend over large areas, such as mosquito problems in irrigated areas in the West.

Some 12 States in the South-Central and Southeastern part of the Nation have adopted specific regulations that govern the conditions under which water may be impounded in order to minimize danger to public health. In most States, these regulations provide for reservoir clearing, drainage of marginal depressions, and periodic removal of vegetation after impoundage. Provision is also made for water level fluctuation and other supplemental control measures in several States. The regulations concerning impounded water were originally adopted for the control of malaria vectors; however, some States are broadening them to include other mosquitoes.

In recent years the need for specific legislation, authorizing formation of local mosquito control districts, has been recognized in many States throughout the Nation. Approximately half of the States now have legislation authorizing the establishment of county or district

mosquito control organizations. This type of legislation has the advantage of permitting communities to meet local problems by organizing control programs that may be carried out on an areawide basis. Such legislation has been found to be especially desirable in States where extensive mosquito problems occur, such as those associated with salt marshes and irrigation.

Vector control activities of various agencies

As previously indicated, various governmental agencies at the Federal, State, and local level are now concerned with vector control. The nature and scope of vector control activities carried out by these agencies, particularly those relating to water resource developments, are discussed in the following section.

Federal agencies.—Although all Federal development and/or operating agencies have an interest in safeguarding public health as related to their projects and programs, the consideration given to vector control varies. Vector control programs of the Federal agencies may include the following types of activity: surveillance, research, technical assistance, and vector control operations.

The most extensive mosquito control operations have been carried out by the Tennessee Valley Authority and the U.S. Army Corps of Engineers on their impoundments. Emphasis has been given to the control of vectors of disease, particularly malaria mosquitoes (*Anopheles quadrimaculatus*).

The U.S. Public Health Service is responsible for developing and recommending procedures for the prevention and control of mosquitoes and other arthropods of public health importance associated with Federal water resource projects. In carrying out this responsibility, proposed plans for Federal water resource projects are studied to determine applicable vector prevention and control measures for incorporation into the design and construction of the project as well as control measures which should be used after the project is in operation. This activity is carried out in close cooperation with State health agencies, and the vector prevention and control recommendations are submitted jointly by the U.S. Public Health Service and the health department of the State in which the project is located. Because of limited funds and personnel available for this activity, vector evaluations and control recommendations usually are developed from an office review of the proposed plans, and field investigations are carried out on relatively few of the projects.

The Public Health Service also conducts investigations on the ecology and epidemiology of vector-borne diseases for the purpose of developing more effective vector prevention and control measures. A few studies have been conducted to determine the nature and extent of water resource vector problems, and to develop and field test chemical and source reduction measures for the control of encephalitis and other irrigation mosquitoes. Source reduction studies carried out on irrigated hay meadows in Montana in cooperation with the Soil and Water Conservation Research Division, Agricultural Research Service, U.S. Department of Agriculture (USDA) were of particular importance. These investigations showed that improved soil and water management practices for certain types of irrigated hay meadows would eliminate mosquito production and increase crop yields 5- to 10-fold.

The Entomology Research Division of the Agricultural Research Service, USDA, carries out extensive research on agricultural insects. However, a branch of the Entomology Research Division is also concerned with investigations on insects affecting man and animals, and it devotes major attention to chemical control measures for mosquitoes, lice, and ticks.

The U.S. Fish and Wildlife Service has cooperated with mosquito control agencies in conducting research on mosquito breeding problems and on developing satisfactory solutions. The service has conducted pilot studies on the use of impoundments as a control measure for salt-marsh mosquitoes.

State health agencies.—The State health departments in most States carry out some type of vector control activities, usually in conjunction with their environmental health programs. Agencies other than health departments have full responsibility for vector control in several States; and in a few cases, the responsibility is divided among several agencies. Vector control activities in the States vary widely depending upon the nature and extent of existing problems. They may include vector surveys; research on chemical and source reduction measures; educational, training, and promotional activities; technical assistance on vector problems; and in some cases participation in actual control operations.

Interests of the State departments of health in the prevention and control of insects of public health importance associated with water resource projects parallel those of the U.S. Public Health Service. In the past, several State departments of health, particularly those in the Southeast, have carried out a wide range of activities in connection with the control of malaria associated with impounded water. These activities have been greatly reduced in most States in recent years. Many States are now expressing considerable concern over the current expanding magnitude of vector problems associated with water resource developments. Most States, especially those in the West where extensive irrigation mosquito problems have developed, can only provide technical assistance on a limited part-time basis. The Bureau of Vector Control, California State Department of Public Health, employs a biologist to devote full time to vector problems associated with water resource developments. This is believed to be the only State that provides full-time technical assistance on this problem. Research activities are likewise extremely limited in most States. Two exceptions are California and Florida, both of which are carrying out various types of investigations related to the prevention and control of vector problems associated with water resource developments.

V. REQUIREMENTS FOR PROVIDING ADEQUATE PREVENTION AND CONTROL OF VECTOR PROBLEMS ASSOCIATED WITH WATER RESOURCE DEVELOPMENTS

The nature, extent, and importance of vector problems commonly associated with water resource developments and the basic prevention and control measures for these problems have been discussed in previous sections of this pamphlet. In order for maximum benefits to be derived from the Nation's water resources, the vast backlog of vector problems associated with existing developments must be brought under control as rapidly as possible, and adequate prevention

and control measures must be planned and built into all future projects. The basic requirements for accomplishing these objectives are:

1. The agencies and groups concerned with the development and utilization of water resources, especially impoundments and irrigation, should have a basic knowledge of the importance of vector problems and their relation to water resource projects. In addition, they should recognize the need for coordinating and integrating vector prevention and control with the primary project functions during the planning, construction, and operational phases of their projects.

2. The sponsoring and/or operating agencies should accept full responsibility for the prevention and control of vector problems created by their projects.

3. The appropriate Federal, State, or local health agency should provide the construction and operating agency, group, or individual with detailed plans and specifications for vector prevention and control for individual water resource projects. The appropriate Federal, State, or local water resource agency should be responsible for seeing that the vector prevention and control measures are integrated into the project.

4. There should be continuous and close liaison and cooperation between the public health agencies and those concerned with the development and utilization of water resources.

5. For all Federal projects, legislation authorizing or providing appropriations for project construction and/or operation should provide adequate funds for building vector prevention measures into the projects at the time of planning and at the time of construction as well as funds for carrying out the necessary control measures after the project is in operation. Similar provision should be made for financing vector prevention and control measures for projects constructed and operated by State or local agencies. Administration of these funds for the specified purpose should be a designated responsibility of the project sponsor and/or operating agency.

6. Investigations should be made of possible ways and means whereby State or Federal agencies could provide additional financial assistance to local vector control programs, particularly for those areas which have sparse human population but extensive and widespread vector problems associated with irrigation or other water resource developments.

7. The irrigation and agriculture agencies should intensify their efforts to develop improved irrigation and drainage practices and to get them into use. At present, there is a tremendous gap between existing knowledge of good soil and water management practices and the application of this knowledge on irrigated farms. All-out efforts should be made to close this gap as rapidly as possible, thereby eliminating mosquito sources, conserving water, and improving irrigation agriculture. Personnel of health agencies and local mosquito control organizations should cooperate in this effort.

8. In connection with the development of vector prevention and control measures for Federal water resource projects, there is a great need for a sound and effective program providing for (a) detailed field surveys and evaluations of vector problems associated with all proposed Federal water resource projects and the development of appropriate measures for preventing and controlling these problems;

(b) adequate technical assistance to Federal, State, or local agencies on the control of vector problems arising from operating water resource projects; (c) adequate surveillance and followup surveys on the prevention and control measures which have been recommended for various types of projects; (d) close and continuous liaison with all other Federal agencies concerned with the development and utilization of water resources; and (e) research as needed to develop more effective vector prevention and control measures.

9. A major increase in research activities is urgently needed to solve the current backlog of vector problems associated with water resource developments and the new problems which are constantly arising. For some types of vector problems, it will be necessary to conduct investigations in the particular area in which they occur. Others may be solved by studies in representative areas and the results can be generally applied to comparable areas. Since many of the vector problems associated with water resource projects involve both public health and other interests, they can best be solved through joint investigations by the agencies concerned. Through such cooperative research, it will be possible to mutually accomplish the major objectives of the various groups.

VI. GENERAL RECOMMENDATIONS

In order to minimize public health hazards associated with water resource developments, every possible effort should be made to avoid creating conditions which will increase populations of vectors of public health importance. It is therefore recommended that the following principles and practices for prevention and control of vector problems be adhered to in the design, construction, operation, and maintenance of water resource projects.

Impoundments

Practices leading to the prevention and source reduction of mosquito and other aquatic insect breeding sites include the following:

1. All borrow pits and other potential ponding areas associated with construction of the dam, relocation of highways or roads, etc., which are located above maximum pool level should be made self-draining.

2. Prior to impoundage, the reservoir basin should be prepared as follows:

(*a*) The normal summer fluctuation zone of the permanent pool should be completely cleared except for isolated trees and sparse vegetation along abrupt shorelines which will be exposed to wave action.

(*b*) Dense stands of timber rooted below the normal summer minimum pool level but extending above that level should be cleared. In some situations, such timber may be felled and securely tied down in lieu of disposal.

(*c*) Borrow pits, depressions, marshes, and sloughs which will be flooded by the reservoir at maximum pool level and which would retain water at lower pool levels should be provided with drains to insure complete drainage or fluctuation of water within them.

(*d*) If the summer fluctuation zone of the permanent pool is limited to a few feet, consideration should be given to "building out" mosquito-producing areas located within flight range of population groups or recreational areas through the use of measures such as deepening and/or filling. This would minimize the need for repetitive measures for controlling vegetation and mosquito production.

3. After impoundage, the following maintenance measures should be carried out in all potential mosquito-producing areas located within flight range of human population groups or recreational areas frequented by significant numbers of persons:

(*a*) All dense vegetation should be removed periodically from flat, protected areas within the normal summer fluctuation zone of the permanent pool.

(*b*) Vegetation, debris, and flotage should be removed periodically from all drains to insure free flows.

4. Water level management to minimize conditions favorable for mosquito production should be used to the maximum degree permitted by the primary purposes of the reservoir. This will minimize the need for repetitive measures for controlling vegetation and mosquito production.

5. As a general principle, waterside recreational areas, particularly those which have facilities for overnight human occupancy, should be located along sections of the reservoir which have a low production potential for mosquitoes and other aquatic insects of public health importance.

Terrestrial arthropods and rodents at recreational areas

1. Proper storage, collection, and disposal of refuse should be practiced in order to prevent and control flies, wasps, other noxious insects, rats, wild rodents, and other small mammals.

2. All buildings should be rodentproofed at recreational areas where rodents are prevalent which may create public health hazards.

3. Debris, rubbish, and other materials which may serve as harborage for rodents and other small mammals should be removed periodically.

4. Brush and weeds along paths, trails, roadways, and other areas frequently used by visitors should be removed in order to reduce the likelihood of tick infestation.

Waterfowl refuges

1. Whenever possible, sites selected for waterfowl habitat development should not be within mosquito flight range of population groups or recreational areas.

2. Waterfowl areas which are to be flooded during the mosquito season should be diked or otherwise prepared with steep shorelines to preclude shallow water areas favorable for mosquito production.

3. Provision should be made for water level management in waterfowl areas which will minimize mosquito production.

Irrigation

Project conveyance and distribution systems

1. Lining or other satisfactory seepage control measures should be provided for all sections of canals and laterals located in porous soil where excessive leakage would result in waterlogged areas, seeps, and ponds.

2. Drains should be installed to prevent ponding of excess irrigation water and natural runoff along the upper side of canals and laterals. All drainage crossing or inlet structures should be placed on grade to avoid ponding.

3. Borrow areas should be self-draining to keep them from retaining ponded water.

4. When possible, provision should be made to prevent turnouts and other hydraulic structures from retaining residual water when they are not being used.

5. Effective measures should be provided to prevent ponding of leakage from water control structures.

6. Every effort should be made to establish delivery schedules which will provide farmers with adequate but not excessive amounts of water at proper intervals to insure efficient irrigation of the crops concerned.

7. Vegetation and debris which would retard normal flows should be periodically removed from conveyance channels, water control structures, and drains.

Project drainage systems

1. Trunk drainage systems should be installed to insure complete removal and proper disposal of excess irrigation water, natural runoff, and seepage from both irrigable and nonirrigable lands affected by the distribution and use of irrigation water on the project.

2. Drainage ditches should be designed, constructed, and maintained so as to minimize ponding in the channels and to insure free flows at all times.

3. Provision should be made to prevent water from ponding behind spoil banks.

4. Underdrains, culverts, inlets, etc., should be placed on grade to prevent ponding.

Irrigated farms

1. The sponsoring agency and other organizations concerned with irrigation agriculture or mosquito control should encourage irrigation farmers to use the following irrigation and drainage practices which will prevent or minimize mosquito sources:

(*a*) The farm supply system, drainage system, and field layouts should be properly fitted to the topography, soil, water supply, crops to be grown, and irrigation methods to be used.

(*b*) All surface irrigated fields should be properly leveled or graded to provide for efficient water application and removal of excess water without ponding.

(*c*) An adequate drainage system should be provided for removal of excess water from all portions of the farm.

(*d*) Irrigation methods should be used which will provide optimum irrigation efficiencies.

(*e*) Application of irrigation water should be limited to the amount required to fill the crop root zone plus water to cover unavoidable losses and excess water needed to prevent upward movement of salts.

Farm ponds

1. The pond basins should be cleared of trees, brush, and other dense vegetation prior to impoundage.

2. Ponds should be constructed with steep banks to discourage growth of vegetation.

3. All dense vegetation should be removed periodically from shallow water areas.

Channel improvements and drainage

1. Borrow areas resulting from construction of the project should be made self-draining.

2. Material excavated from channels should be disposed of in such a way that it will not result in ponding of water.

3. Adequate drains should be installed to prevent ponding of water on berms or behind spoil banks, levees, and dikes.

4. Drainage ditches should be designed, constructed, and maintained so that they will concentrate low flows and reduce silt deposition and subsequent ponding, thereby insuring free flows at all times.

5. Underdrains, culverts, inlets, etc., should be placed on grade to prevent ponding.

6. Collection sumps should be constructed with steep side slopes, and any emergent vegetation should be removed periodically.

7. Sections of natural drainageways that are cut off or bypassed by new channels should be filled or provided with adequate drains.

8. Interior drainage facilities should be well maintained to avoid excessive ponding.

Waterways, terraces, floodways, diversion channels, and drainage ditches

Waterways, terraces, floodways, diversion channels, and drainage ditches should be designed, constructed, and maintained so that they will not retain ponded water or create ponded areas outside of the channels which would be suitable for mosquito production.

Supplemental chemical control measures

In situations where adequate vector control is not obtained through prevention and source reduction measures, provision should be made for supplemental use of insecticides and rodenticides to achieve the desired level of control.

Routine vector appraisal

Arrangements should be made for carrying out a routine program of vector appraisal as a part of normal operations of the reservoir and associated recreational areas. Inspections for adult and larval mosquitoes and other vectors are essential for planning and evaluating control measures and for adjusting control programs to meet temporary or emergency situations.

OFFICE OF
KOOTENAI COUNTY BOARD OF COMMISSIONERS,
Coeur d'Alene, Idaho, October 25, 1966.

Mr. RUPERT B. SPEARMAN,
Area Engineer, Bureau of Reclamation,
Region 1, Spokane, Wash.

DEAR SIR: Kootenai County does endorse and approve the East Greenacres Project because of its interest in full development of the resources of the area. Kootenai County also endorses the plan to fully develop the recreation and fish and wildlife potential of Twin Lakes as is evident from the investments it is now making in the development of recreational facilities.

The County is interested in managing additional recreational facilities that are needed and would be built by the United States to meet the future demands at Twin Lakes, and by this letter indicates a willingness to participate to the extent of one-half the separable investment cost and to operate and maintain such facilities at its expense if the project is authorized and the recreation and fish and wildlife facilities are fully justified.

It is the intent of the County Commissioners to participate in the development of Twin Lakes to the extent of their authority and will take steps at the appropriate time to obtain any necessary authority to enter into agreements for management of the facilities built by the United States.

Very truly yours,

HENRY J. MEYER,
Chairman.
RALPH W. COPE,
Commissioner.
DON ADAMS,
Commissioner.

Attest:

HAROLD E. PETERSON, *Clerk.*

STATE OF IDAHO,
OFFICE OF THE GOVERNOR,
Boise, October 3, 1967.

HON. STEWART L. UDALL,
Secretary of the Interior,
Department of Interior, Washington, D.C.

DEAR MR. SECRETARY: This is in reply to a letter dated July 14, 1967, from Mr. Floyd E. Dominy, Commissioner of the Bureau of Reclamation, relative to the feasibility report for the East Greenacres unit of the Rathdrum Prairie project, Idaho.

This proposal has been reviewed by the Idaho State reclamation engineer, who conducted a hearing concerning the project at Coeur d'Alene, Idaho, September 5, 1967, to gain public views and comments. No one appeared at the hearing in opposition to the project. It has also been considered by the Idaho Water Resource Board, which has the responsibility for formulation of a State water plan. At a regular meeting of the board held September 15, 1967, they gave it their unanimous endorsement. The project has strong local support.

By this letter the State of Idaho indicates its approval of this project as outlined in the report. The project will provide water for irrigation of a total of 5,300 acres of land, of which 3,500 acres will be lands not previously irrigated. It will also make possible the stabilization of the water surface of Twin Lakes for recreation use and fish and wildlife enhancement.

I hope that you will report favorably on this project to the Bureau of Budget and the Congress and that it will receive early authorization.

Sincerely,

DON SAMUELSON, *Governor.*

STATE OF NEVADA,
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES,
Carson City, Nev., July 28, 1967.

Hon. FLOYD E. DOMINY,
Commissioner, U.S. Department of the Interior, Bureau of Reclamation, Washington, D.C.

DEAR MR. DOMINY: I have reviewed the proposed report of the Department of the Interior on the East Greenacres unit, Rathdrum Prairie project, Idaho, which was submitted with your letter of July 4, 1967.

The State of Nevada has no objection to this project and extends congratulations to the Bureau of Reclamation for the development of the report.

Sincerely,

ELMO J. DERICCO, *Director.*

OFFICE OF THE GOVERNOR,
STATE CAPITOL,
Salem, September 25, 1967.

Hon. STEWART UDALL,
Secretary of Interior, Washington, D.C.

DEAR MR. SECRETARY: The State of Oregon, through the State Water Resources Board, has received for comment the proposed report of the Department of the Interior on the East Greenacres unit, Rathdrum Prairie project, Idaho, forwarded in accordance with section 1(c) of the Flood Control Act of December 22, 1944 (58 Stat. 887).

We concur with the views of the Secretary of Interior.

Sincerely,

TOM MCCALL, *Governor.*

STATE OF UTAH,
DEPARTMENT OF NATURAL RESOURCES,
Salt Lake City, Utah, October 20, 1967.

Hon. STEWART L. UDALL,
Secretary of the Interior,
Washington, D.C.

DEAR SECRETARY UDALL: This letter constitutes the comments of the State of Utah with respect to the East Greenacres unit, Rathdrum Prairie project, Idaho as proposed in the May 1966 report of the U.S. Bureau of Reclamation. These comments are submitted in compliance of section 1(c) of the Flood Control Act of December 22, 1944 (58 Stat. 887).

From our study of the report, it appears that the proposed project has a favorable benefit-cost ratio, that the repayment plan is consistent with established reclamation policy, and that there is strong local interest in the development. Moreover, the project will have a beneficial effect on recreation and fish and wildlife.

The project would not adversely affect the interests of the State of Utah. Accordingly, the State of Utah has no objection to the project as proposed by the report and believes that the project report should be approved and favorably recommended to the Congress.

Sincerely yours,

JAY R. BINGHAM, *Executive Director.*

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WASHINGTON STATE,
DEPARTMENT OF WATER RESOURCES,
Olympia, November 9, 1967.

Hon. FLOYD E. DOMINY,
Commissioner, Bureau of Reclamation,
Department of the Interior, Washington, D.C.

MY DEAR MR. COMMISSIONER: This is in response to your letter of July 14, 1967, transmitting copies of the Department of the Interior's report on the East Greenacres unit, Rathdrum Prairie project, Idaho.

The plan is designed to serve municipal and industrial water and irrigation water to a total of 5,270 acres of land in the East Greenacres unit. This includes 1,770 acres now under irrigation from the Twin Lakes system. The project involves abandoning the Twin Lakes diversion and serving the entire East Greenacres unit with ground water pumped through wells constructed throughout the project.

The East Greenacres unit is very similar to the recently completed Spokane Valley project and will be pumping water from the underground reservoir beneath Rathdrum Prairie. The Twin Lakes reservoir will be released to recreational and wildlife uses.

Our geologist advises that the aquifer which underlies Rathdrum Prairie is continuous and underlies the Spokane River Valley in Washington State and, in his opinion, water pumped for the East Greenacres project will at least, in part, be reflected by a similar decrease in ground water moving downstream beneath the Spokane River Valley. However, ground water inflow to the Spokane River in the City of Spokane area is estimated to be sufficient to insure that the proposed pumping for the East Greenacres project will not adversely affect existing water rights in the Spokane River Valley which rely upon this source of ground water for their supply. Further, our geologist pointed out that the Spokane River Valley-Rathdrum Prairie underground reservoir is susceptible to artificial recharge using surplus Spokane River water if and when withdrawals approach or equal annual natural recharge.

In the light of these comments, we endorse the proposed project and urge that this development proceed as rapidly as it is convenient to do so.

Very truly yours,

H. MAURICE AHLQUIST,
Director, Department of Water Resources.

WYOMING EXECUTIVE DEPARTMENT,
Cheyenne, September 11, 1967.

Hon. FLOYD E. DOMINY,
Commissioner, Bureau of Reclamation,
Department of the Interior, Washington, D.C.

DEAR MR. DOMINY: The report of the Bureau of Reclamation, as approved by the Secretary of the Interior, on the East Greenacres unit, Rathdrum Prairie project, Idaho, which was transmitted to this office, under date of July 25, 1967, has been reviewed and we offer the following comments:

The water supply for this project is to be developed from ground water in the project area and apparently will have no effect on the surface water supplies in the vicinity or in the Columbia River Basin.

The development plan will serve the functions of irrigation, municipal and industrial water supply, and enhance the recreation and fish and wildlife opportunities by reducing the drawdown on Twin Lakes which is occasioned by the existing irrigation diversion from that source.

Although the irrigation payout of the project will require assistance from revenues of the Columbia River Basin Power System in the amount of $2,642,500, it appears feasible under present-day conditions and arrangements. Wyoming offers no objections to the proposed East Greenacres unit of the Rathdrum Prairie project as outlined in the report dated May 1966.

Sincerely,

STANLEY K. HATHAWAY, *Governor.*

DEPARTMENT OF THE ARMY,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington, D.C., September 29, 1967.

Hon. FLOYD E. DOMINY,
Commissioner, Bureau of Reclamation,
Department of the Interior, Washington, D.C.

DEAR MR. DOMINY: This is in reply to your letters of July 14, 1967, to the Secretary of the Army and the Chief of Engineers transmitting for review and comment the proposed report of the Department of the Interior on the East Greenacres unit, Rathdrum Prairie project, Idaho.

The proposed plan provides for a new irrigation water supply to 5,270 acres, including the 1,770 acres now under the Twin Lakes system, by pumping water from the ground water aquifer underlying the area. Use of the ground water supply for irrigation and domestic purposes will eliminate the annual drawdown of Twin Lakes, thereby permitting the lake levels to be stabilized and enhance the recreation and fish and wildlife purposes. Two additional public access areas with boat ramps and parking areas would be provided.

The proposed plan does not conflict with existing or authorized projects or plans of the Corps of Engineers.

Sincerely yours,

R. R. PLOGER,
Major General, U.S. Army,
Acting Chief of Engineers.

DEPARTMENT OF AGRICULTURE,
Washington, D.C., September 29, 1967.

Hon. STEWART L. UDALL,
Secretary of the Interior.

DEAR MR. SECRETARY: This is in reply to a letter dated July 14, 1967, from Mr. Floyd E. Dominy, Commissioner of Reclamation, transmitting in your behalf copies of the proposed report of the Department of the Interior on the East Greenacres Unit, Rathdrum Prairie Project, Idaho.

The proposed development plan is designated to serve the functions of irrigation, municipal and industrial water supply, recreation, and fish and wildlife enhancement.

The project would consist of four separate water supply and distribution systems, each consisting of a cluster of deep wells, an elevated

steel regulating reservoir, and a buried pipe pressure distribution system, and public access areas at Twin Lakes. A total of 5,270 acres will be provided irrigation service compared to 1,610 acres with the previous system.

The proposed system of wells would be used in lieu of the present gravity diversions from Twin Lakes. This change in operation would permit Twin Lakes to be used exclusively for recreation and fish and wildlife enhancement. Two new public access areas would be acquired and boat ramps and parking facilities developed to accommodate the anticipated increase in recreation and fishery uses of the lake.

The project construction cost is estimated to be $4,610,000, of which $4,122,000 is allocated to irrigation, $151,000 to municipal and industrial supplies, $303,000 to fish and wildlife, and $34,000 to recreation. Annual operating costs are estimated to total $54,400. Annual benefits and costs are estimated to be $507,100 and $188,100, respectively. The benefit-cost ratio for a 100-year period of analysis is 2.70 to 1, and for the 50-year period of analysis is 2.30 to 1.

The report states that the irrigators could repay about 28 percent of the irrigation allocation within the proposed repayment and development period. The balance would be repaid from municipal and industrial revenues to the extent available and from revenues derived through the sale of power from the Federal Columbia River Power System. This proposed rate of repayment seems low inasmuch as some 2,500–3,500 acres in this area have already been developed by individuals drilling their own wells.

As we understand the project, it would not bring any new land into agricultural production. The project would slightly reduce acreage in wheat and convert more land to grass seed production or pastures. It would make possible a more efficient use of the existing capital and resource investment in agriculture.

Construction of the proposed project would have no adverse effect on forest resources or upon the water and related land resource projects or programs of this Department.

We appreciate the opportunity to review the report.

Sincerely yours,

JOHN A. BAKER, *Assistant Secretary.*

U.S. DEPARTMENT OF COMMERCE,
ECONOMIC DEVELOPMENT ADMINISTRATION,
Washington, D.C., October 3, 1967.

Hon. FLOYD E. DOMINY,
Commissioner,
Bureau of Reclamation,
Department of the Interior,
Washington, D.C.

DEAR COMMISSIONER DOMINY: In further reply to your letter of July 14, 1967, to Secretary Trowbridge, the Department of Commerce has no comments regarding the Rathdrum Prairie Project, Prairie Division, East Greenacres Unit, Idaho.

Sincerely yours,

ROBERT M. RAUNER,
Deputy Assistant Secretary
for Economic Development Planning.

FEDERAL POWER COMMISSION,
Washington, D.C., October 13, 1967.

HON. STEWART L. UDALL,
Secretary of the Interior,
Washington, D.C.

DEAR MR. SECRETARY: The comments herein with respect to the proposed report of your Department on the East Greenacres Unit of the Rathdrum Prairie Project, Idaho, are transmitted in response to the letter, dated July 14, 1967, from the Commissioner of Reclamation. Transmitted with the letter were copies of the Commissioner's report, dated June 13, 1967, and the Regional Director's report, dated May 1966.

The cited reports recommend a plan to provide a new irrigation water supply for 5,270 acres of land, including the 1,770 acres now served from Twin Lakes, by pumping from the extensive ground water aquifer underlying the area. Four complexes, each of which would include wells, pumps, and an elevated steel reservoir, would serve the area for irrigation, domestic, and livestock uses. The recommended plan also includes improvements at Twin Lakes in the interest of recreation, and fish and wildlife enhancement. The total estimated construction cost of the recommended improvements is $4,245,000. Pumping energy for the East Greenacres Unit would be obtained from the Federal Columbia River Power System at a cost of 1¼ mills per kilowatt-hour. Capital costs of the Unit in excess of the ability of the water users to repay would be repaid from power revenues of that System.

The Commission staff has examined the recommended plan and finds that the proposed improvements would not be adaptable to the development of hydroelectric power. The staff also considered the possibility of using Twin Lakes reservoir to develop power. The studies show that due to the low flows and low head available the power that could be produced would be small in amount and economically infeasible of development.

Acordingly, the Commission concludes that the existing and proposed facilities of the East Greenacres Unit, Rathdrum Prairie Project, would not provide opportunity for economical hydroelectric power development.

Sincerely,

LEE C. WHITE, *Chairman.*

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
PUBLIC HEALTH SERVICE,
October 24, 1967.

MR. FLOYD E. DOMINY,
Commissioner, Bureau of Reclamation,
Department of the Interior, Washington, D.C.

DEAR MR. DOMINY: Reference is made to your letter of July 22, 1967, requesting comments and recommendations regarding the East Greenacres unit, Rathdrum Prairie project, Idaho.

Public Health Service regional office comments of September 28, 1965, and October 14, 1964, are included in the report's appendix. The September 28, 1965, letter indicates that the design and characteristics of the proposed development of the East Greenacres unit will not materially affect vector control problems in the area. The October 14,

1964, comments regarding the proposed domestic water supply use are recognized and considered in chapter IV of the report.

Previous Public Health Service review did not include the health aspects of the recreational development which will be effected by the project. The report states in chapter 5, "The level (for Twin Lakes) would be held as near elevation 2316.2 as possible, with drawdown occurring only as needed to control spring runoff." Constant maintenance of one water level may enhance mosquito breeding along shore areas to the detriment of recreational use and lakefront dwelling. It is recommended that water level management to the degree permitted by the primary purposes of the reservoir be adopted to minimize conditions favorable for mosquito production. Even though an initial average annual angler-use of 16,000 fisherman-days, average annual general recreation use of 1,000 visitor-days, and average annual incidental recreation use of 3,000 visitor-days is anticipated, there is no indication that sanitary facilities are planned for the four access facilities. To prevent aesthetic deterioration of the access facilities, protect the public health, and enhance the attractiveness of the access facilities it is recommended that sanitary facilities for water supply, solid waste disposal, and sewage disposal be provided at the access areas. An organizational arrangement should be provided for regular maintenance of such facilities.

The opportunity to present these comments and recommendations is appreciated.

Sincerely yours,

PAUL KABLER,
(For Jerome H. Svore, Director).

U.S. DEPARTMENT OF LABOR,
BUREAU OF EMPLOYMENT SECURITY,
Washington, D.C., August 21, 1967.

MR. FLOYD E. DOMINY,
Commissioner, Bureau of Reclamation,
Department of the Interior, Washington, D.C.

DEAR MR. DOMINY: We have reviewed the proposed report of the Department of the Interior concerning the East Greenacres unit, Rathdrum Prairie project, Idaho and are providing you with our comments, as you requested in your letter of June 13, 1967, to the Secretary of Labor.

We believe that the project would be helpful to the economy of the area. Although job opportunities directly in the agricultural field are not expected to be improved materially, some increase in farm income is anticipated. This should result in more job opportunities in industries related to agriculture.

In view of the above considerations, the Department of Labor is pleased to inform you that it endorses this project, assuming that it meets the standards set forth in pertinent laws.

Sincerely yours,

ROBERT C. GOODWIN, *Administrator.*

OFFICE OF THE SECRETARY OF TRANSPORTATION,
Washington, D.C., September 18, 1967.

Hon. FLOYD E. DOMINY,
Commissioner, Bureau of Reclamation,
Department of the Interior, Washington, D.C.

DEAR MR. DOMINY: This is in response to your letter of July 14, 1967, to Secretary Boyd concerning the proposed report on the East Greenacres Unit of the Rathdrum Prairie Project in Idaho.

Your report recommends the development of an irrigation project near Post Falls, Idaho. The plan would utilize wells and pumps, an elevated reservoir and a closed pipe system to deliver water under pressure to water users for both irrigation and municipal and industrial purposes. The estimated cost of the project is $4,610,000; its direct benefit/cost ratio is 1.7 to 1.

In its review of your report and supporting documentation, the Department of Transportation has ascertained that construction of the East Greenacres Unit would have no direct effect upon the responsibilities of its agencies. Consonant with this finding, the Department has no objection to the recommendations you are making to the Secretary of the Interior.

Your courtesy in furnishing copies of these reports for departmental review is appreciated.

Sincerely yours,

M. CECIL MACKEY
(For Assistant Secretary for Policy Development).

○

EAST GREENACRES UNIT, RATHDRUM PRAIRIE PROJECT, IDAHO

PART 1

Department of Water Administration
APPLICANT'S
Exhibit 3
Date Admitted 3/24/83

HEARINGS
BEFORE THE
SUBCOMMITTEE ON
IRRIGATION AND RECLAMATION
OF THE
COMMITTEE ON
INTERIOR AND INSULAR AFFAIRS
HOUSE OF REPRESENTATIVES
NINETY-FIRST CONGRESS
FIRST SESSION
ON

H.R. 9854

TO AUTHORIZE THE SECRETARY OF THE INTERIOR TO CONSTRUCT, OPERATE, AND MAINTAIN THE EAST GREENACRES UNIT, RATHDRUM PRAIRIE PROJECT, IDAHO, AND FOR OTHER PURPOSES

HEARING HELD IN COEUR d'ALENE, IDAHO
OCTOBER 24, 1969

Serial No. 91-13

Printed for the use of the Committee on Interior and Insular Affairs

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MANUEL LUJAN, JR.
JORGE L. CÓRDOVA,
Resident Commissioner, Puerto Rico

JIM T. CASEY, *Consultant on Irrigation and Reclamation*

Note: The chairman, Hon. Wayne N. Aspinall, and the ranking minority member, Hon. John P. Saylor, are ex officio members of each subcommittee.

We enjoyed ourselves last evening in Spokane and again today.

I know of no matter that was left undone. We have a good record. It will be printed for the benefit of the chairman of the full committee and the other members of the Committee on Interior and Insular Affairs.

We hope Mr. McClure can get this set for hearing in Washington shortly after Congress reconvenes in January.

With that, the committee stands adjourned.

(Whereupon, at 12:10 p.m., the hearing subcommittee recessed, to reconvene at 9:30 a.m., Saturday October 25, 1969, at Grants Pass, Oreg.)

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he feels that he personally represents the finest people in the United States, and I can only say that the quality of the witness can only be matched by the quality of their representation.

Mr. JOHNSON. Now we will allow the Congressman from the area affected here to close the hearing.

Jim, it has been a pleasure to come here to your district and preside over this field hearing that has been held here in the courthouse at Coeur d'Alene, Idaho.

Mr. MCCLURE. Mr. Chairman, thank you.

I want to close the meeting by complimenting the people who have presented the testimony on behalf of the district. I think you have done an excellent job.

And I also want to thank Mrs. Ostlund for her assistance.

I want to recognize my own gal Friday in the district office, Ruth Johnson, who has been, I think, of great assistance in getting the preparations for this hearing underway.

But to close on the note upon which I opened my comments, I want to thank my colleagues from the Congress for giving of themselves the time and the effort to come and participate in this hearing. They don't have to do this. And while a great many people think flying around the country on a jet is a lot of fun, after you have done it for quite a while it isn't that unadulterated joy that the airline advertising would have you believe it is. I realize the efforts that are made by these gentlemen, that takes them away from their offices where there is pressing business, that keeps them from being in their district where they have many things to do and takes of their time and their energy and their talent, is a very real contribution to you folks, and one which I appreciate very deeply.

And again thanks to you, Mr. Chairman, and to the chairman of the full committee for scheduling this hearing.

Mr. JOHNSON. Thank you, Jim.

I just want to say before we close that I certainly appreciated the group that appeared here before us today representing the Government and individuals.

The chairman of the full committee wanted me to state that he was very sorry that he could not attend this field hearing. He generally takes in every field hearing, but he has been on the road the past 2 weeks and he was a little worse for the wear and he had to get back to Denver and take care of a matter in his own congressional district. Chairman Aspinall generally sits with every one of his subcommittees on a hearing of this kind to become very familiar with the local area, the project, and the people. And he insists that we go and hold field hearings so that we can allow the people in the local areas the right to appear, state their position without undue cost to them in coming all the way to Washington. Most of the people who will appear in Washington on this when it is set for further hearings will be people from Washington or people who are supported and their expenses paid by some form of government.

With that, God willing, we will have lunch someplace here this afternoon and, weather permitting, we are going to fly to Grants Pass and hold a field inspection and a hearing there on the Merlin project on the Rogue River unit, so we will be busy until we leave the Northwest for Washington on Sunday.

Now we will recognize the gentleman from Idaho to place additional statements in the record.

Mr. McCLURE. Mr. Chairman, I have been requested by Robert G. Thomas, president of District No. 1 of the Idaho Wildlife Federation to place before the committee their statement. The statement, I might note, is in support of the project.

(The statement referred to, in letter to Congressman McClure, follows:)

IDAHO WILDLIFE FEDERATION,
DISTRICT NO. 1,
Coeur d'Alene, October 23, 1969.

HON. JAMES A. MCCLURE,
Coeur d'Alene, Idaho.

DEAR CONGRESSMAN MCCLURE: The District #1 of the Idaho Wildlife Federation lends its wholehearted support to the East Greenacres Irrigation Project as proposed by the Bureau of Reclamation.

The advantages of the project are three-fold:

1. Conserve our surface water.
2. Stabilize the level of Twin Lakes which will in turn enhance recreation and wildlife habitat.
3. Increase agricultural production on the lands within the boundaries of the project.

Yours truly,

ROBERT G. THOMAS, *President.*

Mr. JOHNSON. Are there any further statements on the part of anyone here?

Our good Secretary, do you have anything to add? Would you like to make a statement here before you close the hearing?

Mrs. OSTLUND. You were making me feel good by the nice remarks you made, but I also want you to know I didn't have to twist anybody's arm. Everybody was just so happy and I was just so elated. I was in seventh heaven all the time I was doing this.

Mr. JOHNSON. We are used to having our arms twisted. We try not to twist anybody else's.

We have appreciated very much your cooperation.

Mrs. OSTLUND. In fact, I got many thanks from everybody for letting them know they could help us.

Mr. JOHNSON. I want to thank the judge for allowing us to use his chambers here. We hope we have not damaged them. I forgot to mention there was to be no smoking in the chambers, but I think you people read very well, and he has it quite prominent around the walls here. Although the court is not in session, we try to abide by their rules governing the use of facilities like this. It has been a very ample facility for our needs. We appreciated it very much.

In closing, I would like to ask the gentleman from Oklahoma if he would like to make a further statement.

Mr. Camp.

Mr. CAMP. Mr. Chairman, I would just like to say that I think this has been very wholesome, it has been very genuine, it has been very informative, and the association with the people we have come in contact with has been very, very fine. I appreciate very, very much the courtesies that you have shown to me, and I am sure these gentlemen feel the same way, in these past few days.

Mr. JOHNSON. The gentleman from California, Mr. Clausen.

Mr. CLAUSEN. Actually I made a number of contributions to the record here today, but Congressman McClure has always told me that

EAST GREENACRES UNIT, RATHDRUM PRAIRIE PROJECT, IDAHO

FRIDAY, OCTOBER 24, 1969

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON IRRIGATION AND RECLAMATION,
OF THE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
Coeur d'Alene, Idaho.

The subcommittee met, pursuant to notice, at 9:30 a.m., in the courtroom, Federal Building, Hon. Harold T. Johnson of California (chairman of the subcommittee) presiding.

Present: Representatives Johnson of California (presiding); McClure, Idaho; Clausen, California; Camp, Oklahoma; and Foley, Washington.

Also present: Jim T. Casey, consultant on irrigation and reclamation.

Mr. JOHNSON. The Subcommittee on Irrigation and Reclamation will come to order.

The purpose of our meeting this morning is to open field hearings on H.R. 9854 by Congressman McClure, your Congressman, and to take testimony from State and local government officials and private individuals.

We are very happy to be here this morning in Coeur d'Alene. We had a very fine field inspection trip yesterday of the project area, the East Greenacres Unit of the Rathdrum Prairie project, Prairie Division. I want to take this opportunity to again thank the people who conducted the tour and also the ladies who provided the refreshments of cookies and coffee in the Grange hall.

We had a good opportunity to look over the general terrain and to pass through a like project on the way out there. We know it will work if authorized and built. After looking over the physical characteristics, I think it would add a great deal to the economy of the area. I hope the legislative process will keep moving after the start of this particular field hearing that is underway this morning.

We are very happy to be here with your Congressman. I want to say he is a very fine Congressman. Only last week he gave a very good account of himself in trying to join with many people in protecting the silver mining industry and the use of silver. I never heard a better presentation concerning silver in my 11 years than was made by your very fine Congressman.

At this time, Jim, I want you to introduce the members of the committee.

I am Congressman Johnson from the Second District of California. I represent an area very much like Congressman McClure represents in the State of Idaho.

Mr. McCLURE. Mr. Chairman, thank you very much.

I might just state parenthetically that I think the First District of Idaho is one of the largest in the country, and yet the gentleman from California, whose district is the inland portion of northern California, has a district which is larger than mine. So when he says it is somewhat similar to ours, indeed it is in many, many ways.

If I might, before introducing these gentlemen to the group, I will simply state I appreciate very, very much the fact they would take the time to come and meet with us, because it is a very real sacrifice on their part to commit this much of themselves and their effort to come and do something for us folks in attempting to push this project forward. The Congress is just now coming to grips with some of the major legislation before Congress in this term, and it is very important that they be in their offices and be on the floor of the Congress voting on these measures that come before the Congress. So they have made a very real personal contribution to your interest by taking the time to come and participate in this hearing, and I am very grateful. I think you folks should be aware of the sacrifice they have made to come and be here.

You have already met our subcommittee chairman, Harold T. "Biz" Johnson from the inland half of northern California.

On the other side of me is the gentleman from the coastal half of northern California, who also represents a very large district with many interests similar to ours, the Honorable Don Clausen.

On the other side is a gentleman who is no stranger to the people of this part of Idaho because he represents the district just across the line in the State of Washington, and he is very familiar with this project, having other portions of the development of the Spokane Valley in almost exactly the same kind of fashion as this. I speak, of course, of our good friend, your friend and mine, the Honorable Tom Foley.

On the other end of the table is a gentleman new to the Congress this year, but no newcomer to working on public interests, having served in the legislature and the affairs in his community and State, the Honorable Happy Camp from Oklahoma.

Mr. JOHNSON. Thank you, Jim.

We will now open the hearing with the printing of H.R. 9854 in the record.

(The document referred to follows:)

Mr. McCLURE. My only caution would be——

Mr. SYLTE. Because we are not in this irrigation project, but this bears directly onto us in this roundabout way.

Mr. McCLURE. I understand your interest. I just want to caution you again that that is beyond our ability sitting here as this committee to guarantee to you.

Mr. CLAUSEN. Will the gentleman yield?

Mr. McCLURE. Yes.

Mr. CLAUSEN. I think the advice that Mr. McClure has given you is very sound. Don't expect to have relief from this committee. You concentrate your efforts on the State water people. I think that is the most important thing we can say to you, because oftentimes people, in appearing before committees, assume their testimony is going to have an impact on what we do or don't do, as it relates to your situation. Certainly you should be concentrating all of your efforts, or people who are similarly affected as you are, with the State itself.

Mr. SYLTE. Thank you.

Mr. JOHNSON. I might say with any project that Congress authorizes and finances and constructs someone is generally hurt. We try to hold that to a minimum and the laws of the given State or the county, city, whoever may be affected under State law certainly has to look to the State agencies, the local government, for their protection. In many cases that affects a lot of things, and I don't know just how much would be involved here. To me it looked like very little. But in the construction of this project there would be a lot of right-of-way that is necessary that is going to have to be secured on the part of the district during the installation of the works. The problem you brought up is a real problem to you.

Mr. SYLTE. It sure is.

Mr. JOHNSON. I think it can be worked out.

Are there any other people in opposition?

Mr. CASEY. Mr. Chairman.

Mr. JOHNSON. I hope our counsel is not in opposition.

Mr. CASEY. I just wanted to observe that the gentleman's livestock water problem by no stretch of the imagination could be worse out there today if this lake was full than it is with it empty. And that is all this project is going to do, is to have a full lake there.

Mr. JOHNSON. With his location he had first call on the water coming down the creek.

Mr. CASEY. The point that I was making is that there is obviously inflow or seepage past the dam that takes care of his off-season water needs and he could certainly continue to rely on that if it is any comfort to him.

Mr. JOHNSON. I have seen cattle take care of themselves on some pretty dry looking lands, so probably if you have some thirsty cattle they will get in that creek bottom and root out some water. I am sure you will take that up with the proper State authorities, and I am sure you can be protected.

I am glad to learn there is no opposition. I want to make that quite clear, that we do give time for the opposition.

If there is someone in opposition to the project, as I stated earlier, the record will be held open for 10 days so they may wish to submit a statement.

water means a lot to us and we would surely hate to find ourselves in the position where we are going to lose our shirts by not having any water by these two factions fighting back and forth over it. I just hope this can be given consideration in your committee as well as through the State reclamation department.

Mr. JOHNSON. I would say in our State, certainly, in your case under our water law out home, you'd be pretty well protected. What the water law is in Idaho is beyond me. But Mr. McClure here, being an attorney and former member of the legislature, and very familiar with a problem such as this, could probably enlighten you on what you might want to do to be in a position to protect yourself if this project is authorized.

Mr. MCCLURE. Mr. Chairman, would you yield?

Mr. JOHNSON. Yes.

Mr. MCCLURE. I would just say to the gentleman that the project which is before us and the action which is taken by this committee will not in any way directly aid you in any way in the preservation of your water rights. Your individual and particular situation is not before this committee and is not a part of the proposed legislation. As the chairman has indicated, the laws of Idaho do give you protection, and it can be guaranteed to you through the State reclamation engineer's office, but I wouldn't want you to rely upon action taken by this committee.

Mr. SYLTE. That isn't what I had in mind. I just wanted to make a little bit of an impression on those who are here. And I am sorry I missed some of these gentlemen from the reclamation department.

Mr. MCCLURE. I would suggest it would be well you make your interests known to the State reclamation engineer.

Mr. SYLTE. We have always cooperated with them but we don't want to get hurt too bad.

Thank you.

Mr. MCCLURE. As your statement indicates, you are already aware if this project goes through you won't any longer be dealing with them so far as water in that stream is concerned.

Mr. CAMP. Mr. Chairman, may I ask a question?

Mr. JOHNSON. Yes, Mr. Camp.

Mr. CAMP. If this project should go through and the level of Twin Lakes is kept up to this particular figure, will there still be water that will be loosed from those lakes that will come down through that creek area?

Mr. MCCLURE. I can't answer the question. I don't really know. I would assume there would be some natural flow.

Mr. CAMP. I would think there would be. If so, his position wouldn't be too bad.

Mr. MCCLURE. Whether that would be sufficient to satisfy all of the other water rights that might be involved in the lakes and in the stream downstream from the lakes is something that is beyond the ability of this committee to fix, I think.

Mr. SYLTE. The gentleman hit just what I was driving at. We have always had water, even though a small flow, through our place and that is what I am concerned about. We hope that perhaps this will not place us in a position where the lake will completely shut off our water so we don't have any.

91ST CONGRESS
1ST SESSION

H. R. 9854

IN THE HOUSE OF REPRESENTATIVES

APRIL 2, 1969

Mr. MCCLURE introduced the following bill; which was referred to the Committee on Interior and Insular Affairs

A BILL

To authorize the Secretary of the Interior to construct, operate, and maintain the East Greenacres unit, Rathdrum Prairie project, Idaho, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the purposes of providing irrigation water supplies, providing municipal and industrial water, the conservation and enhancement of fish and wildlife resources, and the enhancement of recreation opportunities, the Secretary of the Interior, acting pursuant to the Federal reclamation laws (Act of June 17, 1902; 32 Stat. 388, and Acts amendatory thereof or supplementary thereto), is authorized to construct, operate, and maintain the East Greenacres unit, Rathdrum

Prairie project, Idaho. The principal works of the unit shall consist of wells, regulating reservoirs, the necessary water distribution systems, and related works.

SEC. 2. Irrigation repayment contracts shall provide for repayment of the irrigation construction costs assigned to the irrigators for repayment over a period of not more than fifty years, exclusive of any development period authorized by law. Construction costs allocated to irrigation beyond the ability of irrigators to repay shall be charged to and returned to the reclamation fund in accordance with the provisions of section 2 of the Act of June 14, 1966 (80 Stat. 200), as amended by section 6 of the Act of September 7, 1966 (80 Stat. 707).

SEC. 3. The provision of lands, facilities, and project modifications which furnish outdoor recreation and fish and wildlife benefits in connection with the East Greenacres unit shall be in accordance with the Federal Water Project Recreation Act (79 Stat. 213).

SEC. 4. Power and energy required for irrigation water pumping for the East Greenacres unit shall be made available by the Secretary from the Federal Columbia River power system at charges determined by him.

SEC. 5. The interest rate used for purposes of computing interest during construction and, where appropriate, interest on the unpaid balance of the reimbursable obliga-

with your statement, as God says, "God helps those who help themselves," and that is what we are trying to do.

Mr. JOHNSON. Thank you, Mr. Hargrave.

Our next witness will be Mr. Primo Luchini.

Mr. Luchini is not here. His statement will appear in the record if submitted.

Erwin J. Cloud, the manager of the Bank of Idaho, Post Falls, Idaho.

His statement will appear in the record, if submitted.

Is there a representative of the Clover Leaf Grange No. 22, Post Falls, Idaho?

Mr. CASEY. Mr. Chairman, we have that statement already.

Mr. JOHNSON. That is already in the record.

We also had their coffee and ate their cookies.

Mr. CAMP. I wish they had some more.

Mr. JOHNSON. Our next witness will be Mr. Jim McKinnon, Kootenai County Planning Board.

His statement will appear in the record if submitted.

Mr. Gordon Tate, the Kootenai Soil and Water Conservation District.

Mr. CASEY. We have that statement, Mr. Chairman.

Mr. JOHNSON. That statement is in the record.

Now we come down to the last witness that we have listed. Is there someone here who represents the Green Giant bean processing people here that have under contract, as I understand it, 800 acres of green beans that will be planted next year as one of the new crops coming into the valley?

There is no representative of the company here. We like to hear about things like that, because it does show that the area can produce a variety of crops, and with an adequate supply of water, certainly there will be more row crops grown, and they are good cash crops to go along with your stable farming that you have been carrying on here.

Their statement, if it is here, will appear in the record.

At this point is there anyone here in opposition to the project?

STATEMENT OF JACK SYLTE

Mr. SYLTE. I am Jack Sylte, and I am a rancher stockman, just more or less interested in this.

I am not interested in the irrigation angle for myself personally. I am for as far as these people are concerned out there on the prairie. I hope that they get their water and have all the benefits they can derive from it. But I happen to live in a place that is the oldest place in this area as far as ranching and farming is concerned, and has been on this creek that runs between the lake and this irrigation project, and we have never at any time, according to our records there has never been any possession been given to anyone as far as the rights of this creek is concerned through our property.

We are in a unique position in that I believe we are about the only ones that have this irrigation on this creek and water has always flowed through it for our livestock. We operate several hundred head of cattle and have several thousand acres of land involved, and this

Mr. HARGRAVE. Could I have you read the last line for me, please, Mr. Chairman.

Mr. JOHNSON. "God gave us the sun and the earth. Please help us with the water."

Mr. HARGRAVE. That's my comment.

Mr. JOHNSON. I might say to you that is why we are here. We have been led to believe by your very able Representative, Mr. McClure, that you do have a problem. You do have the resources here if they are properly developed, and we are out here to see if we can justify this project in the committee so that the legislative process will work its will and you will get the assistance of the Federal Government if that takes place.

The gentleman from Idaho, Mr. McClure.

Mr. MCCLURE. I just want to thank you for your comment.

And I would like also to publicly and officially request you to convey our thanks to the gals for the cookies.

Mr. JOHNSON. The gentleman from California, Mr. Clausen.

Mr. CLAUSEN. A beautiful statement, and the manner in which you drew out the chairman was very, very effective.

Mr. JOHNSON. I might say, as far as myself and many of the others who are on this committee, we are reclamation minded.

Mr. CLAUSEN. I wonder if they kind of get that idea.

Mr. JOHNSON. We do have to meet certain criteria and the projects have to stand up under very close scrutiny, and if they do, they generally get approved.

The gentleman from Oklahoma, Mr. Camp.

Mr. CAMP. Mr. Chairman, I think, for the record again, if Mr. Hargrave would——

I believe you are the one who mentioned to me yesterday, and showed me some areas, as we drove through this country, where they had to haul water and had been for years. Would you mind making that statement?

Mr. HARGRAVE. That is very true. There's numerous farms that have never had water and they are hauling in water tanks from the city of Rathdrum and Post Falls for their household use, for their livestock, which they don't have very much livestock.

Mr. CLAUSEN. Would the gentleman yield?

Mr. CAMP. Yes, I will yield.

Mr. CLAUSEN. There is one thing, I think, Mr. Chairman, that we possibly should make clear to the people who are in attendance. It is partially along the lines of what the chairman has said.

Mr. Foley, Mr. Johnson, Mr. McClure, Mr. Camp, and myself are from the West. We are inclined to be water resource oriented. But I must remind all of you that with 70 percent of the people living on 1 percent of the land, this is how the Congress is made up, so we have a real selling job. I think you can see, with everything being equal, you are going to have a very receptive committee to your requests, but we don't want you to take what you see before you today as an indication of the fact that it is going to be very easy to get these projects through because many of the people come from the urban oriented areas and they actually sometime refer to these projects as "boondoggles". We are trying to remove this from the vocabulary of Americans because we happen to think this is a real investment that will help people help themselves. This is in keeping

tions assumed by non-Federal entities shall be determined by the Secretary of the Treasury, as of the beginning of the fiscal year in which construction is initiated, on the basis of the computed average interest rate payable by the Treasury upon its outstanding marketable public obligations which are neither due nor callable for redemption for fifteen years from date of issue.

SEC. 6. There is hereby authorized to be appropriated for construction of the works herein authorized and for the acquisition of necessary land and rights the sum of $4,245,000 (July 1964 prices), plus or minus such amounts, if any, as may be required by reason of changes in the cost of construction work of the types involved therein as shown by engineering cost indexes. There are also authorized to be appropriated such sums as may be required for the operation and maintenance of said unit.

Mr. JOHNSON. We understand that the feasibility report has been received from the Secretary of the Interior and that the Bureau of the Budget had no objections to the report being sent to the Congress. We could not get a copy before we came out here, but copies are now on file and available.

Our first witness this morning will be Congressman McClure of the First District of Idaho.

STATEMENT OF REPRESENTATIVE JAMES A. McCLURE, FIRST CONGRESSIONAL DISTRICT OF IDAHO

Mr. MCCLURE. Thank you, Mr. Chairman.

Aside from the remarks I made in introducing these gentlemen as a part of my formal statement, I want to reiterate the gratitude that I have for the fact that the chairman of the full committee, Hon. Wayne Aspinall from Colorado, as well as the chairman of this subcommittee, the Honorable Mr. Johnson from California, have sche-

duled this hearing. That it is being conducted today shows that you, Mr. Chairman, and the chairman of the full committee appreciate the importance of water and related land development projects to our regional well-being.

I further feel your willingness to hold these hearings is an indication of your belief in the importance of State and local support for water resource development. Today we hope to demonstrate that support to this subcommittee through the presentation of an array of witnesses representing a total cross section of local political and economic communities.

You have been furnished a list of those who wish to appear, and in the interest of time I will not undertake to introduce them.

I would, however, like to have a few minutes to discuss some of the policy aspects of this project and to place it in some sort of perspective for this subcommittee, while at the same time conveying to my friends and constituents here an understanding of what they may expect.

As I understand, the purpose of a field hearing is to acquaint members of the committee with the physical environment of the project—we had a very excellent field tour of the project yesterday—and to afford a maximum of local people the opportunity to express themselves about the proposal.

As the chairman mentioned a moment ago, the report has just been filed with the Congress and we do not yet have a copy of that report, but we understand in conversations that it does still meet the criteria which are essential for the approval of a project. I might note parenthetically that one of the difficulties has been the reevaluation of the project in connection with the new interest rate which is required, and then with the elimination of area economic development benefits which were a part of the original evaluation of this project. But it still has a favorable cost-benefit ratio.

The feasibility report has just come to the Congress in the past few days and is now available to us as an up-to-date instrument, and an up-to-date statement of the plan of development. Since we have had the privilege of viewing the plan and the area on the ground and look forward to a professional presentation of it by the Department witnesses, I won't go into the details of the proposal, other than to say that it is an up-to-date expression of sophisticated, multiple-purpose planning. It has as its basic thrust the provision of supplemental and stabilizing water supplies for the preservation of an existing irrigated agricultural economy. It will assist in the fulfillment of growing recreation and fish and wildlife needs, and will provide municipal and industrial water supplies. In this sense the plan does no violence to the agricultural commodity embarrassment that seems to be rediscovered from time to time by critics of the reclamation program.

The East Greenacres project is not a large project. In fact, it is rather small as reclamation projects go. At its presently estimated level of $5\frac{3}{10}$ million, it will not greatly add to that heralded and maligned backlog of unfunded projects. It is interesting to note that it meets the most rigid tests of economic justification in that it has a benefit-cost ratio of more than unity, as I have mentioned, with respect to the new interest rate requirement and with the elimination of the area economic development benefits.

Did you have a question, Mr. Camp?

Mr. CAMP. I have one question.

Mr. JOHNSON. The gentleman from Oklahoma, Mr. Camp.

Mr. CAMP. I notice you say 51 acres of irrigated land and 150 acres of dry land. In our tour and conversation yesterday it was mentioned to us that they have to haul waters for their own use. Do you have to on any of this dry land of yours at all?

Mr. SELF. Well, no. There would be times in the fall, like now, when the irrigation water is off, if you have young stuff on certain parts of my land I would have to haul water to it.

Mr. CAMP. Where do you have to haul it from?

Mr. SELF. I have my own well there at the house.

Mr. CAMP. This is the point I am trying to make. You don't have to go out and look for water on any of this acreage that you have from some other source.

Mr. SELF. No, but there are people within this district that are hauling water from the city of Post Falls. Their domestic water is coming from the city of Post Falls.

Mr. CAMP. I believe this statement was made to us yesterday by you, Don, and I think this is one thing that we ought to have in the record, Mr. Chairman, is the fact that there are people within this area who are hauling water at the present time for their own use.

Thank you very much.

Mr. JOHNSON. Thank you, Mr. Self.

Our next witness is Mr. Donald Hargrave.

STATEMENT OF DONALD HARGRAVE

Mr. HARGRAVE. I think we have a time limit here.

I am Don E. Hargrave, a board member from the East Greenacres Irrigation District.

I don't care to read my statement.

Mr. JOHNSON. Your statement will appear in the record and you may summarize.

(The statement referred to follows:)

STATEMENT OF DONALD HARGRAVE, BOARD MEMBER, EAST GREENACRES IRRIGATION DISTRICT

To the West of us is Modern Spokane Valley Irrigation District, with sufficient water, water for irrigation and progressive farms,

To the East of us is Hayden Lake pressurized irrigation District, with satisfied water users.

We are located in between these two Districts, with an irrigation system that is obsolete, built in the 1900, with open dirt ditches—some pipe line and wooden bridges, not sufficient supply of water to irrigate our present District.

There is numerous dry farms that has wanted irrigation water for years, but there has never been enough water and never will be under present system.

I personally have a very small amount of acres under irrigation. The dry ground that we have here, will hardly pay enough return for maintenances and taxes each year.

Under the new irrigation system we can triple our crop and be a much more progress Community.

There is lots of people working off of the farm because there is no water available to really farm their ground.

With a new District the land owners will benefit from farming there land instead of letting it lay idle.

GOD gave us the Sun and the Earth, Please help us with the Water.

At the present time it is costing me $8 per acre for water and another $8 per acre for electricity to pump this water which is inadequate. In the past we have operated this district on an 8-day schedule. This year it was extended to 9 days to help hold water in the lake; this just helped to make our own situation that much more deplorable. With the open river bed and canal it is almost impossible to control obnoxious weeds as a new crop comes down every fall.

I believe that once this project is approved and installed it will be a benefit to the whole community.

Mr. JOHNSON. Thank you, Mr. Self.

I see you have another statement attached here from Richard R. Self.

Mr. SELF. That's my brother.

Mr. JOHNSON. That will appear in the record at this point.

(The statement referred to follows:)

STATEMENT OF RICHARD R. SELF, POST FALLS, IDAHO

Thank you, Mr. Chairman. My name is Richard R. Self. I am a Dairy farmer living in northern Idaho. I recently moved to the Post Falls area and have purchased 180 acres which is included in this project.

I have been informed of the new Greenacres Project and I am sure it would be very beneficial to my farm in several different ways.

First of all the project would of course make my land irrigated which in turn would increase its value. Secondly it would enable me to increase the amount of crops I could grow. Thirdly, because of the increase in crops it would decrease the amount of money I would have to spend to buy feed for my cows every winter.

I have great hopes that you will see fit to carry out your plans for the completion of this irrigation project as it would be a great asset to my dairy operation, and I am sure that the other farmers of the area feel the same way.

Mr. JOHNSON. You are another man who is operating a dairy in the area here, and you point up a very clear picture of what you are faced with. Certainly this project could help you greatly, because we noticed in the other areas while driving out here in the Spokane Valley they are doing very well off their system, and this system is patterned pretty much after that as far as the installation is proposed here. So we are glad to have your statement.

The gentleman from Idaho, Mr. McClure.

Mr. MCCLURE. No questions, thank you.

Mr. JOHNSON. The gentleman from California, Mr. Clausen.

Mr. CLAUSEN. Mr. Self, no doubt this is the first time you have appeared before a congressional committee, and I just want to compliment you on your statement.

Mr. SELF. Thank you.

Mr. CLAUSEN. I am hopeful that as I make these remarks you would agree with me that, as a result of your coming here, to hear your problem, you have a gentleman from Oklahoma, two of us from California, visiting with your own two Congressmen, one from Washington and one from Idaho, we feel this is the best example of how a congressional committee can demonstrate to the people that we are close to the people. So your appearance here today is going to add immeasurably to the success of this communication that is so important between the individual citizens and congressional committees. We deeply appreciate your coming in and expressing your point of view as well as you have, sir.

Mr. JOHNSON. Thank you, Mr. Self.

Mr. Chairman, we have heard in the committee about the more than 100 authorized feasibility studies pending in the Bureau of Reclamation. The East Greenacres is one of these. I don't know how many members realize that the East Greenacres is the first reclamation project report sent to Congress in more than 18 months. I suspect this backlog in the pipeline is due to the fact that most of the pending projects can't meet the rigid tests now being required and are waiting for a relaxation or a broadening of the benefit criteria to revive them. It is enormously significant, I believe, that this program did not have to await this therapy. One can only imagine how well the East Greenacres would look if benefit procedures were indeed modernized and broadened enough to save most of the other pending projects.

In conclusion, Mr. Chairman, I hope on the basis of the record we make today the subcommittee will be convinced of the essential merit of this program and will lose no time in taking up my bill in formal hearings in Washington just as soon as we come back in the second session.

I have some statements which may be filed at the conclusion of the presentation by others. There are some of these folks who may appear and wish to present the statements in person, if that will be satisfactory.

Mr. JOHNSON. Thank you, Congressman McClure, for a very fine and comprehensive statement relating to your legislation, H.R. 9854, which would authorize the East Greenacres unit.

I might say there is no action we can take here today as a subcommittee of the Subcommittee on Irrigation and Reclamation, but we will compile a good record, I am sure, and take back the sentiments of the local people for the benefit of the other committee members who serve on the subcommittee, who will have this information when we start the formal hearings of the subcommittee, the hearings before the Secretary of Interior, and the other people who will testify in Washington at the start of the real legislative process, we hope. As your Congressman has stated, we hope these will be early in the next year of the 91st Congress, so that he can have full consideration prior to the close of that Congress.

Mr. CLAUSEN. Would the chairman yield?

Mr. JOHNSON. Yes. Just a minute.

We will hear from the Bureau of Reclamation and then go on, starting with the Governor's statement. We will then hear all people in local government, then go to individuals who will testify. We will receive statements for the record, and will hold the record open for a period of 10 days after the hearing, this will give everyone an opportunity to testify either for or in opposition to.

I recognize the gentleman from California, Mr. Clausen.

Mr. CLAUSEN. I thank the chairman.

I would like to take just a brief moment to amplify partially on what our chairman has said and also to make some additional comments with respect to what Mr. McClure has said.

I want the people of this district in Idaho to understand that I flew all night from Washington, D.C., in order to be here for this hearing. As you know, we had the very important housing bill before the Congress yesterday and I felt I had to stay on the floor in order to protect some amendments I had placed in while the bill was in com-

mittee. I am sure each of the members who are here—as I have briefed them today on what took place—feel we developed one of the most comprehensive housing packages that cleared the House by 330 to 9.

I want all of the people who are present to be aware of the fact I was in constant communication with our staff and with the members, relating to them what the progress was on this very important legislation. It is just as important for these members, who represent areas concerned with the housing and forest products industry, as it is to us to come out here and conduct a hearing on a project that is for your benefit. This is a very important vote on the housing bill, and certainly is a credit to all of them, Jim.

I want to say this, there is a reason for us being here. Congressman McClure, as you know, is regarded as one of the more articulate Members of the Congress. He is the kind of fellow who does the homework, but, more importantly, he is a team player. While it is fine for us to come out here and listen to the comments of his constituents, I can tell you he would be the first one to come into our districts if a similar request was made of him. I think it is important that we make these comments when we are talking to his own constituents in his presence. I hope this is not embarrassing, but I think enough of this gentleman to relate to his friends that whenever I cannot be in committee, my proxy is in the hands of your Congressman. This is the greatest compliment that I can pay to him as to my personal confidence. So I am most sympathetic to what will be said here today.

One final comment. On the question of the effect of the interest rates on projects. This relates, of course, to both the Bureau of Reclamation projects as well as the Corps of Engineers projects. Our chairman, Mr. Johnson, and I both served on the Public Works Committee as well as the Interior Committee. We have done everything within our power to relate to the National Water Resources Council the fact that the current project evaluation criteria, involving only the benefit-cost ratio is totally outdated, it is absolutely archaic. I am hopeful we can somehow change this criterion in order to reflect what are commonly recognized as benefits but yet not incorporated into current analyses; I am certain that I speak for most of the members of this committee in this regard.

I have been asked by the Secretary to make a recommendation as to who might be the executive officer to the National Water Resources Council. The kind of person I hope to be able to recommend will be someone who will recognize the need to change this. Certainly this is one way that we can justify the expenditures of this type that will genuinely benefit a lot of people.

Thank you, Mr. Chairman.

Mr. JOHNSON. The gentleman from Washington, Mr. Foley.

Mr. FOLEY. I would just like to say I am very happy to be here.

As Mr. McClure mentioned, it is a neighboring district and I understand very well the utility and value of the irrigation projects that we have seen constructed in the Spokane valley. This is simply an extension of that same effort, and I am going to listen with great interest to the witnesses who appear this morning.

Mr. Chairman, I reserve any further statement.

Mr. JOHNSON. The gentleman from Oklahoma, Mr. Camp.

Mr. CAMP. Mr. Chairman.

Mr. PILIK. This is a small farm, 18 $\frac{9}{10}$ acres, partly developed, but only 6 more years and I will take my pension. But my neighbor right down the street with the same kind of a setup is raising 6-, 8-, and 10-year-old kids.

Mr. JOHNSON. The gentleman from Idaho, Mr. McClure.

Mr. MCCLURE. No questions.

I just want to thank you for appearing and giving us your statement.

Mr. JOHNSON. The gentleman from California, Mr. Clausen.

Mr. CLAUSEN. No questions.

Mr. JOHNSON. Mr. Camp from Oklahoma.

Mr. CAMP. No questions.

Mr. JOHNSON. Thank you, Mr. Pilik.

Mr. PILIK. I would like to thank you for letting me appear.

Mr. JOHNSON. Our next witness is Mr. Russell Howell.

His statement will appear in the record at this point, if submitted.

Mr. Earl Sears, a farmer in the area.

Is Mr. Sears here?

His statement will appear in the record.

(The statement referred to follows:)

STATEMENT OF EARL W. SEARS, POST FALLS, IDAHO

I am Earl Sears. I am a farmer; we have lived on this 160 acre farm for 23 years.

The "East Greenacres" irrigation ditch runs through this farm, but we have never been able to get on the "East Greenacres Irrigation Project" because of water shortage.

Fall wheat and alfalfa are about the only crops one can raise on a dry land farm in this area. Our summers are too dry to profitably raise grain or row crops. Our wheat allotments get smaller each year. At present I have only 25 acres planted to fall wheat. 28 acres are in summer fallow which I shall plant into fall wheat in the fall of 1970. The rest of my acreage is in alfalfa. On dry land alfalfa will produce only one crop a season. With irrigation I should be able to get 3 cuttings of alfalfa. Also I should be able with irrigation to develop a diversified farming operation by planting some of my acreage into spring grains and row crops.

Irrigation should make it possible for this farm to support itself, and provide a good living for my family.

Mr. JOHNSON. Mr. James O. Self, a farmer.

Mr. Self, you were with us yesterday. We will be glad to hear from you.

STATEMENT OF JAMES O. SELF, JR.

Mr. SELF. Thank you, Mr. Chairman and members of this committee. I am James O. Self Jr., a resident of this area for the last 23 years and have been a farmer and dairyman the last 16 years and would very much like to see this project approved, at the present time we are milking 100 head of cows and in order to do this I am forced to lease additional land. There has been only 1 year that I have been able to produce enough feed to carry me through the winter.

I own 51 acres of irrigated land and 150 acres of dry land, if it was all irrigated I could have a much better crop rotation and be able to produce all the feed I would need for my operation.

The present irrigation system has been obsolete for the last 20 years that I know of. To try and rebuild it would be out of the question as the water supply is inadequate for the present land in the district.

Mr. JOHNSON. The gentleman from California, Mr. Clausen.

Mr. CLAUSEN. Can you see what I mean by the way this fellow very effectively milks the information out of the witnesses? I think he can qualify as a grade A dairyman in his own right. He builds a record.

I just want to say your testimony, as far as I am concerned, while it is very short and succinct, probably is as effective a statement as has been presented here today, because it dramatically points out the problems that you and people who are trying to sustain yourselves, maintaining self-sufficiency in your own right, the problem that you actually face. I think it is one of the finest statements, and I compliment you for this. And I also say this because my brother is a grade A dairyman, too.

Mr. JOHNSON. The gentleman from Oklahoma, Mr. Camp.

Mr. CAMP. No questions, Mr. Chairman.

Mr. JOHNSON. Thank you, Mr. Nulph.

Our next witness is Bob Bogner, a farmer from the area.

Is Mr. Bogner here, B-o-g-n-e-r?

Mr. BOGNER. Yes, I am here, but I didn't bring my statement this morning.

Mr. JOHNSON. The next witness is Jim Pilik.

Mr. Pilik.

STATEMENT OF JIM PILIK

Mr. PILIK. My statement is quite short.

Mr. JOHNSON. You may present your statement.

Mr. PILIK. I am Jim Pilik, a farmer in East Greenacres Irrigation District. My main crop is alfalfa, which without water I can only get one crop and with water can get three crops. I also have pasture and raise Devon beef cattle.

As our irrigation water situation is now we are not sure from one week to the next if we are going to have enough water for the rest of the season. This is due to a January 1969, district court decision which limits the amount of water which the irrigation district can draw from Twin Lakes. In this area without water we cannot keep enough hay and pasture to feed our cattle. We would like to make our farm self-supporting. With plenty of water we could raise, in addition to hay and grass, row crops for sale. The climate and our soil are ideal for this type of crop if we have the water.

Mr. JOHNSON. Thank you.

Mr. PILIK. I would request permission to add one statement.

Year before last on my ground I got water 6 days out of 8. This year, to not have the courts looking down on our neck, they cut it down and we got water 6 days out of 9, to kind of soft-soap the court so they didn't slap us right now.

Mr. JOHNSON. We want to thank you for your statement.

We are glad to have an alfalfa grower testify here, because the committee certainly wants to hear from those who are farming on the land and making a living at the present time. Those are the people who justify the need for the project if Congress sees fit to authorize it.

I thought at first you looked more like a lumberman with that jacket on there. The lumbermen and woodsmen in our company all wear those kind of jackets.

I would like to state that yesterday afternoon we witnessed the basic thing we need in this country of ours. That is to let the people who are interested to live on the land and glean from that a living which will be comparable to any other profession. It was very interesting to me, because I witnessed here the same kind of people with the same kind of ideas that I have in my district in Oklahoma, which, of course, would be an agricultural district.

Mr. Chairman, I think any action we can take or consideration we can give to projects such as this, not only here in Idaho but throughout the United States, will be the thing that we need to do to meet the needs we are going to have in the future in taking care of the people in this world. I mean by this through commodities, whether it be lumber or whatever it might be.

I would like to say to you people that I commend you for your efforts, for your feelings in regard to this matter, and we wish you Godspeed.

Mr. JOHNSON. Thank you.

We have with us Mr. Jim Casey, who is the consultant to the Committee on Irrigation and Reclamation, a very knowledgeable person in the field of reclamation, very sympathetic to projects of this kind as far as his background and profession are concerned. So if anyone has any information they would like to seek while the hearing continues, Mr. Casey will be available. He can get into the jury room there with you, if necessary, and really thrash things out, because he is an expert in this particular field. We are very happy to have him as our consultant to the committee.

This, I believe, is your first field hearing under the committee's jurisdiction since you took over.

Our next witness will be Mr. Warnick, the Bureau of Reclamation representative. He will explain to the committee the project as they now have it on the map here in front of us, and as they have studied it and made their recommendations.

So if you will proceed, give your full name and title to the reporter, we are ready to hear you.

STATEMENT OF FRANCIS M. WARNICK, REGIONAL PLANNING ENGINEER, BUREAU OF RECLAMATION, REGION 1

Mr. WARNICK. Mr. Chairman and members of the House Interior Subcommittee on Irrigation and Reclamation:

My name is Francis M. Warnick. I am Regional Planning Engineer for the Bureau of Reclamation for region 1.

We appreciate the opportunity to appear before the distinguished members of this committee and testify on the East Greenacres unit. The report has been adopted by the Assistant Secretary of the Interior and as Congressman McClure advised it has now been sent up to Congress. Evaluation of the unit at 4⅞ percent interest and taking into account any cost changes in the development plan was completed during this year.

The East Greenacres unit is located in Kootenai County near the community of Post Falls. The plan of development has been designed to serve the functions of irrigation, municipal and industrial water supply, fish and wildlife, and recreation.

Kootenai County has experienced persistent unemployment which hampers the area's economic development. Construction, operation, and maintenance of the unit would benefit the area by creating a variety of employment opportunities. Examination of the skills of the presently unemployed within the area reveals that many of the jobs directly associated with construction of the unit can be filled by local people. Positions for operating and maintaining the unit can also be filled with qualified people living in the area.

The principal facilities associated with this development are a system of wells and pumps, elevated regulating storage reservoirs, and a closed pipe distribution system. Water would be delivered under sufficient pressure to permit sprinkler irrigation and domestic use by the water users. Small wells and pumps will be provided to meet the domestic and livestock water requirements through the main line pipe system during the nonirrigation season.

The 3,460 acres of dry land shown in yellow on the map, in that unit area are presently producing wheat, small grain and forage crops, and usually lie fallow every other year. The 1,770 acres of presently irrigated land shown in green on the map, are typically devoted to dairy farming enterprises. These lands draw their irrigation water supply by gravity diversion from Twin Lakes. Water from this source is limited in quantity and the existing conveyance system has an excessive rate of water loss. In addition, Twin Lakes has been extensively developed for recreation and fishing. The Idaho Supreme Court has ruled that the water level of Twin Lakes cannot be lowered below 6.4 feet, a position which is usually reached in July. Thus, the irrigators do not have an adequate irrigation water supply.

To alleviate these problems, the development plan proposes to provide a dependable water supply to the entire 5,230 acres of the unit by pumping ground water from the extensive aquifer underlying the area. By eliminating the presently irrigated lands' dependence upon Twin Lakes for a water supply, the plan greatly enhances the attractiveness of recreation and fish and wildlife by permitting the stabilization of the lake level.

Additional dairy farming and the production of alfalfa, rotation pasture, small-grain nurse crops, and grass seed will occur with development of the unit. No difficulty is anticipated in conforming to the acreage limitation provisions of reclamation law. Willingness has been expressed by the existing East Greenacres Irrigation District to extend its boundaries to include all lands in the unit service area.

The U.S. Public Health Service reviewed the development plan from the standpoint of public health. As recommended by the Service, a thorough plan to cover all contingencies in the use of the proposed distribution system for a domestic water supply will be developed in consultation with the Idaho State Department of Health.

Additional areas of access, provisions for parking and boat ramps on Twin Lakes, together with stocking of the lake with game fish will enhance the recreation and fish and wildlife potential of the unit. Kootenai County has expressed its intent to participate in this aspect of the plan as required under Public Law 89–72.

Annual benefits accruing to the unit using 4⅞-percent discount rate include:

I have lived within this East Greenacres Irrigation District for over 22 years. I served for several years on the board of directors and became acquainted with the irrigation system. We have operated on a very limited budget and the cement washed cobblestone open ditches are thoroughly antiquated. Nonlined, gravelly bottomed main canals are a very inefficient means of supplying water to these old cobblestone distribution ditches. In the past 20 years we have seen neighboring water districts on the east and west of us brought up to date with modern systems and now I believe is the time for us to move forward with the Bureau of Reclamation and a well complex pressure system.

I am the owner and operator of a grade A dairy farm. My dairy supports two families, a total of 11 people. This is our sole means of support so a good source of irrigation water is imperative. The outcome of the last litigation with the Twin Lakes people, and the drastic curtailment of our water supply puts my farm on a shaky foundation. Presently we irrigate for 4 months and our soil is very productive. We have made a very comfortable living and wish the opportunity to continue our labors in the community. The judges ruling against our irrigation system would have land dry for an extra 6 to 8 weeks which would change our operation from profitable farm to a bare existence. Truly we do need an efficient irrigation system and trust that this statement will help point out the need of one.

Mr. JOHNSON. I want to commend you for a very forthright statement, putting to us your actual experience in your operation.

Mr. Nulph, I see you have been there for 22 years. I know to operate a grade A dairy you are at it from morning to night and you need every bit of help you can get to round out a good enterprise in the dairy business today, and I am glad to see that with water you can still make it as an independent dairyman. Believe me, the pressure is great and I know what happens to many dairies in our State. The little fellow is having an awful, awful tough time, even with water.

I think, for the record, this is the type of statement that really points up a very, very vivid picture of what you people face.

The gentleman from Idaho, Mr. McClure.

Mr. MCCLURE. Thank you very much.

I want to commend the gentleman on his statement. I think the facts of life as brought forth on an individual farming enterprise in this area are well stated here. I think they have been helpful to the members of the full committee who perhaps come from an area that is different than this in seeing the kind of picture that is really faced by our small farmers.

I would like to comment only on one thing that is brought out here which hasn't been mentioned before, and your reference to the kind of ditches that you have brings it to mind. It is true, is it not, that in this area the soil is underlain by a very gravelly, porous subsurface and that there is a great deal of water loss in transmission? Is that not correct?

Mr. NULPH. That is correct.

Mr. MCCLURE. And this is one of the reasons for the closed pipe system, to allow you to not only distribute the water more efficiently but also to supply it through sprinklers, thereby getting more use from the water?

Mr. NULPH. Yes.

Mr. MCCLURE. Thank you.

Mr. JOHNSON. We want to thank you, Mr. Bodine, for your statement here.

And as a longtime resident and farmer of the area, how large a farm do you operate?

Mr. BODINE. Actually we have land that is not in the system, we irrigate off a well. We have 740 acres.

Mr. JOHNSON. We also want to thank you for accompanying us yesterday on the field trip and also with our little refreshment period at the Grange hall.

I know it is mandatory that you crop your land every year if you possibly can and with the supply of water you can diversify somewhat and rotate crops, which is a benefit to everyone, including the soil, and you must have greater production off the acreage that you farm if you are going to make it. I know every member of this committee realizes the rural areas are a good part and a very important part of the United States, and we want to see as many people stay there as we possibly can. I think reclamation projects are one thing that lends itself to doing just that, to raise a family and make a living in rural areas of America. A farming venture is some of the finest living in the country. I think we witnessed that yesterday as we drove out from Spokane into the area and again this morning driving to Coeur d'Alene.

I want to personally thank you for a very fine statement and your interest in support of the project.

The gentleman from Idaho, Mr. McClure.

Mr. MCCLURE. Thank you, Mr. Chairman.

I just want to commend you on your statement, and not only on your statement but on your constant interest and the great assistance you have been to me in trying to get the facts together and the way in which you have assisted throughout in getting this thing ready to present to this subcommittee today. It is the constant effort of people like yourself within the area that brings these things to pass. It isn't because any of the rest of us carry the ball, because we can't carry the ball unless you have handed it to us. So I commend you for your statement and for your interest.

Mr. JOHNSON. The gentleman from California, Mr. Clausen.

Mr. CLAUSEN. No questions.

Mr. JOHNSON. The gentleman from Oklahoma, Mr. Camp.

Mr. CAMP. No questions.

Mr. JOHNSON. Thank you, Mr. Bodine.

Our next witness will be Mr. Donald Nulph, another farmer from the area.

Will you give us your address, Mr. Nulph.

STATEMENT OF DONALD NULPH, POST FALLS, IDAHO

Mr. NULPH. Route 1, Post Falls, Idaho.

Mr. Chairman, members of the committee:

Before I begin my statement, previously it was asked if we would live with the 4-foot drawdown. I would have to say I couldn't live with it, I would die with it. If our water was off in July, everything that I have worked for through the years would dry up and literally I would die with this 4-foot drawdown decision.

Now on to the statement.

Irrigation:	
Total	$437,900
Direct	($285,600)
M & I	11,000
Fish and wildlife	23,000
Recreation	2,300
Total	$474,200
Annual equivalent costs	$307,700
Benefit-to-cost ratio:	
Total benefits	1.51
Direct benefits	1.05

The total project cost of $4,965,000 plus a $365,000 suballocation of the commercial power allocation of the Federal Columbia River Power System costs to irrigation, an interest during construction component of $292,000 and annual operating costs of $58,900 were allocated to the functions of the unit. The total construction costs were allocated to the functions as follows: irrigation, $4,879,000, municipal and industrial water, $142,000, fish and wildlife, $281,000, and recreation, $28,000.

The $365,000 irrigation pumping power suballocation would be repaid by an annual pumping power charge. Water users could repay the $52,820 annual operating costs and $778,000 of the $4,514,000 remaining reimbursable irrigation costs over the 50-year repayment period. Surplus revenues from municipal and industrial water would be available to pay about $73,000 of the irrigation obligation; thus, financial assistance amounting to $3,662,500 would be needed to complete repayment. This amount would be returned to the reclamation fund from revenues derived from the disposition of power marketed through the Federal Columbia River Power System in accordance with the acts of June 14, 1966, and September 7, 1966 (Public Laws 89–448 and 89–561).

A 10-year development period during which only project operating costs would be assessed is recommended for the presently dry lands to permit conversion of the farms to an irrigation operation. A 3-year development period is recommended for those lands presently irrigated for installation of sprinkler systems and development of skill in their operation.

Costs allocated to municipal and industrial water total $142,000 for construction, $6,000 for interest during construction, and $1,790 for annual operations. All of these costs are reimbursable with interest. Studies show that all of these costs can be repaid within a 50-year period and, as stated previously, an additional $73,000 would be available through the 60th year for application to the irrigation obligation. The 60-year period coincides with the 10-year development and 50-year repayment period for irrigation on the new lands.

As noted earlier, based on the cost-sharing provisions of Public Law 89–72 for recreation and fish and wildlife enhancement, one-half of the separable construction costs, $16,000, associated interest during construction $700, and all of the separable operating costs, $200, would be repayable by a non-Federal public body. By letter of October 25, 1966, Kootenai County has stated its intent to assume these costs and the responsibility for administration and management of the lands and facilities at Twin Lakes. The $277,000 joint construction costs, $16,000 remaining separable costs, and the $4,090 annual operating costs associated with the joint use facilities would be nonreimbursable in accordance with law.

The East Greenacres Unit is an engineeringly feasible and economically justifiable multiple-purpose reclamation development. It meets the requirements of the recently adopted 4⅞ percent interest rate. It is urgently needed and strongly supported by the local water users, other local interests, and the State of Idaho. An established irrigation district is ready to enter into water service contracts as soon as the unit is authorized for construction.

Mr. JOHNSON. I want to thank you, Mr. Warnick, for a very fine and comprehensive statement, and also for the map illustrating the project that you were describing in the early part of the testimony.

I might say to you people we are very happy to have learned that you used the 4⅞ percent interest factor here and that it still has a favorable cost-benefit ratio. This has been a subject matter that many people have studied and considered in the Congress of the United States and we are going to have to face up to it. We hope there will be a new formula provided by the Water Resources Council. We hope they soon fill their vacancy there so they can get underway to bring in for consideration all benefits that accrue from projects of this kind. We think they are much broader benefits than have been considered in the past, and I am glad to see you people could do this using the present criteria with the new interest rate.

Mr. WARNICK. Thank you very much.

Mr. JOHNSON. The gentleman from Washington, Mr. Foley.

Mr. FOLEY. No questions.

Mr. JOHNSON. The gentleman from Idaho, Mr. McClure.

Mr. MCCLURE. I want to thank you for your statement. It is very helpful to our committee, and there will probably be very few critical comments or questions.

I want to bring out just a couple of things by question. Although this is a closed pipe system, which is not typical of reclamation projects, and the furnishing of domestic and industrial water is also not typical of reclamation projects, this is not the first of its kind but is comparable to others in the area, is that not correct?

Mr. WARNICK. Yes, sir. The Spokane Valley project just west of here, just east of the city of Spokane, is a project almost identical to this. It is a little larger, but it is based on the same program, pumping from ground water aquifers and providing both irrigation and municipal water supplies through a common system, pipe system under pressure.

Mr. MCCLURE. And this has been a successful experience so far as that unit is concerned.

Mr. WARNICK. Yes, sir.

Mr. MCCLURE. There are also some other older projects here east of this project in Idaho which are somewhat similar in a closed pipe system.

Mr. WARNICK. Yes, sir.

Mr. MCCLURE. And they have been in existence for a good many years.

Mr. WARNICK. Yes.

Mr. MCCLURE. Thank you very much.

Mr. JOHNSON. The gentleman from California, Mr. Clausen.

Mr. CLAUSEN. The Twin Lakes, are they manmade lakes?

Mr. WARNICK. They were originally lakes, but they were, by devel-

Mr. JOHNSON. Now you may proceed with yours, Mr. Bodine. Will you give us your address?

STATEMENT OF ROY BODINE, POST FALLS, IDAHO

Mr. BODINE. My address is Post Falls, Idaho.

Mr. Chairman and Representative McClure, I am Roy Bodine, a farmer, former board member of the East Greenacres Irrigation District and a lifelong resident of the area. I wish to thank the members of this Committee on Interior and Insular Affairs for the opportunity of appearing before you.

The East Greenacres District has always been plagued by a chronic shortage of water, some years very severe, but in recent years not as drastic as 30 or 40 years ago. I well remember my father and brother hauling slab wood to a tremendous steam engine used for pumping all the water possible from the lake during a drought year. Never at any time before the advent of sprinkler irrigation has enough water been available to irrigate more than one-half of the farm acres under irrigation, which was very unprofitable. The use of sprinklers has made it possible now, under careful management, to raise the crops such as pasture or hay not requiring a short sprinkler rotation. This however, is all changed now with the recent court decision against the people of the district.

The need of this project I feel confident is justified. It will bring a long-lasting economic shot in the arm to this entire prairie and beyond. The present system is over 60 years old and frankly is outdated and worn out. There are endless miles of open canals and laterals which require constant watching. Most of the buried pipe in the district is old and way past the time of needed replacement. The district, however, is blessed with an excellent manager whose constant vigilance of the system is the only reason it has been able to serve the people. The small acreage in the present district limits the base from which to obtain money for operational expenses to the point where it is difficult to be efficient. The proposed unit would provide a much wider base and a much more efficient district.

Many crops have been raised in the district, all kinds of fruit, vegetables, grains, and even asparagus. Dairying has always been a practical way of making a livelihood. In the early days of the district apples were the predominating cash crop. During the depression the area shifted to self-sustaining family farms raising cattle and the stable foods of life.

The Rathdrum Prairie without adequate irrigation is not profitable for farming. Fertilizer, labor and other farm-related operational expenses are so high that consequently a high rate of productivity must be achieved in order to show a margin of profit.

The prairie is an excellent producer of many varieties of grass seed which will no doubt be the backbone crop in the larger units. Vegetables such as green beans or dry peas will compete for many acres in the project. A rotation of grass and beans could be a profitable farming venture. Dairying and the feeding of cattle will still continue. In addition there will be many small family units which will provide a better way of life as well as a supplement to their income. The farm is still the best place to live and raise a family. I again thank you.

Obviously our own industry does grow with the use of water, but a look at the efficiency of the fertilizer dollar expenditure (through higher) on irrigated land readily shows the economic stability and increase possible by application of good technology and irrigation to a project the size of the East Greenacres tract. The entire area will greatly benefit from this effort.

Very truly yours,

J. LAMAR CHAPMAN, *Manager.*

Mr. JOHNSON. The statement of Jacklin Seed Co., Inc., will appear in the record at this point.

(The statement referred to follows:)

STATEMENT OF JACKLIN SEED CO., INC., DISHMAN, WASHINGTON, SUBMITTED BY DONALD W. JACKLIN

As an agriculture industry directly connected with both production and processing, Jacklin Seed Company fully endorses adoption of the proposed reclamation project for East Greenacres Unit. Jacklin Seed Company owns and farms 2,300 acres of grass seed production and has under production contract another 6,000 acres within the Rathdrum Prairie/Kootenai County area.

The geopraphic area which this reclamation project will provide water is fast approaching major agricultural change. Past cropping practices have primarily been seabland cattle support, low yielding dryland wheat, soil bank projects, and some dairy production. Such practices have cost the Government greatly in the form of subsidy, allotment, diversion, and welfare payments.

Adjoining irrigable land is now testimony to the true profit potential of the Garrison gravelly loam soils which typify this area. Grass seed production is now a major industry for irrigated Rathdrum Prarie soils. Land which once was a financial burden to Government now produces grass seed remunerative sales of over two million dollars annually on the direct scale. Geometric progression of this amount is magnified manifold when reused by Idaho communities.

Green bean production is now an emerging giant which promises to demand considerably more acreage than the area can provide, unless irrigable land is made available. In three years contracted bean acreage has increased 400% with another substantial increase predicted for 1970.

As a matter of record it should be noted that Jacklin Seed Company owns no land which will be materially served by adoption of this reclamation project. Jacklin Seed Company contends that the benefits to the community, the state, and the nation do justify an immediate adoption of this reclamation project, and therefore presents their support for its approval.

Mr. BODINE. Schneidmiller.

Mr. JOHNSON. Mr. Manuel Schneidmiller's statement will appear in the record at this point.

(The statement referred to follows:)

POST FALLS, IDAHO, *October 24, 1969.*

Sub: Rathdrum Prairie project.
Hon. WAYNE H. ASPINALL,
Chairman, Committee on Interior and Insular Affairs,
House of Representatives, Washington, D.C.

DEAR SIR: Having lived and farmed in this area for twenty years, I have observed the need for irrigation water. For the following reasons, I recommend and urge that this project be developed:

1. Present supply of water is inadequate, and litigation appears to be diminishing even this amount.
2. More acres under irrigation under proposed project.
3. Diversification to better utilize land and resources by small operators, thus aiding the family-type farm.
4. Supplemental income for the part-time farmer.
5. More attractive environment for family living.
6. More efficient and permanent supply of water and distribution.

Approval of this project would add to the economy of the area, and raise the living standards of its residents. I again urge its development.

Yours respectfully,

MANUEL SCHNEIDMILLER.

oping a control structure at the outlet, raised in elevation and have been used as a reservoir system with about 3,700 acre-feet of active capacity for irrigation use.

Mr. CLAUSEN. In referring to the closed pipe system, are you going to be running into any unusual right-of-way acquisition costs as a result of this type of system?

Mr. WARNICK. I would say not, because almost all of the pipe systems will be along county roads and there should be no special right-of-way problems on the projects.

Mr. CLAUSEN. We are not going to run into some additional costs because of a lack of ability to provide the necessary right-of-way for the system?

Mr. WARNICK. I would think not.

Mr. CLAUSEN. Is there anything unique about the cost-sharing provisions in this project over what you have had established by precedent in the area generally, or does this follow the same pattern?

Mr. WARNICK. This follows the same pattern of cost sharing as others that have been proposed in this general area of Idaho, Washington, and Oregon.

Mr. CLAUSEN. I want to compliment you on a fine statement, and also to compliment you on using the expression, in defining your benefits, total benefits. In most cases there has been a tendency, you know, to refer to them as "primary" and "secondary" benefits. As Mr. Johnson said, this is one of the things we are trying to get away from, because by dividing them up you end up with an intangible benefit that simply does not get any kind of consideration. We think they are interrelated, so the way to describe it, in our judgment, is to use the term "total benefits," which you included in your testimony. I commend you for joining the cause.

Mr. WARNICK. Thank you.

Mr. JOHNSON. The gentleman from Oklahoma, Mr. Camp.

Mr. CAMP. Thank you, Mr. Chairman.

Mr. Warnick, on page 2 of your statement, in the second line, you mention, "Small wells and pumps will be provided to meet the domestic and livestock water requirements through the main line irrigation pipe system during the nonirrigation season." Did I understand yesterday this meant that during a portion of the year the main line irrigation pipe system would be closed down?

Mr. WARNICK. No, it will never be closed down, but the large pumps at each one of these pump clusters, the larger pumps that would serve the irrigation needs will be shut down, and the smaller pumps operating just for the winter season with small discharges to satisfy the smaller demand for domestic and livestock water will be operating.

Mr. CAMP. How about for municipal water?

Mr. WARNICK. It will be the same way, the small pumps will satisfy the requirement unless there is a larger growth than we anticipate and then the other pumps could be turned on to supply any larger need during the winter period.

Mr. CAMP. Then go down to the next paragraph where it says, talking about Twin Lakes. I believe yesterday when we were up at the site of the Twin Lakes that it was mentioned to the chairman or the chairman asked a question, I think maybe we should have for the record, a statement as to the responsibility for the care of the two lakes. Would they be the responsibility of the county?

Mr. WARNICK. That will be a county responsibility to operate and maintain the facilities that will be constructed up there. Both ramps, public access, and parking areas, and so on will be the responsibility of the county and they will cost share in the capital investment.

Mr. CAMP. On page 5 in the second paragraph it is mentioned that "by letter of October 25, 1966," I assume, that the county commissioners are the ones who gave the letter expressing intent to assume these costs.

I am just wondering, Mr. Chairman, if it would be advisable to get a letter of a little more recent date than this. I am sure your laws up here are the same as they would be down in our country, in that you can't hold one county commissioner's decision over to another county commission?

Mr. JOHNSON. Yes.

If the gentleman will yield.

Mr. CAMP. Yes.

Mr. JOHNSON. At the time of our formal hearings in Washington we will have to have an additional statement at that time from the county so that the committee will be apprised of the fact they are willing to assume their obligation.

Mr. Casey.

Mr. CASEY. I notice we have the commissioners on the witness list this morning, Mr. Chairman. They might wish to comment on that.

Mr. JOHNSON. We can do that.

But I want to assure you that when we get into the formal hearings we will ask for an updated commitment on the part of the present county commissioners in writing to the committee prior to the time we move the legislation from the subcommittee.

Mr. CLAUSEN. Mr. Chairman, I have one question.

There is one question that I did not ask that has occurred to me. Do you see anything in the project that is going to adversely affect the fishery resources? This is something that all of us are very much concerned about as we advance water resource projects. Do you see anything in this project that will adversely affect the fishery resources that are now available?

Mr. WARNICK. The entire effect on fisheries is one of enhancement. There is no loss through any change in the operation. It is an enhancement by virtue of stabilizing the lake and allowing a greater production of fish in the lake.

Mr. CLAUSEN. You will have to excuse it, but Mr. Johnson and I were one of the coauthors of the anadromous fish bills that went to Congress, and being fishermen, I want to be sure I have a place to come and I want to make sure there will be fish in these rivers.

Mr. WARNICK. They will be here.

Mr. JOHNSON. I want to say we will hear more from you when we open the formal hearings in Washington. I am sure that you or the regional director will be on the firing line along with the Secretary of Interior and the Commissioner of Reclamation at that time. We won't take any more time with detail, because we will go into this with a fine-toothed comb when we have you before the committee in Washington where the full subcommittee will be in attendance.

We do want to thank you for your courtesies in transporting us from Spokane to the area yesterday and again this morning, and we hope

2. Further resource development of the area.—Higher income and better adapted crops. The additional water to be provided, especially during the late summer months, will permit growing of better crops such as alfalfa. It will permit and encourage new crops, such as those now canned or processed in the area. These will help to make the smaller tracts more self-sustaining. Processing of the crops will further develop the resources of the whole area.

3. It will eliminate water level of drawdown in Twin Lakes.—This will increase the value of this lake area for recreation uses, including fishing, swimming and other water sports. Thus, the real value of this lake area can be restored.

Such a condition existed on Hayden Lake some years ago from the irrigation drawdown for Avondale and Hayden Lake irrigation districts. A Bureau of Reclamation project has since corrected this condition and returned the lake area to its original valuable use.

Mr. JOHNSON. Now we will get down to Roy Bodine, the local farmer here who has been very active in support of the project.

Mr. Bodine, if you will come forward.

Mr. BODINE. Mr. Chairman, I have some other statements here from Plant Food Center——

Mr. JOHNSON. Just a minute, now. If they are on our list, we want to check them off.

No. 17 is Lamar Chapman.

Mr. BODINE. That is Plant Food Center.

Mr. JOHNSON. Do you have his statement?

Mr. BODINE. Yes.

Mr. JOHNSON. Plant Food Center's statement, of Post Falls, Idaho, will appear in the record at this point.

(The statement referred to, in letter to committee, follows:)

PLANT FOOD CENTER,
October 22, 1969.

HOUSE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
Longworth House Office Building,
Washington, D.C.

GENTLEMEN: We have watched the growth of the Spokane River Valley for many years. These gravelly soils, once considered worthless, have bloomed more and more each year as technology of production has more closely approached the ecological capabilities of the area.

The paramount improvement of this area has been the wise use of water as shown by the rapid increase of privately owned and engineered water systems tapping the underground reservoir of this great valley. Unfortunately the small farms or those encumbered by existing water districts were not able to put in their own system.

Several years ago the Spokane Valley completed a system of pressurized irrigation and domestic water serving several small antiquated irrigation areas as well as many areas of land not previously irrigated.

Our observation of the great improvement in this area has been primarily based upon our relationship as a fertilizer supplier servicing the area. We have seen several new crops come into the area. We have seen marginal growers lease several of these smaller tracts and convert them into economic units with excellent levels of production. We have seen small farms that were once weed patches become excellent small positive type farms supporting nice homes and good supplemental income to the working owners. We view these changes as good and have taken pride in the application of our own chemical and fertilizer technology to assist in this development.

We believe the East Greenacres unit will develop even better because (1) it has not been sub-divided as small as much of the Spokane Valley was, thus lending itself to a better design of water utilization. (2) The new crops now coming into the area can be developed better in a new irrigation area than on old areas. (3) The removal of irrigated lands in the Spokane Valley for housing, roads, etc., places a greater demand on remaining irrigated lands of the area.

With the establishment of the East Greenacres unit, Kootenai County will be in a better position to entice canning and/or other food processing plants, thereby providing added jobs and bolstering the economy of the region, as well as producing food crops for the growing population of the area.

The Coeur d'Alene Chamber of Commerce, by action of its board of directors, decrees itself in full support of this reclamation project and urges that the money be made available to carry out the projected plans.

Mr. JOHNSON. We have Mr. Lawrence Beck, the office manager of the Agricultural Stabilization and Conservation Service.

Is Mr. Beck here?

If not, his statement will appear in the record, if submitted.

Mr. JOHNSON. We have another chamber of commerce, the Post Falls Chamber of Commerce.

Is there a representative here of the Post Falls Chamber of Commerce?

Do you have their statement?

Mr. BOGNER. I am Robert H. Bogner, president of the Post Falls Chamber of Commerce.

Mr. JOHNSON. Do you also represent the Grange?

Mr. BOGNER. No.

Mr. JOHNSON. The statement will appear in the record for Post Falls Chamber of Commerce, if submitted.

The statement of Cloverleaf Grange No. 22 will be placed in the record.

(The statement referred to in form of resolution follows:)

EAST GREENACRES IRRIGATION PROJECT

Whereas: A 1969 court ruling established the low water mark of Twin Lakes at 6.4 feet and

Whereas: this level is usually reached by midsummer, reducing the available water supply by about 40 percent and this limiting of useable water in the East Greenacres irrigation district will work a real hardship on the farmers in this area, causing many acres of grass seed, canning beans, grains, etc. to not have sufficient water to be harvested, and

Whereas: All preliminary surveys and plans have been made for irrigation wells by the Bureau of reclamation, now

Be it resolved: That Cloverleaf Grange go on record as urging the speedy completion of the East Greenacres Unit of the Rathdrum Prairie Project, and

Be it further resolved: That a copy of this resolution be given to Mrs. Ostlund, secretary of the East Greenacres irrigation District, to be presented at the reclamation project hearings.

HARLEY COLLINS,
Master of Cloverleaf Grange # 22.
OPAL COLLINS,
Secretary.

Mr. JOHNSON. We have here a statement of the Kootenai Soil Conservation District.

Is there a representative, a Mr. Gordon Tate, with us? If not, this statement will appear in the record at this point.

(The statement referred to follows:)

STATEMENT OF GORDON TATE, VICE CHAIRMAN, KOOTENAI SOIL CONSERVATION DISTRICT

The Supervisors of the Kootenai Soil and Water Conservation District endorse the proposed irrigation plan developed for the East Greenacres area. Its benefits include:

1. Water conservation.—The present open canal system loses a great deal of water, particularly in the gravelly areas. Pumping from the vast underground supply has proven very satisfactory in the area.

you get us to the airport and get us out of here to Grants Pass tonight, because we open another hearing there tomorrow morning.

Mr. WARNICK. I am sure we will. Thank you very much for this opportunity. And you are certainly welcome for the service we have provided.

Mr. JOHNSON. Our next witness will be Gov. Don Samuelson of Idaho.

I understand he is not with us, but we have Mr. Robert R. Lee here who will give us the benefit of the Governor's statement and will be willing to stand for questioning.

Mr. Lee, will you give the reporter your name and full title.

STATEMENT OF ROBERT R. LEE, DIRECTOR, IDAHO WATER RESOURCE BOARD

Mr. LEE. Mr. Chairman, Congressman McClure, members of the committee, my name is Robert R. Lee. I am director of the Idaho Water Resource Board, our State water planning and development agency.

The Governor regrets he can't be here to meet with you gentlemen and to appear before this group, but he has asked me to present this statement.

The water resource board has a separate statement, which will be presented by one of our members.

Mr. JOHNSON. You may proceed.

Mr. LEE. I am quoting now from Governor Samuelson's written statement.

(The document referred to follows:)

STATEMENT OF IDAHO GOVERNOR DON SAMUELSON

As Governor of the State of Idaho, I support the East Greenacres project. It pleases me to see development of the resource potential of Idaho for the welfare of our people, whether this development is private, State, or federally sponsored. I am especially pleased to endorse the East Greenacres development proposal, since it not only converts presently unirrigated land to more productive irrigated land, but also alleviates a crisis in Kootenai County. Recent court action limiting drawdown of Twin Lakes could have a large detrimental effect on the citizens of Kootenai County who depend on Twin Lakes water for crop irrigation. On January 23, 1969, the Idaho First District Court limited the drawdown of Twin Lakes to 4 feet. Although this limitation will benefit the Twin Lakes recreation users, it places a severe restraint on the East Greenacres Irrigation District. However, the proposed project will provide for the satisfaction of both recreation and irrigation uses and increase the amount of irrigated land by 3,460 acres.

The project has widespread support in Idaho. This proposal has been reviewed by the Idaho State Reclamation Engineer, who conducted a hearing concerning the project at Coeur d'Alene, Idaho, September 5, 1967, to gain public views and comments. No one appeared at the hearing in opposition to the project. It has also been considered by the Idaho Water Resource Board, the constitutional water agency in Idaho which has the responsibility for formulation of a State water plan. On September 15, 1967, the board expressed unanimous endorse-

ment of the project. This was reaffirmed on February 12, 1969. In a letter to the Honorable Stewart L. Udall, dated October 3, 1967, I asked for a favorable report on this project to the Bureau of the Budget and the Congress hoping that it would receive early authorization.

I again hereby add my official and personal support to this worthwhile project.

Mr. JOHNSON. We want to thank the Governor, Mr. Lee, for his statement here in behalf of the project. You have a very fine Governor. We have worked with him on a number of problems in other areas, especially the lumber problems. He was a very important witness to the hearings in Washington during the last Congress when we were working on some problems dealing with the lumber industry. He is very well qualified and very well respected. Tell him hello for us and we are sorry he couldn't be with us.

Mr. LEE. I will do that. The Governor doesn't hesitate to speak his mind. Thank you very much

Mr. JOHNSON. Mr. Foley, the gentleman from Washington.

Mr. FOLEY. No questions.

Mr. JOHNSON. The gentleman from Idaho, Mr. MCCLURE.

Mr. MCCLURE. I just want to comment, I have discussed this project with the Governor. I know of his personal interest as expressed in this letter and that that interest has gone back over quite a period of time, so it is a matter of personal interest as well as official interest. Certainly he has been a very helpful ally in bringing it to the point of this hearing. Hopefully, as we go forward we will continue to work together and it won't be too long before we can see it in the works.

Thank you very much.

Mr. JOHNSON. The gentleman from California, Mr. Clausen.

Mr. CLAUSEN. No questions, other than to state that I believe the statement certainly clarifies a question that had arisen in my mind that relates to the alleviation of the crisis here in Kootenai County. Just two paragraphs and he has told the whole story. So apparently your Governor does tell it like it is in short terms.

I want to amplify what Congressman Johnson has said. Both Mr. Johnson and I represent forest products industry oriented areas, and your Governor has been a real champion and we appreciate his support, sir.

Mr. JOHNSON. The gentleman from Oklahoma, Mr. Camp.

Mr. CAMP. Mr. Chairman, I don't have any questions.

Mr. JOHNSON. Thank you, Mr. Lee, for your appearance here.

I know you have a great deal of knowledge in connection with water resource development in your State due to your position you hold as chairman of the board, as I understand it.

Mr. LEE. Director, sir.

Mr. JOHNSON. As I understand it, your statement from the board will be delivered by a board member who is here present with us.

Mr. LEE. Yes, sir.

Mr. JOHNSON. We want to thank you for appearing here.

Mr. MCCLURE. Mr. Chairman, might I just parenthetically add at this point that Idaho water resource agency is a constitutionally created agency by act of the Legislature of the State of Idaho and the vote of the people of the State of Idaho just in very recent years. It is young and it is vigorous, and the personage of its director here today is evidence of its ability and its vigor.

witnessed a very fine lake, Coeur d'Alene Lake, right next to the city.

Next is Mr. Cecil Meyer, the mayor of Post Falls, Idaho.

If he isn't here, we will file his statement in the record, if submitted.

The next mayor we will call on is Mr. Merle F. Louthan, the mayor of Rathdrum, Idaho.

Is the mayor with us?

We will file his statement in the record as if read, if submitted.

Now we have the TAP Committee representing Kootenai County, Idaho.

Is a representative of that committee here?

If not, their statement may be placed in the record, if submitted.

(Their statement in a letter from Ray Chambers, chairman, Kootenai County TAP, to Representative James McClure, follows:)

U.S. DEPARTMENT OF AGRICULTURE,
AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE,
KOOTENAI COUNTY TECHNICAL ACTION PANEL,
Coeur d'Alene, Idaho, October 21, 1969.

Representative JAMES MCCLURE,
Subcommittee on Irrigation and Reclamation of the House Committee on Interior and Insular Affairs, Washington, D.C.

HON. JAMES MCCLURE: The Kootenai County Technical Action Panel endorses and supports the East Greenacres unit of the Rathdrum Prairie project.

We feel this project is definitely needed in the former East Greenacres irrigated area to replace the former inadequate water supply from Twin Lakes. Due to the summer home development on the Lake and the loss of water in the open ditch, the supply delivered to the tracts for many years has been too sporadic to allow the development of the agricultural potential of the area.

The dryland areas surrounding the old district are at this time very marginal wheat-summer fallow lands. With the addition of water we feel most of this land will go to hay, pasture, or grass seed production, with vegetable crops as the need develops in the cannery now being rejuvenated in Post Falls.

To get an idea of what adequate irrigation and domestic water will do to an area, one has but to drive through the area to the east of Post Falls (a 1946 Bureau of Reclamation project) and compare.

For the economy of the area something is definitely needed. The Post Falls school district which encompasses the area of the proposed project has one of the lowest assessed valuation per pupil ratios in the State of Idaho. We feel with adequate water, a much healthier economy will develop in the entire area to the west and north of Post Falls.

Very truly yours,

RAY CHAMBERS, *Chairman.*

Mr. JOHNSON. Now we have the Coeur d'Alene Chamber of Commerce.

Is there a representative of the chamber of commerce present?

If not, we will place their statement in the record.

(The statement referred to follows:)

STATEMENT OF CHAMBER OF COMMERCE, COEUR D'ALENE, IDAHO, PRESENTED BY KYLE M. WALKER, MANAGER

The board of directors of the Coeur d'Alene Chamber of Commerce in session Tuesday, October 21, voted unanimously to approve and support the East Greenacres unit of the Rathdrum Prairie reclamation project.

With the continuing increase in population in the United States and with the encroachment of superhighways and other building developments which continually shrink the number of acres used for the growing of food and other crops for this Nation, it is expedient that projects such as the East Greenacres be activated to keep pace with the needs for agricultural production. It has been proven in the last 2 or 3 years that the Rathdrum Prairie is well suited for the growing of green beans as well as other established crops.

Mr. McClure. The people who would have been favored by being able to prove the extent of fluctuation which was permitted under an agreement over 60 years old or those who wanted to change it?

Mr. Pointner. I'm sure it wasn't the lake owners.

Mr. McClure. Thank you very much.

Mr. Johnson. Is there a photographer in the room?

We will have a brief 5-minute recess; if he wants to take a picture, fine.

(There followed a short recess.)

Mr. Johnson. The committee will resume its sitting.

At this time I want to recognize the secretary of the East Greenacres Irrigation District.

I want to commend you for your services to this committee and to the committee's staff in arranging the first portion of the witnesses who appeared here this morning, for the most part representing Government.

Mrs. Ostlund. Thank you.

Mr. Johnson. Our first witness this afternoon will be the mayors representing three communities.

We will start off with Mr. Larry Gardner, the mayor of Coeur d'Alene, Idaho.

Mr. Bodine. I have a statement from him.

Mr. Johnson. His statement will appear in the record at this point.

(The statement, in letter to Chairman Johnson, follows:)

Coeur d'Alene, Idaho,
October 20, 1969.

Hon. Harold T. Johnson,
Chairman, House Interior Subcommittee, Washington, D.C.

Dear Mr. Johnson: In behalf of the City of Coeur d'Alene, as Mayor, I heartily endorse the proposal now before your Committee for development of the East Greenacres Unit. Coeur d'Alene is the county seat and the largest population center in Kootenai County. We are all close neighbors in this area, and feel strongly this project will help to improve our area and keep the rural economy on a streng and straight course.

I am convinced that development of the project would be a good investment from a local, regional and national viewpoint. Knowing that statements have been made available to you from the local farmers, lakeshore homeowners, the county and others in the immediate area, I will very briefly note a few benefits to the area.

Coeur d'Alene is just ten miles from the heart of the project area. Being this short distance, our city merchants feel the impact of events in the area. We get a good reading when the farmer has a successful or a poor year. Development of the project will provide a reliable irrigation water supply and system upon which the farmer can soundly make his plans from year to year. He cannot do this now. This healthier and expanded agricultural base is going to mean more job opportunities on the farm and in related businesses in Coeur d'Alene and throughout the county.

The project will provide a more attractive area for recreation and fishing activities at Twin Lakes. And, we in Coeur d'Alene know that the area's recreational and fish and wildlife resources must be wisely developed. We think the project plan for use of Twin Lakes is a wise use of these resources.

I want to express a personal welcome to you gentlemen and thank you for holding this field hearing on the East Greenacres Unit. This type of hearing offers the opportunity for a greater number of those of us at the "grassroots" level to voice our feeling on matters that concern us.

Very truly yours,

L. L. Gardner, Mayor.

Mr. Johnson. We want to say to the mayor we traveled through his city this morning. It looked very busy, a fine place to be, and we

Mr. Johnson. I hope that wasn't prompted by some consideration during the last two Congresses.

Mr. McClure. Mr. Chairman. I might state that the people of Idaho, indeed, are aware of the interest of the people in California.

Mr. Johnson. Thank you, Mr. Lee.

We will now hear from the member who will give us the benefit of the statement of the Idaho Water Resource Board.

STATEMENT OF ROBERT BANDY, MEMBER, IDAHO WATER RESOURCE BOARD

Mr. Bandy. I am Robert Bandy, a member of the Idaho Water Resource Board, Mr. Chairman and members.

Mr. Johnson. You may proceed, Mr. Bandy.

Mr. Bandy. I would like to express the unanimous support of the Idaho Water Resource Board, the State's water planning and development agency, for the East Greenacres unit of the Rathdrum Prairie project. The proposed development will irrigate 3,460 acres of land which are presently not irrigated but which are suitable for irrigation and will provide a supplemental water supply for 1,770 acres which presently have an inadequate supply. This development will provide a significant economic stimulus to Kootenai County and the State of Idaho.

The project will also alleviate an existing, and serious, conflict between the recreation use of Twin Lakes and irrigation use of the Twin Lakes water. The Idaho First District Court, ruled on January 23, 1969, that the drawdown of Twin Lakes could not exceed 4 feet, which is a serious limitation on an irrigation system which is already limited by the natural supply of surface water available. The proposed development taps the very productive Rathdrum Prairie groundwater aquifer, thereby alleviating the pressure on the inadequate surface supply. Without the project, serious limitations of crop production and income to the people depending on the irrigation system could result in the very near future.

I would like to read the Idaho Water Resource Board resolutions giving support to the project. The first was passed on September 15, 1967.

Be it resolved, That the Idaho Water Resource Board endorses the U.S. Bureau of Reclamation sponsorship of the East Greenacres Unit of the Rathdrum Prairie project and supports construction of the project.

The second resolution, which was passed on February 12, 1969, and which reaffirmed support, demonstrates the board's interest in the project being approved and funded as soon as possible.

Be it resolved, That the Idaho Water Resource Board does reaffirm its desire for the early construction and completion of water development projects and wishes to inform the Idaho Congressional Delegation of the importance to the State of Idaho of the early completion of the East Greenacres Unit of the Rathdrum Prairie project, Idaho Prairie Division, U.S. Bureau of Reclamation, Region 1.

I respectfully request that the East Greenacres unit receive favorable consideration by Congress.

Mr. Johnson. We want to thank you, Mr. Bandy, for coming here as a member of the Idaho Water Resource Board and giving us the benefit of its position.

In behalf of the project, I wonder what is the condition of the lake now as far as drawdown is concerned. What is your maximum drawdown or what was your maximum drawdown this summer on the lake?

Mr. BANDY. I imagine—I could be corrected on this—it was clear down to the 4 feet limit.

Mr. JOHNSON. It looked to me like it had been lower. It is up a little bit now from where it was at its lowest point.

Mr. BANDY. This possibly could be on account of the rains that have fallen.

Mr. JOHNSON. I presume with the court putting that limitation on that probably took care of the average, but in a good dry year you would probably want to draw down a little more, and that is why the limitation was placed here by the court, I presume.

Mr. BANDY. They have had serious problems there for the resort people from too low drawdown, and their boats are sitting out in the lake and their docks are too far from the water.

Mr. JOHNSON. The gentleman from Washington, Mr. Foley.

Mr. FOLEY. No questions.

Mr. JOHNSON. The gentleman from Idaho, Mr. McClure.

Mr. MCCLURE. I just want to again compliment the Idaho Resource Board for the leadership and the vigor with which they have applied that leadership in water resource programs in Idaho.

I ask only this question, the development of this ground water aquifer in Rathdrum Prairie is consistent with the plans drawn up by the Idaho Water Resource Board, is it not?

Mr. BANDY. Yes, it is.

Mr. MCCLURE. Thank you very much.

Mr. JOHNSON. The gentleman from California, Mr. Clausen.

Mr. CLAUSEN. No questions.

Mr. JOHNSON. The gentleman from Oklahoma, Mr. Camp.

Mr. CAMP. No questions.

Mr. JOHNSON. We want to thank you, Mr. Bandy.

We have a Bandy out in California who is the director of the Maderia Irrigation District that has a great water project pending before the Congress, but it deals with dollars. We already have it authorized. Are you a relative?

Mr. BANDY. No relative.

Mr. JOHNSON. Our next witness will be Mr. Art Manley, State senator of the State of Idaho.

Mr. Manley.

Mr. MCCLURE. I have his statement.

Mr. JOHNSON. In the absence of Mr. Manley we will file his statement, unless there is objection.

Hearing none, it is so ordered.

(The statement, in letter to subcommittee, follows:)

COEUR D'ALENE, IDAHO,
October 24, 1969.

SUBCOMMITTEE ON IRRIGATION AND RECLAMATION,
House Committee on Interior and Insular Affairs,
Federal Building,
Coeur d'Alene, Idaho.

HONORABLE SIRS: My name is Art Manley. I reside at 1109 11th St., Coeur d'Alene, and am a state senator representing Legislative District #2, the district in which the East Greenacres Irrigation project is located.

Bureau of Reclamation is concerned, we would relinquish any interest we have in the water at Twin Lakes. However, the responsibility from that point on, I believe, would evolve with the State engineer and he may appoint a watermaster to see that it is properly operated from that point forward.

Mr. FOLEY. In other words, the actual operation of the dam and the water levels will be done under the jurisdiction of the State water engineer in accordance with the laws and regulations of the State of Idaho.

Mr. MCCLURE. Would the gentleman yield?

Mr. FOLEY. Yes.

Mr. MCCLURE. I think he made reference to that in his statement, in that the court decree left some unanswered questions which will have to be resolved in the future under State law and under the jurisdiction of the State reclamation engineer.

Mr. JOHNSON. Are there any further questions?

The gentleman from Oklahoma, Mr. Camp.

Mr. CAMP. I have just one question.

How do you handle your sewage situation up there at the present time?

Mr. POINTNER. We have it under the State of Idaho Health Department in which we have cesspools, not cesspools, but septic tanks.

Mr. CAMP. Thank you, sir.

Mr. JOHNSON. The gentleman from Idaho, Mr. McClure.

Mr. MCCLURE. You mentioned there are 600 people up there. Are all the property owners who are affected by this members of your association?

Mr. POINTNER. No, sir.

Mr. MCCLURE. How many are members of your association?

Mr. POINTNER. We had about a hundred forty-two of the people, and they are generally spotted all over the lake.

Mr. MCCLURE. So you and your association are not in a position to speak for 100 percent of all the property owners up there?

Mr. POINTNER. Absolutely not.

Mr. MCCLURE. When we are talking in terms of some kind of agreement or willingness to live and let live for a period of time during the adjustments that are necessary and the passage and creation of this project, you can't speak for all of the people up there, you can only speak for yourself and unofficially to some extent for the members of your association?

Mr. POINTNER. That is true. But I do represent a lot of the people other than members, because they have put money into this suit that we have had to maintain this level, and that is the feeling of almost 100 per cent of the people on the lake.

Mr. MCCLURE. I am puzzled only with one thing about this. You sent a detective over from Spokane to find out who stole the water and he couldn't even find the rock that was supposed to have the marks chiseled on it.

Mr. POINTNER. I think there was a little hanky-panky.

Mr. MCCLURE. Would you have any speculation as to who might have perpetuated that hanky-panky?

Mr. POINTNER. No, I don't.

As the learned attorney here said, we are under appeal at this time to the supreme court of the State of Idaho, which is supposed to, as he says, come up in May, and we trust that it will.

I know the committee is on quite a time schedule here. You have a big program. But I do want to thank the committee for the opportunity of coming before you.

One gentleman here mentioned about the recession in the economy that we had a few years ago. I can't hardly remember it. I want him to know that that was before my time. I, too, don't want that to happen, and I want the economy of this lake to go forward as it has in the past.

Mr. JOHNSON. We want to thank you, Mr. Pointner. You are a very fortunate person representing the property owners along the lake. You are the group that has progressed the suit to the Supreme Court. I think if this project were to be approved and authorized, it would solve both problems, the irrigation district people could operate very well and the recreation, fish, and wildlife interests and people who are private property owners on the lake could operate very well, too. I think this is a multipurpose project. It has in it many things for both parties, and we hope we can move forward with it.

Mr. POINTNER. May I say one thing further relative to this. This system of present irrigation is very wasteful of the water, because they lose from 30 to 50 percent of it at the present time.

Thank you.

Mr. JOHNSON. The gentleman from Washington, Mr. Foley.

Mr. FOLEY. Mr. Pointner, I understand the rules do not permit you to ask a question of the committee. If they did, what question would you ask?

Mr. POINTNER. I would ask, what would be the rules relative to the management of the dam and the off-flow of the lake after the wells were in?

Mr. FOLEY. You are interested in knowing who is actually going to be operating the irrigation works and the dam and so on, who would have control over the water levels.

Mr. POINTNER. The water levels of the lake and the dam itself and the maintenance.

Mr. FOLEY. Mr. Chairman, I think this is a point that needs to be cleared up, and perhaps if the Chair doesn't object, I would like to ask unanimous consent to recall for a minute the Bureau of Reclamation to show this point up in the record, because I think it would be useful for the property owners and for others concerned about this matter to have clear in the record this matter at this point.

Mr. JOHNSON. It was my understanding in the summary given by the representative of the Bureau of Reclamation that they would divest themselves of any right of water from Twin Lakes in the final agreement. Now, maybe I am wrong, but then it would come under State law and individual property rights as far as Twin Lakes were concerned. Maybe we had better have that cleared up.

Mr. CASEY. I want just to observe that Mr. Warnick has left and we will have to have a substitute director here.

Mr. NELSON. My name is Harold Nelson. I am Regional Director of the Bureau of Reclamation. I can state categorically as far as the

I am pleased to see at long last some hopeful indication of progress toward Congressional approval of this project and offer the following brief comments in its support:

1. The present irrigation system is inefficient, wasteful of our water resource, and fails to provide water for a considerable acreage of productive land adjacent to land served within the district. The new project, relying on wells, will eliminate the long, wasteful open canal.

2. The present system has resulted in recurrent and growing friction between homeowners and recreationists in the Twin Lakes area, on the one hand, and property owners using the water in the East Greenacres Irrigation District. As recreational use of Twin Lakes grows by leaps and bounds these conflicts will assume critical proportions. On the other hand, completion of the new project will allow full use and maximum development of Twin Lakes as a recreation area and at the same time eliminate the conflict with water users in the East Greenacres District.

As a member of the real estate profession, I see a tremendous and rapidly growing demand for small tracts and acreages for suburban homes, which is proving increasingly difficult for Kootenai County to supply. On many occasions I have seen dry land in this area lying idle and unproductive for lack of a good community water system. And in many instances land has changed hands at less than its real value because of lack of an adequate water supply.

I believe this project will contribute far more than its cost to the economic and general welfare of the residents of Kootenai County, and accordingly, I do urge its speedy approval.

Respectfully submitted.

ART MANLEY, *State Senator.*

Mr. JOHNSON. The next witness will be Mr. Larry Looney, Idaho State representative.

Is Mr. Looney with us?

Mr. MCCLURE. Mr. Chairman, might I just remark at this time that I talked to Mr. Looney yesterday after he was on the field tour, and he said it would be impossible for him to be here today because he had a conflict that he could not avoid. I talked to Mr. Manley earlier about this and he also, of course, has a very personal interest in this. They both have given it their personal support.

Mr. JOHNSON. We will place Mr. Looney's statement in the record at this point, unless there is objection.

So ordered.

(The statement, in letter to subcommittee, follows:)

HOUSE OF REPRESENTATIVES, *State of Idaho.*

MEMBERS,
Subcommittee on Irrigation and Reclamation,
House Committee on Interior and Insular Affairs.

MEMBERS OF THE COMMITTEE: This statement is to urge your support and subsequent Congressional approval of the East Greenacres Unit of the Rathdrum Prairie Project.

This project would contribute greatly to the orderly development and economic stability of the area by relieving the current shortage of water for irrigation, municipal, and industrial uses; and would greatly improve the recreational potential of Twin Lakes by eliminating the fluctuation of water levels.

Without repeating at length much of the voluminous testimony to which you have no doubt already been exposed, I would simply attempt to summarize what seem to be some of the extremely pertinent facts:

1. The basic needs of the area are clear and well documented.
2. The project would fulfill these needs as well as remove a conflict of interest in Twin Lakes.
3. Local and state support for the project is strong.
4. The cost-benefit ratio is predictably very favorable.

5. The needed water supply is readily available without jeopardizing in any way further basin development.

It is our sincere hope that your consideration of these facts and the supporting data received as a result of your study will lead to your support of this worthwhile and necessary project.

LARRY G. LOONEY.

Mr. JOHNSON. Our next witness will be the Kootenai County commissioners' representative representing Coeur d'Alene, Idaho.

Would you please come forward and give us your name and official title.

STATEMENT OF DON ADAMS, COMMISSIONER, KOOTENAI COUNTY

Mr. ADAMS. I am Don Adams. I am a Kootenai County commissioner and I am here representing the Board of the County Commissioners of Kootenai County.

I also, Mr. Chairman, have appended to the testimony of that board a statement from the Kootenai County Planning and Zoning Commission which will be submitted with this statement.

Mr. JOHNSON. You may proceed.

The statement of the County Planning and Zoning Commission will be made a part of the record following your statement.

Mr. ADAMS. Thank you, Mr. Chairman.

Mr. Chairman and members of the committee, I would like to preface my formal presentation here by bringing to the attention of the committee that this just happens to be October 24, 1969, and it happens to be 40 years to the day since the great stock market crash of 1929. During those years of the great depresesion when I was 9 years old and for a period of time thereafter I lived in a house that had no water, no lights, and no plumbing, so I am particularly mindful of those programs which have brought electrification and reclamation to the rural areas of America and have made life so much better. This, Mr. Chairman, is another one of those programs. So it is particularly significant on this 40th anniversary day I am permitted the opportunity to speak in favor of this particular program.

Mr. JOHNSON. I am very glad to offer you that opportunity. I hope we don't have another depression or stock market crash, because it might affect even this project as far as authorization by the Congress. I do hope we can eliminate the possibility of any pitfall of that kind, because I was a young man then, too, and left school during that depression, which I have regretted ever since. So I dealt with the school of hard knocks myself.

(The statement referred to follows:)

STATEMENT OF THE KOOTENAI COUNTY BOARD OF COMMISSIONERS

Mr. Chairman and members of the committee, the Kootenai County Board of Commissioners in a letter to Mr. R. B. Spearman, Area Engineer, under the date of October 25, 1966, did approve the Rathdrum Prairie Project of the East Greenacres Unit. That letter was made a part of the engineer's proposed report.

The Board of Commissioners, by this testimony, reaffirms that approval and urges that the committee also approve the project and recommend its funding.

Implementation of the Rathdrum Prairie Project will undoubtedly be a major contributor to the orderly development of the area in question. Under the present system, the area has failed to develop, and one has only to observe the POST

hole, did you? Well, that's the name that the lake is getting with the drawdown we are getting.

I want to say right now we are wholeheartedly for the project. We just think it is one of those things that should be done first, naturally, because we are very much interested in it.

At the present time much of the lake is not navigable even by rowboat at times. Now, I don't want to sound antagonistic toward any part of this, because I think it is wonderful, as I said, and so do all of are members, but we have had a real difficult time up there. We have spent thousands upon thousands of dollars trying to protect the property rights on that lake. I have known of drawdowns on that lake to 2.9, and I have known of drawdowns on the lakes whereby the irrigation district pumped water out of the lake with an extreme situation. This is one of the things I want to get across. We must protect the other property owners as well.

I have a question from the board here, if I might, gentlemen, as to what will happen to the dam and the ditch after this project has gone through.

Mr. JOHNSON. I might say this is another must on the part of the rules and procedures of the committee. The witness cannot ask the committee a question.

Mr. POINTNER. All right.

Mr. JOHNSON. We might ask you a lot.

Mr. POINTNER. Good.

Well, I can make a statement, then.

Mr. JOHNSON. That's right. The chairman of our full committee will not allow a witness to ask the committee a question.

Mr. POINTNER. Thank you.

I think there should be some regulation placed upon this as to who will control the dam after the wells are in, if they go in. We intend to do everything we can to cooperate with the irrigation district along this line of allowing water. This year we allowed it to go up over 11 feet. On the drawdown this year, of course, we had a stay of judgment.

The present channel between the two lakes is almost blocked. We have spent, as I have said, thousands of dollars in trying to get an equitable situation here so that we could live with it and also the irrigation district could live with it without damaging either too much, and we are all for that, an equitable situation. But this thing is depreciating the property on the lake. We have 600 members up there, 600 people, with thousands upon thousands of dollars invested. There is a health hazard also. If we once get this lake polluted, we are in trouble. We have people wanting to draw water out of Fish Creek over there, which is our own resource of water, though a very small amount.

We have another situation at our lake whereby the water runs off through the bottom of the lake quite extensively.

I think the property owners on the lake should be considered quite extensively, too, in view of the economy, the taxes, and the amount of moneys spent up there. There are thousands of people who come to that lake every year, not just the 600 people. We have some people up there who have $175,000 invested in one resort. If people don't go up to this area, the economy of that is quite extensive.

Mr. McCLURE. No questions.

I just want to compliment the gentleman on his statement.

Mr. JOHNSON. The gentleman from California, Mr. Clausen.

Mr. CLAUSEN. Sir, do you know of any opposition to the project that is before the committee?

Mr. MITCHELL. There is none that I know of at all, sir.

Mr. JOHNSON. The gentleman from Oklahoma, Mr. Camp.

Mr. CAMP. No questions.

Mr. JOHNSON. Thank you, Mr. Mitchell.

Our next witness will be Mr. Homer Pointner, the president of the Twin Lakes Improvement Association.

Mr. Pointner.

Mr. FOLEY. Mr. Chairman, I would like to be recognized for just a moment.

Mr. JOHNSON. The gentleman from Washington.

Mr. FOLEY. The witness at the table is an old friend of mine. Ten years ago I was deputy prosecuting attorney and he was chief of the detective division of the Spokane Police Department. We worked on a lot of cases together. I hope this won't establish a conflict of interest in my hearing his testimony or reacting to this project, because I understand he is here in support of it as well as the other witnesses. I would just like to say it is a great pleasure to see him again. He seems so active in his retirement.

Mr. CLAUSEN. Would the gentleman yield?

Mr. FOLEY. Yes.

Mr. CLAUSEN. If the witness has anything to do with the training of the Member of Congress from the Spokane area, I want you to know that you would be very proud of your countenance, because he is one of those who does the work well in the Congress, so you would be proud to be a friend as well as one who has done a good job in educating him properly.

Mr. FOLEY. He taught me all I knew about bad checks.

STATEMENT OF HOMER F. POINTNER, PRESIDENT, TWIN LAKES IMPROVEMENT ASSOCIATION

Mr. POINTNER. My name is Homer F. Pointner. I am the president of the Twin Lakes Improvement Association of Twin Lakes, Idaho, and a resident of Washington.

I am very proud to be a friend of Mr. Foley and having worked with him. And not only that, we are very proud of him in the eastern part of Washington. I want you to know that.

I think the use of the recreational area here has been minimized a great deal. In view of all of the studies that have been made on pollution and the preservation of our water supplies, our ground water, our lakes, our recreation areas, I want to speak a little bit about the 600 people who are on this lake, one of whom is Mr. Sweet of the Lockheed Co. in California, who has 70 acres on there, and various other promotional things and various other recreational areas that can be expanded at these lakes.

The reason it hasn't been expanded up to this time is due to the fact that the water has been drawn out of there. When I bought there a few years ago, someone said, you didn't buy a lot up in that mud-

FALLS IRRIGATION DISTRICT to the east of the proposed project area to note the differences in growth and development.

Rathdrum Prairie Project will ultimately increase the assessed value of the area and thereby improve the tax base of not only the County but other local units of government in the area. It is significant to note that Post Falls School District has the second lowest ratio of assessed valuation to student enrollment in the State of Idaho, with $3,061 of assessed valuation per student enrolled as compared to $24,204 of assessed valuation per student for the highest ratio in the State.

While the Land Use Plan of this County is still under development, it has progressed far enough that the Board of Commissioners feels that it can report, at this time, that this project will not have an adverse effect on that plan. Kootenai County does not have a zoning ordinance at this time.

The Rathdrum Prairie Project will contribute materially to the stabilization of the level of Twin Lakes thereby improving the value of the residential property of the area.

The recreational provisions provided for by the project are sorely needed and will insure greater public use of Twin Lakes as well as contribute materially to the tourist traffic of the area.

In general, this Board feels that the project can be of such great value in improving the economic and esthetic features of the community that it urges in the strongest terms possible that the Congress take such steps as may be necessary to expedite its implementation.

Mr. Chairman, we thank you for the opportunity to appear here.

BOARD OF COUNTY COMMISSIONERS,
KOOTENAI COUNTY,
HENRY J. MEYERS, *Chairman.*
RALPH W. COPE, *Commissioner.*
DON ADAMS, *Commissioner.*

Mr. ADAMS. Mr. Chairman, we thank you for the opportunity to appear here.

Mr. JOHNSON. We want to thank you for being here and giving us the benefit of your statement and your preliminary remarks concerning the area and its welfare.

The gentleman from Washington, Mr. Foley.

Mr. FOLEY. No questions, Mr. Chairman.

Mr. JOHNSON. The gentleman from Idaho, Mr. McClure.

Mr. McCLURE. Mr. Chairman.

I just want to compliment the commissioners on their statement and the presentation of it here this morning. I think one thing that has been noted and will be noted by the Congress is the willingness of Kootenai County to participate in the features at Twin Lakes and their willingness to assume the obligation for maintenance and operation of those facilities. This kind of local participation is somewhat the reverse of the old grant-in-aid by the Federal Government. Sometimes the local units of government are using the carrot instead of the stock now.

Mr. JOHNSON. The gentleman from California, Mr. Clausen.

Mr. CLAUSEN. Mr. Commissioner, I do want to compliment you on a fine statement.

Do you see any problems as far as the local government updating its position of support in a future letter as referred to by Mr. Camp?

Mr. ADAMS. Mr. Chairman.

Sir, I don't see any problems in updating that letter and that position at the formal hearings in Washington if they are held before the second Monday of January 1971, because the present board will still be in office at least until then.

Mr. CLAUSEN. You know, as to your reference to this contribution to the tax base, in California we call them county supervisors, and I used to be one of them. So this is music to my ears, because you sound like you are singing my song. I think this is very important, this kind of investment. I always refer to these projects as investments. It can do a tremendous amount to add to the economics and the tax base and will help you fellows make yourselves more self-sufficient.

Mr. JOHNSON. The gentleman from Oklahoma, Mr. Camp.

Mr. CAMP. Mr. Chairman, I have just one question.

On the first page of your statement in the third paragraph, in the third line from the bottom, starting with the word "and", "and one has only to observe the Post Falls Irrigation District to the east of the proposed project area to note the difference in growth and development." If my directions are right, the one we saw yesterday was to the west of this particular project. Do all three of them tie together or will they if this project comes about?

Mr. ADAMS. My understanding is the Post Falls Irrigation District is a special reclamation project. I didn't go on the tour, sir, and I would assume you are talking about the other part of the East Greenacres unit.

Mr. CAMP. I believe the one we saw was in the Spokane River.

Mr. JOHNSON. Spokane Valley.

Mr. CAMP. Thank you, Mr. Chairman.

I just wondered if all three of them tied together.

Mr. JOHNSON. We want to thank you, Mr. Adams, for appearing here.

(The statement referred to follows:)

STATEMENT OF THE KOOTENAI COUNTY PLANNING AND ZONING COMMISSION ON THE RATHDRUM PRAIRIE PROJECT, PRAIRIE DIVISION EAST GREENACRES UNIT

The Kootenai County Planning and Zoning Commission hereby certifies that it endorses the Rathdrum Prairie project, prairie division, East Greenacres unit.

The planning and zoning commission feels that this project may well be incorporated into the water and sewer plan currently under development in this county.

The Kootenai County Planning and Zoning Commission concurs in the testimony submitted by the Kootenai County Board of Commissioners relative to the project under study.

Mr. JOHNSON. Our next witness will be Mr. R. Keith Higginson, State reclamation engineer, of Boise, Idaho.

STATEMENT OF R. KEITH HIGGINSON, IDAHO STATE RECLAMATION ENGINEER

Mr. HIGGINSON. My name is R. Keith Higginson. I am the Idaho State reclamation engineer. I have a statement on behalf of myself, and I have been asked to hand the committee a statement from the Idaho State Reclamation Association.

Mr. JOHNSON. That statement will appear in the record following your statement, without objection.

Hearing none, it is so ordered.

You may proceed.

Mr. HIGGINSON. Mr. Chairman, members of the committee:

tunately our courts are not congested like they are in California and some of the more urban areas that send their excess population up here to hunt and fish.

We do feel the people on the other side, the people who dwell around the lake, will cooperate individually and through their counsel if they see progress made, if I should be unsuccessful in the supreme court. I, of course, am overwhelmingly sure that I will be proved right again by the supreme court, although we don't want you to abandon the project on that faint hope, either.

Whether or not we can keep it from being heard until 1974 and finally resolved by the supreme court, I certainly cannot assure anyone, of course. Our courts don't usually seem to act that slow, although the last time up in the supreme court, after it was argued and submitted to them, it was almost a year before we got a decision out of them, which was one of the longer cases. I am sure Congressman McClure will realize this from his experience in our supreme court, that 30 to 60 to 90 days is not unusual here and a year is more to our liking than our present position.

Other than that, I stand ready to answer questions of the subcommittee.

Mr. JOHNSON. We want to thank you, Mr. Mitchell, for clearing up that one point as far as the area and the size of the district is concerned.

The gentleman from Washington, Mr. Foley.

Mr. FOLEY. I don't have any questions. Mr. Mitchell's explanation is very useful. I am sure he realizes that none of the committee is taking any position between these two litigants, and we are going to judge the project on its own merits. The pendency of the action, I think, is not directly a matter of concern to the committee in evaluating the project, but it is useful background information.

Also, I want to say I have not particularly made comments or asked questions after each witness. I hope that it won't be judged a matter of discourtesy. But I am going to have to leave in about 15 minutes.

Mr. JOHNSON. Would the gentleman yield for just a moment.

The rules of the House are that no pictures or television coverage can be taken during a hearing. We will recess in a moment as soon as we get through another witness, and then you can take a picture before we disperse or when we come back.

In the Senate they can take pictures during hearings, and what have you, but the House rules are very strict on that.

Mr. FOLEY. I hope I won't be judged discourteous in not commenting on the witnesses' testimony. I am going to have to leave in 15 minutes, and I didn't want to delay for my part the proceedings so I could hear as many witnesses as possible.

I think, however, Mr. Chairman, I would just like to say in general that all the statements, I think, have been excellent. They have been very succinct, concise, and to the point. I think we are upholding the reputation of westerners for plain speech, and I think it is going to be useful and a valuable record.

Mr. JOHNSON. I know it will. The testimony has been good, the answers to questions have been good, the questioning has been put by very able people from the committee, and the record is good up to this point.

The gentleman from Idaho, Mr. McClure.

Court. In all likelihood the case will be heard by the Supreme Court in the spring of 1970. If the state Supreme Court should agree with the District Judge, we will be in dreadful circumstances as an irrigation district unless your proposed project has begun.

I am informed by the District's Board of Directors that if at least one of the well clusters in the project is installed, it would probably furnish enough water so that, together with the water from Twin Lakes, we could get by until the project was completed.

I hope the above outline of the status of the lawsuit and its relationship to the urgency of proceeding with the project will be of help to the sub-committee.

Very truly yours,

THOMAS A. MITCHELL,
Attorney at Law.

Mr. MITCHELL. I will probably, as is typical of a lawyer who has been somewhat usurped by other witnesses, summarize by expanding.

One of our dangers, as I am sure the nonlawyers of the subcommittee have become aware in dealing with their lawyer members——

Mr. FOLEY. May I just interrupt the witness and make a comment?

On that very point we have the constant experience in the Congress of witnesses coming up with very thick statements of maybe 30 or 40 pages and saying that the time is brief and so they won't read their prepared statement, they will submit it for the file and just make a few brief comments. Most of us feel after an hour or so of those few brief comments that we would have been better off with the 50-page statement.

Mr. JOHNSON. I am sure that counsel will be considerate of the committee's time this morning.

You may proceed.

Mr. MITCHELL. I shall, sir.

I would briefly like to point out one point that I neglected to mention in my statement, and that has not come out in the statements of other witnesses. I am sure Congressman McClure, from his past experience, will recognize the significance of this. The increase, the boundaries that now include this yellow [indicating] increasing it to some 5,000 acres, this has already been achieved. It is not something that will be achieved, it has been achieved under our Idaho law, a not inconsiderable task itself, which does show the overwhelming support of all of the residents of the area, those in the new proposed area not yet being served and those in the old area. It was obtained without having to go through any of our normal court proceedings to bring in recalcitrant landowners. There were none.

Mr. CLAUSEN. Would the gentleman yield?

You are referring to expansion of the district or these are the irrigable lands?

Mr. MITCHELL. The district has been expanded by law already so that the moment this project is in effect we have nothing further to do here.

Mr. CLAUSEN. You would have immediate customers and users.

Mr. MITCHELL. Yes, sir; that is correct.

As concerns the status of the lawsuit, I will attempt to answer Congressman Foley's question put to previous witnesses. I am also a slow attorney. I understand that the transcript has been typed up by the court reporter much faster than I had hoped and is lying in the courthouse now. The opposing counsel hasn't yet forced me to go get it and serve it upon him. I am hopeful this won't be heard by our supreme court next spring, although, Congressman Johnson, unfor-

The Idaho Department of Reclamation is the agency charged with administration of the rights to the use of the waters of the State. Such rights may be established by diversion and application to a beneficial use or by permit issued by the department. In our supervision of the work of watermasters on the streams and lakes of the State we are bound to follow the decisions of the State and Federal courts.

In connection with this responsibility, I have become aware of a confusing and potentially serious problem which exists concerning the use of water from Twin Lakes by the East Greenacres Irrigation District. This organization and its predecessors have withdrawn water from this lake for many years. However, recent decisions by the district and supreme courts of Idaho have placed their right to continue such withdrawal in serious question. These decisions have also created confusion by their failure to adjudicate the rights of others who are withdrawing water from the lakes. If my office was to establish a water district and appoint a watermaster to regulate the withdrawal of water from Twin Lakes, the recreation interests might well find that enforcement of these decisions would require that all uses of water with priorities subsequent to the irrigation district would be prohibited. This would include many private and commercial users who withdrew water from the lake. The decisions also place serious restrictions on the rights of the irrigation district. It is limited to a miximum storage elevation of 10.4 feet on the gage at the outlet and a minimum elevation of 6.4 feet. The total amount of water in storage between these two elevations we estimate to be 3,700 acre feet. This quality, plus the amount available during the drawdown season from natural flow, appears to us to be less than the requirements of the presently irrigated lands. It must also be taken into consideration that there are considerable losses in conveying the water from the lake to the irrigation district lands.

It therefore appears that there is some urgency in resolving the conflicts between the irrigation and recreation interests. Each has problems created by interpretation of the court's decisions. The most reasonable and mutually agreeable solution would be for the irrigation district to acquire a substitute source of water leaving the lake for use by the recreation interests.

This can be accomplished by the construction of the East Greenacres unit of the Rathdrum Prairie project. Although I can take no position favoring any particular project, I wish to report that my office has completed the processing of the application filed by the Bureau of Reclamation. Permit No. 95–7055 has been issued providing for withdrawal of 90 c.f.s. of water from 19 wells for irrigation of 5,300 acres of land. Nothing further is required of the Bureau or the irrigation district at this time regarding this water right.

Construction of the project would make the present water supply of Twin Lakes available for appropriation or transfer to the recreation interests who will be project beneficiaries along with the irrigators.

I therefore urge your earliest consideration of authorization and funding of this project.

Mr. JOHNSON. Your statement has been a very good one because it has cleared up several points about the amount of drawdown on the lake. And, if there is more than 3,700 acre-feet of water needed down-

stream it is taken at the present time from users out of the lake, both private dwellings and small business enterprises, I presume?

Mr. HIGGINSON. Yes, that is correct. There are a number of commercial developments on the lake and private homeowners.

Mr. JOHNSON. Also, I am glad to learn here that there has been a permit issued granting the 90 cubic feet per second from the 19 wells, and you figure that as sufficient to irrigate the 5,300 acres with an adequate supply of water during irrigation season.

Mr. HIGGINSON. Yes. this is the application filed by the Bureau for this project and it has been processed and cleared our office and has been approved.

Mr. JOHNSON. The gentleman from Washington, Mr. Foley.

Mr. FOLEY. No questions.

Mr. JOHNSON. The gentleman from Idaho, Mr. McClure.

Mr. MCCLURE. Thank you, Mr. Chairman.

The situation so far as the court order on the level of Twin Lakes, as outlined by your statement, is indeed a confusing situation for the people who own property on the lake as well as those who use waters from the lake. My understanding is that the court decree is under stay, is pending at the present time, and hasn't been applied to the operation of this district during the present irrigation season or, indeed, up until now. Is that not correct?

Mr. HIGGINSON. That is my understanding. We do not at the present time regulate the use of water from the lake. There has been no request and we have not established a water district, so there is no regulation at the present time. The matter has been appealed and I understand that this year the drawdown was beyond the 4 feet.

Mr. MCCLURE. So the real restrictions of the court decree have not yet been felt by the irrigators who would be benefited by this project.

Mr. HIGGINSON. That is correct.

Mr. MCCLURE. So we are not dealing with the correction of a problem which has had its serious effects upon the people as yet. We are still, at this time, dealing prospectively and hoping to avoid those consequences.

Mr. HIGGINSON. That is correct.

Mr. MCCLURE. Thank you.

Mr. JOHNSON. The gentleman from California, Mr. Clausen.

Mr. CLAUSEN. I have no questions, because, actually, you must have been anticipating my questions.

Mr. JOHNSON. The gentleman from Oklahoma, Mr. Camp.

Mr. CAMP. I have just one question, Mr. Chairman.

Do I understand that the use of the lakes themselves, with the private ownership around them, will be for private people? How about public, is there any area for public use of the Twin Lake area?

Mr. HIGGINSON. Congressman Camp, it is my understanding that it is part of the proposal here as evidenced by the interest of the county to acquire property for public use and to develop that property for public recreation as well as private.

Mr. CLAUSEN. Will the gentleman yield?

Mr. CAMP. Yes.

Mr. CLAUSEN. The one thing that comes to my mind as far as your testimony is concerned is that in this day of confrontation all over the United States apparently your foresight is going to pay dividends

Mr. CLAUSEN. You know, listening to this very clever and very able lawyer sitting on my left help you build your case here, I think you can understand the importance of building the record. If I just might mention this for your benefit, as well as the people who are here attending this hearing, that we have only five members of the full Interior Committee who are present here today. Yet it is common practice for all of the members and the staff of the committee to read the record once the information is developed in the hearing record. So you can see the importance of your Congressman drawing you out and, in fact, really building a case for your cause here.

Mr. JOHNSON. The gentleman from Oklahoma, Mr. Camp.

Mr. CAMP. Mr. Chairman, I don't have any questions, but I also would like to reiterate your statement publicly here as to the courtesies that were shown us yesterday afternoon. Let me say we appreciate it very much.

Mr. JOHNSON. Thank you, Mr. Gocke.

Does Mr. Mitchell, the attorney for the district, have a further statement?

Mr. MITCHELL. You have the statement that I have filed.

Mr. JOHNSON. We will now hear from Mr. Mitchell, the attorney for the district, as I understand it, a practicing attorney from Coeur d'Alene, Idaho.

STATEMENT OF THOMAS A. MITCHELL, ATTORNEY, COEUR D'ALENE, IDAHO

Mr. MITCHELL. Chairman Johnson and members of the subcommittee:

A practicing unsuccessful attorney, as has been brought out by the statements of all witnesses so far today. I am the losing attorney, the second time around, that is. It is now on its way up to the Supreme Court again.

I will not strictly follow my written submitted statement in that it, for the most part, has been usurped by the previous speakers.

Mr. JOHNSON. Your statement will appear in the record and you may summarize any way you see fit.

(The statement, in letter to subcommittee follows:)

COEUR D'ALENE, IDAHO,
October 9, 1969.

Re status of legal proceedings—East Greenacres—Twin Lakes.
Subcommittee on Irrigation and Reclamation,
House Committee on Interior and Insular Affairs,
Washington, D.C.

GENTLEMEN: I am the attorney for East Greenacres Irrigation District, the unit about which you are having hearings on October 24. The purpose of my statement is to inform the Sub-committee of the status of pending litigation between East Greenacres Irrigation District and a group of Twin Lakes property owners, which affects the need for urgency in going ahead with construction.

The suit began in 1959, brought by a group of Twin Lakes landowners to limit the amount of water our Irrigation District could draw from Twin Lakes during the irrigation season. This is at present our only source of water and your proposed project would completely replace that source of water with wells. The case has already been once to the Idaho Supreme Court and on retrial the District Judge limited the amount of water we could take so severely that in most years by July we would be out of water. The effect of his judgment has been held in abeyance by a stay order pending our appeal of his judgment to the Supreme

drawing water in that manner, and your operations are presently predicated upon the withdrawal of greater amounts of water than the court decree permits?

Mr. GOEKE. Yes, sir.

Mr. MCCLURE. So when the court decree becomes effective, assuming that it does, and you are then limited to the fluctuation as established by the court decree, there will be a very real reduction in the amount of water which you can use in your operations.

Mr. GOEKE. Yes, there will be. It will be a tremendous reduction.

Mr. MCCLURE. You and I know, but perhaps some of the members of the committee do not know, that the months of July and August are the months of water demand in this area of the State and without water being available in most years, at least, the crops would dry up.

Mr. GOEKE. That is right. Those are our critical months, July and August.

Mr. MCCLURE. And your statement indicates that with the court decree you would run out of water in the usual year by the end of July.

Mr. GOEKE. Right.

Mr. MCCLURE. I think this year it might have been just a little bit better than that.

Mr. GOEKE. It might have been this year, but not too far off.

Mr. FOLEY. Will the gentleman yield?

Mr. MCCLURE. Yes, I would be happy to.

Mr. FOLEY. It will probably be difficult to tell when or if the decree of the court will be affirmed. Do you think it is possible you might have to live with a 4-foot drawdown next year?

Mr. GOEKE. That is hard to say. I am hoping we don't have to. We might have to live with that 4 feet, depending the way they go.

Mr. FOLEY. Even if the committee would act very promptly the actuality of this project being funded and built for several years is nonexistent. The project couldn't possibly be in operation, I would assume, before 1974 at the earliest possible date if everything went very fast. So you are going to have the crop years 1970, 1971, 1972, and 1973, and maybe 1974 if everything goes well under the existing order. Have you any plans for any other relief?

Mr. GOEKE. Not as yet, no. Of course they may keep this stay on if they know this project is going through.

Mr. MCCLURE. It would be your hope that the people who have brought the suit would be sympathetic to your needs if they see an end when they can predict and when you can assure them that there will be an end to the drawdown.

Mr. GOEKE. Yes, sir.

Mr. JOHNSON. Would the gentleman yield?

Mr. MCCLURE. Yes, I would be happy to.

Mr. JOHNSON. Possibly your court calendar is pretty crowded and they won't get to it for a while.

Mr. MCCLURE. I appreciate the comments Mr. Foley made, because we have to approach it with a degree of realism, too, and you do have a very real time period which can cause difficulty. When he asked if you have any plans, I suspect all of you are going to pray for rain.

Mr. GOEKE. That's right, we have to.

Mr. JOHNSON. The gentleman from California, Mr. Clausen.

because you are apparently going to avoid confrontation between the irrrigationists and the recreation users.

Mr. HIGGINSON. There has been confrontation which resulted in the court action, and we are hoping to terminate that.

Mr. JOHNSON. We want to thank you for your statement.

(The statement, referred to in letter to Chairman Johnson, follows:)

IDAHO STATE RECLAMATION ASSOCIATION, INC.,
Boise, Idaho.

HON. HAROLD T. JOHNSON,
Chairman, Irrigation and Reclamation Subcommittee, House Interior and Insular Affairs Committee.

DEAR CHAIRMAN JOHNSON: The Idaho State Reclamation Association welcomes the members of the Irrigation and Reclamation Subcommittee to Coeur d'Alene. We appreciate the opportunity to present to your Sub-Committee our views on the East Greenacres Unit of the Rathdrum Prairie Project, and to place our statement as a portion of the official record of these proceedings.

Our Association is representative of the "grass-roots" irrigation farmers of Idaho. Our membership is comprised of over 150 irrigation districts and canal companies which represent in excess of 2,000,000 irrigated acres in Idaho. Our organization is supported by voluntary contributions from the various water user organizations and we are affiliated directly with the National Reclamation Association.

If the members of this Sub-committee have had the opportunity to visit the nearby shores of beautiful Coeur d'Alene Lake, and to scan the abundant forests nearby, you are no doubt wondering why you are here to hold a hearing on a reclamation project proposal. However, a few miles to the west of this town lies an area which is confronted with irrigation water shortages in the prime growing months.

The East Greenacres Irrigation District has long been a member of our Association in spite of the fact that our office and the majority of our meetings are held approximately 600 miles to the south in Boise. This irrigation district has explored their problems thoroughly, and eventually approached the Region 1 office of the Bureau of Reclamation for help.

It is the opinion of the Board of Directors of our Association that, although small, the project under consideration is truly a multiple-use project within the concept of the reclamation laws. Benefits would accrue to not only irrigation interests, but to municipal, industrial, recreational, and fish and wildlife. In addition, the construction of this project would put to rest a history of long controversy and litigation which has resulted from a fluctuating water level at Twin Lakes.

Our review of the proposal shows it to be a well studied and considered proposal. Although the farms are small, the direct benefits that will accrue in the project area are substantial. The system as contemplated will provide a highly efficient operation for irrigation, industrial, and domestic uses. The existing gravity operation would be abandoned. The recreation and wildlife interests will be overjoyed to have the water level in Twin Lakes remain at a constant level.

In summary, our Association commends Region 1 of the Bureau of Reclamation on their proposal on behalf of the East Greenacres Irrigation District. We join in the District's request for early authorization and construction.

We again thank you for the opportunity to present this statement. It is our hope that your stay here is enjoyable and that you will return often.

Respectfully submitted.

MAX B. SCHLOTTMAN, *President.*

Mr. JOHNSON. Our next witness will be the East Greenacres Irrigation District.

Will you come forward. You are the chairman of the board, as I understand it.

Give us your name.

STATEMENT OF ARTHUR H. GOEKE, CHAIRMAN, EAST GREENACRES IRRIGATION DISTRICT

Mr. Goeke. I am Arthur Goeke, chairman of the East Greenacres Irrigation District.

This is a statement of the board of directors of the East Greenacres Irrigation District.

It should not be necessary for us to go into a lengthy dissertation as to the nature of, and the need for, our proposed irrigation project because this subject is extensively covered in the May 1966 report presented by the U.S. Department of the Interior, Bureau of Reclamation. We do, however, wish to outline briefly for you how desperate our situation is.

Our present irrigation system consists of 1,539.77 acres which we irrigate by gravity flow from Twin Lakes, a distance of about 10 miles. There is a tremendous loss of water as the water flows this distance in an open canal and because of the deterioration and obsoleteness of the canal. Also the distribution facilities within the land area of the present irrigation system are obsolete and inefficient to operate causing loss of water and improper and inadequate distribution of water available to the land. The cost of putting our present irrigation system into efficient operation would be prohibitive; and it would still be obsolete. The system was planned and built around the turn of the century for flood irrigation. Later on much land was excluded from the original system because of the inadequacy of the water supply. The land in this area does not adapt itself to efficient flood irrigation as some irrigated land. Sprinkler irrigation is the only efficient method of irrigating land here. With sprinkler irrigation and an adequate water supply this land can produce abundantly and bring prosperity to the region.

Another aspect which we wish to bring up is the matter of the long-standing litigation between the Twin Lakes Lakeshore Owners' Association and the East Greenacres Irrigation District regarding the operating levels of Twin Lakes. Since the compilation of the feasibility report by the Bureau of Reclamation there have been further court decrees in regard to the irrigation district's rights to the water supply from Twin Lakes. District court decree No. 18420 (State of Idaho) limits the irrigation district's withdrawal of water from the lakes to 4 feet per season (decree dated January 23, 1969). This means that we will be without water for our land by July of each year. This year we got by fairly well by cutting down on water distribution and by securing a "stay of execution" of the decree, pending our appeal to State supreme court. This appeal comes up for hearing next spring.

You can see now that with this new development we are desperate. We need water for our very existence.

Ours is a semiarid area with little or no rainfall during the summer months. With water our land is very productive. With the increased acreage which is contemplated for our project, the farms in our area can really become productive with increased income to the farmers. Winter wheat and one crop of alfalfa hay is all that dry-land farming will produce in this area. With sufficient water and added acreage to our irrigation system (increasing our irrigated acreage from 1,539.77 acres to 5,270 acres) three crops of alfalfa hay can be grown and harvested. Also there can be a conversion of land from wheat production to self-supported diversified farming operations consisting of the raising of

various kinds of grass seed as well as row crops. It has already been proved that this area produces the best beans of any area in the country. The economy of this area could be greatly strengthened and there is the possibility of this area becoming a great food processing center with the establishing of food processing plants.

With adequate water and a change in the kind of crops raised, it is an absolute certainty that the economic status of our farmers will be improved. With the farmers' economy improved it is a proven fact that all other business and services in the area will improve and contribute to our livelihood, to the welfare of the whole, and make this world just a little better place to live in.

It will be noted that in addition to the rehabilitation and expansion of our irrigation system, the Bureau of Reclamation includes in their report the addition of a domestic water systems. We do not feel that it is necessary to go into this addition in great detail as to the advantages to be derived from an adequate domestic water supply. It matters not how efficient a farm may be in its operation with proper farming methods employed and an adequate irrigation water supply, a family must also have its domestic water supply. It must have water for food preparation, for drinking purposes both for man and animal, and for cleanliness. This is at present in operation in this area a domestic water association which supplies water to a very small portion of the area. The facilities of this water supply were declared obsolete and incapable of expansion in the Bureau of Reclamation's feasibility report.

There is another aspect of this matter which we wish to touch upon before closing and that is: The proposed operation of Twin Lakes for recreation and fish and wildlife purposes will eliminate conflicting uses of the Twin Lakes and will improve the outdoor recreation opportunities in this area.

Mr. Johnson. We want to thank you, Mr. Goeke, for giving us the benefit of the statement from the irrigation district board.

I want to take this opportunity to thank you for taking us on that field trip yesterday and pointing out just what we were supposed to see, and also to learn from you of the problems of a farmer on the land who is trying to make a living and raise a family in this community. I think it is a real challenge to anyone who is trying to do just that. Certainly an adequate supply of water will benefit greatly. You certainly need more crop diversification, a better yield, more water for all purposes.

We want to thank you for this statement.

The gentleman from Washington, Mr. Foley.

Mr. Foley. No questions.

Mr. Johnson. The gentleman from Idaho, Mr. McClure.

Mr. McClure. I just want to underline again the same question that was asked earlier with respect to the court decree. You are now operating under the restrictions of the court decree, are you?

Mr. Goeke. No. We had the stay in the spring on it.

Mr. McClure. And you have, during this irrigation season, withdrawn water from Twin Lakes in excess of the amount that would be permitted by that court decree, if in effect.

Mr. Goeke. Yes, sir.

Mr. McClure. Without attempting at all to second guess or to go behind the court decree at all, you have in recent years been with-

Public Law 91-286
91st Congress, H. R. 9854
June 23, 1970

An Act

To authorize the Secretary of the Interior to construct, operate, and maintain the East Greenacres unit, Rathdrum Prairie project, Idaho, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the purposes of providing irrigation water supplies, providing municipal and industrial water, the conservation and enhancement of fish and wildlife resources, and the enhancement of recreation opportunities, the Secretary of the Interior, acting pursuant to the Federal reclamation laws (Act of June 17, 1902; 32 Stat. 388, and Acts amendatory thereof or supplementary thereto), is authorized to construct, operate, and maintain the East Greenacres unit, Rathdrum Prairie project, Idaho. The principal works of the unit shall consist of wells, regulating reservoirs, the necessary water distribution systems, and related works.

East Greenacres unit, Rathdrum Prairie project, Idaho. Authorization. 43 USC 371 and note.

SEC. 2. (a) Irrigation repayment contracts shall provide for repayment of the irrigation construction costs assigned to the irrigators for repayment over a period of not more than fifty years, exclusive of any development period authorized by law. Construction costs allocated to irrigation beyond the ability of irrigators to repay shall be charged to and returned to the reclamation fund in accordance with the provisions of section 2 of the Act of June 14, 1966 (80 Stat. 200), as amended by section 6 of the Act of September 7, 1966 (80 Stat. 707), and from surplus municipal and industrial water revenues as provided by subsection 2(b) of this Act.

16 USC 835h-835m.

(b) Municipal and industrial repayment contracts shall provide for repayment of the construction costs allocated to municipal and industrial water supply, with interest, by the municipal and industrial water users over a period of not more than fifty years from the date that water is first delivered for that purpose, pursuant to contracts with municipal corporations, organizations, or other entities as defined in section 2(g) of the Reclamation Project Act of 1939 (53 Stat. 1187): *Provided*, That contracts for municipal and industrial water service shall provide that annual payments shall continue at the same rates as long as the irrigation repayment contracts are in effect: *Provided further*, That revenues in excess of those required to repay the allocated municipal and industrial water supply costs with interest and the portion of the annual operation, maintenance, and replacement costs allocated to municipal and industrial water supply shall be returned to the reclamation fund and credited toward the repayment of the construction costs allocated to irrigation which are beyond the ability of the irrigators to repay. Such contracts may be entered into with a qualified entity or entities pursuant to the provision of this Act without regard to the last sentence of subsection 9(c) of the Reclamation Project Act of 1939, supra, and shall be executed before the commencement of construction of the unit.

43 USC 485a.

84 STAT. 319
84 STAT. 320

53 Stat. 1193. 43 USC 485h.

(c) The interest rate used for purposes of computing interest during construction and, where appropriate, interest on the unpaid balance of the reimbursable obligations assumed by non-Federal entities shall be determined by the Secretary of the Treasury, as of the beginning of the fiscal year in which construction is initiated, on the basis of the computed average interest rate payable by the Treasury upon its outstanding marketable public obligations which are neither due nor callable for redemption for fifteen years from date of issue.

SEC. 3. The provision of lands, facilities, and project modifications which furnish outdoor recreation and fish and wildlife benefits in connection with the East Greenacres unit shall be in accordance with the Federal Water Project Recreation Act (79 Stat. 213).

16 USC 460l-12 note.

Department of Water Administration
APPLICANT'S
Exhibit 4
Date Admitted 3/24/83 RSH

MICROFILMED

84 STAT. 320

SEC. 4. Power and energy required for irrigation water pumping for the East Greenacres unit shall be made available by the Secretary from the Federal Columbia River power system at charges determined by him.

Agricultural use, limitation.

63 Stat. 1051. 7 USC 1421 note.

62 Stat. 1251; 63 Stat. 676, 1057. 7 USC 1301.

SEC. 5. For a period of ten years from the date of enactment of this Act, no water from the project authorized by this Act shall be delivered to any water user for the production on newly irrigated lands of any basic agricultural commodity, as defined in the Agricultural Act of 1949, or any amendment thereof, if the total supply of such commodity for the marketing year in which the bulk of the crop would normally be marketed is in excess of the normal supply as defined in section 301(b)(10) of the Agricultural Adjustment Act of 1938, as amended, unless the Secretary of Agriculture calls for an increase in production of such commodity in the interest of national security.

Appropriations.

SEC. 6. There is hereby authorized to be appropriated for construction of the works herein authorized and for the acquisition of necessary land and rights the sum of $4,965,000 (January 1969 prices), plus or minus such amounts, if any, as may be required by reason of changes in the cost of construction work of the types involved therein as shown by engineering cost indexes. There are also authorized to be appropriated such sums as may be required for the operation and maintenance of said unit.

Approved June 23, 1970.

LEGISLATIVE HISTORY:

HOUSE REPORT No. 91-987 (Comm. on Interior and Insular Affairs).
SENATE REPORT No. 91-920 (Comm. on Interior and Insular Affairs).
CONGRESSIONAL RECORD, Vol. 116 (1970):
April 20, considered and passed House.
June 11, considered and passed Senate.

MICROFILMED

GPO 37-139

Department of Water Administration
PROTESTANT'S Park
Exhibit 1
Date Admitted 3/24/83 PSH

PRELIMINARY REPORT

ON

UPPER AND LOWER TWIN LAKES

KOOTENAI COUNTY

IDAHO

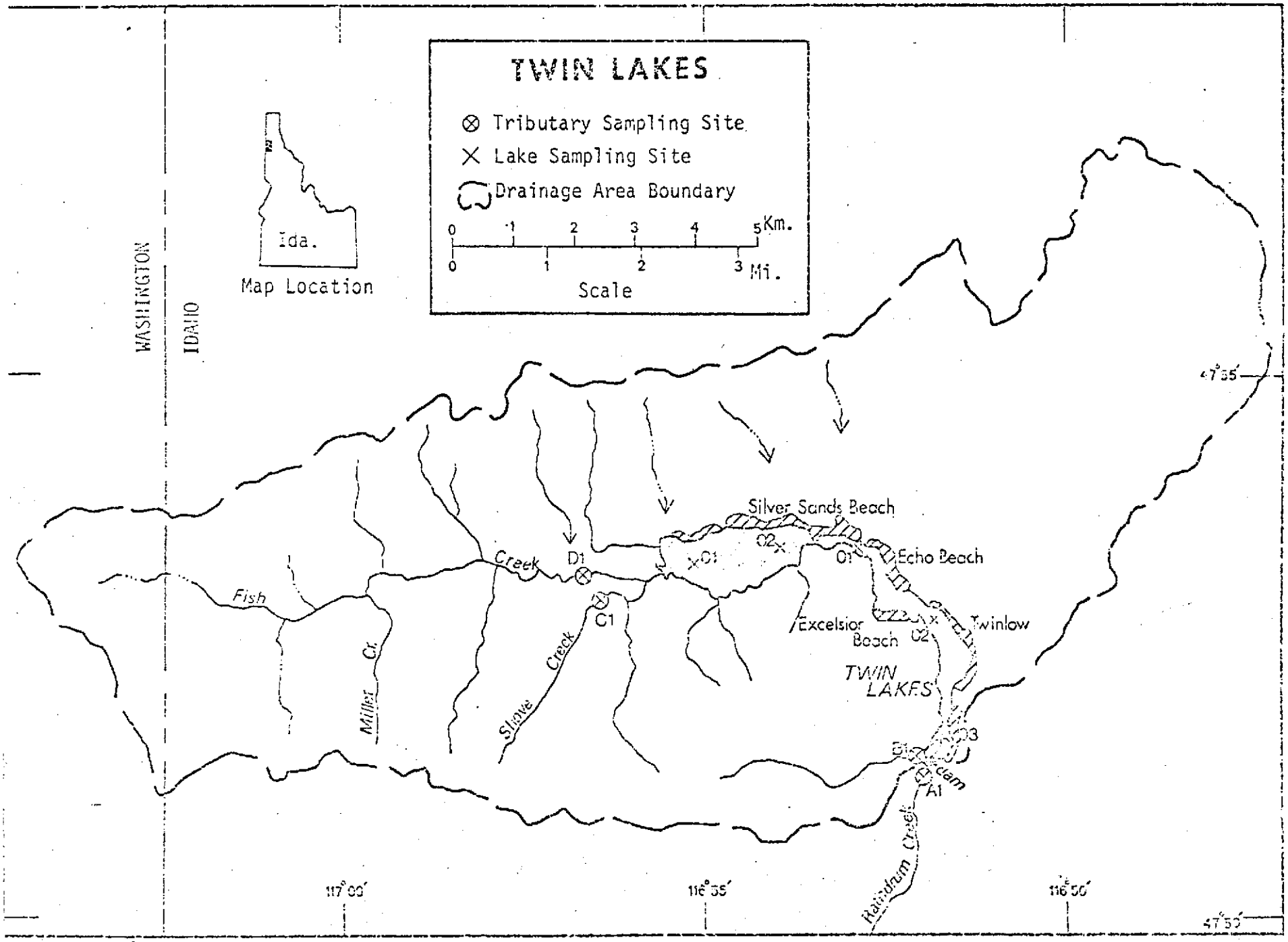
EPA REGION X

NOTICE

This document is a preliminary draft. It has not been formally released by EPA and should not at this stage be construed to represent Agency policy. It is being circulated for comment on its technical accuracy and policy implications.

National Eutrophication Survey
CERL, Corvallis, Ore.
EMSL, Las Vegas, Nev.

[illegible]


TWIN LAKES
⊗ Tributary Sampling Site
× Lake Sampling Site
Drainage Area Boundary
0 1 2 3 4 5 Km.
0 1 2 3 Mi.
Scale
Ida.
Map Location
WASHINGTON
IDAHO
47°35'
Silver Sands Beach
Echo Beach
Excelsior Beach
Twinlow
TWIN LAKES
Fish Creek
Miller Cr.
Slave Creek
Hatchdrum Creek
D1
C1
A1
117°00'
116°35'
116°50'
47°30'

PRELIMINARY REPORT ON UPPER AND LOWER TWIN LAKES, IDAHO

STORET NO.'s 1612-1613

I. CONCLUSIONS

A. Trophic Condition:*

Based upon field observations and Survey data, Twin Lakes is considered eutrophic. Chlorophyll a values in the lake ranged from 1.1 µg/l to 19.4 µg/l with a mean of 2.3 µg/l in the lower basin and 5.0 µg/l in the upper basin. Nutrient levels and potential for primary production as measured by algal assay control yield were low, but aquatic weed problems and algal blooms indicate lake degradation. Secchi disc visibility was quite high in the lake throughout the sampling year.

Field limnologists reported abundant submerged macrophytes along the entire lake bottom; the low phosphorus values in Twin Lakes probably result from phosphorus tied up in these macrophytes. Limnologists also noted algal blooms throughout the lake in July and water lilies in the narrows separating the upper and lower basins. The Idaho Department of Water Resources et al. (1975) report that enriched conditions in Twin Lakes are primarily due to irrigation runoff, feedlots and residential development around the lake.

*See Appendix E.

B. Rate-Limiting Nutrient:

The algal assay results indicate that Upper and Lower Twin Lakes was limited by available phosphorus levels during the sampling year. The lake data generally suggest primary limitation by nitrogen throughout the sampling year.

C. Nutrient Controllability:

1. Point sources -

During the sampling year there were no known point sources impacting Upper and Lower Twin Lakes.

The calculated annual phosphorus loading of 0.11 g $P/m^2/yr$ is equal to that proposed by Vollenweider as a "oligotrophic" loading for lakes with such volume and hydraulic retention time; however, sharp chemical and temperature stratification combined with lengthy detention time could contribute to nutrient buildup and potential for internal recycling. As there are no known avert pollutant sources to the lake, much of the organic load impacting the hypolimnetic dissolved oxygen is presumably from macrophyte decomposition. An aquatic weed control program could be considered for these waters.

Further information about the land uses and watershed surrounding Twin Lakes is needed before additional recommendations for lake improvements can be proposed.

II. LAKE AND DRAINAGE BASIN CHARACTERISTICS

Lake and drainage basin characteristics are itemized below. Lake surface area, mean depth and volume were provided by Martin and Hanson (1966). Maximum depth was estimated on the basis of National Eutrophication Survey (NES) sampling data. Tributary flow data were provided by the Idaho District Office of the U.S. Geological Survey (USGS). Mean hydraulic retention time was obtained by dividing the lake volume by mean flow of the outlet. Precipitation values are estimated by methods as outlined in NES Working Paper No. 175. A table of metric/English conversions is included as Appendix A.

A. Lake Morphometry:

1. Surface area: 16.35 km^2. = 6.31 mi^2 = 4040 acres
2. Mean depth: 2.3 meters. = 7.55 ft
3. Maximum depth: 18.3 meters. 60 ft
4. Volume: 38.534 x 106 m^3. = 31,240 acre ft.
5. Mean hydraulic retention time: 676 days (1.8 yr).

B. Tributary and Outlet:
(See Appendix B for flow data)

1. Tributaries -

Name	Drainage area (km^2)	Mean flow (m^3/sec)
C-1 Shove Creek	6.6	0.11
D-1 Fish Creek	37.8	0.61
Minor tributaries and immediate drainage -	72.4	1.42
Totals	116.8	2.14
2. Outlet - A-1 Rathdrum Creek	133.4 51.51 mi^2 32,960 acres	0.66

16,900 acre ft/yr.

C. Precipitation:

1. Year of sampling: 86.1 cm. 34 in
2. Mean annual: 84.2 cm. 33.15

93,115 acre ft/year

128 CFS

III. LAKE WATER QUALITY SUMMARY

Upper and Lower Twin Lakes was sampled four times during the open-water season of 1975 by means of a pontoon-equipped Huey helicopter. Each time, samples for physical and chemical parameters were collected from a total of five stations on the lake and from a number of depths at each station (see map, page i). During each visit, depth-integrated samples were collected from each station for chlorophyll a analysis and phytoplankton identification and enumeration. During the first and last visits, 18.9-liter depth-integrated samples were composited for algal assays. Maximum depths sampled were 3.4 meters at Station 01, 17.1 meters at Station 02, and 1.5 meters at Station 03 (Lower Twin Lakes); and 3.4 meters at Station 01, and 4.0 meters at Station 02 (Upper Twin Lakes). For a more detailed explanation of NES methods, see NES Working Paper No. 175.

The results obtained are presented in full in Appendix C and are summarized in III-A for waters at the surface and at the maximum depth for each site. Results of the phytoplankton counts and chlorophyll a determinations are included in III-B. Results of the limiting nutrient study are presented in III-C.

UPPER TWIN LAKES
STORET CODE 1613

PHYSICAL AND CHEMICAL CHARACTERISTICS

PARAMETER	(6/ 3/75) S*** = 2 N*	RANGE	MEDIAN	MAX DEPTH RANGE (METERS)	(7/23/75) S*** = 2 N*	RANGE	MEDIAN	MAX DEPTH RANGE (METERS)	(9/10/75) S*** = 2 N*	RANGE	MEDIAN	MAX DEPTH RANGE (METERS)
TEMPERATURE (DEG CENT)												
0.-1.5 M DEPTH	4	14.6- 15.2	14.9	0.0- 1.5	3	21.5- 22.2	22.0	0.0- 1.5	4	15.1- 16.2	15.7	0.0- 1.5
MAX DEPTH**	2	9.8- 12.4	11.1	3.4- 4.6	2	19.3- 20.4	19.8	2.4- 4.0	2	14.3- 15.1	14.7	2.7- 3.7
DISSOLVED OXYGEN (MG/L)												
0.-1.5 M DEPTH	4	8.8- 10.0	8.9	0.0- 1.5	3	6.8- 9.6	9.2	0.0- 1.5	4	8.6- 9.6	9.4	0.0- 1.5
MAX DEPTH**	2	8.8- 9.2	9.0	3.4- 4.6	2	9.8- 10.2	10.0	2.4- 4.0	2	9.6- 9.6	9.6	2.7- 3.7
CONDUCTIVITY (UMHOS)												
0.-1.5 M DEPTH	4	20.- 22.	22.	0.0- 1.5	3	14.- 22.	21.	0.0- 1.5	4	14.- 19.	16.	0.0- 1.5
MAX DEPTH**	2	18.- 20.	19.	3.4- 4.6	2	19.- 21.	20.	2.4- 4.0	2	16.- 16.	16.	2.7- 3.7
PH (STANDARD UNITS)												
0.-1.5 M DEPTH	4	7.4- 8.0	7.8	0.0- 1.5	3	7.6- 8.0	7.8	0.0- 1.5	4	7.6- 8.5	8.3	0.0- 1.5
MAX DEPTH**	2	7.7- 7.7	7.7	3.4- 4.6	2	7.8- 8.7	8.3	2.4- 4.0	2	8.3- 8.3	8.3	2.7- 3.7
TOTAL ALKALINITY (MG/L)												
0.-1.5 M DEPTH	4	10.- 17.	15.	0.0- 1.5	3	19.- 21.	20.	0.0- 1.5	4	12.- 14.	13.	0.0- 1.5
MAX DEPTH**	2	10.- 15.	13.	3.4- 4.6	2	19.- 22.	21.	2.4- 4.0	2	11.- 16.	14.	2.7- 3.7
TOTAL P (MG/L)												
0.-1.5 M DEPTH	4	0.016-0.019	0.017	0.0- 1.5	3	0.014-0.015	0.014	0.0- 1.5	4	0.016-0.024	0.020	0.0- 1.5
MAX DEPTH**	2	0.016-0.018	0.017	3.4- 4.6	2	0.015-0.021	0.018	2.4- 4.0	2	0.016-0.069	0.042	2.7- 3.7
DISSOLVED ORTHO P (MG/L)												
0.-1.5 M DEPTH	4	0.007-0.017	0.013	0.0- 1.5	3	0.004-0.011	0.009	0.0- 1.5	4	0.002-0.003	0.002	0.0- 1.5
MAX DEPTH**	2	0.012-0.014	0.013	3.4- 4.6	2	0.009-0.014	0.011	2.4- 4.0	2	0.002-0.002	0.002	2.7- 3.7
NO2+NO3 (MG/L)												
0.-1.5 M DEPTH	4	0.020-0.020	0.020	0.0- 1.5	3	0.020-0.020	0.020	0.0- 1.5	4	0.020-0.020	0.020	0.0- 1.5
MAX DEPTH**	2	0.020-0.020	0.020	3.4- 4.6	2	0.020-0.020	0.020	2.4- 4.0	2	0.020-0.020	0.020	2.7- 3.7
AMMONIA (MG/L)												
0.-1.5 M DEPTH	4	0.040-0.100	0.045	0.0- 1.5	3	0.040-0.060	0.040	0.0- 1.5	4	0.020-0.030	0.020	0.0- 1.5
MAX DEPTH**	2	0.030-0.040	0.035	3.4- 4.6	2	0.020-0.040	0.030	2.4- 4.0	2	0.020-0.020	0.020	2.7- 3.7
KJELDAHL N (MG/L)												
0.-1.5 M DEPTH	4	0.400-0.600	0.400	0.0- 1.5	3	0.400-0.600	0.600	0.0- 1.5	4	0.400-0.400	0.400	0.0- 1.5
MAX DEPTH**	2	0.300-0.300	0.300	3.4- 4.6	2	0.300-0.400	0.350	2.4- 4.0	2	0.400-0.600	0.500	2.7- 3.7
SECCHI DISC (METERS)	2	3.0- 3.2	3.1		1	4.6- 4.6	4.6		2	2.4- 3.7	3.0	

* N = NO. OF SAMPLES
** MAXIMUM DEPTH SAMPLED AT EACH SITE
*** S = NO. OF SITES SAMPLED ON THIS DATE

UPPER TWIN LAKES
STORET CODE 1613

PHYSICAL AND CHEMICAL CHARACTERISTICS

(10/24/75)

PARAMETER	N*	RANGE	MEDIAN	MAX DEPTH RANGE (METERS)
TEMPERATURE (DEG CENT)				
0.-1.5 M DEPTH	4	8.8- 10.1	9.6	0.0- 1.5
MAX DEPTH**	2	8.8- 9.9	9.3	1.5- 3.0
DISSOLVED OXYGEN (MG/L)				
0.-1.5 M DEPTH	4	9.4- 10.0	9.7	0.0- 1.5
MAX DEPTH**	2	9.4- 9.8	9.6	1.5- 3.0
CONDUCTIVITY (UMHOS)				
0.-1.5 M DEPTH	4	20.- 24.	22.	0.0- 1.5
MAX DEPTH**	2	20.- 24.	22.	1.5- 3.0
PH (STANDARD UNITS)				
0.-1.5 M DEPTH	4	6.9- 7.3	7.1	0.0- 1.5
MAX DEPTH**	2	7.0- 7.3	7.1	1.5- 3.0
TOTAL ALKALINITY (MG/L)				
0.-1.5 M DEPTH	4	10.- 18.	10.	0.0- 1.5
MAX DEPTH**	2	10.- 18.	14.	1.5- 3.0
TOTAL P (MG/L)				
0.-1.5 M DEPTH	4	0.014-0.019	0.016	0.0- 1.5
MAX DEPTH**	2	0.018-0.019	0.018	1.5- 3.0
DISSOLVED ORTHO P (MG/L)				
0.-1.5 M DEPTH	4	0.002-0.005	0.002	0.0- 1.5
MAX DEPTH**	2	0.002-0.005	0.003	1.5- 3.0
NO2+NO3 (MG/L)				
0.-1.5 M DEPTH	4	0.020-0.020	0.020	0.0- 1.5
MAX DEPTH**	2	0.020-0.020	0.020	1.5- 3.0
AMMONIA (MG/L)				
0.-1.5 M DEPTH	4	0.020-0.020	0.020	0.0- 1.5
MAX DEPTH**	2	0.020-0.020	0.020	1.5- 3.0
KJELDAHL N (MG/L)				
0.-1.5 M DEPTH	4	0.200-0.400	0.300	0.0- 1.5
MAX DEPTH**	2	0.200-0.300	0.250	1.5- 3.0
SECCHI DISC (METERS)				
	2	3.1- 3.2	3.2	

* N = NO. OF SAMPLES
** MAXIMUM DEPTH SAMPLED AT EACH SITE

LOWER TWIN LAKES
STORET CODE 1612

PHYSICAL AND CHEMICAL CHARACTERISTICS

PARAMETER	N*	(6/ 3/75) S*** = 3 RANGE	MEDIAN	MAX DEPTH RANGE (METERS)	N*	(7/23/75) S*** = 3 RANGE	MEDIAN	MAX DEPTH RANGE (METERS)	N*	(9/10/75) S*** = 3 RANGE	MEDIAN	MAX DEPTH RANGE (METERS)
TEMPERATURE (DEG CENT)												
0.-1.5 M DEPTH	6	13.7- 15.8	14.9	0.0- 1.5	6	23.9- 25.5	24.6	0.0- 1.5	5	14.3- 15.4	14.5	0.0- 1.5
MAX DEPTH**	3	5.6- 15.5	13.7	1.5- 14.6	3	8.0- 25.3	23.7	1.2- 14.0	3	3.6- 15.4	14.4	0.0- 13.7
DISSOLVED OXYGEN (MG/L)												
0.-1.5 M DEPTH	6	8.8- 9.6	9.0	0.0- 1.5	6	8.2- 9.6	8.7	0.0- 1.5	5	8.6- 9.8	9.0	0.0- 1.5
MAX DEPTH**	3	8.0- 9.0	8.8	1.5- 14.6	3	7.6- 8.8	8.8	1.2- 14.0	3	1.8- 9.8	9.0	0.0- 13.7
CONDUCTIVITY (UMHOS)												
0.-1.5 M DEPTH	6	22.- 23.	23.	0.0- 1.5	6	19.- 25.	23.	0.0- 1.5	5	10.- 18.	14.	0.0- 1.5
MAX DEPTH**	3	20.- 23.	23.	1.5- 14.6	3	17.- 25.	22.	1.2- 14.0	3	9.- 18.	14.	0.0- 13.7
PH (STANDARD UNITS)												
0.-1.5 M DEPTH	6	7.3- 8.0	7.8	0.0- 1.5	6	7.0- 7.8	7.3	0.0- 1.5	5	7.5- 8.1	7.8	0.0- 1.5
MAX DEPTH**	3	8.0- 8.2	8.2	1.5- 14.6	3	6.7- 7.4	7.2	1.2- 14.0	3	7.0- 7.9	7.8	0.0- 13.7
TOTAL ALKALINITY (MG/L)												
0.-1.5 M DEPTH	6	14.- 21.	15.	0.0- 1.5	6	13.- 24.	23.	0.0- 1.5	5	10.- 26.	17.	0.0- 1.5
MAX DEPTH**	3	12.- 21.	18.	1.5- 14.6	3	14.- 23.	18.	1.2- 14.0	3	13.- 25.	15.	0.0- 13.7
TOTAL P (MG/L)												
0.-1.5 M DEPTH	6	0.012-0.018	0.016	0.0- 1.5	6	0.013-0.018	0.015	0.0- 1.5	5	0.012-0.422	0.015	0.0- 1.5
MAX DEPTH**	3	0.012-0.018	0.016	1.5- 14.6	3	0.015-0.022	0.016	1.2- 14.0	3	0.008-0.422	0.014	0.0- 13.7
DISSOLVED ORTHO P (MG/L)												
0.-1.5 M DEPTH	6	0.007-0.014	0.011	0.0- 1.5	6	0.009-0.012	0.009	0.0- 1.5	5	0.002-0.012	0.002	0.0- 1.5
MAX DEPTH**	3	0.007-0.009	0.007	1.5- 14.6	3	0.009-0.012	0.009	1.2- 14.0	3	0.002-0.012	0.002	0.0- 13.7
NO2+NO3 (MG/L)												
0.-1.5 M DEPTH	6	0.020-0.020	0.020	0.0- 1.5	6	0.020-0.020	0.020	0.0- 1.5	5	0.020-0.020	0.020	0.0- 1.5
MAX DEPTH**	3	0.020-0.020	0.020	1.5- 14.6	3	0.020-0.020	0.020	1.2- 14.0	3	0.020-0.020	0.020	0.0- 13.7
AMMONIA (MG/L)												
0.-1.5 M DEPTH	6	0.030-0.040	0.035	0.0- 1.5	6	0.020-0.060	0.035	0.0- 1.5	5	0.020-0.020	0.020	0.0- 1.5
MAX DEPTH**	3	0.030-0.040	0.040	1.5- 14.6	3	0.020-0.040	0.030	1.2- 14.0	3	0.020-0.020	0.020	0.0- 13.7
KJELDAHL N (MG/L)												
0.-1.5 M DEPTH	6	0.200-0.400	0.350	0.0- 1.5	6	0.200-0.800	0.400	0.0- 1.5	5	0.200-1.600	0.400	0.0- 1.5
MAX DEPTH**	3	0.300-0.400	0.300	1.5- 14.6	3	0.200-0.400	0.300	1.2- 14.0	3	0.200-1.600	0.400	0.0- 13.7
SECCHI DISC (METERS)	2	3.2- 4.9	4.0		1	3.7- 3.7	3.7		3	1.8- 3.7	3.0	

* N = NO. OF SAMPLES
** MAXIMUM DEPTH SAMPLED AT EACH SITE

LOWER TWIN LAKES
STORET CODE 1612

PHYSICAL AND CHEMICAL CHARACTERISTICS

(10/24/75)

S*** = ?

PARAMETER	N*	RANGE	MEDIAN	MAX DEPTH RANGE (METERS)
TEMPERATURE (DEG CENT)				
0.-1.5 M DEPTH	6	9.3- 11.3	10.4	0.0- 1.5
MAX DEPTH**	3	8.1- 10.0	9.3	1.5- 17.1
DISSOLVED OXYGEN (MG/L)				
0.-1.5 M DEPTH	5	8.2- 9.2	8.8	0.0- 1.5
MAX DEPTH**	2	1.4- 9.2	5.3	3.0- 17.1
CONDUCTIVITY (UMHOS)				
0.-1.5 M DEPTH	6	24.- 25.	24.	0.0- 1.5
MAX DEPTH**	3	23.- 32.	24.	1.5- 17.1
PH (STANDARD UNITS)				
0.-1.5 M DEPTH	6	6.7- 7.1	7.0	0.0- 1.5
MAX DEPTH**	3	6.4- 7.1	6.8	1.5- 17.1
TOTAL ALKALINITY (MG/L)				
0.-1.5 M DEPTH	6	10.- 16.	10.	0.0- 1.5
MAX DEPTH**	3	10.- 10.	10.	1.5- 17.1
TOTAL P (MG/L)				
0.-1.5 M DEPTH	6	0.013-0.049	0.016	0.0- 1.5
MAX DEPTH**	3	0.015-0.206	0.020	1.5- 17.1
DISSOLVED ORTHO P (MG/L)				
0.-1.5 M DEPTH	6	0.002-0.018	0.003	0.0- 1.5
MAX DEPTH**	3	0.002-0.149	0.003	1.5- 17.1
NO2+NO3 (MG/L)				
0.-1.5 M DEPTH	6	0.020-0.020	0.020	0.0- 1.5
MAX DEPTH**	3	0.020-0.020	0.020	1.5- 17.1
AMMONIA (MG/L)				
0.-1.5 M DEPTH	6	0.020-0.030	0.020	0.0- 1.5
MAX DEPTH**	3	0.020-0.280	0.020	1.5- 17.1
KJELDAHL N (MG/L)				
0.-1.5 M DEPTH	6	0.200-0.500	0.200	0.0- 1.5
MAX DEPTH**	3	0.200-0.400	0.400	1.5- 17.1
SECCHI DISC (METERS)				
	3	2.4- 4.0	3.0	

* N = NO. OF SAMPLES
** MAXIMUM DEPTH SAMPLED AT EACH SITE
*** = NO. OF SITES SAMPLED ON THIS DATE

B. Biological Characteristics:

1. Phytoplankton - Not available at this time.

2. Chlorophyll a -

Sampling Date	Station Number	Chlorophyll a (µg/l)
06/03/75	01 (Lower Twin)	1.7
	02	1.1
	03	1.2
	01 (Upper Twin)	2.5
	02	2.4
07/23/75	01	2.9
	02	3.7
	03	2.0
	01	1.9
	02	3.4
09/10/75	01	3.7
	02	2.5
	03	---
	01	19.4
	02	---
10/24/75	01	2.8
	02	2.5
	03	1.4
	01	2.5
	02	2.8

C. Limiting Nutrient Study:

1. Autoclaved, filtered, and nutrient spiked -

a. 06/03/75 (Lower Twin Lakes)

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum Yield (mg/l-dry wt.)
Control	<0.005	0.025	0.4
0.05 P	<0.055	0.025	1.4
0.05 P + 1.0 N	<0.055	1.025	17.4
1.00 N	<0.005	1.025	0.5

b. 09/10/75

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum Yield (mg/l-dry wt.)
Control	0.010	0.035	0.9
0.05 P	0.060	0.035	5.6
0.05 P + 1.0 N	0.060	1.035	18.8
1.00 N	0.010	1.035	0.8

c. 10/24/75

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum Yield (mg/l-dry wt.)
Control	0.010	0.050	0.7
0.05 P	0.060	0.050	3.9
0.05 P + 1.0 N	0.060	1.050	21.2
1.00 N	0.010	1.050	0.7

C. Limiting Nutrient Study (continued) -

1. Autoclaved, filtered, and nutrient spiked -

d. 06/03/75 (Upper Twin Lakes)

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum Yield (mg/l-dry wt.)
Control	<0.005	0.025	0.3
0.05 P	<0.055	0.025	1.7
0.05 P + 1.0 N	<0.055	1.025	17.6
1.00 N	<0.005	1.025	0.3

e. 09/10/75

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum Yield (mg/l-dry wt.)
Control	0.025	0.150	2.1
0.05 P	0.075	0.150	9.0
0.05 P + 1.0 N	0.075	1.150	24.4
1.00 N	0.025	1.150	2.1

f. 10/24/75

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum Yield (mg/l-dry wt.)
Control	0.005	0.045	0.6
0.05 P	0.055	0.045	4.0
0.05 P + 1.0 N	0.055	1.045	25.6
1.00 N	0.005	1.045	0.5

2. Discussion -

The control yields of the assay alga, Selenastrum capricornutum, indicate that the potential for primary productivity was moderate in Upper and Lower Twin Lakes except during September sampling when it was high in Upper Twin Lakes. In all assays, there was significant increase in yield over that of the control when orthophosphorus was added indicating phosphorus limitation. The addition of nitrogen alone did not result in an increase in yield, and the maximum growth increase over that of the control was achieved with the simultaneous addition of both nitrogen and phosphorus.

Mean inorganic nitrogen to orthophosphorus ratios N/P in the lake data were approximately 6/1 in Lower Twin Lakes for all sampling rounds suggesting nitrogen limitation at those times. In Upper Twin Lakes, the N/P ratios of approximately 5/1 and 6/1 in June and August suggest nitrogen limitation, while the approximate ratios of 21/1 and 13/1 in September and October suggest phosphorus limitation and co-limitation by the two nutrients, respectively, on those sampling occasions.

IV. NUTRIENT LOADINGS
(See Appendix D for data)

For the determination of nutrient loadings, the Idaho National Guard collected monthly near-surface grab samples from each of the tributary sites indicated on the map (page i), except for the high runoff month of July when two samples were collected. Sampling was begun in October 1974, and was completed in September 1975.

Through an interagency agreement, stream flow estimates for the year of sampling and a "normalized" or average year were provided by the Idaho District Office of the USGS for the tributary sites nearest the lake.

In this report, nutrient loads for sampled tributaries were determined by using a modification of a USGS computer program for calculating stream loadings. Nutrient loads indicated for tributaries are those measured minus known point source loads, if any.

Nutrient loadings for unsampled "minor tributaries and immediate drainage" ("ZZ" of USGS) were estimated by using the mean annual nutrient loads, in $kg/km^2/year$, in Shove Creek and Fish Creek at Stations C-1 and D-1 and multiplying the means by the ZZ area in km^2.

A. Waste Sources:

1. Known municipal - None

2. Known industrial - None

B. Annual Total Phosphorus Loading - Average Year:

1. Inputs -

Source	kg P/yr	% of total
a. Tributaries (nonpoint load) -		
C-1 Shove Creek	55	3.0
D-1 Fish Creek	580	31.3
b. Minor tributaries and immediate drainage (nonpoint load) -	870	46.8
c. Known municipal STP's - None		
d. Septic tanks* -	65	3.5
e. Known industrial - None		
f. Direct precipitation** -	285	15.4
Totals	1,855	100.0%

2. Outputs - A-1 Rathdrum Creek 235

3. Net annual P accumulation - 1,620

*Estimate based on 227 lakeshore residences.
**Estimated (See NES Working Paper No. 175).

C. Annual Total Nitrogen Loading - Average Year:

1. Inputs -

Source		kg N/yr	% of total
a.	Tributaries (nonpoint load) -		
	C-1 Shove Creek	1,970	4.0
	D-1 Fish Creek	8,590	17.3
b.	Minor tributaries and immediate drainage (nonpoint load) -	18,970	38.2
c.	Known municipal STP's - None		
d.	Septic tanks* -	2,420	4.9
e.	Known industrial - None		
f.	Direct precipitation** -	17,650	35.6
	Totals	49,600	100.0%

2. Outputs - A-1 Rathdrum Creek 7,610

3. Net annual N accumulation - 41,990

*Estimate based on 227 lakeshore residences.
**Estimated (See NES Working Paper No. 175).

D. Mean Annual Nonpoint Nutrient Export by Subdrainage Area:

Tributary	kg P/km^2/yr	kg N/km^2/yr
Shove Creek	8	298
Fish Creek	15	227

E. Mean Nutrient Concentrations in Ungaged Streams:

Tributary	Mean Total P (mg/l)	Mean Total N (mg/l)
B-1 Unnamed Stream	0.037	0.570

E. Yearly Loadings:

In the following table, the existing phosphorus loading is compared to the realtionship proposed by Vollenweider (1975). Essentially, his "eutrophic" loading is that at which the receiving waters would become eutrophic or remain eutrophic; his "oligotrophic" loading is that which would result in the receiving water remaining oligotrophic or becoming oligotrophic if morphometry permitted. A "mesotrophic" loading would be considered one between "dangerous" and "permissible."

Note that Vollenweider's model may not be applicable to water bodies with very short retention times or in which light penetration is severely restricted from high concentrations of suspended solids in the surface waters.

	Total Yearly Phosphorus Loading ($g/m^2/yr$)
Estimated loading for Upper and Lower Twin Lakes	0.11
Vollenweider's "eutrophic" loading	0.22
Vollenweider's "oligotrophic" loading	0.11

V. LITERATURE REVIEWED

Idaho Department of Water Resources, Department of Health and Welfare, Department of Fish and Game, and Department of Budget, Policy Planning and Coordination. 1975. "Idaho Environmental Overview". Boise, Idaho.

Martin, R.O.R. and Ronald L. Hanson, 1966. Reservoirs in the U.S. Geological Survey Water Supply Paper 1838. U.S. Government Printing Office, Washington, D.C.

U.S. Environmental Protection Agency. 1975. National Eutrophication Survey Methods 1973-1976. Working Paper No. 175. National Environmental Research Center, Las Vegas, Nevada, and Pacific Northwest Environmental Research Laboratory, Corvallis, Oregon.

Vollenweider, R. A. 1975. Input-Output Models With Special Reference to the Phosphorus Loading Concept in Limnology. Schweiz. Z. Hydrol. 37:53-84.

VI. APPENDICES

APPENDIX A

CONVERSION FACTORS

CONVERSION FACTORS

Hectares x 2.471 = acres

Kilometers x 0.6214 = miles

Meters x 3.281 = feet

Cubic meters x 8.107×10^{-4} = acre/feet

Square kilometers x 0.3861 = square miles

Cubic meters/sec x 35.315 = cubic feet/sec

Centimeters x 0.3937 = inches

Kilograms x 2.205 = pounds

Kilograms/square kilometer x 5.711 = lbs/square mile

APPENDIX B

TRIBUTARY FLOW DATA

TRIBUTARY FLOW INFORMATION FOR IDAHO 08/23/76

LAKE CODE 1612 TWIN LAKES

TOTAL DRAINAGE AREA OF LAKE(SQ KM) 133.4

TRIBUTARY	SUB-DRAINAGE AREA(SQ KM)	NORMALIZED FLOWS(CMS) JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN	CFS
1612A1	133.4	0.57	0.74	0.96	1.70	1.13	0.68	0.68	0.62	0.31	0.11	0.17	0.31	0.66	23.3
1612C1	5.5	0.113	0.142	0.255	0.283	0.198	0.085	0.028	0.028	0.028	0.028	0.028	0.057	0.106	3.7
161201	37.8	0.57	0.88	1.39	1.56	1.19	0.48	0.23	0.14	0.14	0.17	0.23	0.34	0.61	21.5
161277	89.8	1.42	1.98	3.34	3.71	2.72	1.13	0.45	0.37	0.37	0.40	0.45	0.79	1.42	50.2

SUMMARY

TOTAL DRAINAGE AREA OF LAKE = 133.4
SUM OF SUB-DRAINAGE AREAS = 133.3
TOTAL FLOW IN = 25.71 908.0 CFS
TOTAL FLOW OUT = 7.99 282 CFS

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
1612A1 OUTLET	10	74	0.072	19	0.071	2.5			
	11	74	0.113	18	0.113	4.0			
	12	74	0.196	16	0.130	4.6			
	1	75	0.507	18	0.580	20.5			
	2	75	0.906	16	0.510	18.0			
	3	75	1.356	16	0.864	30.5			
	4	75	1.484	13	0.255	9.0			
	5	75	4.332	16	5.097	180 CFS			
	6	75	0.988	7	1.416	50			
	7	75	0.467	5	0.566	20.0	0.566	28	0.425
	8	75	0.368	8	0.396	14.0			
	9	75	0.230						
1612C1 Stream CE.	10	74	0.017	19	0.017				
	11	74	0.028	18	0.037				
	12	74	0.028	16	0.023				
	1	75	0.037	18	0.079				
	2	75	0.051	16	0.062				
	3	75	0.133	16	0.108				
	4	75	0.261	13	0.156				
	5	75	0.368	16	0.481				
	6	75	0.122	7	0.150				
	7	75	0.048	5	0.057	8	0.051	28	0.037
	8	75	0.031	8	0.028				
	9	75	0.025						

TRIBUTARY FLOW INFORMATION FOR IDAHO 08/23/76

LAKE CODE 1612 TWIN LAKES

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
161201 FISH CR	10	74	0.105	19	0.099				
	11	74	0.159	18	0.210				
	12	74	0.164	16	0.136				
	1	75	0.210	18	0.453				
	2	75	0.283	16	0.368				
	3	75	0.765	16	0.623				
	4	75	1.472	13	0.906				
	5	75	2.124	16	2.718				
	6	75	0.680	7	0.850				
	7	75	0.278	5	0.311	8	0.283	26	0.210
	8	75	0.173	8	0.161				
	9	75	0.142						

APPENDIX C

PHYSICAL AND CHEMICAL DATA

STORET RETRIEVAL DATE 76/09/25
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

161201
47 53 27.0 116 53 00.0 3
LOWER TWIN LAKES
16055 IDAHO

130292

11EPALES 2111202
0015 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/06/03	12	15 0000	15.8	9.0	126	22	7.80	14	0.040	0.400	0.020K	0.012
	12	15 0005	15.7	9.0		22	7.90	14	0.030	0.400	0.020K	0.011
	12	15 0011	15.5	9.0		23	8.20	12	0.040	0.400	0.020K	0.007
75/07/23	13	15 0000	24.2	8.6	144	25	7.05	24	0.060	0.800	0.020K	0.012
	13	15 0005	23.9	8.8		21	7.20	24	0.040	0.400	0.020K	0.009
	13	15 0010	23.7	7.6		22	7.20	23	0.020	0.400	0.020K	0.009
75/09/10	14	30 0000	14.5	9.0	144	14	8.15	26	0.020K	0.500	0.020K	0.004
	14	30 0005	14.3	9.0		14	7.70	10	0.020K	0.400	0.020K	0.002
	14	30 0009	14.4	9.0		14	7.80	13	0.020K	0.400	0.020K	0.002
75/10/24	10	30 0000	10.4	9.0	156	24	6.70	16	0.030	0.500	0.020K	0.018
	10	30 0005	10.4	8.8		24	6.70	10K	0.020K	0.400	0.020K	0.006
	10	30 0010	10.0	9.2		23	6.80	10K	0.020K	0.400	0.020K	0.003

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT RFMNING PERCENT
75/06/03	12	15 0000	0.016	1.7	
	12	15 0005	0.017		
	12	15 0011	0.016		
75/07/23	13	15 0000	0.018	2.9	
	13	15 0005	0.015		
	13	15 0010	0.015		
75/09/10	14	30 0000	0.034	3.7	
	14	30 0005	0.015		
	14	30 0009	0.014		
75/10/24	10	30 0000	0.030	2.8	
	10	30 0005	0.049		
	10	30 0010	0.020		

K VALUE KNOWN TO BE LESS
THAN INDICATED

STORET RETRIEVAL DATE 76/08/25
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

161202
47 52 44.0 116 51 59.0 3
LOWER TWIN LAKES
16055 IDAHO

130292

11EPALES 2111207
0052 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/06/03	12 35	0000	15.0	8.8	192	22	7.30	14	0.030	0.200	0.020K	0.011
	12 35	0005	14.9	9.0		23	7.50	16	0.040	0.300	0.020K	0.014
	12 35	0015	14.1	9.0		22	7.70	17	0.030	0.300	0.020K	0.011
	12 35	0025	7.0	8.0		19	7.70	15	0.030	0.300	0.020K	0.009
	12 35	0048	5.6	8.0		20	8.20	18	0.030	0.300	0.020K	0.009
75/07/23	13 35	0000	25.0	9.6		20	7.80	24	0.030	0.500	0.020K	0.009
	13 35	0005	24.2	8.6		19	7.30	22	0.020	0.200	0.020K	0.009
	13 35	0015	22.6	9.4		17	7.20	24	0.030	0.200K	0.020K	0.010
	13 35	0030	10.6	5.8		12	6.40	16	0.090	0.400	0.030	0.020
	13 35	0046	8.0	8.8		17	6.70	18	0.040	0.200K	0.020	0.012
75/09/10	11 40	0000	14.7	8.6	120	14	7.80	17	0.020K	0.200K	0.020K	0.002
	11 40	0005	14.4	8.6		10	7.50	16	0.020K	0.200K	0.020K	0.002K
	11 40	0020	12.3	8.4		8	7.30	15	0.020K	0.200	0.020K	0.005
	11 40	0030	6.4	1.8		8	6.80	16	0.020	0.200	0.020K	0.006
	11 40	0045	3.6	1.8		9	7.05	15	0.020K	0.200	0.020K	0.002
75/10/24	09 50	0000	11.3	8.2	120	25	7.00	10K	0.020K	0.200	0.020K	0.003
	09 50	0005	11.2	8.2		24	7.00	10K	0.020K	0.200K	0.020K	0.004
	09 50	0016	11.2	8.6		24	6.90	10K	0.020K	0.200K	0.020K	0.004
	09 50	0040	10.9	7.6		24	6.70	10K	0.020K	0.200K	0.020K	0.010
	09 50	0056	8.1	1.4		32	6.45	10	0.280	0.400	0.020K	0.149

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/06/03	12 35	0000	0.012	1.1	
	12 35	0005	0.016		
	12 35	0015	0.013		
	12 35	0025	0.012		
	12 35	0048	0.012		
75/07/23	13 35	0000	0.013	3.7	
	13 35	0005	0.013		
	13 35	0015	0.015		
	13 35	0030	0.024		
	13 35	0046	0.022		
75/09/10	11 40	0000	0.012	2.5	
	11 40	0005	0.014		
	11 40	0020	0.027		
	11 40	0030	0.015		
	11 40	0045	0.008		
75/10/24	09 50	0000	0.015	2.5	
	09 50	0005	0.017		

K VALUE KNOWN TO BE LESS THAN INDICATED

STORET RETRIEVAL DATE 76/08/25
NATL EUTROPHICATION SURVEY
FPA-LAS VEGAS

161203
47 51 38.0 116 51 54.0 3
LOWER TWIN LAKES
16055 IDAHO

130391

11EPALES 2111202
0008 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/06/03	13 00	0000	14.7	9.6		23	8.00	17	0.030	0.400	0.020K	0.010
	13 00	0005	13.7	8.8		23	8.00	21	0.040	0.300	0.020K	0.007
75/07/23	13 55	0000	25.5	8.2		25	7.40	13	0.050	0.400	0.020K	0.010
	13 55	0004	25.3	8.8		25	7.40	14	0.030	0.300	0.020K	0.009
75/09/10	14 15	0000	15.4	9.8	72	18	7.90	25	0.020	1.600	0.020K	0.012
75/10/24	09 30	0000	9.3	9.2	96	24	7.10	10	0.020K	0.200K	0.020K	0.003
	09 30	0005	9.3			24	7.10	10K	0.020K	0.200K	0.020K	0.002

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/06/03	13 00	0000	0.016	1.2	
	13 00	0005	0.018		
75/07/23	13 55	0000	0.016	2.0	
	13 55	0004	0.016		
75/09/10	14 15	0000	0.422		
75/10/24	09 30	0000	0.013	1.4	
	09 30	0005	0.015		

K VALUE KNOWN TO BE LESS
THAN INDICATED

STORET RETRIEVAL DATE 76/08/25
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

161301
47 53 15.0 116 55 10.0 3
UPPER TWIN LAKES
16055 IDAHO

130792

11EPALES 2111202
0015 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/06/03	11 30	0000	14.7	8.8	120	22	7.70	17	0.100	0.400	0.020K	0.013
	11 30	0005	14.6	8.8		21	7.40	12	0.040	0.400	0.020K	0.017
	11 30	0011	12.4	9.2		20	7.70	10K	0.040	0.300	0.020K	0.014
75/07/23	11 15	0000	21.5	9.6		22	8.00	20	0.060	0.600	0.020K	0.011
	11 15	0008	20.4	10.2		21	7.85	19	0.020	0.400	0.020K	0.009
75/09/10	15 15	0000	16.2	9.4	144	16	8.35	14	0.030	0.400	0.020K	0.003
	15 15	0005	15.9	8.6		15	8.50	12	0.020K	0.400	0.020K	0.002
	15 15	0009	14.3	9.6		16	8.30	16	0.020K	0.400	0.020K	0.002K
75/10/24	12 05	0000	9.2	10.0	126	23	7.30	10	0.020K	0.300	0.020K	0.002K
	12 05	0005	8.8	9.8		24	7.30	18	0.020K	0.200K	0.020K	0.005

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT RFMNING PERCENT
75/06/03	11 30	0000	0.016	2.5	
	11 30	0005	0.019		
	11 30	0011	0.018		
75/07/23	11 15	0000	0.014	1.9	
	11 15	0008	0.015		
75/09/10	15 15	0000	0.016	19.4	
	15 15	0005	0.019		
	15 15	0009	0.016		
75/10/24	12 05	0000	0.018	2.5	
	12 05	0005	0.019		

K VALUE KNOWN TO BE LESS THAN INDICATED

STORET RETRIEVAL DATE 76/08/25
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

161302
47 53 28.0 116 54 02.0 3
UPPER TWIN LAKES
16055 IDAHO

130292

11EPALES 2111202
0019 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/06/03	11 55	0000	15.2	10.0	126	20	8.00	10K	0.040	0.600	0.020K	0.014
	11 55	0005	15.2	9.0		22	7.90	17	0.050	0.400	0.020K	0.007
	11 55	0015	9.8	8.8		18	7.70	15	0.030	0.300	0.020K	0.012
75/07/23	11 30	0000	22.2	6.8	180	21	7.60	19	0.040	0.600	0.020K	0.004
	11 30	0005	22.0	9.2		14	7.80	21	0.040	0.400	0.020K	0.009
	11 30	0013	19.3	9.8		19	8.70	22	0.040	0.300	0.020K	0.014
75/09/10	14 45	0000	15.5	9.4	96	14	7.60	13	0.020K	0.400	0.020K	0.002K
	14 45	0005	15.1	9.6		19	8.20	13	0.020K	0.400	0.020K	0.003
	14 45	0012	15.1	9.6		16	8.30	11	0.020K	0.500	0.020K	0.002
75/10/24	11 45	0000	10.1	9.4	124	20	6.90	10K	0.020K	0.400	0.020K	0.003
	11 45	0005	10.0	9.6		21	7.00	10K	0.020K	0.300	0.020K	0.002
	11 45	0010	9.9	9.4		20	7.00	10K	0.020K	0.300	0.020K	0.002

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT RFMNING PERCENT
75/06/03	11 55	0000	0.018	2.4	
	11 55	0005	0.017		
	11 55	0015	0.016		
75/07/23	11 30	0000	0.015	3.4	
	11 30	0005	0.014		
	11 30	0013	0.021		
75/09/10	14 45	0000	0.024		
	14 45	0005	0.022		
	14 45	0012	0.069		
75/10/24	11 45	0000	0.014	2.8	
	11 45	0005	0.015		
	11 45	0010	0.018		

K VALUE KNOWN TO BE LESS
THAN INDICATED

APPENDIX D

TRIBUTARY AND WASTEWATER TREATMENT PLANT DATA

STORET RETRIEVAL DATE 76/08/25
NATL EUTROPHICATION SURVEY
EPA- LAS VEGAS

1612A1
47 51 25.0 116 51 58.0 4
RATHDRUM CREEK
16 7.5 HAYDEN
0/TWIN LAKES 130341
GRVL RD BRDG 2.3 MI SW OF TWIN LKS STATN
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/10/19	13 50		0.024	0.200	0.055	0.005K	0.010
74/11/19	10 45		0.024	0.100K	0.061	0.005K	0.010K
74/12/16	10 30		0.040	0.200	0.015	0.005	0.010
75/01/18	13 15		0.032	0.200	0.025	0.005K	0.010K
75/02/16	14 05		0.040	0.800	0.044	0.008	0.010K
75/03/16	10 20		0.035	0.200	0.015	0.005K	0.010K
75/04/13	11 30		0.070	0.150	0.010	0.005K	0.010K
75/05/16	14 30		0.010	0.300	0.030	0.005K	0.010K
75/06/07	11 45		0.010	0.250	0.020	0.005K	0.010
75/07/05	10 30		0.005	0.400	0.015	0.005	0.010K
75/07/08	11 05		0.010	0.900	0.015	0.005K	0.010
75/07/28	11 00		0.005	0.400	0.010	0.005K	0.030
75/08/08	09 00		0.025	0.250	0.040	0.010	0.040
75/09/10	11 40		0.010	0.900	0.020	0.005K	0.010K

K VALUE KNOWN TO BE LESS
THAN INDICATED

STORET RETRIEVAL DATE 76/08/25
NATL EUTROPHICATION SURVEY
EPA- LAS VEGAS

161281
47 51 27.0 116 51 59.0 4
UNNAMED STREAM
16 7.5 HAYDEN
T/TWIN LAKES 130391
GRVL RD BRDG 2.4 MI SW OF TWIN LKS STATN
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/10/19			0.016	0.900	0.030	0.005	0.010
74/11/18	11 00		0.128	0.700	0.030	0.025	
74/12/16	10 45		0.336	0.300	0.015	0.010	0.010
75/03/16	10 15		0.375	0.200	0.025	0.005K	0.040
75/04/13	11 40		0.575	0.600	0.035	0.005K	0.020
75/05/16	14 45		0.210	0.500	0.035	0.005	0.080
75/06/07	12 05		0.070	0.250	0.055	0.020	0.060
75/07/05	10 50		0.065	0.150	0.005	0.005K	0.020
75/07/08	11 20		0.105	0.200	0.030	0.005	0.040
75/07/28	11 20		0.110	0.300	0.015	0.015	0.040
75/08/08	09 15		0.080	0.400	0.020	0.010	0.060
75/09/10	11 55		0.065	0.200	0.015	0.005	0.030

K VALUE KNOWN TO BE LESS
THAN INDICATED

STORET RETRIEVAL DATE 76/08/25
NATL EUTROPHICATION SURVEY
EPA- LAS VEGAS

1612C1
47 52 48.0 116 56 43.0 4
SHOVE CREEK
16 7.5 SPIRIT LK W
T/TWIN LAKES 130292
GRVL RD RHDG 4.2 MI WSW OF SLVR SNDS RCH
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/10/19	14 55		0.016	0.300	0.025	0.015	0.025
74/11/18	11 40		0.032	0.200	0.025	0.020	0.040
74/12/16	11 30		0.016	0.200	0.025	0.015	0.020
75/04/13	12 20		0.025	0.250	0.020	0.015	0.015
75/05/16	15 30		0.030	1.450	0.065	0.010	0.010
75/06/07	13 15		0.010	0.700	0.020	0.010	0.010
75/07/05	11 50		0.005	0.100	0.005K	0.015	0.020
75/07/08	13 00		0.010	0.050K	0.005	0.015	0.020
75/07/28	12 10		0.015	0.550	0.010	0.020	0.030
75/08/08			0.010	0.075	0.010	0.020	0.045
75/09/10	12 30		0.015	3.000	0.040	0.015	0.020

K VALUE KNOWN TO BE LESS
THAN INDICATED

STORET RETRIEVAL DATE 74/08/25
NATL EUTROPHICATION SURVEY
EPA- LAS VEGAS

161201
47 53 09.0 116 57 06.0 4
FISH CREEK
16 7.5 SPIRIT LK W
T/TWIN LAKES 130292
GRVL RD BRDG 3.8 MI W OF SILVER SNDS RCH
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/10/19	14 40		0.016	0.100	0.010	0.015	0.025
74/11/18	11 30		0.048	0.400	0.025	0.020	0.050
74/12/16	11 04		0.040	0.400	0.025	0.015	0.020
75/01/18	14 00		0.080	0.200	0.015	0.015	0.040
75/02/16	14 30		0.056	0.800	0.024	0.016	0.016
75/03/16	11 00		0.055	0.150	0.010	0.010	0.020
75/04/13	12 10		0.080	0.100	0.015	0.010	0.030
75/05/16	15 15		0.035	0.800	0.055	0.025	0.040
75/06/07	13 00		0.020	0.350	0.010	0.010	0.030
75/07/05	11 30		0.010	1.350	0.027	0.015	0.030
75/07/08	12 50		0.020	0.350	0.015	0.015	0.035
75/07/28	11 55		0.020	0.150	0.010	0.015	0.020
75/08/08	09 45		0.010	0.150	0.020	0.020	0.050
75/09/10	12 50		0.020	2.000	0.030	0.015	0.020

APPENDIX E

PARAMETRIC RANKINGS OF LAKES SAMPLED BY NES IN 1975

STATE OF IDAHO

LAKE DATA TO BE USED IN RANKINGS

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500-MEAN SEC	MEAN CHLORA	15-MIN DO	MEDIAN DISS ORTHO P
1601	AMERICAN FALLS RESERVOIR	0.105	0.080	463.800	15.379	14.700	0.035
1602	CASCADE LAKE	0.032	0.060	415.047	8.081	14.800	0.009
1603	LAKE COEUR D'ALENE	0.017	0.040	380.348	10.391	12.200	0.005
1604	DWORSHAK RESERVOIR	0.010	0.080	401.866	2.420	7.400	0.009
1605	HAUSER	0.026	0.075	366.286	11.112	14.600	0.013
1606	HAYDEN LAKE	0.010	0.040	243.500	2.787	11.800	0.003
1607	ISLAND PARK RESERVOIR	0.034	0.050	391.778	9.322	12.800	0.012
1608	LAKE LOWELL	0.070	0.070	477.111	25.389	14.600	0.015
1609	MAGIC RESERVOIR	0.062	0.130	400.750	7.322	14.700	0.020
1610	PALISADES RESERVOIR	0.024	0.080	345.428	2.067	12.800	0.007
1611	LOWER PAYETTE	0.013	0.040	234.000	4.600	9.600	0.007
1612	LOWER TWIN LAKES	0.016	0.050	370.000	2.318	13.600	0.009
1613	UPPER TWIN LAKES	0.017	0.045	369.143	4.986	8.200	0.004

PERCENT OF LAKES WITH HIGHER VALUES (NUMBER OF LAKES WITH HIGHER VALUES)

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500-MEAN SEC	MEAN CHLOPA	15-MIN DO	MEDIAN DISS ORTHO P
1601	AMERICAN FALLS RESERVOIR	0 (0)	17 (1)	8 (1)	8 (1)	21 (2)	0 (0)
1602	CASCADE LAKE	33 (4)	54 (6)	17 (2)	42 (5)	4 (0)	50 (5)
1603	LAKE COEUR D'ALENE	67 (8)	96 (11)	50 (6)	25 (3)	67 (8)	83 (10)
1604	DWORSHAK RESERVOIR	94 (11)	17 (1)	25 (3)	83 (10)	100 (12)	50 (5)
1605	HAUSER	42 (5)	33 (4)	75 (9)	17 (2)	4 (0)	25 (3)
1606	HAYDEN LAKE	96 (11)	96 (11)	92 (11)	75 (9)	75 (9)	100 (12)
1607	ISLAND PARK RESERVOIR	25 (3)	71 (8)	42 (5)	33 (4)	54 (6)	33 (4)
1608	LAKE LOWELL	8 (1)	42 (5)	0 (0)	0 (0)	33 (4)	17 (2)
1609	MAGIC RESERVOIR	17 (2)	0 (0)	33 (4)	50 (6)	21 (2)	8 (1)
1610	PALISADES RESERVOIR	50 (6)	17 (1)	83 (10)	100 (12)	54 (6)	75 (9)
1611	LOWER PAYETTE	83 (10)	54 (6)	100 (12)	67 (8)	83 (10)	67 (8)
1612	LOWER TWIN LAKES	75 (9)	71 (8)	58 (7)	92 (11)	42 (5)	50 (5)
1613	UPPER TWIN LAKES	58 (7)	83 (10)	67 (8)	58 (7)	92 (11)	92 (11)

STORET SUMMARY

**** STORET SUMMARY SECTION ****

FOLLOWING IS A RETRIEVAL OF DATA FROM THE ENVIRONMENTAL PROTECTION AGENCY'S STORET SYSTEM, A DATABASE OF SAMPLING SITES AND THEIR ASSOCIATED QUALITY DATA. THE INFORMATION WAS RETRIEVED USING SPECIFIC STORET INSTRUCTION SETS IN COMBINATION TO SELECT ONLY THE DATA REQUESTED FOR THIS RETRIEVAL. BRIEF EXPLANATIONS OF THE INSTRUCTION SETS ARE INCLUDED BELOW.
QUESTIONS MAY BE DIRECTED TO THE STORET USER ASSISTANCE SECTION AT
(202) 382-7220 OR (800) 424-9067.

FOLLOWING IS THE FORMAT FOR THE STATION HEADER INFORMATION WHICH APPEARS ON EACH PAGE OF THE RETRIEVAL UNLESS STATION AGGREGATION WAS PERFORMED

```
*                                                                                *
*                                        STATION NUMBER(S)                       *
*                                        LATITUDE/LONGITUDE PRECISION CODE       *
*                                        STATION LOCATION                        *
*                                        STATE/COUNTY CODE STATE NAME COUNTY NAME *
*                                        MAJOR BASIN NAME MAJ/MIN/SUB BASIN CODE *
*                                        MINOR BASIN NAME                        *
*STATION TYPE                            AGENCY CODE    HYDROLOGIC UNIT CODES    *
*LOCATION VERIFIED BY/DATE   STA. DEPTH   STA. STORED DATE   ARCHIVE CLASS   CSN-RSP*
*                                                                                *
*RIVER MILE INDEX                                                                *
*                                                                                *
**********************************************************************************
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CONTINUED ON NEXT PAGE(S)

RETRIEVAL PROGRAM

PGM=ALLPARM
THIS PROGRAM PRINTS ACTUAL SAMPLE VALUES FOR ALL PARAMETERS

NO BEGINNING DATE WAS REQUESTED -- STORET ASSUMED THE BEGINNING DATE WAS THAT OF THE OLDEST DATA VALUE FOUND
NO ENDING DATE WAS REQUESTED -- STORET ASSUMED THE ENDING DATE WAS THAT OF THE MOST RECENT DATA VALUE FOUND

STATION SELECTION WAS BY:

AGENCY CODE(S) AND STATION NUMBER(S) FOR THE FOLLOWING AGENCY(S):
21IDSURV

DATA SPECIFICATIONS:

NOTE
NO REMARK CODE RESTRICTIONS WERE SPECIFIED - COMPUTATIONS WILL
BE PERFORMED WITHOUT REGARD TO DATA REMARKS

DATA RESTRICTIONS:

NOTE
NO DEPTH INDICATOR RESTRICTIONS WERE SPECIFIED - COMPUTATIONS WILL
BE PERFORMED WITHOUT REGARD TO DEPTH INDICATORS

NOTE
NO GRAB/COMPOSITE RESTRICTIONS WERE SPECIFIED, SO BOTH GRAB AND COMPOSITE SAMPLE TYPES MAY HAVE
BEEN INCLUDED - COMPUTATIONS WILL BE PERFORMED WITHOUT REGARD TO SAMPLE TYPE

NOTE
NO COMPOSITE SAMPLE RESTRICTIONS WERE SPECIFIED - COMPUTATIONS WILL INCLUDE STATISTICAL FEATURES OF
THE COMPOSITING PROCESS, PRODUCING VALID RESULTS ONLY WHEN SOPHISTICATED COMPOSITES ARE NOT ENCOUNTERED.
SPECIFY COMPOSITE HANDLING KEYWORDS "ANC" AND/OR "DSROC" IF NEEDED

***** END OF SUMMARY SECTION *****

Department of Water Administration
PROTESTANT'S
Exhibit 2
Date Admitted 3/24/83

MICROFILMED

STORET RETRIEVAL DATE 83/03/11
2000082
47 53 15.0 116 55 10.0 5
UPPER TWIN LAKE STATION 01
16055 IDAHO KOOTENAI
PACIFIC NORTHWEST 130300
SPOKANE RIVER
21IDSURV 17010305000
760810 DEPTH 0
/TYPA/AMBNT/LAKE
INDEX
MILES

	INITIAL DATE			76/04/21	76/06/29	76/10/04	76/11/09	77/06/29	78/04/19	79/06/11	80/04/30
	INITIAL TIME-DEPTH-BOTTOM							1900 0006	1200		0900 0001
00010	WATER	TEMP	CENT				8.0	21.0	9.0		13.0
00011	WATER	TEMP	FAHN				46.4	69.8	48.2		55.4
00076	TURB	TRBIDMTR	HACH FTU	2.1	0.9	0.5	1.4	1.2	2.4	1.4	
00078	TRANSP	SECCHI	METERS							4.00	
00094	CNDUCTVY	FIELD	MICROMHO							25	
00095	CNDUCTVY	AT 25C	MICROMHO	25	26		55	27	21		24
00116	INTNSVE	SURVEY	IDENT					771607	771607	791607	771607
00300	DO		MG/L				12.4	7.4	11.0		9.6
00301	DO	SATUR	PERCENT				104.2	82.2	94.8		90.6
00400	PH		SU				8.20	7.50	8.10	8.25	
00403	LAB	PH	SU	7.1	6.8		7.4			6.1	6.5
00410	T ALK	CACO3	MG/L	18	16	24	44	12	7	8	9
00425	HCO3 ALK	CACO3	MG/L						7	8	9
00430	CO3 ALK	CACO3	MG/L						0	0	0
00500	RESIDUE	TOTAL	MG/L	36	31			34		29	42
00530	RESIDUE	TOT NFLT	MG/L					3		1 K	1 K
00610	NH3+NH4-	N TOTAL	MG/L				0.020	0.010	0.034	0.004	0.019
00615	NO2-N	TOTAL	MG/L				0.001 K	0.001 K	0.001 K		
00619	UN-IONZD	NH3-NH3	MG/L				0.001	0.000	0.001		
00620	NO3-N	TOTAL	MG/L				0.100 K	0.020 K	0.020 K		
00625	TOT KJEL	N	MG/L	1.090	0.700	0.330	1.000	0.900	0.620		0.200
00630	NO2&NO3	N-TOTAL	MG/L							0.02 K	0.02 K
00650	T PO4	PO4	MG/L	0.01 K	0.02						
00660	ORTHOPO4	PO4	MG/L	0.01 K	0.02	0.01 K					
00665	PHOS-TOT		MG/L P	0.020	0.020	0.010 K	0.070	0.010	0.020	0.020	0.030
00900	TOT HARD	CACO3	MG/L					8			10
00916	CALCIUM	CA-TOT	MG/L								3.2
00940	CHLORIDE	TOTAL	MG/L				2				1
00945	SULFATE	SO4-TOT	MG/L								10 K
00951	FLUORIDE	F,TOTAL	MG/L								0.04
00956	SILICA	TOTAL	MG/L								12.3
01002	ARSENIC	AS,TOT	UG/L								10 K
01027	CADMIUM	CD,TOT	UG/L								1 K
01034	CHROMIUM	CR,TOT	UG/L								50 K
01042	COPPER	CU,TOT	UG/L								10 K
01051	LEAD	PB,TOT	UG/L								50 K
01055	MANGNESE	MN	UG/L								10.0 K
01092	ZINC	ZN,TOT	UG/L								1 K
31501	TOT COLI	MFIMENDO	/100ML						1	1 K	7
31616	FEC COLI	MFM-FCBR	/100ML						1 K	1 K	1 K
31679	FECSTREP	MF M-ENT	/100ML						1 K	1 K	8
70507	PHOS-T	ORTHO	MG/L P				0.030	0.010 K	0.010 K	0.010	0.010
71845	AMMONIA	TOT-NH4	MG/L	0.2	0.0	0.0					
71850	NITRATE	TOT-NO3	MG/L	0.1 K	0.1 K	0.1 K					
71855	NITRITE	TOT-NO2	MG/L	0.00	0.00	0.00					

(SAMPLE CONTINUED ON NEXT PAGE)

STORET RETRIEVAL DATE 83/03/11
2000082
47 53 15.0 116 55 10.0 5
UPPER TWIN LAKE STATION 01
16055 IDAHO KOOTENAI
PACIFIC NORTHWEST 130300
SPOKANE RIVER
21IDSURV 17010305000
76C810 DEPTH 0
/TYPA/AMBNT/LAKE
INDEX
MILES . . . . . .

(SAMPLE CONTINUED FROM PREVIOUS PAGE)

	INITIAL DATE			76/04/21	76/06/29	76/10/04	76/11/09	77/06/29	78/04/19	79/06/11	80/04/30
	INITIAL TIME-DEPTH-BOTTOM							1900 0006	1200		0900 0001
71900	MERCURY	HG,TOTAL	UG/L								0.5 K
	INITIAL DATE			80/04/30	80/04/30	80/04/30	80/04/30	80/04/30	80/07/17	80/07/17	80/07/17
	INITIAL TIME-DEPTH-BOTTOM			0900 0002	0900 0003	0900 0004	0900 0005	0000	0000	0001	0002
00010	WATER	TEMP	CENT	13.0	13.0	11.0	11.0	13.0	19.2	19.2	19.2
00011	WATER	TEMP	FAHN	55.4	55.4	51.8	51.8	55.4	66.6	66.6	66.6
00076	TURB	TRBIDMTR	HACH FTU							1.3	
00078	TRANSP	SECCHI	METERS					3.50	4.50		
00095	CNDUCTVY	AT 25C	MICROMHO							24	
00116	INTNSVE	SURVEY	IDENT	771607	771607	771607	771607	771607	771607	771607	771607
00300	DO		MG/L	9.6	9.6	8.6	7.4	9.6			8.0
00301	DO	SATUR	PERCENT	90.6	90.6	77.5	66.7	90.6			85.1
00400	PH		SU					7.80	7.40		
00403	LAB	PH	SU							6.5	
00410	T ALK	CACO3	MG/L							11	
00425	HCO3 ALK	CACO3	MG/L							11	
00430	CO3 ALK	CACO3	MG/L							0	
00530	RESIDUE	TOT NFLT	MG/L							1	
00610	NH3+NH4-	N TOTAL	MG/L							0.034	
00625	TOT KJEL	N	MG/L							0.600	
00630	NO2&NO3	N-TOTAL	MG/L							0.02 K	
00665	PHOS-TOT		MG/L P							0.020	
00900	TOT HARD	CACO3	MG/L							16	
00916	CALCIUM	CA-TOT	MG/L							4.8	
00927	MGNSIUM	MG,TOT	MG/L							0.5	
00929	SODIUM	NA,TOT	MG/L							2.20	
00937	PTSSIUM	K,TOT	MG/L							0.40	
00940	CHLORIDE	TOTAL	MG/L							1	
00945	SULFATE	SO4-TOT	MG/L							10 K	
00956	SILICA	TOTAL	MG/L							10.6	
01002	ARSENIC	AS,TOT	UG/L							10 K	
01027	CADMIUM	CD,TOT	UG/L							5 K	
01034	CHROMIUM	CR,TOT	UG/L							50 K	
01042	COPPER	CU,TOT	UG/L							10 K	
01045	IRON	FE,TOT	UG/L							250	
01051	LEAD	PB,TOT	UG/L							50 K	
01055	MANGNESE	MN	UG/L							10.0 K	
01092	ZINC	ZN,TOT	UG/L							1	
31501	TOT COLI	MFIMENDO	/100ML							1 K	
31616	FEC COLI	MFM-FCBR	/100ML							1 K	
31679	FECSTREP	MF M-ENT	/100ML							2	
70300	RESIDUE	DISS-180	C MG/L							35	
70507	PHOS-T	ORTHO	MG/L P							0.010	
71900	MERCURY	HG,TOTAL	UG/L							0.5 K	

```
 2CCC082
47 53 15.0 116 55 10.0  5
UPPER TWIN LAKE STATION 01
16055 IDAHO              KOOTENAI
PACIFIC NORTHWEST         130300
SPOKANE RIVER
21IDSURV            17010305000
        760810     DEPTH    0
/TYPA/AMBNT/LAKE
INDEX
MILES     .       .       .       .       .       .       .       .       .       .       .       .
     INITIAL DATE                          80/07/17  80/07/17  80/07/17
     INITIAL TIME-DEPTH-BOTTOM                  0003      0004      0005
00010  WATER      TEMP      CENT          19.2      19.2      19.2
00011  WATER      TEMP      FAHN          66.6      66.6      66.6
00116  INTNSVE   SURVEY     IDENT       771607    771607    771607
00300    DO                 MG/L           8.0       7.4       3.4
00301    DO       SATUR    PERCENT        85.1      78.7      36.2
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STORET RETRIEVAL DATE 83/03/11
2000083
47 53 28.0 116 54 02.0 5
UPPER TWIN LAKE STATION 02
16055 IDAHO KOOTENAI
PACIFIC NORTHWEST 130300
SPOKANE RIVER
21IDSURV 17010305000
76C810 DEPTH 0
/TYPA/AMBNT/LAKE
INDEX
MILES

	INITIAL DATE			76/04/21	76/06/29	76/10/04	76/11/09	77/06/29	78/04/19	79/06/11	80/04/30	
	INITIAL TIME-DEPTH-BOTTOM							1415 0009	1220		0920 0000	
00010	WATER	TEMP	CENT				7.5	21.1	9.0		13.0	
00011	WATER	TEMP	FAHN				45.5	70.0	48.2		55.4	
00076	TURB	TRBIDMTR	HACH FTU	2.4	1.0	0.4	0.8	1.1	2.3	0.9		
00078	TRANSP	SECCHI	METERS						3.00	4.50	3.50	
00094	CNDUCTVY	FIELD	MICROMHO							25		
00095	CNDUCTVY	AT 25C	MICROMHO	24	25		63	26	20			
00116	INTNSVE	SURVEY	IDENT					771607	771607	771607	771607	
00300	DO		MG/L				12.6	7.2	10.8		9.6	
00301	DO	SATUR	PERCENT				105.9	80.0	93.1		90.6	
00400	PH		SU				7.90	7.70	8.00	8.25		
00403	LAB	PH	SU	7.1	7.1		7.5			6.1		
00410	T ALK	CACO3	MG/L	22	20	28	44	12	8	7		
00425	HCO3 ALK	CACO3	MG/L						8	7		
00430	CO3 ALK	CACO3	MG/L						0	0		
00500	RESIDUE	TOTAL	MG/L	35	34			34		32		
00530	RESIDUE	TOT NFLT	MG/L					2		1 K		
00610	NH3+NH4-	N TOTAL	MG/L				0.020	0.010	0.018	0.009		
00615	NO2-N	TOTAL	MG/L				0.001 K	0.001 K	0.001			
00619	UN-IONZD	NH3-NH3	MG/L				0.000	0.000	0.000			
00620	NO3-N	TOTAL	MG/L				0.100 K	0.020 K	0.020 K			
00625	TOT KJEL	N	MG/L	0.610	0.500	0.760	0.700	0.600	0.450			
00630	NO2&NO3	N-TOTAL	MG/L							0.02 K		
00650	T PO4	PO4	MG/L	0.01 K	0.05							
00660	ORTHOPO4	PO4	MG/L	0.01 K	0.03	0.01 K						
00665	PHOS-TOT		MG/L P	0.030	0.020	0.010 K	0.060	0.010	0.020	0.010		
00900	TOT HARD	CACO3	MG/L					12				
00940	CHLORIDE	TOTAL	MG/L				2					
31501	TOT COLI	MFIMENDO	/100ML						1 K	1 K		
31616	FEC COLI	MFM-FCBR	/100ML						1 K	1 K		
31679	FECSTREP	MF M-ENT	/100ML						1 K	1 K		
70507	PHOS-T	ORTHO	MG/L P				0.020	0.010 K	0.010 K	0.010 K		
71845	AMMONIA	TOT-NH4	MG/L	0.2	0.0	0.0						
71850	NITRATE	TOT-NO3	MG/L	0.1 K	0.1 K	0.1 K						
71855	NITRITE	TOT-NO2	MG/L	0.00	0.00	0.00						

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	INITIAL TIME-DEPTH-BOTTOM			0920 0001	0920 0002	0920 0003	0920 0004	0920 0005	0920 0006	0000	0001
00010	WATER	TEMP	CENT	13.0	13.0	13.0	13.0	11.0	11.0	19.2	19.2
00011	WATER	TEMP	FAHN	55.4	55.4	55.4	55.4	51.8	51.8	66.6	66.6
00078	TRANSP	SECCHI	METERS							4.25	
00095	CNDUCTVY	AT 25C	MICROMHO	25							25
00116	INTNSVE	SURVEY	IDENT	771607	771607	771607	771607	771607	771607	771607	771607
00300	DO		MG/L	9.6	9.6	9.4	9.2	8.8	2.0	8.0	8.0
00301	DO	SATUR	PERCENT	90.6	90.6	88.7	86.8	79.3	18.0	85.1	85.1
00400	PH		SU							7.40	
00403	LAB	PH	SU	6.5							6.6
00500	RESIDUE	TOTAL	MG/L	37							
00530	RESIDUE	TOT NFLT	MG/L	2							7
00610	NH3+NH4-	N TOTAL	MG/L	0.011							
00625	TOT KJEL	N	MG/L	0.300							0.600
00630	NO2&NO3	N-TOTAL	MG/L	0.02 K							0.02 K
00665	PHOS-TOT		MG/L P	0.020							0.050
31501	TOT COLI	MFIMENDO	/100ML	17							1 K
31616	FEC COLI	MFM-FCBR	/100ML	1 K							1 K
31679	FECSTREP	MF M-ENT	/100ML	28							1
70507	PHOS-T	ORTHO	MG/L P	0.010							

	INITIAL DATE			80/07/17	80/07/17	80/07/17	80/07/17	80/07/17	
	INITIAL TIME-DEPTH-BOTTOM			0002	0003	0004	0005	0006	
00010	WATER	TEMP	CENT	19.2	19.2	19.2	19.2	19.2	
00011	WATER	TEMP	FAHN	66.6	66.6	66.6	66.6	66.6	
00116	INTNSVE	SURVEY	IDENT	771607	771607	771607	771607	771607	
00300	DO		MG/L	8.0	8.0	8.0	7.6	3.2	
00301	DO	SATUR	PERCENT	85.1	85.1	85.1	80.9	34.0	

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	INITIAL TIME-DEPTH-BOTTOM							1350 0006	1100	1330		
00010	WATER	TEMP	CENT				8.8	21.0	13.9	9.5		
00011	WATER	TEMP	FAHN				47.8	69.8	57.0	49.1		
00076	TURB	TRBIDMTR	HACH FTU	2.4	1.0	0.5	0.9	1.5	2.2	2.3	1.1	
00078	TRANSP	SECCHI	METERS							2.50	4.50	
00094	CNDUCTVY	FIELD	MICROMHO								25	
00095	CNDUCTVY	AT 25C	MICROMHO	25	24		38	23		22		
00116	INTNSVE	SURVEY	IDENT					771607	771607	771607	791607	
00300	DO		MG/L				11.2	7.3	8.2	11.4		
00301	DO	SATUR	PERCENT				96.6	81.1	78.8	100.9		
00400	PH		SU				8.10	7.60	7.50	8.30	7.90	
00403	LAB	PH	SU	7.1	7.2		7.5				6.0	
00410	T ALK	CACO3	MG/L	20	16	28	44	11	11	9	8	
00425	HCO3 ALK	CACO3	MG/L							9	8	
00430	CO3 ALK	CACO3	MG/L							0	0	
00500	RESIDUE	TOTAL	MG/L	34	37			34	23		29	
00530	RESIDUE	TOT NFLT	MG/L					3	1 K		1 K	
00610	NH3+NH4-	N TOTAL	MG/L				0.020	0.010 K	0.571	0.022	0.008	
00615	NO2-N	TOTAL	MG/L				0.001 K	0.001 K	0.001	0.001 K		
00619	UN-IONZD	NH3-NH3	MG/L				0.001	0.000	0.005	0.001		
00620	NO3-N	TOTAL	MG/L				0.100 K	0.020 K	0.020 K	0.020 K		
00625	TOT KJEL	N	MG/L	1.160	0.300	0.440	1.200	0.600	1.400	0.840		
00630	NO2&NO3	N-TOTAL	MG/L								0.02 K	
00650	T PO4	PO4	MG/L	0.01 K	0.07							
00660	ORTHOPO4	PO4	MG/L	0.01 K	0.03	0.01 K						
00665	PHOS-TOT		MG/L P	0.030	0.030	0.010 K	0.040	0.010	0.020	0.020	0.010	
00669	PHOS-TOT	HYDRO	MG/L P						0.010			
00900	TOT HARD	CACO3	MG/L					12				
00940	CHLORIDE	TOTAL	MG/L				2					
31501	TOT COLI	MFIMENDO	/100ML							1 K	40	
31616	FEC COLI	MFM-FCBR	/100ML							1 K	1	
31679	FECSTREP	MF M-ENT	/100ML							1 K	1 K	
70507	PHOS-T	ORTHO	MG/L P				0.010	0.010 K	0.010 K	0.010 K	0.010 K	
71845	AMMONIA	TOT-NH4	MG/L	0.2	0.0	0.0						
71850	NITRATE	TOT-NO3	MG/L	0.1 K	0.1 K	0.1 K						
71855	NITRITE	TOT-NO2	MG/L	0.00	0.00 K	0.00						

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	INITIAL TIME-DEPTH-BOTTOM			1100 0000	1100 0001	1100 0002	1100 0003	1100 0004	1100 0005	1100 0006	1100 0007		
00010	WATER	TEMP	CENT	13.0	13.0	13.0	13.0	12.7	11.0	9.0	8.0		
00011	WATER	TEMP	FAHN	55.4	55.4	55.4	55.4	54.9	51.8	48.2	46.4		
00078	TRANSP	SECCHI	METERS	4.00	4.00								
00095	CNDUCTVY	AT 25C	MICROMHO		24								
00116	INTNSVE	SURVEY	IDENT	771607	771607	771607	771607	771607	771607	771607	771607		
00300	DO		MG/L	10.6	10.6	10.2	11.2	11.0	11.0	11.0	10.8		
00301	DO	SATUR	PERCENT	100.0	100.0	96.2	105.7	103.8	99.1	94.8	90.8		
00403	LAB	PH	SU		6.7								
00410	T ALK	CACO3	MG/L		8								
00425	HCO3 ALK	CACO3	MG/L		8								
00430	CO3 ALK	CACO3	MG/L		0								
00500	RESIDUE	TOTAL	MG/L		34								
00530	RESIDUE	TOT NFLT	MG/L		1	K							
00610	NH3+NH4-	N TOTAL	MG/L		0.015								
00625	TOT KJEL	N	MG/L		0.200								
00630	NO2&NO3	N-TOTAL	MG/L		0.02	K							
00665	PHOS-TOT		MG/L P		0.020								
00900	TOT HARD	CACO3	MG/L		4								
00916	CALCIUM	CA-TOT	MG/L		2.4								
00940	CHLORIDE	TOTAL	MG/L		1								
00945	SULFATE	SO4-TOT	MG/L		10	K							
00951	FLUORIDE	F,TOTAL	MG/L		0.03								
00956	SILICA	TOTAL	MG/L		8.2								
01002	ARSENIC	AS,TOT	UG/L		10	K							
01027	CADMIUM	CD,TOT	UG/L		1	K							
01034	CHROMIUM	CR,TOT	UG/L		50	K							
01042	COPPER	CU,TOT	UG/L		10	K							
01051	LEAD	PB,TOT	UG/L		50	K							
01055	MANGNESE	MN	UG/L		10.0	K							
01092	ZINC	ZN,TOT	UG/L		1	K							
31501	TOT COLI	MFIMENDO	/100ML		1								
31616	FEC COLI	MFM-FCBR	/100ML		1	K							
31679	FECSTREP	MF M-ENT	/100ML		13								
70507	PHOS-T	ORTHO	MG/L P		0.010								
71900	MERCURY	HG,TOTAL	UG/L		0.5	K							

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INITIAL TIME-DEPTH-BOTTOM				1100 0008	1100 0009	1100 0010	1100 0011	1100 0012	1100 0013	0000	0001	
00010	WATER	TEMP	CENT	8.0	7.8	7.0	7.0	7.0	7.0	19.5	19.5	
00011	WATER	TEMP	FAHN	46.4	46.0	44.6	44.6	44.6	44.6	67.1	67.1	
00078	TRANSP	SECCHI	METERS							4.50		
00095	CNDUCTVY	AT 25C	MICROMHO								25	
00116	INTNSVE	SURVEY	IDENT	771607	771607	771607	771607	771607	771607	771607	771607	
00300	DO		MG/L	10.8	9.8	9.8	9.8	9.0	9.0	8.0	8.0	
00301	DO	SATUR	PERCENT	90.8	82.4	80.3	80.3	73.8	73.8	87.0	87.0	
00400	PH		SU							7.40		
00403	LAB	PH	SU								6.6	
00530	RESIDUE	TOT NFLT	MG/L								3	
00610	NH3+NH4-	N TOTAL	MG/L								0.052	
00625	TOT KJEL	N	MG/L								0.100	K
00630	NO2&NO3	N-TOTAL	MG/L								0.02	K
00665	PHOS-TOT		MG/L P								0.020	
31501	TOT COLI	MFIMENDO	/100ML								12	
31616	FEC COLI	MFM-FCBR	/100ML								1	K
31679	FECSTREP	MF M-ENT	/100ML								4	

INITIAL DATE				80/07/17	80/07/17	80/07/17	80/07/17	80/07/17
INITIAL TIME-DEPTH-BOTTOM				0002	0003	0004	0005	0006
00010	WATER	TEMP	CENT	19.5	19.5	19.5	19.0	19.0
00011	WATER	TEMP	FAHN	67.1	67.1	67.1	66.2	66.2
00116	INTNSVE	SURVEY	IDENT	771607	771607	771607	771607	771607
00300	DO		MG/L	8.0	8.0	4.6	6.7	3.2
00301	DO	SATUR	PERCENT	87.0	87.0	50.0	71.3	34.0

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	INITIAL TIME-DEPTH-BOTTOM							1330 0003	1330 0026	1310	0000
00C10	WATER	TEMP	CENT				9.0	20.9	15.0	9.0	20.0
00C11	WATER	TEMP	FAHN				48.2	69.6	59.0	48.2	68.0
00076	TURB	TRBIDMTR	HACH FTU	1.5	1.0	0.5	1.4	1.4	1.8	2.1	0.2
00C78	TRANSP	SECCHI	METERS								5.00
00095	CNDUCTVY	AT 25C	MICROMHO	25	23		30	25	25	20	
00116	INTNSVE	SURVEY	IDENT					771607	771607	771607	771607
00300	DO		MG/L				10.4	7.2	8.0	11.8	8.8
00301	DO	SATUR	PERCENT				89.7	80.0	78.4	101.7	95.7
00400	PH		SU				8.00	7.40		8.20	7.90
00403	LAB	PH	SU	7.1	7.1		7.3				
00410	T ALK	CACO3	MG/L	20	16	24	44	10	11	10	
00425	HCO3 ALK	CACO3	MG/L							10	
00430	CO3 ALK	CACO3	MG/L							0	
00500	RESIDUE	TOTAL	MG/L	33	34			31	30		
00530	RESIDUE	TOT NFLT	MG/L					2	4		
00610	NH3+NH4-	N TOTAL	MG/L				0.010	0.010	0.010	0.033	
00615	NO2-N	TOTAL	MG/L				0.001	0.001 K	0.001 K	0.001 K	
00619	UN-IONZD	NH3-NH3	MG/L				0.000	0.000		0.001	
00620	NO3-N	TOTAL	MG/L				0.100 K	0.020 K	0.020 K	0.020 K	
00625	TOT KJEL	N	MG/L	1.160	0.400	0.440	1.000	0.500	0.700	0.620	
00650	T PO4	PO4	MG/L	0.01 K	0.03						
00660	ORTHOPO4	PO4	MG/L	0.01 K	0.03	C.01					
00665	PHOS-TOT		MG/L P	0.150	0.040	0.020	0.060	0.010 K	0.010	0.020	
00900	TOT HARD	CACO3	MG/L					8	12		
00940	CHLORIDE	TOTAL	MG/L				2				
31501	TOT COLI	MFIMENDO	/100ML							1 K	
31616	FEC COLI	MFM-FCBR	/100ML							1 K	
31679	FECSTREP	MF M-ENT	/100ML							1 K	
70507	PHOS-T	ORTHO	MG/L P				0.020	0.010 K	0.010 K	0.010 K	
71845	AMMONIA	TOT-NH4	MG/L	0.1	0.0	C.0					
71850	NITRATE	TOT-NO3	MG/L	0.1 K	0.1 K	0.1 K					
71855	NITRITE	TOT-NO2	MG/L	0.00	0.00	C.00					

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	INITIAL TIME-DEPTH-BOTTOM			0001	0002	0003	0004	0005	0006	0007	0008		
00010	WATER	TEMP	CENT	20.0	20.0	19.0	18.0	17.5	15.0	11.5	10.0		
00011	WATER	TEMP	FAHN	68.0	68.0	66.2	64.4	63.5	59.0	52.7	50.0		
00076	TURB	TRBIDMTR	HACH FTU	1.1									
00116	INTNSVE	SURVEY	IDENT	791607	771607	771607	771607	771607	771607	771607	771607		
00300	DO		MG/L	8.8	8.9	9.0	9.1	9.1	9.2	9.8	9.1		
00301	DO	SATUR	PERCENT	95.7	96.7	95.7	95.8	95.8	90.2	90.7	80.5		
00403	LAB	PH	SU	6.1									
00410	T ALK	CACO3	MG/L	9									
00425	HCO3 ALK	CACO3	MG/L	9									
00430	CO3 ALK	CACO3	MG/L	0									
00500	RESIDUE	TOTAL	MG/L	29									
00530	RESIDUE	TOT NFLT	MG/L	1	K								
00610	NH3+NH4-	N TOTAL	MG/L	0.007									
00630	NO2&NO3	N-TOTAL	MG/L	0.02	K								
00665	PHOS-TOT		MG/L P	0.010									
31501	TOT COLI	MFIMENDO	/100ML	10									
31616	FEC COLI	MFM-FCBR	/100ML	1	K								
31679	FECSTREP	MF M-ENT	/100ML	1									
70507	PHOS-T	ORTHO	MG/L P	0.010									

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	INITIAL TIME-DEPTH-BOTTOM			0009	0010	0011	0012	0013	0014	1030 0000	1030 0001		
00010	WATER	TEMP	CENT							13.0	13.0		
00011	WATER	TEMP	FAHN							55.4	55.4		
00078	TRANSP	SECCHI	METERS							3.50			
00095	CNDUCTVY	AT 25C	MICROMHO							26			
00116	INTNSVE	SURVEY	IDENT	771607	771607	771607	771607	771607	771607	771607	771607		
00300	DO		MG/L	8.5	8.1	7.0	6.3	5.8	5.8	10.6	10.6		
00301	DO	SATUR	PERCENT							100.0	100.0		
00400	PH		SU							7.80			
00403	LAB	PH	SU							6.5			
00500	RESIDUE	TOTAL	MG/L							32			
00530	RESIDUE	TOT NFLT	MG/L							1			
00610	NH3+NH4-	N TOTAL	MG/L							0.001			
00619	UN-IONZD	NH3-NH3	MG/L							0.00			
00625	TOT KJEL	N	MG/L							0.300			
00630	NO2&NO3	N-TOTAL	MG/L							0.02	K		
00665	PHOS-TOT		MG/L P							0.020			
31501	TOT COLI	MFIMENDO	/100ML							2			
31616	FEC COLI	MFM-FCBR	/100ML							1	K		
31679	FECSTREP	MF M-ENT	/100ML							5			
70507	PHOS-T	ORTHO	MG/L P							0.010	K		

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	INITIAL TIME-DEPTH-BOTTOM			1030 0002	1030 0003	1030 0004	1030 0005	1030 0006	1030 0007	1030 0008	1030 0009		
00010	WATER	TEMP	CENT	13.0	13.0	12.0	12.0	9.0	8.0	7.0	7.0		
00011	WATER	TEMP	FAHN	55.4	55.4	53.6	53.6	48.2	46.4	44.6	44.6		
00116	INTNSVE	SURVEY	IDENT	771607	771607	771607	771607	771607	771607	771607	771607		
00300	DO		MG/L	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.4		
00301	DO	SATUR	PERCENT	100.0	100.0	98.1	98.1	91.4	89.1	86.9	85.2		
	INITIAL DATE			80/04/30	80/04/30	80/04/30	80/07/17	80/07/17	80/07/17	80/07/17	80/07/17		
	INITIAL TIME-DEPTH-BOTTOM			1030 0010	1030 0011	1030 0012	0000	0001	0002	0003	0004		
00010	WATER	TEMP	CENT	7.0	7.0		19.0	19.0	19.0	19.0	19.0		
00011	WATER	TEMP	FAHN	44.6	44.6		66.2	66.2	66.2	66.2	66.2		
00076	TURB	TRBIDMTR	HACH FTU				1.2						
00078	TRANSP	SECCHI	METERS				5.00						
00095	CNDUCTVY	AT 25C	MICROMHO				24						
00116	INTNSVE	SURVEY	IDENT	771607	771607	771607	771607	771607	771607	771607	771607		
00300	DO		MG/L	10.0	8.2	2.0	8.0	8.0	8.0	8.0	8.0		
00301	DO	SATUR	PERCENT	82.0	67.2		85.1	85.1	85.1	85.1	85.1		
00400	PH		SU				7.30						
00403	LAB	PH	SU				6.4						
00410	T ALK	CACO3	MG/L				9						
00425	HCO3 ALK	CACO3	MG/L				9						
00430	CO3 ALK	CACO3	MG/L				0						
00530	RESIDUE	TOT NFLT	MG/L				4						
00610	NH3+NH4-	N TOTAL	MG/L				0.102						
00619	UN-IONZD	NH3-NH3	MG/L				0.001						
00625	TOT KJEL	N	MG/L				0.900						
00630	NO2&NO3	N-TOTAL	MG/L				0.02	K					
00665	PHOS-TOT		MG/L P				0.010						
00900	TOT HARD	CACO3	MG/L				12						
00916	CALCIUM	CA-TOT	MG/L				3.2						
00940	CHLORIDE	TOTAL	MG/L				1	K					
00945	SULFATE	SO4-TOT	MG/L				10	K					
00956	SILICA	TOTAL	MG/L				7.0						
31501	TOT COLI	MFIMENDO	/100ML				16						
31616	FEC COLI	MFM-FCBR	/100ML				1	K					
31679	FECSTREP	MF M-ENT	/100ML				1						
70300	RESIDUE	DISS-180	C MG/L				30						
70507	PHOS-T	ORTHO	MG/L P				0.010						

STORET RETRIEVAL DATE 83/03/11
2000085
47 52 44.0 116 51 59.0 5
LOWER TWIN LAKE STATION 02
16055 IDAHO KOOTENAI
PACIFIC NORTHWEST 130300
SPOKANE RIVER
21IDSURV 17010305000
760810 DEPTH 0
/TYPA/AMBNT/LAKE
INDEX
MILES

	INITIAL DATE				80/07/17	80/07/17	80/07/17	80/07/17	80/07/17	80/07/17
	INITIAL TIME-DEPTH-BOTTOM				0005	0006	0007	0008	0009	0010
00010	WATER	TEMP	CENT		19.0	16.0	13.8	12.0	10.0	9.0
00011	WATER	TEMP	FAHN		66.2	60.8	56.8	53.6	50.0	48.2
00116	INTNSVE	SURVEY	IDENT		771607	771607	771607	771607	771607	771607
00300	DO		MG/L		8.0	8.0	8.0	8.0	8.0	6.2
00301	DO	SATUR	PERCENT		85.1	80.0	76.9	74.1	70.8	53.4

STORET RETRIEVAL DATE 83/03/11
2000086
47 51 38.0 116 51 54.0 5
LOWER TWIN LAKE STATION 03
16055 IDAHO KOOTENAI
PACIFIC NORTHWEST 130300
SPOKANE RIVER
211DSURV 17010305000
76C810 DEPTH 0
/TYPA/AMBNT/LAKE
INDEX
MILES

	INITIAL DATE			76/04/21	76/06/29	76/10/04	76/11/09	77/06/29	78/04/19	79/06/11	79/06/11		
	INITIAL TIME-DEPTH-BOTTOM							1300 0003	1245	0000	0001		
00010	WATER	TEMP	CENT				7.0	20.5	9.0	20.0	19.8		
00011	WATER	TEMP	FAHN				44.6	68.9	48.2	68.0	67.6		
00076	TURB	TRBIDMTR	HACH FTU	1.7	1.0	0.5	0.8	1.5	2.4		1.3		
00078	TRANSP	SECCHI	METERS							2.50			
00094	CNDUCTVY	FIELD	MICROMHO							25			
00095	CNDUCTVY	AT 25C	MICROMHO	25	23		28	23	21				
00116	INTNSVE	SURVEY	IDENT					771607	771607	771607	771607		
00300	DO		MG/L				12.5	7.4	12.4	9.3	9.6		
00301	DO	SATUR	PERCENT				102.5	82.2	106.9	101.1	104.3		
00400	PH		SU				8.00		8.20				
00403	LAB	PH	SU	7.2	7.0		7.5			8.2			
00410	T ALK	CACO3	MG/L	20	20	28	48	9	10		8		
00425	HCO3 ALK	CACO3	MG/L						10		8		
00430	CO3 ALK	CACO3	MG/L						0		0		
00500	RESIDUE	TOTAL	MG/L	36	35			33			28		
00530	RESIDUE	TOT NFLT	MG/L					4			1 K		
00610	NH3+NH4-	N TOTAL	MG/L				0.040	0.010 K	0.051		0.008		
00615	NO2-N	TOTAL	MG/L				0.001 K	0.001 K	0.001 K				
00619	UN-IONZD	NH3-NH3	MG/L				0.001		0.002				
00620	NO3-N	TOTAL	MG/L				0.100 K	0.020 K	0.020 K				
00625	TOT KJEL	N	MG/L	0.830	0.300	0.760	2.100	0.700	0.560				
00630	NO2&NO3	N-TOTAL	MG/L								0.02 K		
00650	T PO4	PO4	MG/L	0.01 K	0.03								
00660	ORTHOPO4	PO4	MG/L	0.01 K	0.03	0.01 K							
00665	PHOS-TOT		MG/L P	0.030	0.010	0.010 K	0.060	0.030	0.020		0.010		
00900	TOT HARD	CACO3	MG/L					8					
00940	CHLORIDE	TOTAL	MG/L				1						
31501	TOT COLI	MFIMENDO	/100ML						3		10		
31616	FEC COLI	MFM-FCBR	/100ML						1 K		1 K		
31679	FECSTREP	MF M-ENT	/100ML						1 K		1 K		
70507	PHOS-T	ORTHO	MG/L P				0.030	0.010 K	0.010 K		0.010 K		
71845	AMMONIA	TOT-NH4	MG/L	0.1	0.0	0.0							
71850	NITRATE	TOT-NO3	MG/L	0.1 K	0.1 K	0.2							
71855	NITRITE	TOT-NO2	MG/L	0.00	0.00	0.00							

STORET RETRIEVAL DATE 83/03/11
2000086
47 51 38.0 116 51 54.0 5
LOWER TWIN LAKE STATION 03
16055 IDAHO KOOTENAI
PACIFIC NORTHWEST 130300
SPOKANE RIVER
211DSURV 17010305000
760810 DEPTH 0
/TYPA/AMBNT/LAKE
INDEX
MILES

	INITIAL DATE			79/06/11	79/06/11	80/04/30	80/04/30	80/04/30	80/04/30	80/07/17	80/07/17	
	INITIAL TIME-DEPTH-BOTTOM			0002	0003	1000 0000	1000 0001	1000 0002	1000 0003	0000	0001	
00010	WATER	TEMP	CENT	19.0	19.0	12.0	12.0	12.0	12.0	19.0	19.0	
00011	WATER	TEMP	FAHN	66.2	66.2	53.6	53.6	53.6	53.6	66.2	66.2	
00078	TRANSP	SECCHI	METERS			2.50				2.50		
00095	CNDUCTVY	AT 25C	MICROMHO				25				25	
00116	INTNSVE	SURVEY	IDENT	771607	771607	771607	771607	771607	771607	771607	771607	
00300	DO		MG/L	10.2	9.6	11.6	11.6	11.6	11.0	8.0	8.0	
00301	DO	SATUR	PERCENT	108.5	102.1	107.4	107.4	107.4	101.9	85.1	85.1	
00400	PH		SU			8.00						
00403	LAB	PH	SU				6.5				6.7	
00500	RESIDUE	TOTAL	MG/L				36					
00530	RESIDUE	TOT NFLT	MG/L				1 K				2 K	
00610	NH3+NH4-	N TOTAL	MG/L				0.108					
00625	TOT KJEL	N	MG/L				0.200				0.300	
00630	NO2&NO3	N-TOTAL	MG/L				0.02 K				0.02 K	
00665	PHOS-TOT		MG/L P				0.040				0.020	
31501	TOT COLI	MFIMENDO	/100ML				1				6	
31616	FEC COLI	MFM-FCBR	/100ML				1 K				1 K	
31679	FECSTREP	MF M-ENT	/100ML				27				2	
70507	PHOS-T	ORTHO	MG/L P				0.010					

	INITIAL DATE			80/07/17	80/07/17	
	INITIAL TIME-DEPTH-BOTTOM			0002	0003	
00010	WATER	TEMP	CENT	19.0	19.0	
00011	WATER	TEMP	FAHN	66.2	66.2	
00116	INTNSVE	SURVEY	IDENT	771607	771607	
00300	DO		MG/L	8.0	6.6	
00301	DO	SATUR	PERCENT	85.1	70.2	

THAT'S ALL FOLKS

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STORET   RETRIEVAL DATE 83/03/11
PFOI/STA
R1
H N
DSELEC
10CCCC0099999000000999999                    ********      777777773 F

EXTRACT/MASKING OPTION NOT PERFORMED
621IDSURV 12C00082         2000086
CLROCCCOO



STATIONS SELECTED =      5
```

```
PGM=ALLPARM,PURP=FOI/STA,A=21IDSURV,B=P,S=2000082,S=2000086,
```

```
JES2 A  END  JOB 5356 EPAMWBTR  45 WSPTL  ACCT RX45 3.41.03 AM 11 MAR 83 R16.RD1  R16.PR1  EPA1  DP  BL  RM MMWB
```

Chuck –
Univ. of Idaho Data
Call them for more info. – Dr Milligan.

Bill Bogue
(208) 442-1685

TABLE B-1

WATER QUALITY/LAKE CHARACTERISTICS

No.	(1) Name	Definition/Units of Measure	(2) Data Source
1.	MAXDEPTH	Maximum depth of lake/meters	pfw
2.	EPIDEPTH	Epilimnial depth/meters	pfw
3.	SECCHI	Secchi depth/meters	pfw
4.	EUPHZONE	Euphotic zone/meters	pfw
5.	SHAPEO2	Shape code for oxygen profile/(3)	pfw
6.	EPITMPMX	Maximum epilimnial temperature/C°	pfw
7.	EPITMPMN	Mean epilimnial temperature/C°	pfw
8.	HYPO2MIN	Minimum oxygen concentration in hypolimnion/mg. per litre	pfw
9.	HYPO2MEN	Mean oxygen concentration in hypolimnion/mg. per litre	pfw
10.	H2SHYPO	Presence of H_2S in hypolimnion/1: yes, 2: no	pfw
11.	CHLA	Chlorophyll A concentration/mg/(meter)^3	pfw
12.	PH	Log of hydrogen ion concentration	pfw
13.	CONDUCT	Conductivity/micro ohms	pfw
14.	TURBID	Turbidity/N.T.U.	pfw
15.	ALKALIN	Alkalinity/mg. per litre	pfw
16.	TSS	Total suspended solids/mg. per litre	pfw
17.	ORGCONT	Organic content/percent	pfw
18.	PTOTAL	Total phosphorus/mg. per litre	pfw
19.	NO3N	Nitrous oxide/mg. per litre	pfw
20.	NH3N	Ammonia concentration/mg. per litre	pfw
21.	TKN	Total Kjeldahl Nitrogen	pfw
22.	TOTCOLIF	Total coliforms/no. per 100 ml.	pfw
23.	FECOLIF	Fecal coliforms/no. per 100 ml.	pfw
24.	COLOR	Code for color/platinum units	pfw
25.	ODOR	Code for odor/T.O.S. (4)	pfw
26.	NTOTAL	Total nitrogen/mg. per litre	pfw
27.	NP	Nitrogen - phosphorus ratio	pfw
28.	ELEV	Elevation flake surface/feet	USGS Topo Maps
29.	AREAAC	Area flake surface/acres	pfw & USGS Topo Maps
30.	AREASQM	Area flake surface/sq. meters	pfw & USGS Topo Maps
31.	SHOREM	Shoreline length of lake/meters	pfw & USGS Topo Maps
32.	SHOREIDX	Ratio of shorem to circumference of circle with same area as lake surface.	pfw & USGS Topo Maps
33.	VOLUME	Volume of lake/cubic meters	pfw & USGS Topo Maps

Notes:

1. Name given here may be abbreviated elsewhere in report.

2. pfw is abbreviation for project field work.

3. Shape code is as follows: (O^2 profile with 7 classes)

Class	Code
Orthograde	1
Positive orthograde	2
Negative heterograde	3
Weak positive heterograde	4
Positive heterograde	5
Weak clinograde	6
Clinograde	7

4. Threshold odor number defined as an index of the greatest dilution of sample with odor free water yielding a definite perceptable odor.

Department of Water Administration
PROTESTANT'S Park
Exhibit 3
Date Admitted 3/24/83 RDA

MICROFILMED

Table B-1. Water Quality/Lake Characteristics (Continued)

	TOTCOLIF	FECOLIF	COLOR	ODOR	NTOTAL	NP	ELEV
MACARTHUR L	0.	0.	2.00E+01	0.	0.14	2.5	2.08E+03
MYRTLE L	0.	0.	5.	0.	0.15	3.75E+01	5.95E+03
PERKINS L	0.	0.	1.00E+01	0.	0.09	5.	2.63E+03
COCOLALLA L	3.90E+01	0.	1.50E+01	0.	0.19	5.4	2.20E+03
HOODOO L	NA	5.	1.00E+01	0.	0.32	1.07E+01	2.14E+03
LOWER PRIEST L	2.	0.	5.	0.	0.21	5.25E+01	2.44E+03
LAKE PEND OREILLE	6.	0.	5.	0.	0.36	4.50E+01	2.06E+03
ROUND L	0.	0.	1.00E+01	0.	0.17	7.1	2.12E+03
SPIRIT LAKE	1.60E+01	0.	5.	0.	0.08	4.4	2.44E+03
UPPER PRIEST L	0.	0.	5.	0.	0.198	3.30E+01	2.44E+03
BENEWAH L	7.00E+01	0.	1.00E+01	0.	0.37	9.7	2.14E+03
CAVE L	1.10E+01	0.	1.50E+01	0.	0.14	4.	2.14E+03
LAKE CHATCOLET	1.50E+01	0.	1.00E+01	1.	0.07	1.8	2.12E+03
LAKE COEUR D'ALENE	1.20E+01	0.	5.	0.	0.165	9.2	2.12E+03
FERNAN L	5.	0.	1.00E+01	0.	0.17	5.9	2.15E+03
HAUSER L	0.	0.	2.00E+01	0.	0.27	1.80E+01	2.18E+03
HAYDEN L	1.00E+01	0.	5.	0.	0.19	4.5	2.24E+03
ROSE L	NA	1.	2.50E+01	0.	0.48	1.50E+01	2.12E+03
STEVENS L	1.	0.	5.	0.	0.17	4.25E+01	5.55E+03
SWAN LAKE	0.	3.50E+01	6.00E+01	2.	0.55	2.3	2.13E+03
TWIN LAKES LOWER L	3.00E+01	0.	5.	0.	0.25	1.67E+01	2.31E+03
TWIN LAKES UPPER L	1.90E+01	0.	5.	0.	0.32	1.39E+01	2.31E+03
DWORSHAK RES	1.50E+01	0.	5.	0.	0.222	1.06E+01	1.60E+03
MANN'S LAKE	1.30E+01	5.60E+01	3.00E+01	1.	1.78	1.19E+01	1.81E+03
MOOSE CREEK R	1.00E+01	0.	3.00E+01	0.	0.13	2.6	2.88E+03
SOLDIERS MEADOW R	6.70E+01	2.00E+01	1.00E+01	1.	1.04	1.30E+01	4.52E+03
LAKE WAHA	7.90E+01	6.	2.00E+01	2.	0.94	8.5	3.39E+03
WINCHESTER L	0.	0.	2.50E+01	3.	0.23	3.7	3.90E+03
ALTURAS L	2.70E+01	0.	5.	0.	0.2	2.22E+01	7.02E+03
BAYHORSE L	0.	0.	1.00E+01	0.	0.	0.	8.58E+03
GOOSE LAKE	0.	0.	5.	0.	0.35	1.84E+01	6.36E+03
PETIT L	2.	0.	5.	0.	0.17	1.06E+01	7.00E+03
REDFISH L	0.	0.	5.	0.	0.13	3.25E+01	6.55E+03
SEVEN DEVILS L	0.	1.00E+01	5.	0.	0.15	8.8	7.56E+03
STANLEY L	0.	0.	5.	0.	0.2	1.82E+01	6.51E+03
TCLO L	0.	0.	1.00E+01	1.	0.25	0.1	3.23E+03
WARM L	1.20E+01	1.40E+01	5.	0.	0.12	1.20E+01	5.30E+03
WILLIAMS LAKE	1.40E+01	1.	1.00E+01	0.	0.66	9.4	5.25E+03
BASIN L	0.	0.	5.	0.	0.13	7.6	7.70E+03
BROWNLEE R	0.	0.	5.	3.	0.495	1.46E+01	2.07E+03
ECHO L	5.00E+01	0.	5.	0.	0.2	3.33E+01	1.25E+03
GEM L	0.	0.	5.	0.	0.05	6.3	7.74E+03
HEDEVIL L	0.	0.	5.	0.	0.11	6.5	7.46E+03
HELLS CANYON R	0.	0.	5.	0.	0.42	1.14E+01	1.69E+03
LOWER BERNARD L	0.	0.	5.	0.	0.08	6.2	7.24E+03
OXBOW RES	0.	0.	5.	1.	0.54	1.20E+01	1.80E+03
SHELF L	0.	0.	5.	0.	0.06	4.	7.42E+03

Sep 1981

Table B-1. Water Quality/Lake Characteristics (Continued)

	ALKALIN	TSS	CRGCONT	PTOTAL	NO3N	NH3N	TKN
MACARTHUR L	7.49E+01	8.6	0.	0.057	0.02	0.01	0.1
MYRTLE L	5.76	1.4	0.	0.004	0.02	0.005	0.1
PERKINS L	5.18E+01	1.	0.	0.018	0.02	0.01	0.
COCOLALLA L	2.11E+01	5.4	0.	0.035	0.02	0.01	0.1
HOODOO L	9.12E+01	1.	0.	0.03	0.02	0.593	0.3
LOWER PRIEST L	1.92E+01	0.8	0.8	0.004	0.02	0.081	0.2
LAKE PEND OREILLE	7.10E+01	2.2	0.	0.008	0.02	0.05	0.3
ROUND L	2.88E+01	3.	0.	0.024	0.02	0.03	0.1
SPIRIT LAKE	8.64	7.	0.	0.018	0.02	0.49	0.
UPPER PRIEST L	4.13E+01	0.8	0.8	0.006	0.068	0.09	0.1
BENEWAH L	2.50E+01	5.6	4.	0.038	0.02	0.92	0.3
CAVE L	1.73E+01	4.4	3.	0.035	0.02	0.35	0.1
LAKE CHATCOLET	2.50E+01	5.2	3.8	0.04	0.02	0.01	0.
LAKE COEUR D'ALENE	2.06E+01	2.3	2.3	0.018	0.02	0.02	0.1
FERNAN L	1.34E+01	6.	0.	0.029	0.02	0.21	0.1
HAUSER L	1.92E+01	8.8	0.6	0.015	0.02	0.03	0.2
HAYDEN L	2.50E+01	2.8	0.	0.042	0.02	0.02	0.1
ROSE L	1.34E+01	3.8	2.	0.032	0.02	0.116	0.4
STEVENS L	2.92E+01	2.2	0.	0.004	0.02	0.005	0.1
SWAN LAKE	5.76E+01	9.20E+01	2.48E+01	0.239	0.02	0.2	0.5
TWIN LAKES LOWER L	1.15E+01	2.8	0.	0.015	0.02	0.04	0.2
TWIN LAKES UPPER L	1.15E+01	1.6	0.	0.023	0.02	0.04	0.3
DWORSHAK RES	1.50E+01	2.	2.	0.021	0.022	0.03	0.2
MANN'S LAKE	5.39E+01	5.	3.9	0.15	0.21	0.12	1.5
MOOSE CREEK R	1.82E+01	0.6	0.6	0.05	0.02	0.1	0.1
SOLDIERS MEADOW R	2.74E+01	5.4	1.8	0.08	0.19	0.16	0.8
LAKE WAHA	3.08E+01	6.6	5.1	0.11	0.23	0.13	0.7
WINCHESTER L	6.76E+01	1.36E+01	8.	0.062	0.02	0.005	0.2
ALTURAS L	1.92E+01	0.6	1.	0.009	0.04	0.005	0.1
BAYHORSE L	2.11E+01	1.	0.	0.015	0.02	0.05	0.
GOOSE LAKE	3.84	0.5	0.5	0.019	0.02	0.03	0.3
PETIT L	6.72	1.6	0.	0.016	0.02	0.005	0.1
REDFISH L	7.68	1.4	0.	0.004	0.02	0.03	0.1
SEVEN DEVILS L	3.84	3.	1.8	0.017	0.02	0.005	0.1
STANLEY L	1.73E+01	1.	0.	0.011	0.02	0.05	0.1
TOLO L	2.38E+02	4.36E+01	2.4	1.951	0.02	0.01	0.2
WARM L	2.30E+01	0.6	0.	0.01	0.02	0.005	0.1
WILLIAMS LAKE	5.03E+01	4.	2.5	0.07	0.05	0.04	0.6
BASIN L	9.6	0.8	0.5	0.017	0.02	0.005	0.1
BROWNLEE R	1.15E+02	1.	6.	0.034	0.23	0.07	0.2
ECHO L	0.96	0.	1.8	0.006	0.02	0.005	0.1
GEM L	1.92E+01	0.8	0.5	0.008	0.02	0.005	0.
HEDEVIL L	3.84	2.6	1.	0.017	0.02	0.005	0.1
HELLS CANYON R	1.13E+02	2.8	3.	0.037	0.14	0.03	0.2
LOWER BERNARD L	1.25E+01	1.2	0.5	0.013	0.02	0.005	0.
OXBOW RES	1.11E+02	3.6	4.	0.045	0.25	0.04	0.2
SHELF L	9.6	0.	3.4	0.015	0.02	0.021	0.

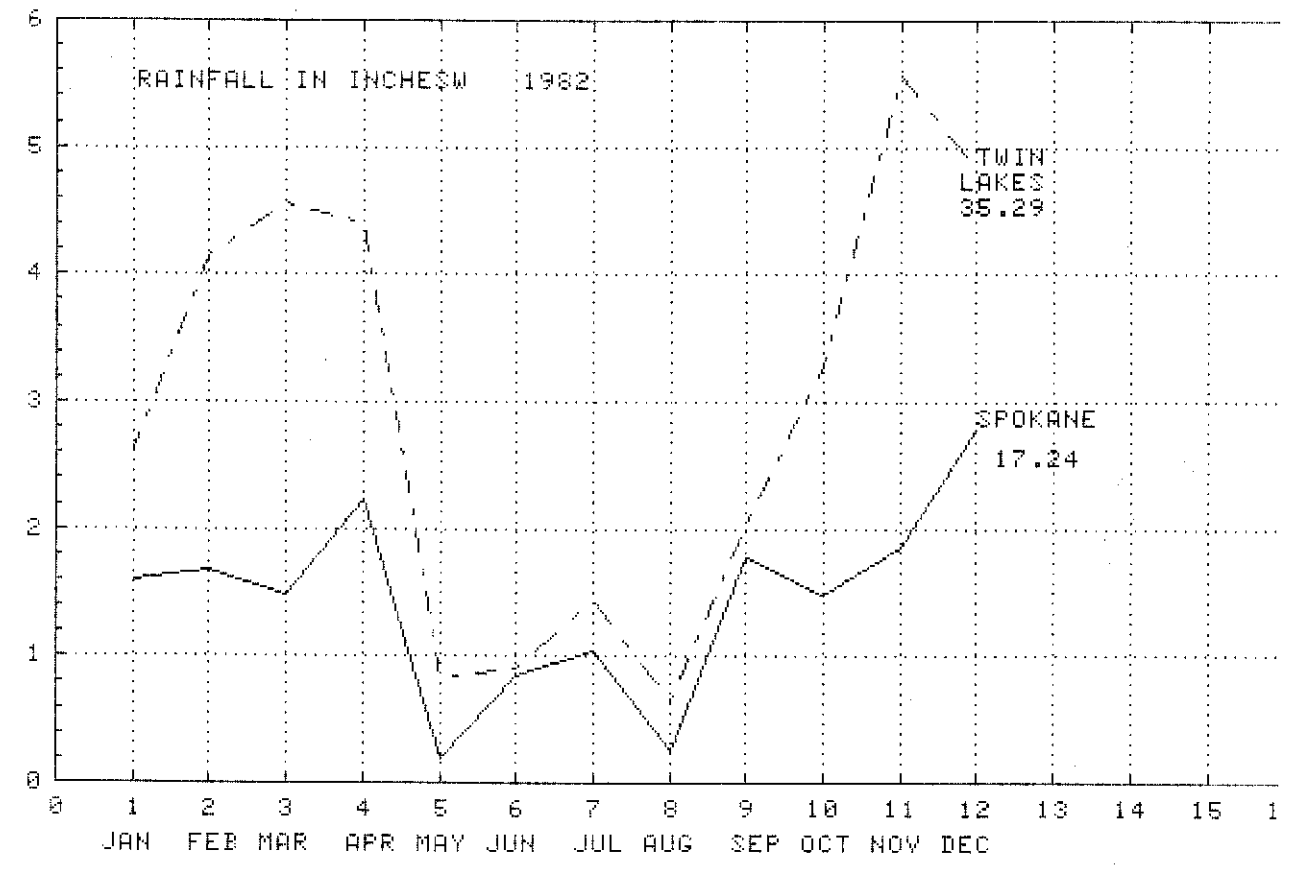
Table B-1. Water Quality/Lake Characteristics (Continued)

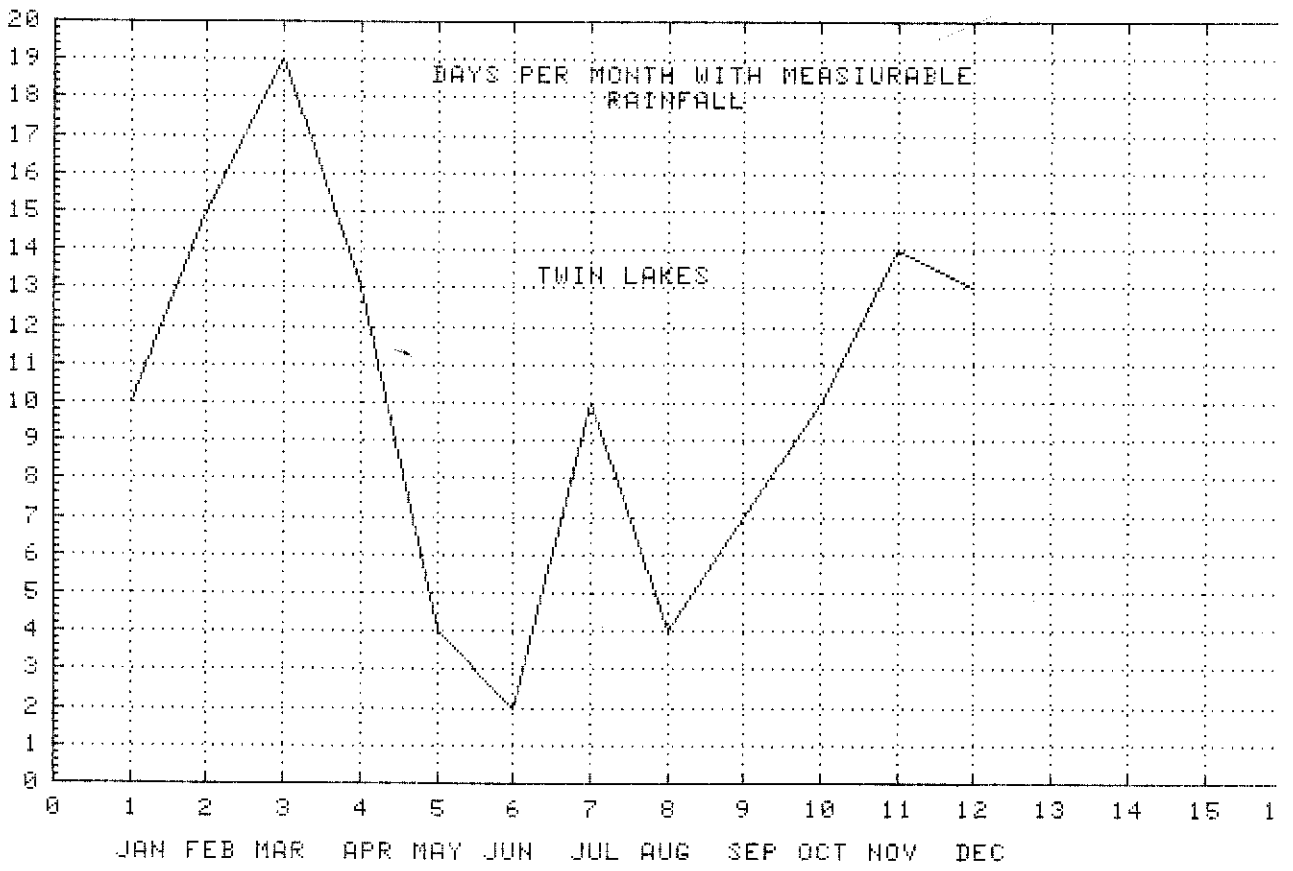
	HYPO2MIN	HYPO2MEN	H2SHYPO	CHLA	PH	CONDUCT	TURBID
MACARTHUR L	6.1	6.5	2.	1.49E+01	8.15	1.00E+02	4.70E+01
MYRTLE L	NA	NA	2.	1.55	6.2	2.00E+01	0.44
PERKINS L	0.	0.	2.	7.16	6.55	8.00E+01	1.20E+01
COCOLALLA L	5.	4.9	2.	4.46E+01	6.3	5.50E+01	6.5
HOODOO L	6.9	6.9	1.	5.62	7.5	3.72E+02	1.3
LOWER PRIEST L	6.8	6.8	2.	2.63	6.99	3.80E+01	0.66
LAKE PEND OREILLE	1.10E+01	1.11E+01	2.	1.45	7.42	1.14E+02	0.4
ROUND L	0.	0.	2.	1.73E+01	7.65	6.80E+01	2.9
SPIRIT LAKE	0.6	1.55	2.	3.5	6.43	2.00E+01	1.5
UPPER PRIEST L	1.10E+01	1.10E+01	2.	3.13	7.22	7.00E+01	0.5
BENEWAH L	6.8	6.5	2.	1.15E+01	7.1	5.10E+01	3.6
CAVE L	7.1	7.1	2.	8.97	6.9	5.00E+01	3.5
LAKE CHATCOLET	6.4	6.3	2.	7.08	7.1	5.10E+01	3.2
LAKE COEUR D'ALENE	4.	4.83	2.	4.94	6.9	5.00E+01	1.
FERNAN L	5.9	5.9	2.	4.23	6.43	3.90E+01	1.3
HAUSER L	0.	0.2	2.	4.85	6.65	4.50E+01	0.8
HAYDEN L	7.1	7.78	2.	1.01	7.	5.00E+01	0.7
ROSE L	4.15	4.2	2.	3.07E+01	6.51	4.00E+01	6.25
STEVENS L	NA	8.	2.	1.68	7.05	5.10E+01	0.39
SHAN LAKE	NA	2.	1.	3.85E+01	7.9	1.18E+02	2.40E+01
TWIN LAKES LOWER L	1.6	3.5	2.	6.84	6.37	2.10E+01	0.8
TWIN LAKES UPPER L	6.	6.1	2.	3.93	6.23	2.20E+01	1.
DWORSHAK RES	5.8	7.7	1.	4.4	8.	3.00E+01	0.8
MANN'S LAKE	5.3	6.8	2.	1.2	7.5	1.24E+02	1.10E+01
MOOSE CREEK R	5.	3.	2.	3.71	7.9	4.00E+01	1.3
SOLDIERS MEADOW R	1.1	5.9	2.	1.5	7.	6.30E+01	1.30E+01
LAKE WAHA	1.6	7.6	2.	1.99E+01	7.6	7.70E+01	1.40E+01
WINCHESTER L	0.3	1.03E+01	2.	3.29E+01	9.05	1.25E+02	4.3
ALTURAS L	4.3	6.41	2.	0.	6.31	4.90E+01	0.32
BAYHORSE L	1.3	2.07	2.	2.59	6.99	4.00E+01	0.65
GOOSE LAKE	1.20E+01	9.	2.	2.	6.2	1.60E+01	0.63
PETIT L	1.80E+01	6.	2.	2.	6.2	2.20E+01	0.33
REDFISH L	7.	7.74	2.	0.	6.22	2.80E+01	0.34
SEVEN DEVILS L	5.3	6.5	2.	1.54	6.4	1.80E+01	0.4
STANLEY L	2.6	4.78	2.	0.	6.49	3.80E+01	0.45
TULO L	5.8	5.8	2.	3.28	8.05	3.75E+02	5.20E+01
WARM L	0.05	2.06	2.	0.	7.1	4.60E+01	1.1
WILLIAMS LAKE	0.	1.5	2.	5.	8.	1.08E+02	5.
BASIN L	7.4	8.1	2.	1.34	6.69	3.80E+01	0.3
BROWNLEE R	0.6	0.8	2.	5.83	9.13	2.48E+02	0.6
ECHO L	7.7	7.9	2.	0.05	6.2	1.80E+01	0.3
GEM L	3.	6.93	2.	0.88	6.4	1.80E+01	0.5
HEDEVIL L	8.1	8.3	2.	5.86	6.15	1.20E+01	0.4
HELLS CANYON R	6.8	7.	2.	1.00E+01	9.17	2.35E+02	0.5
LOWER BERNARD L	9.	9.23	2.	1.39	6.59	2.80E+01	0.4
OXBOW RES	2.8	3.	2.	1.00E+01	8.9	2.30E+02	0.7
SHELF L	0.6	1.09E+01	2.	0.98	6.1	2.20E+01	0.4

Table B-1. Water Quality/Lake Characteristics

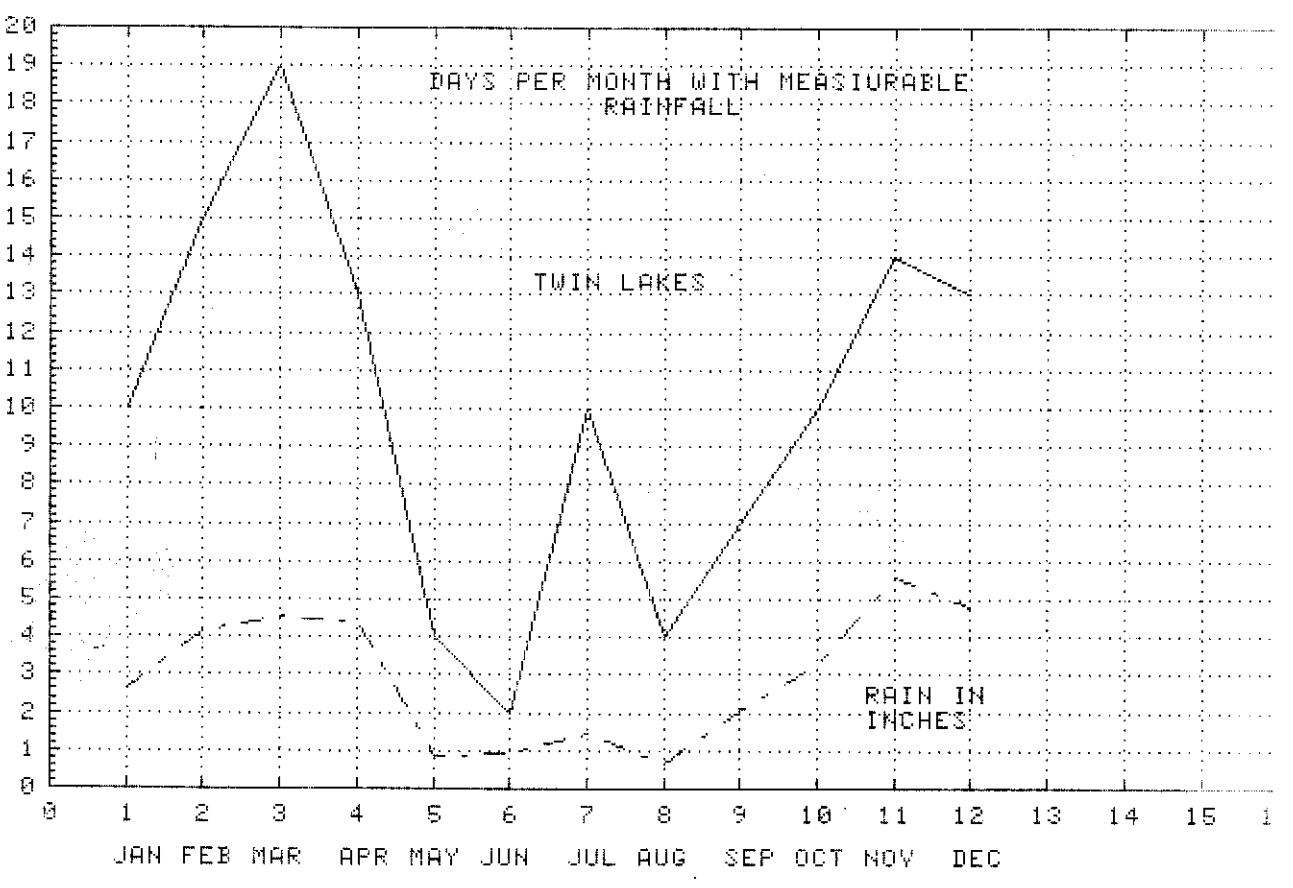
	MAXDEPTH	EPIDEPTH	SECCHI	EUPHZONE	SHAPE02	EPITMPMX	EPITMPMN
MACARTHUR L	2.7	2.7	1.3	3.5	1.	1.85E+01	1.85E+01
MYRTLE L	NA	NA	NA	NA	NA	1.30E+01	NA
PERKINS L	5.5	1.5	3.9	1.05E+01	7.	1.88E+01	1.80E+01
COCOLALLA L	1.36E+01	1.36E+01	0.9	2.4	1.	1.71E+01	1.65E+01
HOODOO L	1.2	1.2	1.2	3.2	1.	1.03E+01	1.03E+01
LOWER PRIEST L	1.02E+02	4.	5.5	1.49E+01	1.	2.25E+01	1.67E+01
LAKE PEND OREILLE	3.51E+02	1.50E+01	9.	2.43E+01	1.	1.80E+01	1.65E+01
ROUND L	1.03E+01	5.	2.5	6.8	7.	1.43E+01	1.41E+01
SPIRIT LAKE	2.88E+01	8.	4.2	1.13E+01	7.	1.65E+01	1.61E+01
UPPER PRIEST L	2.94E+01	4.	6.	1.62E+01	1.	1.70E+01	1.12E+01
BENEWAH L	4.2	4.2	1.8	4.9	1.	1.01E+01	9.7
CAVE L	5.5	5.5	2.7	7.3	1.	1.13E+01	1.14E+01
LAKE CHATCOLET	1.12E+01	1.12E+01	1.5	4.1	1.	1.14E+01	1.14E+01
LAKE COEUR D'ALENE	5.49E+01	2.20E+01	5.	1.35E+01	6.	1.33E+01	1.33E+01
FERNAN L	7.6	7.6	3.	8.1	1.	2.01E+01	1.93E+01
HAUSER L	1.21E+01	5.5	5.2	1.40E+01	7.	2.04E+01	1.96E+01
HAYDEN L	5.42E+01	1.00E+01	1.27E+01	3.43E+01	1.	1.94E+01	1.93E+01
ROSE L	5.2	5.2	1.3	3.5	1.	1.63E+01	1.64E+01
STEVENS L	NA	NA	NA	NA	NA	NA	NA
SWAN LAKE	8.	5.	0.1	0.2	NA	NA	NA
TWIN LAKES LOWER L	1.83E+01	1.83E+01	2.5	6.8	1.	1.63E+01	1.62E+01
TWIN LAKES UPPER L	4.2	4.2	4.	1.08E+01	1.	1.61E+01	1.60E+01
DWORSHAK RES	1.92E+02	5.	7.6	2.05E+01	6.	2.41E+01	2.26E+01
MANN'S LAKE	1.50E+01	3.	2.7	7.3	7.	2.40E+01	2.32E+01
MOOSE CREEK R	4.2	4.2	2.4	4.2	NA	2.70E+01	2.46E+01
SOLDIERS MEADOW R	1.39E+01	3.	3.3	8.9	3.	2.16E+01	2.05E+01
LAKE WAHA	3.30E+01	3.	1.4	3.8	3.	2.30E+01	2.13E+01
WINCHESTER L	9.5	2.	1.2	3.2	1.	2.80E+01	2.63E+01
ALTURAS L	5.15E+01	7.	1.30E+01	3.51E+01	4.	1.73E+01	1.72E+01
BAYHORSE L	7.	3.	5.5	1.49E+01	7.	1.73E+01	1.69E+01
GOOSE LAKE	7.3	3.5	6.4	1.73E+01	1.	2.10E+01	1.98E+01
PETIT L	NA	NA	NA	NA	1.	1.80E+01	1.70E+01
REDFISH L	9.00E+01	6.	1.40E+01	3.78E+01	1.	1.79E+01	1.77E+01
SEVEN DEVILS L	6.4	6.4	6.4	1.73E+01	5.	1.68E+01	1.64E+01
STANLEY L	2.50E+01	7.	1.10E+01	2.97E+01	4.	1.77E+01	1.70E+01
TOLO L	1.3	1.3	0.3	0.8	1.	1.98E+01	1.72E+01
WARM L	2.55E+01	4.8	5.	1.35E+01	7.	1.98E+01	1.97E+01
WILLIAMS LAKE	5.60E+01	6.	3.	8.1	7.	2.10E+01	2.00E+01
BASIN L	1.15E+01	3.	1.10E+01	2.97E+01	5.	1.60E+01	1.52E+01
BROWNLEE R	8.44E+01	2.00E+01	3.	8.1	7.	2.49E+01	2.42E+01
ECHO L	1.12E+01	4.	1.00E+01	1.12E+01	3.	1.78E+01	1.63E+01
GEM L	2.45E+01	4.	1.35E+01	3.65E+01	5.	1.53E+01	1.47E+01
HEDEVIL L	5.8	5.8	5.8	1.57E+01	1.	2.04E+01	1.96E+01
HELLS CANYON R	6.49E+01	6.49E+01	1.8	4.9	7.	2.34E+01	2.32E+01
LOWER BERNARD L	8.2	2.5	7.8	8.2	5.	2.04E+01	1.90E+01
OXBOW RES	3.81E+01	3.81E+01	3.2	8.6	7.	2.17E+01	2.10E+01
SHELF L	1.21E+01	4.	1.13E+01	3.05E+01	5.	1.64E+01	1.58E+01

Department of Water Administration
PROTESTANT'S
Exhibit 4
Date Admitted 3/24/83





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STATE OF IDAHO
DEPARTMENT OF WATER ADMINISTRATION
Statehouse – Annex 2
Boise, Idaho 83707
(208) 384-2215

R. Keith Higginson
Director

Water Rights Administration
Water Resource Investigations
Dam and Reservoir Safety
Water Well Drilling
Flood Plain Management
Irrigation and
Flood Control Districts

December 30, 1971

Department of Water Administration
APPLICANT'S
Exhibit 5
Date Admitted 3/24/83

Mr. Norman H. Moore
Regional Director
United States Department
of the Interior
Bureau of Reclamation
Regional Office, Region 1
Box 8008
Boise, Idaho 83707

Dear Mr. Moore:

Thank you for your letter of December 22, 1971, in which you included proposed language of the contract between the Bureau of Reclamation and the East Greenacres Irrigation District. I see no reason why that language is not satisfactory to cover your proposal to convert the Twin Lake storage right to a recreation facility. My only concern would be that you do not allow a lengthy period of time to expire between the discontinuance of use of water from Twin Lake and the transfer of the water right to some other entity. This could give rise to claims that the water right had been forfeited through non-use and would become available for appropriation by others.

If I can be of assistance to you or the district in accomplishing the necessary transfer, please let me know.

Very truly yours,

R. KEITH HIGGINSON
Director

RKH:mjl

Form B-27
USBR Reg. 1
Rev. 10-70

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
REGION 1
East Greenacres Unit
Rathdrum Prairie Project, Idaho
(Project or office)

RECORD OF EXECUTION OF CONTRACT

Contractor East Greenacres Irrigation District
Contract No. 14-06-100-7329 Date of contract June 1, 1972
Estimated amount involved $1,005,500
Purpose Repayment contract

Remarks: Contract approved as to form and authority delegated to the Regional Director to execute it by Assistant Secretary of Interior on March 17, 1972.

Place Boise, Idaho Date June 1, 1972

1. Contract transmitted to Field Solicitor for legal approval.

John W. E. Faulkner, Supervising Dep.
(Title)

Place Boise, Idaho Date June 1, 1972

2. Contract given legal approval.

Contract has been legal approval by
Field Solicitor Lemargie, Ephrata, Wash.

Field Solicitor

3. Contract executed and transmitted to the following:

Original contract
Duplicate original to contractor
Copy to: ☐ Surety

☐ Director of Design and Construction, E&R Center, Denver, Colorado

☐ Chief, Division of Water O&M, E&R Center, Denver, Colorado

Department of Water Administration
APPLICANT'S
Exhibit 6
Date Admitted 3/24/83 KJT

MICROFILMED

Contract No.
14-06-100-7329

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
East Greenacres Unit
Rathdrum Prairie Project, Idaho

REPAYMENT CONTRACT BETWEEN THE UNITED STATES OF AMERICA AND THE EAST GREENACRES IRRIGATION DISTRICT

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
East Greenacres Unit
Rathdrum Prairie Project, Idaho

Contract No.
14-06-100-7329

REPAYMENT CONTRACT BETWEEN THE UNITED STATES OF AMERICA AND THE EAST GREENACRES IRRIGATION DISTRICT

THIS CONTRACT, made this 1st day of June, 1972, by and between THE UNITED STATES OF AMERICA (hereinafter called the United States), acting through the Secretary of the Interior by his duly authorized representative (hereinafter called the Contracting Officer), pursuant to the Act of Congress of June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, including without limitation by this enumeration the Act of Congress approved June 23, 1970 (84 Stat. 319)(hereinafter called the Federal Reclamation Laws), and EAST GREENACRES IRRIGATION DISTRICT (hereinafter called the Contractor), organized and existing under and by virtue of the laws of the State of Idaho,

WITNESSETH, THAT:

RECITALS AND DEFINITIONS

Explanatory Recitals

2. WHEREAS, the Secretary of the Interior has been authorized by the Act of June 23, 1970, to construct, operate, and maintain the East Greenacres Unit of the Rathdrum Prairie Project, which said unit is within the area of the Contractor; and

3. WHEREAS, there are areas of land and water users within the area of the Contractor presently being served with an inadequate water supply and by facilities that are inadequate to maintain or expand the existing economy, which water supply and facilities should be replaced by a new water supply and distribution system; and

4. WHEREAS, there are within the area of the Contractor areas of arable land and water users which can be served but which are now without water under its existing water supply and distribution system, or that require an additional water supply which can only be provided from a new water source and by a new distribution system; and

5. WHEREAS, the Contractor desires to enter into a contract with the United States for a new water source and supply for irrigation and for domestic, municipal, and industrial purposes and for the construction of a new distribution system in conformity with the provisions of the Federal Reclamation Laws which will enable it to meet the requirements associated with the circumstances mentioned above, and the United States is willing to enter into such a contract with the Contractor.

NOW, THEREFORE, in consideration of the mutual and dependent stipulations herein set forth, it is hereby covenanted and agreed as follows:

Definitions

6. The following terms used in this contract shall have the following respective meanings:

"Secretary" shall mean the Secretary of the Interior or his duly authorized representative.

"Project works" shall mean all works or facilities to be constructed under the provisions of this contract.

"Project water" shall mean the water made available through the project works.

"Irrigation water" shall mean that portion of the project water made available for use on land for the nourishing of plant life.

"D, M, & I water" shall mean that portion of the project water made available for domestic, municipal, and industrial services for use other than on land for the nourishing of plant life.

"Irrigable lands" shall mean those arable lands within the area served by the Contractor determined by the Secretary to be suitable for sustained irrigation which are to be served by the project works.

"Land class" shall mean an area of project land designated by the Secretary according to its relative suitability for irrigation farming.

"Class 6W lands" shall mean those lands within the area served by the Contractor considered to be nonarable but having existing water rights under the Contractor's irrigation system. These lands will continue to receive water from the project works.

"Block 1" shall mean those lands within the area served by the Contractor classified by the Secretary as irrigable which are presently being irrigated.

"Block 2" shall mean those lands within the area served by the Contractor classified by the Secretary as irrigable which can be irrigated for the first time as a result of the construction of the project works.

"Excess land" -- That definition is as set forth in Article 30.

PROJECT CONSTRUCTION AND CONSTRUCTION CHARGES

Description and Costs of Project Works

7(a). The United States, within the limits of this contract and authorizing legislation and to the extent funds are or may be made available therefor, will construct the following principal project works:

(1) A closed pipe distribution system of corrosion resistant pipe, together with equalizing reservoirs, designed to provide irrigation water service to approximately 5,340 acres of land at the rate of 6.4 gallons per minute per acre and D, M, & I water as the need and demand arises.

(2) Wells with pumps and motors therefor to withdraw ground water in sufficient amounts for the above described distribution system, plus small wells with pumps and motors therefor to withdraw D, M, & I water during the nonirrigation season.

(3) A metered turnout from the distribution system for irrigation water to each 40-acre ownership or to the ownership, if less than 40 acres, which was of record in the proper office of the county or Contractor on November 10, 1971: Provided, however, where installation of more than one turnout is required to provide satisfactory service to a single ownership of 40 acres or less, additional turnouts may be provided.

(4) A metered turnout from the distribution system for D, M, & I water to each ownership of record as of November 10, 1971 desiring D, M, & I water service and notifying the Contractor thereof in writing prior to the commencement of the construction of the project works: Provided, however, that not more than 250 metered turnouts will be installed by the United States.

(5) Office building and combination shop and garage, including office furniture, transportation equipment, and tools determined by the Secretary to be necessary to undertake the operation and maintenance of the project.

7(b). Should it appear necessary or desirable to the Secretary after consultation with the Contractor, either before or during construction, the project works mentioned and described by this article may be modified in design or location, or work may be eliminated or added to that mentioned or described above.

7(c). The total estimated cost of the project works described in this article is $5,544,000 (October 1971 prices).

(1) The United States will undertake the construction of the project works as described in this article as soon as practicable and carry the construction through to completion to the extent possible within the limit of the estimated costs above stated, plus or minus such amounts, if any, as the Secretary in his discretion may determine to be justified by reason of ordinary fluctuation from October 1971 construction costs, as indicated by engineering cost indices, applicable to the type of construction work involved and the limit of the availability of funds therefor.

(2) If the Secretary finds at any time that the work required to carry out the objectives of this contract cannot be completed at a cost within that estimated as may be affected by (1) of this subarticle, he shall consult with the Contractor's Board of Directors and shall make continuation of construction beyond that which can be feasibly completed within that cost estimate, contingent on the completion of arrangements with the Contractor for the assumption by it, in addition to the construction charge obligation set out in Article 8, of all the estimated increased cost of completing all of the works. If the Contractor does not make the necessary arrangements and assume the increased obligation, or in the event additional appropriations are not available or authorized, the Secretary may notify the Contractor, when the work which is feasible to construct within the estimated cost is finished, that said work is deemed completed.

Cost of Work to be Paid and Annual Installments

8(a). The Contractor's maximum construction charge obligation under this contract is $1,005,500, which amount is determined from a tentative allocation of project costs for repayment by the irrigation and D, M, & I water users, plus not more than 20% for increases in the D, M, & I water users' obligation resulting from possible fluctuations in the cost of construction above October 1971 prices. The tentative allocation

for repayment and the maximum construction charge obligation to be repaid by the irrigation and D, M, & I water users is as follows:

	Tentative Allocation For Repayment	Maximum Construction Charge Obligation
Irrigation water users construction charge obligation	$796,500	$796,500
D, M, & I water users obligation	174,000	209,000
D, M, & I construction charge obligation (including interest during construction)	(122,000)	(146,500)
D, M, & I assistance to irrigation	(52,000)	(62,500)
Total	$970,500	$1,005,500

8(b). The Contractor shall pay its construction charge obligation to the United States in successive annual installments on or before June 30 of the year for which any installment is applicable. Each of such annual installments shall be the aggregate of the annual sums due and payable by the Contractor to the United States on account of the irrigation water users' construction charge obligation allocated to each block and to the D, M, & I water users' construction charge obligation or to the D, M, & I water users as assistance to irrigation.

8(c). The irrigation construction charge obligation shall be allocated between the two blocks prior to the end of the development period for Block 1 by multiplying the number of irrigable acres in each block by $150. The obligation allocated to each block shall be paid in 50

successive equal annual installments beginning with the year following the end of the development period. Each annual installment shall be reduced by the amount of the annual operation, maintenance, and replacement costs of the project works which are allocated to the nonreimbursable functions of recreation and fish and wildlife enhancement as determined in Article 11 hereof and which will be incurred by the Contractor in its operation of such works. Except for such payments as may be required under the general obligation of the Contractor because of delinquencies or defaults with respect to particular lands or a shortage of D, M, & I water users during any period of time within the operation and area of the Contractor, the allocated share of the irrigation water users' portion of the Contractor's construction charge obligation to each block will be the maximum limit of the irrigation water users' portion of the construction charge obligation to be paid by the lands in that block.

8(d). The D, M, & I construction charge obligation shall be repaid with interest at 3.502% in 50 successive equal annual installments beginning with the year following the year in which the Contracting Officer notifies the Contractor that water will be available from the completed project works. The annual construction charge installment shall be determined by multiplying the D, M, & I water users' construction charge obligation by 0.042649, the factor required to repay the obligation with 3.502% interest within 50 years. Until such time as the actual construction cost and the

Contractor's actual D, M, & I water users' construction charge obligation is determined as provided in Article 11, the Contractor's annual D, M, & I construction charge installment shall be $5,200. Except for such payments as may be required under the general obligation of the Contractor because of delinquencies or defaults of the D, M, & I water users with respect to those charges, those sums will be the maximum of the Contractor's construction charge obligation to be paid by the D, M, & I water users: Provided, That if and when the number of D, M, & I turnouts and/or water services reaches 250, the Contractor shall put all such service arrangements it enters into thereafter on an individual water service contract basis with the contracts being entered into in accordance with (c) of Article 24 hereof.

8(e). D, M, & I water users' assistance to irrigation shall be repaid in 10 successive equal annual installments beginning with the year following the year in which the last payment on the D, M, & I construction charge obligation is made by the Contractor. The annual installments shall be equal to those determined in (d) hereof, upon the determination of the Contractor's actual D, M, & I water users' construction charge obligation.

Development Period

9(a). For Block 1, there will be a development period of 3 years and for Block 2, there will be a development period of 10 years. The development periods for the lands in the two blocks will commence in the year following the year that the Contracting Officer notifies the Contractor that the

project works are completed and water is available. If the timely announcement of availability of water from the completed project irrigation works is not delivered to the Contractor by the Secretary prior to October 1 of the year preceding that for which water will be available from those works, the first year of the development period will be the first year following that in which water is available therefrom as announced by the Secretary. During the development periods for the two blocks, the Contractor shall make assessments on the lands therein in the amounts required to meet their share of the total annual costs of operation and maintenance of the irrigation system, and other costs and obligations, if any, of the Contractor under this contract, including the requirements for a reserve and replacement fund as provided in Article 17.

9(b). The Contractor shall levy the assessments against all irrigable lands and Class 6W lands during the development period, and shall make the necessary collection from the irrigation water users in advance of the delivery of water to them.

Project Irrigable Acreage

10. The lands of the Contractor which have been classified by the Secretary as irrigable are shown on land classification maps on file in the offices of the Contractor and the Regional Director, Bureau of Reclamation, Boise, Idaho. No changes shall be made in the lands classified as irrigable without the prior approval of the Secretary. From time to time before the close of the development period for any block, lands within that block may, upon request of the Contractor's Board, be reclassified by the

Secretary under standards consistent with those used in making the original classification. The Contractor, with the approval of the Secretary and the landowner involved, may, for the purpose of adjustment and matters of its own internal administration, make changes in the irrigable area within the area served by the Contractor from time to time, so long as such changes do not end in a total area of more than 5,310 irrigable acres and 30 acres of nonarable 6W lands. Nothing in this article shall be deemed to relieve the Contractor in any way of its general obligation to pay the United States the full amount of the Contractor's construction charge obligation under this contract.

Statement of Costs

11(a). Upon the completion of the authorized work for the Contractor or the termination of action thereon as determined by the Secretary for any reason stated in this contract, the Secretary shall furnish the Contractor with a written statement of the actual construction cost of the project works, the allocation of such costs, and the Contractor's actual D, M, & I construction charge obligation and D, M, & I assistance to irrigation.

11(b). The costs which make up the various obligations to be paid by the Contractor to the United States under this contract shall embrace all expenditures of whatsoever nature or kind in relation to the function for which the charge is made including, but without limitation by reason of this enumeration, costs of surveys and investigations, rights of way, labor, property, material and equipment, engineering, legal work, superintendence, administration, overhead, general expenses, inspection, special

services, and damage claims of all kinds, whether or not involving the negligence of officers, agents, or employees of the United States. The Secretary's determination as to what costs are properly chargeable under this contract, the amount thereof, the classification and allocation of those charges for repayment purposes, and the distribution thereof among the blocks and the water users shall be conclusive: Provided, however, That any such determination by the Secretary shall not increase the Contractor's maximum construction charge obligation as set forth in (a) of Article 8 and shall include only those costs that are properly allocable to the Contractor and the water users thereof.

PROJECT OPERATION AND MAINTENANCE AND OPERATION AND MAINTENANCE CHARGES

Operation and Maintenance of Existing Irrigation Works

12. During the construction of the project irrigation works, the Contractor will continue to operate and maintain the portions of its existing irrigation system not directly involved at the time in the construction of such works.

Operation and Maintenance of Transferred Works--Payment of Miscellaneous Costs

13(a). Upon substantial completion of the project works, or as otherwise determined by the Contracting Officer, and following written notification, the care, operation, and maintenance of any or all of the project works shall be transferred to the Contractor.

13(b). The Contractor, without expense to the United States, shall care for, operate, and maintain such transferred works in full compliance

with the terms of this contract, and in such manner that said transferred works will remain in good and efficient condition: Provided, That prior to April 1 of the year that the first irrigation construction charge installment is due hereunder and prior to April 1 of each succeeding year, the Contractor shall provide a written statement of the actual expenses incurred in the operation and maintenance of the project works excluding power and transmission costs for the preceding calendar year and the Contracting Officer shall after the receipt, review and approval of such statement apply 8.7% of such costs as a credit against the irrigation construction charge obligation installment. If such statement is not provided by the Contractor on or before April 1 of each year, the Contractor shall not receive credit for such costs in that year nor shall it be applied as a credit in subsequent years. The first such notice can include the cumulative operation and maintenance costs incurred by the Contractor since the transfer of the care, operation, and maintenance of the project works to the Contractor: Provided, however, That such percentage can be adjusted by the Contracting Officer with the final allocation of project costs or at any other time which he considers appropriate: Provided further, however, That upon the completion of the repayment of the irrigation construction charge obligation by the Contractor the Contracting Officer shall make such arrangements for crediting which he considers appropriate.

13 (c). The Contractor shall promptly make any and all repairs to the project works being operated by it which are necessary for proper care, operation, and maintenance. In case of neglect or failure of the Contractor to make such repairs within 60 days following written notification, the Contracting Officer may cause the repairs to be made, and the cost thereof shall be paid by the Contractor as prescribed by the Contracting Officer.

13 (d). No substantial change shall be made by the Contractor in any of the major transferred works without first obtaining the written consent of the Contracting Officer.

13 (e). The Contractor shall hold the United States, its officers, agents, and employees harmless as to any and all damages which may in any manner grow out of the care, operation, and maintenance, of any of the project works transferred to the Contractor.

13(f). In the event the Contractor is found to be operating the transferred works or any part thereof in violation of this contract, or is otherwise violating the same, then at the election of the Contracting Officer the United States may take over from the Contractor the care, operation, and maintenance of such transferred works by giving written notice to the Contractor of such election and of the effective date thereof. Thereafter, during the period of operation by the United States, the Contractor shall pay to the United States annually in advance the cost of operation and maintenance of such works as prescribed in notices

from the Contracting Officer to the Contractor. Such works may be re-transferred to the Contractor in the manner originally transferred.

13 (g). In addition to all other payments to be made by the Contractor under this contract, the Contractor shall, during the period of time any or all of the project works are being operated by it, pay to the United States following the receipt of a detailed statement, the costs incurred by the United States for work involved in the administration and supervision of this contract.

Review and Inspection of Project Works for Determining Adequacy of Maintenance

14 (a). The Contracting Officer with the Contractor may, from time to time, make reviews of maintenance of project works being operated by the Contractor with a view to assisting the Contractor in determining the condition of facilities and the adequacy of the maintenance program. This review may include any or all of the project facilities constructed by the United States and transferred to the Contractor or project facilities constructed by the Contractor with funds advanced by the United States. A report of the review, including recommendations, if any, will be prepared and copies will be furnished to the Contractor. Except for such participation by the Contractor as it may desire, the review will be without cost to the Contractor.

14 (b). If deemed necessary by the Contracting Officer or requested by the Contractor, special inspections of any project works being

operated by the Contractor and of the Contractor's books and records may be made to ascertain the extent of any operation and maintenance deficiencies, to determine the remedial measures required for their correction, and to assist the Contractor in solving specific problems. Any special inspection or audit shall, except in a case of emergency, be made after written notice to the Contractor and the actual cost thereof shall be paid by the Contractor to the United States.

Drainage and Water Quality Studies

15. To aid in determining the source and solution of future potential drainage and water quality problems, the Contractor shall upon request of the Contracting Officer maintain records of ground water levels and ground water quality. If and when needed, the Contractor shall construct drainage works to protect the irrigability of lands and take such corrective measures as are necessary to maintain the quality of the water supply within the project area.

Power

16(a). Pursuant to the Act of June 23, 1970 above, and subject to the provisions of this contract, the Secretary will make available power and energy necessary for the pumping of irrigation and D, M, & I water under this contract. The charges to the Contractor for said power and energy for each type of service will be at separate rates to be announced by the Secretary. The initial rate for irrigation pumping, however, shall be 1½ mills per kilowatt hour and it does not include any charges to transmit power and energy from the point of delivery on the Bonneville Power

Administration System to the project facilities. The initial irrigation pumping rate shall continue until such time as the Secretary adjusts it under (b) of this article. The amounts of power and energy used for D, M, & I service, including losses, during the nonirrigation season will be determined from meters at the pumping plants; and suitable adjustment factors will be applied to the average monthly nonirrigation season energy use to determine D, M, & I energy during the irrigation season months. The power charges for irrigation and D, M, & I shall be included in any operation and maintenance charge if the United States has operation and maintenance responsibility. When the Contractor has assumed the operation and maintenance responsibility, the power charges, including any charges to transmit power and energy over lines and facilities of others, shall be paid semiannually in advance for irrigation, one-half on April 1 and one-half on July 1 of each year, or in such other manner as may be mutually agreed upon, and monthly for D, M, & I commencing with the first year in which the Contractor assumes operation and maintenance responsibility, in accordance with an appropriate notice from the Secretary. Such notices will require payment for the estimated irrigation pumping power requirement for the irrigation season for the year for which issued and the Contractor will be billed monthly for the D, M, & I power requirement unless otherwise provided in the announcement by the Secretary. After the end of the irrigation pumping season a notice of the actual

irrigation power charge shall be issued and the deficit, if any, in the advance payment to meet the actual charge shall be paid by the Contractor as announced in the notice. If the advance payment exceeds the actual power charge, a credit shall be applied on the advance power charge to be due from the Contractor for the next irrigation season. Transmission to the points of use will be either over lines and facilities constructed as part of the project works or by means of other available lines and facilities. As a part of the cost of construction of the project works, the United States will pay the costs for connections made to lines and facilities not its own. Except as hereinafter provided in Subarticle (c) of this article, where power and energy are transmitted over lines and facilities other than those of the United States, the power charges to the Contractor for irrigation and for D, M, & I will include charges for such transmission pursuant to the terms of contractual arrangements to be made by the United States after consultation with the Contractor's Board.

16(b). The irrigation pumping power rates established in (a) of this article may be adjusted by the Secretary from time to time, but not oftener than once every 5 years, unless otherwise mutually agreed upon.

16(c). The Contractor may, during the time it is operating and maintaining the project works, with approval of the Secretary, enter into contractual arrangements for the transmission of power and energy over

lines and facilities other than those of the United States. Those power and energy transmission costs which, as a result of such contractual arrangements, are not to be a responsibility of the United States will not be included in the above-said power charge to the Contractor.

16(d). No preferential rate for the power and energy required for pumping D, M, & I water has been provided by statute or this contract.

Reserve Fund

17. Commencing with the first year for which water is available from the completed project works as announced by the Secretary and continuing until such time as all sums of money becoming due hereunder shall have been paid to the United States, the Contractor shall accumulate and maintain a reserve fund which will be available for use in the manner, for the purposes, and in the circumstances hereinafter set forth. Such reserve fund shall consist of annual deposits by the Contractor of not less than $6,000 to a special account created by the Contractor for the purpose. Such annual deposits shall continue until the amount in the reserve fund is not less than $60,000. Expenditures shall be made from such reserve fund only for meeting major unforeseen extraordinary costs of operation and maintenance, repair, betterment and replacement of project works, and for operation and maintenance during periods of special stress, such as may be caused by drought, hurricanestorms, or other like emergencies. Whenever said reserve fund is reduced below $60,000 by expenditures therefrom, it shall be restored by the accumulation

of annual deposits of $6,000 commencing with the next year following that in which the fund is reduced below said amount. During any period in which any of the project works are operated and maintained by the United States, such fund shall be available for like use by the United States. At the option of the Contractor, the reserve fund may be invested to the extent permitted by law, provided that such reserve fund may be made available within a reasonable time to meet the expenses for the purpose for which it was accumulated: Provided, That upon mutual agreement said fund and the annual installments may be adjusted to reflect the addition, deletion, or changes in project facilities and operation and maintenance costs not contemplated when this contract was executed.

Contractor to Employ Manager

18. During the term of this contract, the Contractor will employ a competent manager or superintendent who shall have had experience in the operation of works similar to the project works described herein.

ASSESSMENTS AND PENALTIES

Assessments

19 (a). The Contractor shall cause to be levied and collected all necessary assessments, tolls, service, and other charges, and will use all the authority and resources of the Contractor to collect the same and to make all payments to the United States when due and to meet its other obligations under this contract. Amounts which are the responsibility of

the irrigation water users shall be collected from them through annual construction assessments based upon an acreage charge and they may also be collected through such other methods as the Contractor and the Secretary may agree upon.

19 (b). Should the Contractor be in default at any time in the payment of construction charge installments, the Secretary, by written notice to the Contractor, may require the Contractor to levy toll and/or service charges for the collection of its construction charge installments from water users in advance of water delivery, and also establish a toll and/or service charge to be paid in advance of water delivery in addition to, or in place of, any toll and/or service charges levied by the Contractor.

General Obligation--Benefits Conditioned upon Payment

20 (a). The obligation of the Contractor to pay the United States as provided in this contract is a general obligation of the Contractor notwithstanding the manner in which the obligation may be distributed among the Contractor's water users and notwithstanding the default of individual water users in their obligations to the Contractor.

20 (b). The payment of charges becoming due hereunder is a condition precedent to receiving benefits under this contract. No water will be made available to the Contractor through project facilities during any period in which the Contractor may be in arrears in the advance payment of any operation and maintenance charges due the United States or in

arrears for more than 12 months in the payment of any construction charges due the United States. The Contractor shall not furnish water made available pursuant to this contract for lands or parties which are in arrears in the advance payment of operation and maintenance or toll charges or in arrears more than 12 months in the payment of construction charges as levied or established by the Contractor.

20(c). The Secretary may enter on the project works to shut off water being delivered in violation of this article.

Irrigation Operation and Maintenance Charge
Levies and Assessments

21(a). The provisions of this article are made with the object, among other things, of encouraging the economical use of irrigation water and of distributing the irrigation operation and maintenance charges equitably among the lands within the area served by the Contractor.

21(b). The Contractor, in establishing and collecting per-acre irrigation charges, shall levy a minimum annual operation and maintenance charge against each irrigable acre within the area served by the Contractor and the payment of such minimum charge shall be required whether or not irrigation water is used. The amount of irrigation water in acre-feet per acre which is to be delivered each year on payment of the minimum annual charge shall be determined by the Contractor, but it shall not

exceed 2 acre-feet for the irrigable lands within the area served by the Contractor. For irrigation water to be delivered each year in excess of the minimum amounts, the landowners or water users involved shall pay to the Contractor an additional water charge as follows:

(1) For the first ½ acre-foot or fraction thereof used per acre, at a rate per acre-foot not less than 100% of the rate per acre-foot charge for water made available for the year under the annual minimum charge.

(2) For each acre-foot or fraction thereof in excess of the first ½ acre-foot used per acre, not less than 120% of the rate per acre-foot charged for water made available under the annual minimum charge.

21(c). To carry out the provisions of this article, the Contractor or the United States, whichever is operating and maintaining the irrigation works involved, shall measure the irrigation water delivered to each farm turnout and shall keep individual farm turnout irrigation delivery water records.

Penalty for Delinquent Payments

22. The Contractor shall pay a penalty on installments or charges which become delinquent computed at the rate of 1% per month of the amount of such delinquent installments or charges for each day from such delinquency until paid: Provided, That no penalty shall be charged to

the Contractor unless such delinquency continues for more than 30 days in which event the penalty shall accrue from the initial date of delinquency.

PROJECT WATER SUPPLY

Project Diversions and Protection of Project Water Supply

23(a). The water supply available for diversion from wells for irrigation of the lands within the project and for D, M, & I uses shall comprise all the water, within the rights being acquired or appropriated for the project for irrigation and D, M, & I purposes, that become available through the operation of the project works. As of the date of this contract, the United States has obtained a permit from the State of Idaho to appropriate the necessary waters therefor which permit has been amended. The United States, when the construction and operation of the project has progressed to where it can do so under the laws of the State of Idaho, will obtain the necessary certificate and license thereunder in connection therewith.

23(b). In case a dispute arises as to the character, extent, priority, or validity of the water rights being acquired or acquired by the United States as the source of the water supply for the project, the Contractor, if requested by the Secretary, shall join with or assist the United States in promptly bringing and diligently prosecuting judicial proceedings for the determination of such dispute and it shall take all

measures necessary toward the defense and protection of the water supply, either independently or in cooperation with the United States, when the Secretary, in his discretion, determines that such proceedings or other measures are desirable. Nothing in this article, however, shall be construed as precluding the United States, independently or in cooperation with the Contractor, from taking such action as the Secretary deems necessary to protect the water supply.

Lands For Which Irrigation Water Is Furnished
Water Service Contracts

24(a). The irrigation water delivered under the terms of this contract, except under the provisions of (c) of this article, shall be used solely for distribution by the Contractor to the water users for irrigation uses on irrigable lands and on lands classified by the Secretary as 6W. No water may be delivered to or made available for nonirrigable lands, except such of those classified lands noted above as are nonirrigable, or to or for lands not within the operation of the Contractor, without the approval of the Secretary.

24(b). The Contractor (and the United States, should it be operating and maintaining any of the project works) will operate the project works to the end of making available for each irrigable acre of land and each acre of 6W land within the operation of the Contractor during each irrigation season that quantity of water to which it or they are entitled.

24(c). The Contractor may, subject to the approval of the Secretary, enter into water service contracts upon forms approved by the Secretary, which provide for such service and payment of appropriate charges to the United States, subject to certification by the Contractor that there is capacity in the system and an adequate water supply to serve such contracts without adversely affecting existing water users.

Transfer of Water Rights, Dam, Appurtenant Facilities, and Rights of Way for Use in Maintenance of Level of Lakes

25. The Contractor agrees that after completion of the project works under this contract and project water becoming fully available therefrom and the United States having perfected its rights to said project waters, it will, on request of the United States, transfer by appropriate documents its existing water rights in Twin Lakes, with the transfer document concurred in by the State of Idaho, and its dam, outlet works, dam site, and all other facilities appurtenant thereto and rights of way therefor to the United States or some other entity designated by the United States for use in maintaining the level of those Lakes as near constant as possible for recreation and fish and wildlife enhancement.

United States Not Liable for Water Shortages or Interruptions

26. No liability shall accrue against the United States or any of its officers, agents, or employees for damage, direct or indirect, arising by reason of shortages in the quantity of water available through

the project works or interruptions in water deliveries to lands or water users within the area served by the Contractor resulting from drought, failure of the power supply, inaccuracy in distribution, hostile diversion, prior or superior claims, accident to or failure of facilities of the project works, whether or not attributable to negligence of officers, agents, or employees of the United States, or other causes of whatsoever kind. Nor shall the Contractor's obligations to the United States under this contract be reduced by reason of such shortages or interruptions.

Waste, Seepage, and Return Flow Waters
And Wasteful and Unauthorized Use of Water

27 (a). The United States does not abandon nor relinquish any of the waste, seepage, or return flow waters attributable to the project water supplied under this contract. All such waters are reserved and intended to be retained for the use and benefit of the United States as a source of supply for the project.

27 (b). If suitable return flow water from any part of the area served by the Contractor shall at any time be or become available at points where it can be used on lands within that area, the United States may supply such water as a part of the supply to which the lands and water users therein are entitled.

27 (c). The Secretary and the Contractor each may provide in the rules and regulations with respect to avoidance of the wasteful and unauthorized use of water that any water user found to be making use of

water available under the terms of this contract in a way that is unreasonably wasteful and harmful to the project or unauthorized shall have the amount of water to be delivered for his use at any one time, or over the irrigation season, reduced to an amount which would avoid such waste and harm or unauthorized use.

Quality of Water

28. The operation and maintenance of project facilities shall be performed in such manner as is practicable to maintain the quality of raw water made available through such facilities at the highest level reasonably attainable as determined by the Contracting Officer. The United States does not warrant the quality of water and is under no obligation to construct or furnish water treatment facilities to maintain or better the quality of water.

Water and Air Pollution Control

29. The Contractor shall, within its legal authority, comply fully with all applicable Federal laws, orders, and regulations, and the laws of the State of Idaho, all as administered by appropriate authorities, concerning the pollution of streams, reservoirs, groundwater or water courses with respect to thermal pollution or the discharge of refuse, garbage, sewage effluent, industrial waste, oil, mine tailings, mineral salts, or other pollutants, and concerning the pollution of the air with respect to radioactive materials or other pollutants.

GENERAL PROVISIONS

Excess Land

30. As used herein the term "excess land" means that part of the irrigable land within the area served by the Contractor in excess of 160 acres held in the beneficial ownership of any single person; or in excess of 320 acres held in the beneficial ownership of husband and wife jointly. The term "large landowner" means an owner of excess lands as herein defined; the term "nonexcess land" means all land within the area served by the Contractor which is not excess land as defined herein. Until one-half of the construction charges allocated against any excess lands have been fully paid, no sale of any such lands shall carry the right to receive irrigation water hereunder, unless and until the purchase price involved in such sale is approved by the Secretary and upon proof of fraudulent representation as to the true consideration involved in such sales the Secretary may instruct the Contractor by written notice to refuse to deliver any irrigation water subject to this contract to the lands involved in such fraudulent sales and the Contractor shall thereafter take such steps as may be necessary to insure that said water is not delivered to such lands.

Lands Not to Receive Water Until Owners Thereof Execute Certain Contracts

31 (a). Except as permitted by the Act of July 11, 1956 (70 Stat. 524) or the Act of September 2, 1960 (74 Stat. 732), no irrigation water

shall be delivered to any excess lands as defined in Article 30 unless the owners thereof shall have executed valid recordable contracts in form satisfactory to the Secretary, agreeing to the provisions of this article, agreeing to the appraisal provided for in Article 32; and that such appraisal shall be made on the basis of the actual bona fide value of such lands at the date of the appraisal without reference to the construction of the project, and agreeing to the sale of such lands under terms and conditions satisfactory to the Secretary and at prices not to exceed those fixed, all as hereinafter provided.

31(b). Each large landowner as a condition precedent to the right to receive irrigation water delivered hereunder for any of his excess lands shall, within 10 years following the initial availability of water to the Contractor under this contract and before any irrigation water is delivered by the Contractor to his excess land, execute a valid recordable contract in form satisfactory to the Secretary: Provided, That no excess land may be made eligible to receive irrigation water hereunder by the execution of a recordable contract unless such excess land was, on the date of initial availability of water, held in ownership of the large landowner executing such recordable contract. In such recordable contract the large landowner shall agree to the provisions contained in this article and agree to dispose of his excess lands in accordance therewith to persons who can take title thereto as nonexcess land as herein provided and at a price not to exceed the approved, appraised

value of such excess land within the period of 10 years after the said initial availability of water, and shall agree further that if said land is not so disposed of within said period of 10 years, the Secretary shall have the power to dispose of said land subject to the same conditions on behalf of such large landowner; and the Contractor agrees that it will take all necessary steps to insure that irrigation water is not delivered to any large landowner other than for his nonexcess lands until such owner meets the conditions precedent herein stated.

31(c). Each large landowner as a condition precedent to the right to receive irrigation water delivered by the Contractor for any of his lands shall, within 30 days after the date of notice from the United States through the Contractor requesting such large landowner to designate his lands within the area served by said Contractor which he desires to designate as nonexcess lands, file in the office of the Contractor, in duplicate, one copy thereof to be furnished by the Contractor to the Secretary, his written designation and description of lands so selected to be nonexcess lands and upon failure to do so the Contractor shall be required to make such designation and mail a notice thereof to such large landowner, and in the event said Contractor fails to act within such period of time as the Secretary considers reasonable, such designation will be made by the Secretary who will mail a notice thereof to the Contractor and to the large landowner. The large landowner

shall become bound by any such action on the part of the Contractor or the Secretary, and the Contractor will take all necessary steps to insure that irrigation water is delivered to lands eligible as nonexcess lands only when so designated as nonexcess. A large landowner may with the consent of the Secretary designate land other than that previously designated as nonexcess land: Provided, That such redesignation may be made only by a large landowner who had theretofore executed a recordable contract under the terms hereof, only with respect to land covered by such recordable contract, and only to the extent that an equal acreage of the irrigable land initially designated as nonexcess and owned by such large landowner shall, upon such new designation, become excess land subject to the provisions of such recordable contract in the same manner as if such land had been included therein.

Valuation and Sale of Excess Lands

32(a). The value of the excess lands within the area served by the Contractor held in the ownership of large landowners shall be appraised in a manner to be prescribed by the Secretary. At the option of a large landowner, the value of such land may be appraised, subject to the approval thereof by the Secretary, by three appraisers. One of said appraisers shall be designated by the Secretary and one shall be designated by the Contractor, and the two appraisers so appointed shall name the third. If the appraisers so designated by the Secretary and

the Contractor are unable to agree upon the appointment of the third, the Judge of the United States District Court for the District of Idaho shall be requested to name the third appraiser.

32 (b). The following principles shall govern the appraisal:

(1) No value shall be given such lands on account of the existing or prospective possibility of securing water from the project.

(2) The value of improvements on the land at the time of said appraisal shall be included therein, but shall also be set forth separately in such appraisal.

32 (c). The excess land of any large landowner shall be reappraised at the instance of the United States or at the request of said landowner. The cost of the first appraisal of each tract of excess land shall be paid by the United States. The cost of each appraisal thereafter shall be paid by the party requesting such appraisal.

32 (d). Any improvements made or placed on the appraised land after the appraisal hereinabove provided for prior to sale of the land by a large landowner may be appraised in like manner.

32 (e). Future sales of excess irrigable lands of large landowners within areas served by the Contractor shall not carry the right to receive irrigation water hereunder for such land and the Contractor agrees to refuse to deliver irrigation water to land so sold until, in addition to compliance with other provisions hereof, a verified

statement showing the sale price upon any such sale shall have been filed with the Contractor and duly recorded in the County records.

32(f). The Contractor shall take all reasonable steps requested by the Secretary to ascertain the occurrence and conditions of all sales of irrigable lands of large landowners in areas served by the Contractor and to inform the Secretary concerning the same.

32(g). A true copy of this contract and of each appraisal made pursuant thereto shall be maintained on file in the office of the Contractor and like copies in the office of the Secretary, and shall be made available for examination during the usual office hours by all persons who may be interested therein.

Production Limitation on Newly Irrigated Lands

33. For a period of 10 years from June 23, 1970, no water from the project works shall be delivered to any water user for the production on lands newly irrigated of any basic agricultural commodity, as defined in the Agricultural Act of 1949 (63 Stat. 1051) or any amendment thereof, if the total supply of such commodity for the marketing year in which the bulk of the crop would normally be marketed is in excess of the normal supply as defined in Section 301(b)(10) of the Agricultural Adjustment Act of 1938 (52 Stat. 41) as amended, unless the Secretary of Agriculture calls for an increase in production of such commodity in the interest of national security.

Title to Project Irrigation Works
and Lands and Rights of Way Therefor

34. Title to all works constructed under this contract, together with the lands and interests therein acquired therefor, including the Contractor's existing well, pump, motor, appurtenances, and right of way therefor which are being purchased from it by the United States under a separate contract, shall be in and remain in the name of the United States until otherwise provided by Congress; except that pursuant to the authority of the Act of July 29, 1954 (68 Stat. 580), as amended, title to office furniture, transportation equipment and tools which are determined by the Secretary to be necessary for the operation and maintenance of the project works and which has been purchased with appropriated funds and the expenditures therefor are included in the Contractor's construction charge obligation provided for in Article 8 shall be transferred to the Contractor at the time the project works are transferred to the Contractor for its care, operation and maintenance.

Books, Records and Reports

35. The Contractor shall establish and maintain accounts and other books and records pertaining to its financial transactions, land use and crop census, water supply, water use, changes of project works, and to other matters as the Contracting Officer may require. Reports thereon shall be furnished to the Contracting Officer in such form and on such date or dates as he may require. Subject to applicable Federal laws and regulations, each party shall have the right during office hours

to examine and make copies of each other's books and records relating to matters covered by this contract.

Performance of Work with Contributed Funds

36 (a). Pursuant to the Act of March 4, 1921 (41 Stat. 1367, 1404), the United States, at its option, may perform with funds contributed by the Contractor any construction or maintenance work within the authority of the Contractor but which is not otherwise provided for by this contract. If the United States determines that it will undertake any such work, funds therefor shall be advanced by the Contractor as directed by the Secretary. The advance shall be accompanied by a certified copy of a resolution of the Contractor's Board of Directors describing the work to be done and authorizing its performance by the United States with the Contractor's funds.

36 (b). After completion of any work so undertaken, the United States shall furnish the Contractor with a statement of the cost of the work done. Any unexpended balance of the funds advanced will be refunded to the Contractor or applied as otherwise directed by the Contractor.

Rules, Regulations, and Determinations

37 (a). The Contracting Officer shall have the right to make, after an opportunity has been offered to the Contractor for consultation, rules and regulations consistent with the provisions of this contract, the laws of the United States and the State of Idaho, to add

to or to modify them as may be deemed proper and necessary to carry out this contract, and to supply necessary details of its administration which are not covered by express provisions of this contract. The Contractor shall observe such rules and regulations.

37 (b). Where the terms of this contract provide for action to be based upon the opinion or determination of either party to this contract, whether or not stated to be conclusive, said terms shall not be construed as permitting such action to be predicated upon arbitrary, capricious, or unreasonable opinions or determinations. In the event that the Contractor questions any factual determination made by the Contracting Officer, the findings as to the facts shall be made by the Secretary only after consultation with the Contractor and shall be conclusive upon the parties.

Confirmation of Contract

38. The execution of this contract shall be authorized or ratified by the qualified electors of the Contractor at an election held for that purpose. The Contractor, after the election and upon the execution of this contract, shall promptly secure a final decree of the proper court of the State of Idaho approving and confirming the contract and decreeing and adjudging it and the apportionment of the benefits made thereunder to be lawful, valid, and binding on the Contractor. The Contractor shall furnish to the United States a certified copy of such decree and of all pertinent supporting records.

Changes in Contractor's Organization

39. While this contract is in effect, no change shall be made in the Contractor's organization, by inclusion or exclusion of lands, by dissolution, consolidation, merger or otherwise, except upon the Contracting Officer's written consent.

Notices

40. Any notice, demand, or request authorized or required by this contract shall be deemed to have been given when mailed, postage prepaid, or delivered to the Regional Director, Region 1, Bureau of Reclamation, Boise, Idaho, on behalf of the United States and to the Secretary of the Contractor, Post Falls, Idaho, on behalf of the Contractor. The designation of the addressee or the address may be changed by notice given in the same manner as provided in this article for other notices.

Equal Opportunity

41. During the performance of this contract, the Contractor agrees as follows:

(1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such

action shall include, but not be limited to, the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this Equal Opportunity clause.

(2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(3) The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Contracting Officer, advising the labor union or workers' representative of the Contractor's commitments under this Equal Opportunity clause, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The Contractor will furnish all information and reports required by said amended Executive Order and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the Contracting Officer and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the Contractor's noncompliance with the Equal Opportunity clause of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended, in whole or in part, and the Contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in said amended Executive Order, and such other sanctions may be imposed and remedies invoked as provided in said Executive Order, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The Contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of said amended Executive Order, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the Contracting Officer may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, That in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Contracting Officer, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

Title VI, Civil Rights Act of 1964

42(a). The Contractor agrees that it will comply with Title VI of the Civil Rights Act of July 2, 1964 (78 Stat. 241) and all requirements imposed by or pursuant to the Department of the Interior Regulation (43 CFR 17) issued pursuant to that title, to the end that, in accordance with Title VI of that Act and the Regulation, no person in the United States shall, on the ground of race, color, or national

origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Contractor receives financial assistance from the United States and hereby gives assurance that it will immediately take any measures to effectuate this agreement.

42 (b). If any real property or structure thereon is provided or improved with the aid of Federal financial assistance extended to the Contractor by the United States, this assurance obligates the Contractor, or in the case of any transfer of such property, any transferee for the period during which the real property or structure is used for a purpose involving the provision of similar services or benefits. If any personal property is so provided, this assurance obligates the Contractor for the period during which it retains ownership or possession of the property. In all other cases, this assurance obligates the Contractor for the period during which the Federal financial assistance is extended to it by the United States.

42 (c). This assurance is given in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts, property, discounts, or other Federal financial assistance extended after the date hereof to the Contractor by the United States, including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date.

The Contractor recognizes and agrees that such Federal financial assistance will be extended in reliance on the representations and agreements made in this assurance, and that the United States shall reserve the right to seek judicial enforcement of this assurance. This assurance is binding on the Contractor, its successors, transferees, and assignees.

Contingent on Appropriation or Allotment of Funds

43. The expenditure or advance of any money or the performance of any work by the United States hereunder which may require appropriation of money by the Congress or the allotment of funds shall be contingent upon such appropriation or allotment being made. The failure of the Congress to appropriate funds or the absence of any allotment of funds shall not relieve the Contractor from any obligations under this contract. No liability shall accrue to the United States in case such funds are not appropriated or allotted.

Assignment Limited--Successors and Assigns Obligated

44. The provisions of this contract shall apply to and bind the successors and assigns of the parties hereto, but no assignment or transfer of this contract or any part or interest therein shall be valid until approved by the Contracting Officer.

Officials Not to Benefit

45 (a). No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this contract

or to any benefit that may arise herefrom. This restriction shall not be construed to extend to this contract if made with a corporation or company for its general benefit.

45 (b). No official of the Contractor shall receive any benefit that may arise by reason of this contract other than as a landowner within the project and in the same manner as other landowners within the project.

IN WITNESS WHEREOF, the parties hereto have signed their names the day and year first above written.

THE UNITED STATES OF AMERICA

By E F Sullivan
Regional Director, Region 1
Bureau of Reclamation

EAST GREENACRES IRRIGATION DISTRICT

(SEAL)

By
President
Board of Directors

ATTEST:

Ethel A. Austlund
Secretary

STATE OF IDA( )
: ss
County of Ada)

On this 1st day of June, 1972, personally appeared before me E.F. Sullivan, to me known to be the official of the United States of America that executed the within and foregoing instrument and acknowledged said instrument to be the free and voluntary act and deed of said United States, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument.

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

John H. Weld
Notary Public in and for the
State of Idaho
Residing at Boise

(SEAL)

My commission expires: 6-10-75

* * * * * * * * *

STATE OF IDAHO)
: ss
County of Kootenai)

On this 25th day of May, 1972, before me Gretchen M. Pollis, a Notary Public, personally appeared Roy Bodine and Ethel A Ostlund, known to me to be respectively the President and Secretary of the EAST GREENACRES IRRIGATION DISTRICT, and the persons who executed the within instrument on behalf of said corporation, and acknowledged to me that said corporation executed the same.

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

Gretchen M. Pollis
Notary Public in and for the
State of Idaho
Residing at Post Falls, Idaho

(SEAL)

My commission expires: 11/24/74

STATE OF IDAHO }
COUNTY OF KOOTENAI } ss.
FILED:

1972 JUL 26 AM 9:18

CLERK, DISTRICT COURT

DEPUTY

Department of Water Administration
APPLICANT'S
Exhibit 7
Date Admitted 3/24/83 RJA

IN THE DISTRICT COURT OF THE FIRST JUDICIAL DISTRICT OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF KOOTENAI

IN THE MATTER OF THE REPORT AND PETITION OF THE BOARD OF DIRECTORS OF EAST GREENACRES IRRIGATION DISTRICT, KOOTENAI COUNTY, IDAHO, FOR THE EXAMINATION, APPROVAL AND CONFIRMATION OF SAID REPORT AND OF THE PROCEEDINGS HAD BY SAID BOARD ENLARGING SAID DISTRICT, ORDERING THE CONSTRUCTION OF NEW ADDITIONAL AND SEPARATE WORKS AND IMPROVEMENTS WITHIN SAID DISTRICT AND IMPOSING ASSESSMENTS FOR THE PAYMENT AND COST THEREOF UPON THE LANDS WITHIN SAID IRRIGATION DISTRICT.

No. 27822

JUDGMENT AND DECREE

The above entitled matter came on for hearing pursuant to notice duly given on July 21, 1972, at 1:30 p.m. in the courtroom of the above entitled court in the courthouse in Coeur d'Alene, Kootenai County, Idaho before Honorable Dar Cogswell for the judicial examination, approval and confirmation of proceedings had by the District filed under and pursuant to the authority and direction of the Board of Directors of the District as provided by Chapter 18, Title 43 IC as amended and in conformity with the provisions of 43-407 and 43-408 IC. Petitioners appeared by and through their attorney Thomas A. Mitchell and no person appeared herein by way of answer or objection either in person or in writing at the time and place set for hearing this petition, and

MICROFILMED

the default having been duly and regularly entered herein pursuant to an order of this Court and the Court thereupon sitting without a jury proceeded to examine and consider all proceedings of said Board of Directors involved in the cause and upon evidence entered by and on behalf of said petitioners and duly and regularly admitted by the Court in support of the allegations of the petition, and the Court having considered all of the evidence and being advised in the premises, the Court having entered its Findings of Fact and Conclusions of Law wherein it is ordered that judgment be entered accordingly,

IT IS HEREBY ORDERED, ADJUDGED AND DECREED:

1. That due and legal notice of the filing of the Petition herein for judicial examination, approval and confirmation of the proceedings herein referred to was duly and regularly given and published by the Clerk of this Court and by the District and the secretary thereof pursuant to the Orders of this Court for the time and in the manner required by the statutes of the State of Idaho in such proceedings.

2. That the default of each and every person and party interested in the subject matter of the Petition herein has been duly and regularly entered by the order of this Court and such defaults are hereby confirmed.

3. That all proceedings taken and done by the East Greenacres Irrigation District and the directors thereof relating to the authorization of an entry into said repayment contract as shown by Exhibit A admitted in evidence herein for the improvement and replacement of the irrigation system at a cost to the District not to exceed the sum of $1,005,500.00 were in all respects duly and legally taken and had and done pursuant to and in strict compliance

with the statutes of the State of Idaho applicable thereto and said proceedings of said district in executing said contract and calling an election and canvassing the ballots thereafter and in levying said assessments are hereby ratified, approved and confirmed.

4. That the proceedings for the apportionment of benefits to accrue to each lot, tract or subdivision of said land within said district under said contract as shown by Exhbit A admitted in evidence is hereby ratified and confirmed and that the assessments as shown by Exhibit A as admitted in evidence herein is in all respects under and pursuant to the provisions of IC 43-408 as amended approved, ratified and confirmed and said apportionment and distribution of costs therein is ratified and confirmed.

5. That all resolutions of the Board of Directors of the Irrigation District therein touching upon the proceedings, the authorization of the contract, and the proceedings of the apportionment of the benefits set forth in the Petition on file in this action were in all respects duly and regularly taken, had and done pursuant to and in strict compliance with the laws of the State of Idaho applicable thereto.

6. That the repayment contract dated the 1st day of June, 1972, and admitted in evidence as Exhibit A, is hereby approved and confirmed by this Court and decreed to be a valid contract binding upon the parties hereto.

7. That the land upon which said assessment is to be levied equally is as follows:

All lands contained within the following described boundary;

Commencing at the W¼ corner of Sec. 4, T50N R5WBM; thence south along the west line thereof a distance of 598.40 feet; thence east a distance of 1070 feet; thence south a distance of 103.95 feet; thence S44° 22½'W to a point which bears N45° 37'30"W from the most northerly corner of a parcel described in Instrument No. 594687, Kootenai County Records; thence S45° 37'30"E to said most northerly corner; thence S45° 37'30"E 205.71 feet; thence S42° 13'W 179.80 feet; thence S50° 44'W 207.73 feet; thence S55° 01'W 68.09 feet; thence S45° 19'W 153.27 feet; thence N42° 42'W 667.43 feet; thence N60° 40'W 64.84 feet; thence N42° 42' W 18.20 feet to a point on the west line of said section; thence south along said west line to the SE corner of Tract 97, Plat 9, East Greenacres Irrigation District; thence west along the south line of said Tract 97 to the northerly bank of the Spokane River; thence westerly along the bank of said river to a point where said bank intersects the south line of Tract 122, Plat 9, East Greenacres Irrigation District, extended; thence west to the west line of Sec. 5, T50N R5WBM; thence north along the west line thereof to the W¼ corner of said Sec. 5; thence west along the E-W midsection line of Sec. 6, T50N R5WBM to the W¼ corner thereof; thence north along the west line of Sec. 6 to its intersection with the south line of US Highway 10; thence northeasterly and easterly along said south line of US Highway 10 to its point of intersection with the west line of Sec. 5, T50N R5WBM; thence south along said west line to its point of intersection with the north line of the county road as shown on the Plat, as said road traverses Tract 24, Plat 9, East Greenacres Irrigation District; thence northeasterly along the north line of said road across Tracts 24, 23, 10 and 7, Plat 9, East Greenacres Irrigation District, to a point where said north line intersects the south line of US Highway 10;

thence west along said south line to a point where the west line of Tract 25, Plat 10, East Greenacres Irrigation District, extended, intersects the said south line; thence north along the west line of Tract 25, and its northerly extension, to the NW corner of Lot 1, Block 11, 1st Addition to Mountain View Terrace; thence east to a point of intersection with the west line of Corbin Road; thence north along said west line to a point 9 feet south of the SE corner of Lot 10, Block 1, Mountain View Terrace; thence west to the SW corner of Tract 3, Plat 10, East Greenacres Irrigation District; thence south to the northerly line of SIRR right of way; thence southwesterly along said line to a point due south of the SW corner of Tract 4, Plat 10, East Greenacres Irrigation District; thence North to the NW corner of said Tract 4; thence east to the NE corner of said Tract 4; thence north to the NW corner of Tract 44, Plat 5, East Greenacres Irrigation District; thence east to the NW corner of Tract 41, Plat 5, East Greenacres Irrigation District; thence north to the NW corner of Tract 24, Plat 5, East Greenacres Irrigation District; thence east to the NE corner, said Tract 24; thence north to the NE corner of Tract 105, Plat 7, East Greenacres Irrigation District; thence east to the NE corner of Tract 104, Plat 7, East Greenacres Irrigation District; thence north to the NE corner of Tract 89, Plat 7, East Greenacres Irrigation District; thence west to the NE corner of Tract 86, Plat 7, East Greenacres Irrigation District; thence South to the SE corner of said Tract 86; thence west to the SW corner of Tract 84, Plat 7, East Greenacres Irrigation District; thence north to the NW corner of Tract 77, Plat 7, East Greenacres Irrigation District; thence east to the NE corner of Tract 71, Plat 7, East Greenacres Irrigation District; thence north to the southerly line of Northern Pacific right of way; thence northwesterly along said line to the east line of Corbin Road; thence north along said east line to the NW corner of Tract 8, Plat 7, East Greenacres Irrigation District; thence east to a point which is 198 feet west of the east

line of section 29, T51N R5WBM; thence north to a point which bears north 660 feet from the south line of Sec. 20, T51N R5WBM; thence east to the east line of said Sec. 20; thence north along the said east line to the E¼ corner of said Sec. 20; thence west to the SW corner of E½NE¼, Sec. 20; thence north to the NW corner thereof; thence west to the S¼ corner of Sec. 17 T51N R5WBM; thence north to the center of said Section 17; thence east to the E¼ corner thereof; thence north to the NE corner of said Sec. 17; thence east to the SW corner of SE¼SW¼ Sec. 9, T51N R5WBM; thence north to the NW corner of S½SW¼SE¼SW¼; thence east to the NE corner thereof; thence north to the NW corner of W½SE¼NE¼SW¼ Sec. 9 T51N R5WBM; thence east to the NE corner thereof; thence south to the SE corner thereof; thence east to the SW corner, Tract 5, Plat 3, East Greenacres Irrigation District; thence north to the NW corner of said Tract 5; thence east to the SE corner, Tract 2, Plat 3, East Greenacres Irrigation District; thence north to the NW corner of said Tract 2; thence east to the NE corner of Tract 1, Plat 3, East Greenacres Irrigation District; thence south to a point which bears north 555.1 feet from the northerly right of way line of Northern Pacific railroad; thence S89° 42'W 405.1 feet; thence S0° 18'E to the north line of Trent Road; thence southwesterly along said north line of Trent Road to its intersection with the south line of Tract 15, Plat 3, East Greenacres Irrigation District; thence east to the SW corner of Tract 37, Plat 2, East Greenacres Irrigation District; thence north to the south line of the Northern Pacific right of way; thence northeasterly along said south line to its intersection with the north line of Tract 35, Plat 2, East Greenacres Irrigation District; thence east to the NE corner of Tract 33, Plat 2, East Greenacres Irrigation District; thence north to the SE corner of Tract 24, Plat 2, East Greenacres Irrigation District; thence east to the SE corner of Tract 16, Plat 2, East Greenacres Irrigation District; thence north to the NE corner of said Tract 16; thence east to the SE corner of Tract 10, Plat 2,

East Greenacres Irrigation District; thence north to the south line of the Northern Pacific right of way; thence northeasterly along said south line to its intersection with the north line of Sec. 11, T51N R5WBM; thence east along said north line to the N¼ corner of said section; thence south to the south line of the CMStP&P right of way; thence southwesterly along said south line to a point which is 60 rods due south of the north line of Sec. 14, T51N R5WBM; thence east to the N-S midsection line of said section; thence south to the north line of SIRR right of way; thence southwesterly along said north line to the east line of Sec. 22, T51N R5WBM; thence south to the SE corner of Sec. 22; thence west to the S¼ corner of Sec. 22; thence south to the center of Sec. 27, T51N R5WBM; thence west to the NE corner of the west 26 2/3 rods of E½SW¼ Sec. 27; thence south along the east line thereof to the south line of said Sec. 27; thence west 26 2/3 rods; thence south to the SE corner of W½NW¼ Sec. 34, T51N R5WBM; thence west to the W¼ corner of Sec. 34; thence south to the SW corner of Sec. 34; thence west to the S¼ corner of Sec. 33, T51N R5WBM; thence south to the SE corner of Government Lot 3, Sec. 4, T50N R5WBM; thence east to the NE corner of Lot 5, McGuire Townsite; thence southerly to the SE corner thereof; thence westerly along the south lines of lots 5, 6 and 7, and as extended, to the east line of Sec. 5, T50N R5WBM; thence south to the point of beginning.

EXCEPTING THEREFROM:

1. NW¼ Sec. 15, T51N R5WBM lying south of railroad right of way

2. Tracts 5 and 12, and Tract 51 and the W½ of Tract 50, Plat 4, East Greenacres Irrigation District

3. That part of Tract 128, Plat 7, East Greenacres Irrigation District described in Bk 44 Deeds, p. 129, Kootenai County.

Done in open court this 21st day of July, 1972.

Dar Cogswell
District Judge

STATE OF IDAHO
COUNTY OF KOOTENAI } ss

THIS IS TO CERTIFY THAT THE FOREGOING IS A TRUE COPY OF THE ORIGINAL NOW ON FILE OR RECORD IN THIS OFFICE.

CLERK OF
DISTRICT COURT By Jessie P. Lucci
Deputy 3-23-83

Department of Water Administration
APPLICANT'S
Exhibit 8
Date Admitted 3/24/83

BEFORE THE DIRECTOR OF THE

DEPARTMENT OF WATER ADMINISTRATION

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NOS. 95-7302, 95-7379, 95-7418, 95-7331, 95-7334 and 95-7391.

MEMORANDUM DECISION

Application for Permit No. 95-7302 was filed by Upper Twin Lakes Water Company on June 11, 1973, seeking a permit to appropriate 0.17 second foot of water from Upper Twin Lakes to be used for domestic and fire protection purposes. The application was protested by Clifton P. Holm, the U.S. Bureau of Reclamation, the East Greenacres Irrigation District, Lake Forest Homes, and the Twin Lakes Improvement Association.

Application for Permit No. 95-7379 was filed by Roger Bacon on October 3, 1973, seeking a permit to appropriate .2 second foot of water from Lower Twin Lakes for irrigation purposes. The application was protested by the Upper Twin Lakes Water Company.

Application for Permit No. 95-7418 was filed by Rudolph and Esther M. Stammerjohan, seeking a permit to appropriate .02 second foot of water from Upper Twin Lakes for domestic purposes and was protested by the East Greenacres Irrigation District.

Each of the above applications was the subject of a conference held at Coeur d'Alene, Idaho, on March 28, 1974. The three application matters were consolidated for the purpose of that conference by agreement of all parties. After an informal discussion, it was agreed by representatives of all of the applicants and protestants that the matter would be determined by the department based upon information available to it concerning the water supply and water rights at Twin Lakes without the necessity of a formal hearing.

Application for Permit No. 95-7331 was filed by Tim Lane on June 30, 1973, seeking a permit to appropriate .12 second foot of water from Upper Twin Lakes for domestic, fire protection and irrigation purposes. The application was not protested.

DEPARTMENT COPY

Application for Permit No. 95-7344 was filed by Homer F. Pointner on August 14, 1973, seeking a permit to appropriate .01 second foot of water from Lower Twin Lakes for domestic purposes. The application was not protested.

Application for Permit No. 94-7391 was filed by Homer Steele on October 16, 1973, seeking a permit to appropriate .2 second foot of water from Upper Twin Lakes for domestic and fire protection purposes. The application was not protested.

Each of these six applications seeks to appropriate water from Twin Lakes which has been the subject of considerable water right controversy in recent years. That controversy has resulted in decisions of the Idaho Supreme Court and the First Judicial District Court in the case of Twin Lakes Improvement Association, Inc., et al vs. East Greenacres Irrigation District. It was determined that the East Greenacres Irrigation District had rights to store water in Twin Lakes and to withdraw water from the lake subject to two limitations:

(1) The District may withdraw water at a rate of 45.74 cubic feet per second, provided it can be applied to a beneficial use.

(2) The District is prohibited from raising the waters of the lake above the elevation of 10.4 feet on the outlet gauge or lowering the waters of the lake below 6.4 feet on the outlet gauge.

It was agreed at the conference that the only water available for appropriation is the surplus to present uses and rights which spills from the lake during the spring runoff period and which is not beneficially used by the irrigation district or other prior appropriators. However, after the lakes have once filled to 10.4 feet elevation on the staff gauge at the outlet each year and begin to recede below 10.4 feet, there would be no surplus waters available for these or any other permits. It was therefore agreed that any permits issued by the Department of Water Administration, which recognized that water was available only under these conditions, could be approved without interfering with prior water rights. Since all of the six above-numbered applications similarly propose to take water from the lakes,

their approval must be similarly conditioned to prevent overuse of the available water supply.

IT IS THEREFORE ORDERED and Application for Permit Nos. 95-7302, 95-7379, 95-7418, 95-7331, 95-7334 and 95-7391 are each hereby approved, subject to prior existing rights and the following conditions of use:

(1) No water may be withdrawn from Twin Lakes under any of these permits unless water is spilling from the lake that is not beneficially used by prior appropriators including the irrigation district under the district's right to divert 45.74 cubic feet per second.

(2) Use of water under these permits may continue subject to condition #1 above until the lake fills to 10.4 feet on the gauge and begins to recede below that level.

(3) Regulation of use of water as herein determined shall be subject to the control by the Department of Water Administration until such time as a water district is formed and a watermaster can be appointed.

DATED this 22nd day of April, 1974.

R. KEITH HIGGINSON
Director

TRACTED

Contract No. 14-06-100-9230
dated 1-25-77

RATHDRUM PRAIRIE PROJECT BOOK 281 PAGE 597

724240

DEED

780.—

THIS INDENTURE, made this 4 day of January, 197 7, between the EAST GREENACRES IRRIGATION DISTRICT, hereinafter called the Grantor, and the UNITED STATES OF AMERICA, acting through the Regional Director, Bureau of Reclamation, Department of the Interior, hereinafter called the Grantee.

WITNESSETH, That the Grantor, for and in consideration of the benefits to be derived from the construction of the East Greenacres Unit of the Rathdrum Prairie Federal Reclamation Project, have granted, bargained, and sold, and by these presents do grant, bargain, sell and convey, unto the Grantee and its assigns forever all its right, title, and interest in the following described property situated in the County of Kootenai, State of Idaho, to wit:

1. All its water, storage, and flowage rights in Twin Lakes (formerly Fish Lakes) including Water License No. 14757.
2. Twin Lakes Dam, damsite, outlet works, and all other facilities and interests appurtenant thereto and rights-of-way therefore located in Section 17, Township 52 N., Range 4 W., B.M.

TOGETHER WITH ALL AND SINGULAR tenements, herditaments, and appurtenances thereunto belonging, or in anywise appertaining thereto,

RECLAMATION PLANNED

Department of Water Administration
APPLICANT'S
Exhibit 9
Date Admitted 3/24/83

issues and profits thereof; and all estate, right, title, and interest in and to the said property, as well in law as in equity, of the said Grantors.

THIS INSTRUMENT is made pursuant to Article 25 of the June 1, 1972 repayment contract between the East Greenacres Irrigation District and the United States of America.

IN WITNESS WHEREOF, the Grantors above named have hereunto set their hands and seals as of the day and year first above written.

EAST GREENACRES IRRIGATION DISTRICT

By Roy Berdine
Director

Secretary

By Donald Satchwell
Director

By Lawrence H. Bartlett
Director

By D. A. Rulph
Director

By Betty M. Jorgensen
Director

STATE OF IDAHO)
) ss
County of Kootenai)

On this 4 day of January, 1977, personally appeared before me Roy Bodine, D. A. Nulph, Bette M. Jergensen and Donald Satchwell, Lawrence M. Bartlett, to me known to be the officials of the EAST GREENACRES IRRIGATION DISTRICT, that executed the within and foregoing instrument to be the free and voluntary act and deed of EAST GREENACRES IRRIGATION DISTRICT said Post Falls, Idaho, for the uses and purposes therein mentioned and on oath stated that they were authorized to execute said instrument.

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

(SEAL)

Lawrence A. Keating Jr.
Notary Public in and for the
State of Idaho
Residing at Post Falls
My commission expires: 2/10/77

Filed and recorded at the request of Bureau of Reclamation
at 11 o'clock a M., this 7 day of July, 1977, 19__
By: Kathy Taylor Deputy
Carol Deitz
Ex-Officio
Recorder
Fee: GCO
Return: Bx 043 - 550 W. Fort St. Boise, Id.

BEFORE THE DIRECTOR OF THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF PROTESTS AGAINST APPROVAL OF APPLICATION FOR TRANSFER NO. 2745 OF WATER RIGHT NOS. ~~95-2059~~ 95-0973 AND 95-2059 IN THE NAME OF THE UNITED STATES OF AMERICA, ACTING THROUGH THE REGIONAL DIRECTOR, BUREAU OF RECLAMATION	ORDER ADOPTING PROPOSED MEMORANDUM DECISION AND ORDER

WHEREAS, A. Kenneth Dunn, Director of the Department of Water Resources having issued and served a copy on the parties on June 27, 1984, a Proposed Memorandum Decision and Order in the above-captioned matter, pursuant to Idaho Code, Section 67-5211; and,

WHEREAS, more than fifteen days have passed since the service of the Proposed Memorandum Decision and Order; and,

WHEREAS, no exceptions to that Proposed Memorandum Decision and Order have been received;

IT IS, THEREFORE, HEREBY ORDERED that said Proposed Memorandum Decision and Order be adopted and issued as the Final Decision and Order.

Dated this 1st day of August, 1984.

A. KENNETH DUNN

Director

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BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR TRANSFER NO. 2745 OF WATER RIGHT NO. 95-0973 AND 95-2059 FILED BY THE UNITED STATES OF AMERICA, ACTING THROUGH THE REGIONAL DIRECTOR, BUREAU OF RECLAMATION	PROPOSED MEMORANDUM DECISION AND ORDER

The United States of America, acting through the Regional Director, Bureau of Reclamation (hereafter called the Bureau) filed Application for Transfer No. 2745 to change the nature of use on two water rights Nos. 95-0973 and 95-2059 from irrigation and stockwater to recreation and fish and wildlife enhancement and lake level maintenance.

Both water rights were originally held by the East Greenacres Irrigation District (hereafter called the District) with the water being used primarily for irrigation purposes within the District boundaries. Water right No. 95-0973 resulted from the court decree, Twin Lakes Improvement Association, Inc. vs East Greenacres Irrigation District, Kootenai County Case No. 18420, June 4, 1969. The court established the maximum and minimum lake level at 10.40 feet and 6.4 feet respectively on the staff gauge located at the lower lake dam. The other water right, No. 95-2059 is based on a license issued by the State of Idaho, Department of Reclamation, a predecessor agency to the Department of Water Resources; and is for a flow of 45.74 cubic feet of water per second from Twin Lakes with a priority of May 4, 1920.

The Bureau first filed the application for transfer on June 3, 1982 requesting a change in right No. 95-0973 then on January 10, 1983, amended the application to include right No. 95-2059. The application was published as required by statute and objections against the changes were received from the following protestants: Betty Rose Hogan; David Osterberg; Mr. and Mrs. Dean Primmer; Mr. Orville Sylte; John E. Sylte; Chester Sylte; Donald Zigler, Mayor of the City of Rathdrum, Idaho; Shirley Watson; Mr. and Mrs. Glen Silliman; Roy C. Watson; Mr. and Mrs. Don Knowles; Robert A. Goelzer; Elizabeth Stevens; Susan E. Park; Mrs. Chester R. Park; Helen M. Willard; Marvin E. Willadsen; Mr. and Mrs. Chester A. Park and Robert K. Tinder. On March 7, 1983, Gordon Sytle submitted under Rule 6 of the Department's Practice and Procedure, a petition to

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intervene signed by 66 persons. The Director granted intervention status to the petitioners. A hearing was conducted on March 24, 1983 by a hearing officer for the Director of the Department of Water Resources. The applicant, Bureau, was represented by Mr. Ed Thomas, an employee of the Bureau. All of the protestants were either present or represented at the hearing with attorney Paul McCabe representing Sylte Ranch. Six intervenors were present at the hearing and Gordon Sylte acted as spokesman for them and also for the intervenors not present.

The protestants have different concerns about the proposed change depending on whether they are lake property owners or Rathdrum Creek property owners downstream from Twin Lakes. The lake property owners are concerned about the fluctuation in lake level both the low water level which exposes mud flats and the high water level that would leach the septic systems if allowed to remain for a long period of time at maximum elevation. They also are concerned, if they use lake water, about the effect this change will have on their present use. The creek property owners are concerned about the cessation of flow in Rathdrum Creek, if the inflow to the lake is used to maintain the lake level at the maximum elevation. The lack of flow in Rathdrum Creek, they claim, would injure their existing water rights including those for stockwater, irrigation, domestic purposes as well as the enjoyment of their property.

The hearing officer has considered the application for transfer, the protests, the petition to intervene, the testimony given at the hearing and the following exhibits in proposing a decision in this matter.

EXHIBITS

Applicant

No. 1 A copy of License and Certificate of Water Right No. 14757 (new number 95-2059)

No. 2 Congressional Record printing of the Secretary of Interior's report on the East Greenacres Unit, Reclamation Prarie Project, Idaho, House Document No. 91-182

No. 3 Transcript of Hearings before the Subcommittee on Irrigation and Reclamation

No. 4 Public Law 91-286, Congressional Authorization of East Greenacres Unit

No. 5 Letter of December 30, 1971 from Director, Idaho Department of Water Administration to Regional Director, U.S. Bureau of Reclamation

RECEIVED

No. 6 Contract between the United States of America and the East Greenacres Irrigation District

No. 7 Idaho District Court Decree filed July 26, 1972

No. 8 Memorandum Decision on water right permits, Nos. 95-7302, 95-7379, 95-7418, 95-7331, 95-7334, and 95-7391

No. 9 Contract dated January 4, 1977 conveying East Greenacres Irrigation District's water rights in Twin Lakes along with the diverting works to the United States of America

Protestant Chester A. Park

No. 1 Environmental Protection Agency Preliminary Report on Upper and Lower Twin Lakes

No. 2 Environmental Protection Agency computer printout dated March 11, 1983 of water quality of Twin Lakes

No. 3 Table B-1, Water Quality Lake Characteristics

No. 4 Chart of Twin Lakes precipitation

The use of Twin Lakes as a source of water supply to irrigate the East Greenacres Irrigation District land began in about 1905 when a control structure was built at the outlet of the lower lake. The diversion structure constructed could regulate the lake level a vertical distance of about 10.4 feet. During the irrigation season water was released from storage into Rathdrum Creek and then rediverted from the creek about ten miles downstream onto the District's lands.

As the population of the surrounding area increased, the lakes increased in popularity as a recreation area and many homesites were developed along the shoreline. A dispute grew between the District and the shoreline property owners over the amount of water that should be released from the lake which culminated in a final decision by the Idaho Supreme Court in the case entitled Lakeshore Owners Association vs East Greenacres Irrigation District. The decision established a maximum lake level of 10.4 feet and a minimum lake level of 6.4 feet on the guage at the control struction.

The dispute between the recreation interests and the irrigators along with the inadequate supply of water in Twin Lakes in many years gave impetus to a plan by the District to obtain an alternate water supply. The District contracted with the Bureau for the development of East Greenacres Unit of the Rathdrum Prarie Project using ground water as the source for irrigation. The District agreed to convey their water rights in Twin Lakes to the Bureau with the

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storage right to be used for recreation and fish and wildlife enhancement and the flow right to be used for lake level stabalization. The Bureau has now made an application to change the nature of use of Twin Lakes water which is the subject of this decision.

It must now be determined if injury will occur to existing water rights due to the change, if there will be an expansion of the original right, and whether the change from using the water for irrigation of the District to using the water for lake level stabilization, recreation, and fish and wildlife enhancement is in the public interest.

Based upon the evidence presented at the hearing and his understanding of water law, the hearing officer proposes this memorandum decision and order:

FINDINGS OF FACTS

1. The lake level when used for irrigation fluctuated between 6.4 and 10.4 feet on the gauge at the lower lake control structure.

2. The District did not prohibit other water users from diverting and using water from the lake or the ten miles of Rathdrum Creek between Twin Lakes and the District's point of rediversion during the years they irrigated with Twin Lakes water.

3. The natural decline in the lake level due to evaporation and seepage would be about 1.7 feet.

4. The evaporation and seepage from Twin Lakes exceeds the natural flow into the reservoir at times during the late summer months.

5. The water from the lake was last released for irrigation of District land during the 1976 irrigation season.

6. The District conveyed to the Bureau all of its water rights in Twin Lakes on January 4, 1977.

7. The water stored in Twin Lakes has not been released to satisfy junior downstream rights after being conveyed to the Bureau.

8. There are not other sizable storage reservoirs on Rathdrum Creek that compete for the water that is stored in Twin Lakes.

CONCLUSIONS OF LAW

1. The change in the nature of use of the water stored in Twin Lakes from irrigation to recreation and fish and wildlife enhancement will not cause injury to other water rights.

The lake property owners that hold water rights will not be injured since the water level will fluctuate less than when the water was drawn from the

lake for irrigation. A maximum lake level of 10.4 feet, if allowed to decline naturally due to evaporation and seepage, should not cause leaching of the septic systems of the lake property owners.

The water rights of Rathdrum Creek water users will not be injured since the water will be diverted to storage during the non-irrigation season during the time the flow of Rathdrum Creek exceeds the flow necessary to satisfy existing water rights.

2. Water has been stored in the reservoir every year since the diversion structure was constructed, and, therefore, the storage water right has not been lost by non-use.

3. The change in the nature of use of the direct flow of Rathdrum Creek from irrigation to lake level maintenance would injure the existing water rights of both the Twin Lakes water users and the Rathdrum Creek water users. The lake water users have been diverting the inflow to the lake for many years without any interference from or prohibition by the District. The creek water users have used the direct flow downstream from the outlet works to satisfy their junior water rights. Both the lake users and the creek users have come to depend, since the fall season of 1976, upon the natural flow of Rathdrum Creek to satisfy their existing water rights.

4. It is the local public interest to avoid large fluctuations in the water level of Twin Lakes but it is not in the interest of the local public to dry up the channel of Rathdrum Creek downstream of the control structure.

These interests can be best protected by approving the change in nature of use of water right No. 95-0923 for the storage water and denying the change in nature of use of water right No. 95-2059 for the direct flow from Rathdrum Creek.

ORDER

THEREFORE, IT IS ORDERED That the portion of Application for Transfer No. 2745 to change the nature and place of use of water right No. 95-0973 for storage in Twin Lakes is APPROVED and that the right is described as follows:

Purpose: recreation and fish and wildlife enhancement

Place of use: within Twin Lakes

Season of diversion to storage: November 1 to March 31

Volume: From 6.4 (elev. 2308.39 msl) to 10.4 (elev. 2312.39 msl) feet on the gauge at the control structure

Point of diversion: NE1/4NW1/4, Sec. 17, Twp. 52N, Rge. 4W, B.M.

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IT IS FURTHER ORDERED That the portion of Application for Transfer No. 2745 to change the nature of use of water right license No. 95-2059 for 45.74 cubic feet per second of water is DENIED since it would injure existing water rights and since it is not in the public interest.

Dated this 26 day of June, 1984.

Bobby D. Fleenor

BOBBY D. FLEENOR

Chief, Operations Bureau

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Form No. 222 10/80

Transfer No. 2745

Water Right No. _____

Partial Approval

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES

AMENDED

APPLICATION FOR TRANSFER OF WATER RIGHT

To Change the NATURE OF USE **and/or the Place of Use**

Name of applicant The United States of America Acting Through the Regional Director, Bureau of Reclamation Phone (208) 334-1165

Post Office address Box 043 - 550 West Fort Street, Boise, Idaho 83724

A. DESCRIPTION OF RIGHT AS RECORDED

1. Right evidenced by:

   a. Decree No. _____ Decreed to East Greenacres Irrigation District (Name)

   in case of Twin Lakes Improvement Assn. vs East Greenacres Irrigation District

   dated in ~~December 31, 1965~~ December 21, 1970 in Supreme Court of Idaho (Name of court) county of Kootenai

   b. License No. 14757/95-2059 & 95-0973 issued by the Idaho Department of Water Resources

   c. Claim No. _____ on file with the Idaho Department of Water Resources

2. If applicant is not the original holder of this right, explain how it was acquired and attach a copy of the deed or other evidence of ownership of the land to which the right is appurtenant Rights conveyed by attached deed from East Greenacres Irrigation District

3. Source of water Twin Lakes tributary to Rathdrum Creek

4. Date of priority May 4, 1920

5. Water ~~is~~ was used for the following purposes:

   amount _____ for irrigation purposes from May 15 to Sept. 15

   amount _____ for stockwater purposes from May 15 to Sept. 15

   amount _____ for _____ purposes from _____ to _____ (month/day — both dates inclusive)

6. Total amount of water under right: a. 45.74 cubic feet per second

   b. Storage right between ~~elevations 2301.99~~ &/or & 2315.57 in Twin Lakes

7. Location of original point of diversion is NE ¼ of NW ¼ of Section 17

   Township 52 N. Range 4 W., B.M., in Kootenai County

   Additional points of diversion, if any _____

8. Lands irrigated or place of use: See attachment

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 2287

9. Describe any other water rights used for the same purpose as described above Ground water license No. 95-7055

10. To your knowledge, has any portion of this water right undergone a period of five or more consecutive years of nonuse? No If yes, describe in item D, REMARKS.

B. DESCRIPTION OF PORTION OF RIGHT OWNED BY APPLICANT (If the entire right is owned by the applicant, omit part B).

1. Amount of water: a. _____ cubic feet per second
&/or
b. _____ acre feet per annum

2. Point of diversion _____ ¼ _____ ¼, Section _____ Township _____

Range _____, B.M., _____ County

Additional points _____

3. Place of use:

TWP.	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	
			The storage right for 3730 acre feet (further identified by the Idaho Department of Water Resources as No. 95-0973) will be used to raise the level of Twin Lakes to an optimum elevation for recreation and fish and wildlife enhancement. The natural flow right for 45.74 ft^3/s (further identified by the Idaho State Department of Water Resources as No. 95-2059) will be used to make up evaporation, seepage, and transportation losses after the storage season in order to maintain the level of Twin Lakes at an optimum level for recreation and fish and wildlife enhancement.															

Total number of acres to be irrigated _____

C. DESCRIPTION OF RIGHT OR PORTION THEREOF, AFTER THE REQUESTED CHANGE

1. General Information

a. Amount of water to be diverted _____ c.f.s. &/or _____ acre feet

b. Description of diverting works _____

c. Describe the reasons for the proposed changes Article 25 of the repayment contract dated June 1, 1972, between the United States of America and the East Greenacres Irrigation District, as confirmed by the District Court of Kootenai County (Case No. 27822) provides for transfer of the District's Dam and water rights to maintain Twin Lakes for recreation and fish and wildlife ~~enhancement which is a project purpose under 84 Stat. 319. Change in use of~~ the District's water rights for recreation and fish and wildlife enhancement first occurred during 1976 irrigation season.

2. Change in point of diversion

Point of diversion _____ ¼ _____ ¼, Section _____ Township _____

Range _____, B.M., _____ County

Additional points This right is transferred from the irrigation diversion and storage right to a storage right in Twin Lakes for recreation and fish and ~~wildlife enhancement, pursuant to authorization and construction of the East~~ Greenacres Unit of the Rathdrum Prairie Federal Reclamation Project which was ~~specifically authorized by the Congress at the request and approval of the~~ State of Idaho.

3. Change in place of use

a. Are there leins, mortgages, or contracts on the lands from which you propose to transfer the water right which limit your authority to make the proposed change? Yes _____ No X. If yes, provide a statement agreeing to the proposed change from the holder of the lien, mortgage or contract.

b. Describe the affect on the land now irrigated if the place of use is changed pursuant to this transfer

Replacement water supply has been provided from ground water under License No. 95-7055.

Twsp.	Range	Section	Forty-Acre Tract	No. Acres Described in Permit	No. Acres Actually Irrigated
51 N.	5 W.	2	SE¼ SE¼	23	23
		20	SW¼ SW¼	10	10
			SE¼ SW¼	40	40
		21	NE¼ NE¼	25	25
			NW¼ NE¼	20	20
			SW¼ NE¼	40	40
			SE¼ NE¼	40	40
			NE¼ NW¼	5	5
			NW¼ NW¼	25	25
			SW¼ NW¼	40	40
			SE¼ NW¼	40	40
			NE¼ SW¼	40	40
			NW¼ SW¼	40	40
			SW¼ SW¼	40	40
			SE¼ SW¼	40	40
			NE¼ SE¼	40	40
			NW¼ SE¼	40	40
			SW¼ SE¼	40	40
			SE¼ SE¼	40	40
		27	SW¼ NW¼	37	37
			SE¼ NW¼	9	9
		28	NE¼ NE¼	40	40
			NW¼ NE¼	40	40
			NE¼ NW¼	40	40
			NW¼ NW¼	40	40
		29	NE¼ NE¼	40	40
			NW¼ NE¼	40	40
			SW¼ NE¼	40	40
			SE¼ NE¼	40	40
			NE¼ SW¼	40	40
			NW¼ SW¼	30	30
			SW¼ SW¼	40	40
			SE¼ SW¼	30	30
			NE¼ SE¼	40	40
			NW¼ SE¼	40	40
			SW¼ SE¼	40	40
			SE¼ SE¼	40	40
		32	NE¼ NE¼	40	40
			NW¼ NE¼	40	40
			SW¼ NE¼	40	40
			SE¼ NE¼	40	40
			NE¼ NW¼	1	1
			NW¼ NW¼	27	27
			SE¼ NW¼	40	40
			NE¼ SW¼	40	40
			NW¼ SW¼	10	10
			SW¼ SW¼	10	10
			SE¼ SW¼	40	40
			NE¼ SE¼	40	40
			NW¼ SE¼	40	40
			SW¼ SE¼	40	40
			SE¼ SE¼	40	40
50 N.	5 W.	5	NE¼ NE¼	40	40
			NW¼ NE¼	40	40
			SW¼ NE¼	40	40
			SE¼ NE¼	40	40
			NE¼ NW¼	40	40
			NW¼ NW¼	23	23
			SW¼ NW¼	40	40
50 N.	5 W.	5 cont'd	SE¼ NW¼	40	40
			NE¼ SW¼	40	40
			NW¼ SW¼	40	40
			SW¼ SW¼	40	40
			SE¼ SW¼	24	24
			NE¼ SE¼	20	20
			NW¼ SE¼	34	34
			SW¼ SE¼	4	4

Total .....2287 Acres

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c. Describe the lands of place of use to which the right will be transferred:

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

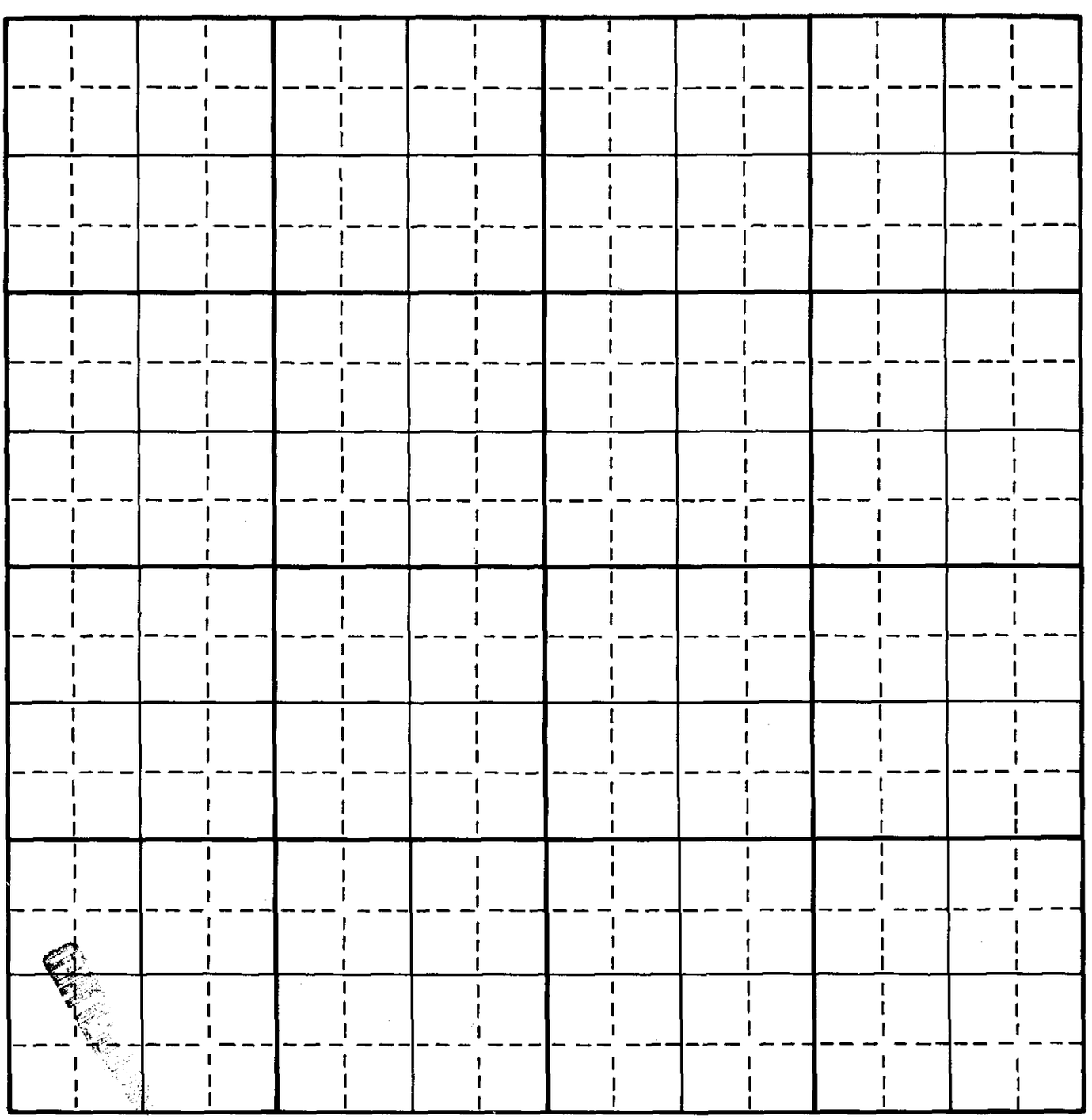
TWIN LAKES - Kootenai County, Idaho

Total number of acres to be irrigated _____

4. Describe any other water rights used for the same purpose as described above. _____

_____

5. Draw a map indicating the new point(s) of diversion and/or the new land to be irrigated. Show clearly the land involved by section, township and range number. N/A



SCALE: 2 inches equal 1 mile. Draw plan in ink.

D. REMARKS

I hereby assert that no one will be injured by such change and that the change does not constitute an enlargement in use of the original right. The information contained in this application is true to the best of my knowledge. I understand that any willfull misrepresentations made in this application may result in voiding its approval.

L.W. Lloyd
(Signature of Regional Director

Subscribed and sworn to before me this 3rd day of June, 1982

Ed J. Thomas
(Notary Public)

My commission expires I.F.e

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

This is to certify that I have examined Application for Transfer of Water Rights No. 95-0973 and said application is hereby APPROVED, subject to the following limitations and conditions: pursuant to Proposed Memorandum Decision and Order and Order Adopting Proposed ~~Memorandum Decision and Order. IT IS FURTHER ORDERED that the portion of Application~~ for Transfer of Water Right No. 95-2059 to change the nature of use be DENIED, pursuant to Proposed Memorandum Decision and Order and Order Adopting Proposed Memorandum Decision and Order.

Witness my hand this 1st day of August, 19 84

A. KENNETH DUNN, Director

FOR DEPARTMENT USE ONLY

Received by SRC Date 1/10/83 Protest filed by

Prelim. check by Fee 20.00 #25801

Receipted by SRC Date 1/10/83

Published in Coeur d'Alene Press

Copies of protest forwarded by

Pub. dates 2/3 & 10/83

Hearing held by Date

Watermaster recommendation requested on

Recommended for approval denial

rec'd.

by

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR TRANSFER NO. 2745 OF WATER RIGHT NO. 95-0973 AND 95-2059 FILED BY THE UNITED STATES OF AMERICA, ACTING THROUGH THE REGIONAL DIRECTOR, BUREAU OF RECLAMATION

CERTIFICATE OF MAILING

I HEREBY CERTIFY That on this the 7th day of August, 1984, a true copy of the foregoing ORDER ADOPTING THE PROPOSED MEMORANDUM DECISION AND ORDER was miled, postage prepaid to:

Regional Director
Bureau of Reclamation
Box 043, 550 W. Fort St.
Boise, ID 83724

Mr. and Mrs. Glen Stilliman
N. 4425 Gunning Road
Rathdrum, ID 83858

Mr. and Mrs. Don Knowles
Rt. 4, Box 728
Rathdrum, ID 83858

Mrs. Chester R. Park
Rt. 4, Box 730
Rathdrum, ID 83858

Mr. David Osterberg
Rt. 4, Box 363
Rathdrum, ID 83858

Mr. Orville Sylte
c/o Sylte Ranch
Rt. 4, Box 854
Rathdrum, ID 83858

Mr. Chester Sylte
Box 313
Rathdrum, ID 83858

Mrs. Shirley Watson
P. O. Box 197
Rathdrum, ID 83858

Ms. Helen Willard
Rt. 4 Box 840H
Rathdrum, ID 83858

Mr. and Mrs. Chester A. Park
Rt. 4, Box 712
Rathdrum, ID 83858

Mr. Robert A. Goelzer
P. O. Box 278
Rathdrum, ID 83858

Ms. Elizabeth Stevens
Rt. 4 Box 727
Rathdrum, ID 83858

Ms. Susan E. Park
Rt. 4, Box 711
Rathdrum, ID 83858

Mrs. Betty Rose Hogan
Rt. 1, Box 340
Rathdrum, ID 83858

Mr. and Mrs. Dean A. Primmer
Rt. 1, Box 645
Rathdrum, ID 83858

Mr. John E. Sylte
c/o Sylte Ranch
Rt. 4, Box 854
Rathdrum, ID 83858

Hon. Donald Zigler, Mayor
City of Rathdrum
City Hall
Rathdrum, ID 83858

Mr. Roy C. Watson
Rt. 4, Box 728A
Rathdrum, ID 83858

Mr. Marvin K. Willadsen
E. 700 Willadsen Road
Rathdrum, ID 83858

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Rita I. Fleck

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

BEFORE THE DIRECTOR OF THE DEPARTMENT

OF WATER RESOURCES OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR TRANSFER NO. 2745 OF WATER RIGHT NO. 95-0973 AND 95-2059 FILED BY THE UNITED STATE OF AMERICA, ACTING THROUGH THE REGIONAL DIRECTOR, BUREAU OF RECLAMATION	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 March 24, 1983, 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.

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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 June, 1984.

A. KENNETH DUNN
Director
Department of Water Resources

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR TRANSFER NO. 2745 OF WATER RIGHT NO. 95-0973 AND 95-2059 FILED BY THE UNITED STATES OF AMERICA, ACTING THROUGH THE REGIONAL DIRECTOR, BUREAU OF RECLAMATION) CERTIFICATE OF MAILING

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

Bureau of Reclamation
Box 043, 550 W. Fort St.
Boise, ID 83724

Mr. and Mrs. Glen Stilliman
N. 4425 Gunning Road
Rathdrum, ID 83858

Mr. and Mrs. Don Knowles
Rt. 4, Box 728
Rathdrum, ID 83858

Mrs. Chester R. Park
Rt. 4, Box 730
Rathdrum, ID 83858

Mr. David Osterberg
Rt. 4, Box 363
Rathdrum, ID 83858

Mr. Orville Sylte
c/o Sylte Ranch
Rt. 4, Box 854
Rathdrum, ID 83858

Mr. Chester Sylte
Box 313
Rathdrum, ID 83858

Mrs. Shirley Watson
P. O. Box 197
Rathdrum, ID 83858

Ms. Helen Willard
Rt. 4 Box 840H
Rathdrum, ID 83858

Mr. and Mrs. Chester A. Park
Rt. 4, Box 712
Rathdrum, ID 83858

Mr. Robert A. Goelzer
P. O. Box 278
Rathdrum, ID 83858

Ms. Elizabeth Stevens
Rt. 4 Box 727
Rathdrum, ID 83858

Ms. Susan E. Park
Rt. 4, Box 711
Rathdrum, ID 83858

Mrs. Betty Rose Hogan
Rt. 1, Box 340
Rathdrum, ID 83858

Mr. and Mrs. Dean A. Primmer
Rt. 1, Box 645
Rathdrum, ID 83858

Mr. John E. Sylte
c/o Sylte Ranch
Rt. 4, Box 854
Rathdrum, ID 83858

Hon. Donald Zigler, Mayor
City of Rathdrum
City Hall
Rathdrum, ID 83858

Mr. Roy C. Watson
Rt. 4, Box 728A
Rathdrum, ID 83858

Mr. Marvin K. Willadsen
E. 700 Willadsen Road
Rathdrum, ID 83858

MICROFILMED

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

AFFIDAVIT OF PUBLICATION

NOTICE OF AMENDED APPLICATION FOR TRANSFER OF WATER RIGHT

On January 10, 1983, the United States of America acting through the Regional Director of the Bureau of Reclamation filed with the Department of Water Resorces, Amended Application for Transfer of Water Right No. 95-0973. The purpose of the amendement is to add to Application for Transfer of Water Right No. 95-0973 filed on August 23, 1982, by changing 45.74 cubic feet per second natural flow from Rathdrum Creek used for the irrigation of 2,287 acres within the East Green Acres Irrigation Distirct, to Recreation and Fish and Wildlife Enhancement purposes to be used in Twin Lakes to make up evaporation, seepage, and transportation losses in order to maintain the level of Twin Lakes at an optimum level for recreation and fish and wildlife enhancement. Protests against the granting of this Amended Transfer must be filed with the Director of the Department of Water Resources, 4055 Government Way, Coeur d'Alene, Idaho 83814 on or before February 22, 1983.

A. KENNETH DUNN
Director

Legal 525
Feb. 3, 10, 1983

2/14/83

STATE OF IDAHO,
County of Kootenai, } ss.

Arlene Hancock being first duly sworn upon oath deposes and says:

1. I am now and at all times hereinafter mentioned was a citizen of the United States, resident of the State of Idaho, over the age of twenty-one years and not a party of the above entitled action.

2. I am now and at all times hereinafter mentioned was the printer (principal clerk) of the "Coeur d'Alene Press," a newspaper printed and published daily except Sunday in Coeur d'Alene, Kootenai County, Idaho, and having a general circulation in said county.

3. The Notice

of which the annexed is a printed copy, was published in the regular issue of said newspaper for 2 consecutive weeks, commencing on the 3 day of Feb, 1983, and ending on the 10 day of Feb, 1983, and such publication was made as often during said period as said daily newspaper was regularly issued.

4. That said newspaper has been continuously and uninterruptedly published in said Kootenai County, during a period of more than seventy-eight consecutive weeks immediately prior to the first publication of said notice

Arlene Hancock

Subscribed and sworn to before me this 10 day of Feb 1983

Roberta Brandley
Notary Public for the State of Idaho,
residing at Coeur d'Alene, Idaho.

RECEIVED
FEB 14 1983
LEADER
Department of Water Resources
Northern District Office

LIST OF PROTESTANTS - TRANSFER #95-0973

1. Betty Rose Hogan
2. David Osterberg
3. Dean A. & Clara J. Primmer
4. Orville Sylte
5. John E. Sylte, Sylte Ranch, Inc.
6. Chester Sylte
7. Donald Zigler
8. Mrs. Shirley Watson
9. Glen & Ginger A. Silliman
10. Roy C. Watson
11. Mr. & Mrs. Don Knowles
12. Robert A. Goelzer
13. Elizabeth Stevens
14. Susan Park
15. Mrs. Chester R. Park
16. Helen M. Willard
17. Marvin K. Walladsen
18. Chester A & Diane J. Park

AMENDED TRANSFER

1. Robert K. Tinder

Supplement to
Form No. 222
2/82

Transfer No. _____

Water Right No. 95-0973

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES

Application For Transfer of Water Right
Supplemental Information for
CHANGE IN NATURE OF USE

RECEIVED
AUG 23 1982
Department of Water Resources

1. Fully complete Form 222. Type or print in ink "CHANGE IN NATURE OF USE" at the top of page 1. If no change in point of diversion or place of use is desired, so note under items C.2 and/or C.3 C.

2. Describe fully the new use to which the water is intended to be applied:

a. Nature of use: Recreation, Fish and Wildlife enhancement

b. Rate of flow: Waters will be retained in storage.

c. Hours per day and days per year that the flow will be diverted:

N/A

d. Season of use: January 1 to December 31

e. Return flows from the use: (quantity and quality of return flows, and location of discharge):

N/A

3. Describe positive and negative effects on other waterusers predicted to result from the proposed change in nature of use. Undoubtedly some additional reservoir overflow will become available for other downstream users. There are no known negative effects.

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DEED

THIS INDENTURE, made this 4 day of January, 197 7, between the EAST GREENACRES IRRIGATION DISTRICT, hereinafter called the Grantor, and the UNITED STATES OF AMERICA, acting through the Regional Director, Bureau of Reclamation, Department of the Interior, hereinafter called the Grantee.

WITNESSETH, That the Grantor, for and in consideration of the benefits to be derived from the construction of the East Greenacres Unit of the Rathdrum Prairie Federal Reclamation Project, have granted, bargained, and sold, and by these presents do grant, bargain, sell and convey, unto the Grantee and its assigns forever all its right, title, and interest in the following described property situated in the County of Kootenai, State of Idaho, to wit:

1. All its water, storage, and flowage rights in Twin Lakes (formerly Fish Lakes) including Water License No. 14757.
2. Twin Lakes Dam, damsite, outlet works, and all other facilities and interests appurtenant thereto and rights-of-way therefore located in Section 17, Township 52 N., Range 4 W., B.M.

TOGETHER WITH ALL AND SINGULAR tenements, herditaments, and appurtenances thereunto belonging, or in anywise appertaining thereto,

MICROFILMED

issues and profits thereof; and all estate, right, title, and interest in and to the said property, as well in law as in equity, of the said Grantors.

THIS INSTRUMENT is made pursuant to Article 25 of the June 1, 1972 repayment contract between the East Greenacres Irrigation District and the United States of America.

IN WITNESS WHEREOF, the Grantors above named have hereunto set their hands and seals as of the day and year first above written.

EAST GREENACRES IRRIGATION DISTRICT

By _____
Director

_____
Secretary

By _____
Director

By _____
Director

By _____
Director

By _____
Director

STATE OF IDAHO)
) ss
County of Kootenai)

On this 4 day of January, 1977, personally appeared before me Roy Bodine, D. A. Nulph, Bette M. Jergensen and Donald Satchwell, Lawrence M. Bartlett, to me known to be the officials of the EAST GREENACRES IRRIGATION DISTRICT, that executed the within and foregoing instrument to be the free and voluntary act and deed of EAST GREENACRES IRRIGATION DISTRICT said Post Falls, Idaho, for the uses and purposes therein mentioned and on oath stated that they were authorized to execute said instrument.

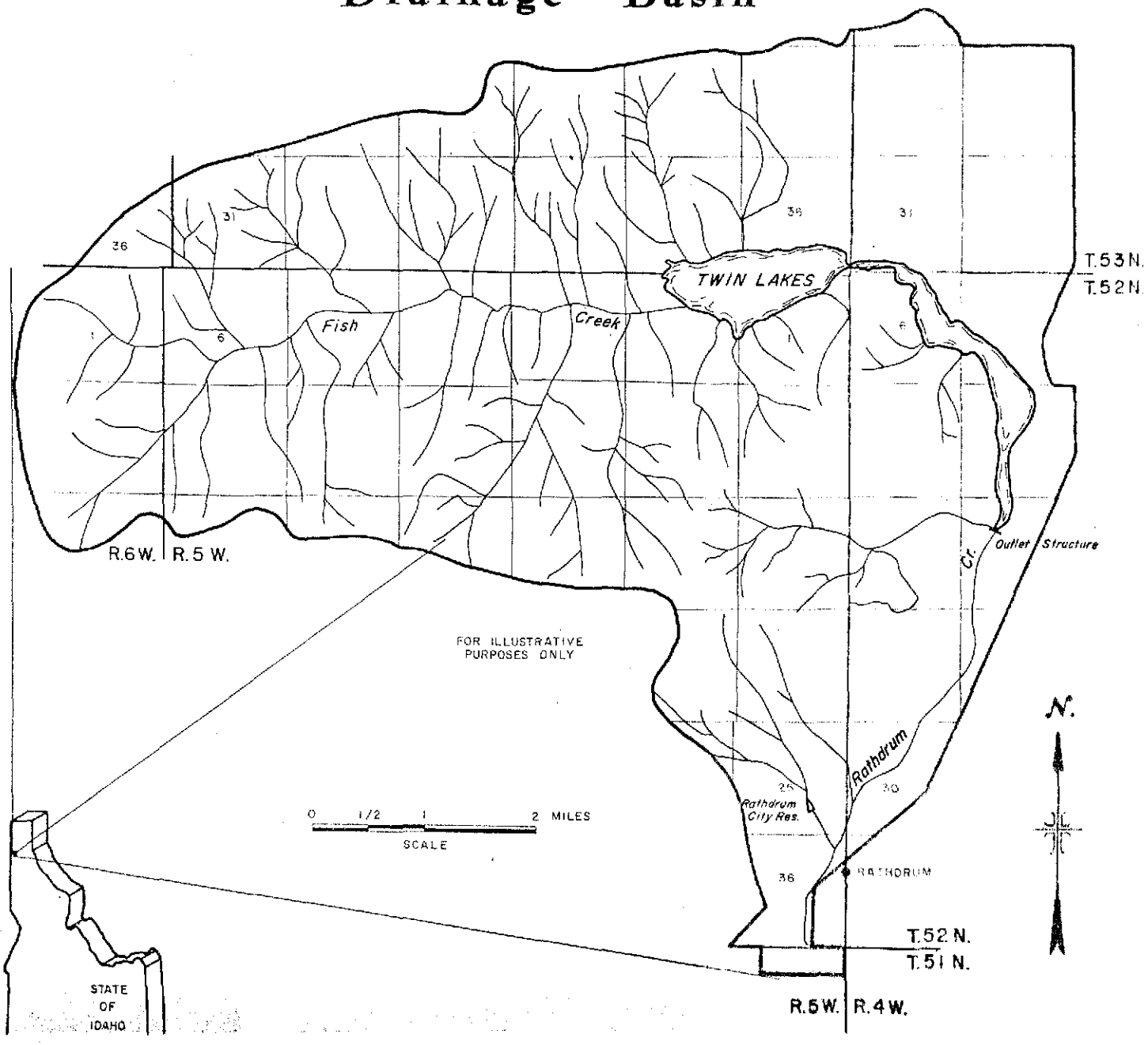
IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

Lawrence M. Bartlett
Notary Public in and for the
State of Idaho
Residing at Post Falls
My commission expires: 2/10/77

(SEAL)

Twin Lakes & Rathdrum Creek

Drainage Basin



AFFIDAVIT OF PUBLICATION

NOTICE OF APPLICATION FOR TRANSFER OF WATER RIGHT

On August 23, 1982, the United States of America acting through the Regional Regional Director of the Bureau of Reclamation filed with the Department of Water Resources Application for Transfer of Water Right No. 95-0973. The original water right is for 3,730 AF of water from Twin Lakes, tributary to Rathdrum Creek, used for Irrigation Storage and Irrigation from Storage, with a point of diversion in the NENW, Sec. 17, T52N, R4W, B.M., Kootenai County, and with a place of use within the East Green Acres Irrigation District, for a total of 2,287 acres. The date of priority is March 23, 1906. The applicant now wishes to change the nature of use from irrigation storage and irrigation from storage to recreation storage and wildlife storage. The period of use will now be year around and the place of use will now be limited to Twin Lakes, Kootenai County, Idaho.

Protests against the granting of this transfer must be filed with the Director of the Department of Water Resources, 4055 Government Way, Coeur d'Alene, Idaho 83814 on or before October 18, 1982.

A. KENNETH DUNN
Director

Legal 51
Sept. 30, Oct. 7, 1982

STATE OF IDAHO,
County of Kootenai, } ss.

Arlene Hancock being first duly sworn upon oath deposes and says:

1. I am now and at all times hereinafter mentioned was a citizen of the United States, resident of the State of Idaho, over the age of twenty-one years and not a party of the above entitled action.

2. I am now and at all times hereinafter mentioned was the printer (principal clerk) of the "Coeur d'Alene Press," a newspaper printed and published daily except Sunday in Coeur d'Alene, Kootenai County, Idaho, and having a general circulation in said county.

3. The Keeper

of which the annexed is a printed copy, was published in the regular Thurs issue of said newspaper for 2 consecutive issues, commencing on the 30 day of Sept, 1982 and ending on the 7 day of Oct, 1982 and such publication was made as often during said period as said daily newspaper was regularly issued.

4. That said newspaper has been continuously and uninterruptedly published in said Kootenai County, during a period of more than seventy-eight consecutive weeks immediately prior to the first publication of said notice.

Arlene Hancock

Subscribed and sworn to before me this 7 day of Oct, 1982.

Roberta Manley
Notary Public for the State of Idaho,
residing at Coeur d'Alene, Idaho.

RECEIVED
OCT 8 1982
Department of Water Resources
Northern District Office
LEADER

October 23, 1984

Regional Director
Bureau of Reclamation
Box 043
550 West Fort St.
Boise, ID 83724

Dear Sir:

Re: Application for Transfer of Water Right Nos. 95-0793 and 95-2059

On August 1, 1984, the Department issued an Order Adopting Proposed Memorandum Decision and Order indicating the transfer No. as being 2745, but listed the water right as 95-2059 twice. Please notice that the order has been corrected, indicating the water right Nos. to be 95-0973 and 95-2059.

We hope no inconvenience has been caused.

Sincerely,

BOBBY D. FLEENOR
Chief, Regional Offices Bureau

BDF:rf

Enclosure

cc: Mr. and Mrs. Glen Stilliman
Mr. and Mrs. Don Knowles
Mrs. Chester R. Park
Mr. David Osterberg
Mr. Orville Sylte
Ms. Elizabeth Stevens
Mrs. Betty Rose Hogan
Mr. John E. Sylte
Mr. Roy C. Watson
Mr. Chester Sylte
Mrs. Shirley Watson
Ms. Helen Willard
Mr. and Mrs. Chester A. Park
Mr. Robert A. Goelzer
Ms. Susan E. Park
Mr. and Mrs. Dean A. Primmer
Hon. Donald Zigler, Mayor
Mr. Marvin K. Willadsen

MICROFILMED

August 7, 1984

Regional Director
Bureau of Reclamation
Box 043
550 West Fort St.
Boise, ID 83724

Dear Sir:

Re: Application for Transfer of Water Right Nos. 95-0973 and 95-2059

Enclosed is a copy of the partially approved Application for Transfer No. 2755 of water right Nos. 95-0973 and 95-2059 along with a copy of the Proposed Memorandum Decision and Order and Order Adopting Proposed Memorandum Decision and Order.

Any person who does not agree with the decision of the Department may request a rehearing before the Director within twenty days of may appeal directly to the district court within thirty days of the date the decision is mailed.

Sincerely,

L. GLEN SAXTON
Chief, Operations Bureau

LGS:rf

Enclosures

cc: see Certificate of Mailing

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RECEIVED
JUN 24 1983

United States Department of the Interior

BUREAU OF RECLAMATION
PACIFIC NORTHWEST REGION
FEDERAL BUILDING & U.S. COURTHOUSE
BOX 043 - 550 WEST FORT STREET
BOISE, IDAHO 83724 - 0430

IN REPLY REFER TO: PN 420
870.

Dan Tuthill

JUN 23 1983

Mr. Kenneth Dunn
Idaho Department of Water Resources
Statehouse
Boise, Idaho 83720

Dear Mr. Dunn:

Re: Adjudication of the Waters of Twin Lakes and Rathdrum Creek Kootenai County, Civil No. 32572, U.S. Attorney N-76-0067

This letter is to confirm recent discussions with various members of your staff, and information provided to the public at an information meeting in Rathdrum, Idaho, on May 10, 1983, regarding prescription of Twin Lakes water rights.

As indicated in various correspondence and formal filings in the referenced case, the United States acquired all of the water rights formerly held by the East Greenacres Irrigation District, as provided and authorized by Public Law 91-286. The records are quite clear that the congressional intent was to transfer the water rights then held by the East Greenacres Irrigation District to Twin Lakes for enhancement of recreation, fish and wildlife after completion of the project. However, it is not our interpretation that Congress intended that the water right priority held by East Greenacres be administered so as to deprive the then existing users around Twin Lakes of a source of water.

However, as has been pointed out, the 1906 priority water right, if administered on a priority basis, would require cessation of nearly all diversions from Rathdrum Creek and Twin Lakes for portions of most years.

The project act was signed into law on June 23, 1970. Pursuant to that act, a replacement water supply was provided for irrigation of the District lands, and the District deeded their Twin Lakes and Rathdrum Creek water rights to the United States on January 4, 1977.

The United States is of course immune to appropriation by prescription. However, until January 4, 1977, these water rights were held by the East Greenacres Irrigation District. While the District was well aware that their water rights predated nearly all other rights on the system, the records indicate that the District did not take action to enforce their rights on the users around Twin Lakes.

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It is our position that the water rights acquired by the United States from the East Greenacres Irrigation District were in fact prescribed by those users above the Twin Lakes outlet works who established diversions prior to January 4, 1972, (the 5-year statute of limitations period prior to the date of transfer of the water rights to the United States on January 4, 1977). We suggest, therefore, that the proposed findings in the referenced action be amended to so provide.

Sincerely yours,

John W. Keys, III

Assistant Regional Director

MICROFILMED

95-0973

We the undersigned representatives of property owners of the Twin Lakes drainage area will continue to oppose the change of beneficial use of the water rights applied for by the Bureau of Reclamation, until the Bureau completes an Environmental Limnological analysis ~~Impact Statement~~ supporting their position that the above mentioned change will enhance Fish, Wildlife, and Recreation.

The undersigned people were appointed by the attending property owners at a meeting held at the Carriage Inn, Twin Lakes Village on Monday, May 16, 1983.

Robert K. Tucker

Sol D. Smith

Robert E. Green

Chester A. Park

Catherine L. Lancaster

Marita Lettl

Klaus Mehrens

MICROFILMED

Please file

95-2059

United States Department of the Interior

BUREAU OF RECLAMATION
PACIFIC NORTHWEST REGION
FEDERAL BUILDING & U.S. COURTHOUSE
BOX 043 - 550 WEST FORT STREET
BOISE, IDAHO 83724 - 0430

IN REPLY
REFER TO: PN 420
870.-

RECEIVED
APR 18 1983
Department of Water Resources

APR 15 1983

Honorable James A. McClure
Attention: Ruth Johnston
Federal Building
Fourth and Lakeside
Coeur d'Alene, Idaho 83814

Dear Senator McClure:

Enclosed is a copy of the report on the hearings held in Coeur d'Alene, Idaho, on October 24, 1969, on the then proposed East Greenacres Unit, Rathdrum Prairie Project. Your attention is called particularly to the testimony presented by Mr. Jack Sylte beginning on page 49.

At the time of his meeting with you in Coeur d'Alene on March 8, 1983, Mr. Neil Stessman of this office was not aware of the discussion which had taken place in the field hearing between Mr. Jack Sylte and members of the Subcommittee on Irrigation and Reclamation of the Committee on Interior and Insular Affairs, including Representative (now Senator) James A. McClure. As I understand from the meeting there was a question as to whether consideration had been given in the legislation to assuring flows in Rathdrum Creek below Twin Lakes for the purpose of meeting various needs including stockwater and diversions for irrigation. It appears from the record of the hearing that the Subcommittee clearly declined the suggestion that such be considered and indicated that the rights to such flows are dependent upon rights established under the laws of the State of Idaho.

At the March 24, 1983, hearing, the Idaho Department of Water Resources agreed to delay their determination regarding the water right change application for 60 days. The delay was to provide time to investigate a change in the Twin Lakes operating plan. We are presently involved in discussions with the Idaho Department of Fish and Game about the anticipated effects of possible revisions in the plan. We anticipate a meeting later in the month with those who requested the delay.

Sincerely yours,

L. W. LLOYD

Regional Director

Enclosure

MICROFILMED

cc: Mr. Bobby Fleenor, Idaho Department of Water Resources
Statehouse, Boise, Idaho (w/o enclosure)
Identical letters to:
Honorable Steve Symms, Coeur d'Alene, Idaho (w/enclosure)
Congressman Larry Craig, Coeur d'Alene, Idaho (w/enclosure)

Bob Flamer

Smith, McCabe and Hosack
ATTORNEYS AT LAW

SUITE 200, 2005 IRONWOOD PARKWAY
COEUR D'ALENE, IDAHO 83814
(208) 666-1461

Sidney E. Smith
Paul D. McCabe
Charles W. Hosack

April 14, 1983

RECEIVED
APR 18 1983
Department of Water Resources

A. Kenneth Dunn - Director
State Department of Water Resources
450 West State Street
Boise, Idaho 83720

In re: Application of the United States of America Acting through the Regional Director, Bureau of Reclamation for Change of Use of Water Right No. 950973

Dear Mr. Dunn:

I represent Gordon Sylte and Sylte Ranch, Inc., in the above matter, and appeared on their behalf at the hearing March 24th. While I was not present at the conclusion of the hearing, it is my understanding that the matter was taken under advisement for a period of sixty days to give the interested parties an opportunity to try to work out some kind of an arrangement with the Bureau of Reclamation that might be acceptable to all for the administration of Twin Lakes.

I have met with several of the interested parties and we are in the process now of exploring the formation of an appropriate Taxing District so that we would then have an entity, rather than a group of individuals.

I feel that we will need more time in order to get the process under way and it is my understanding in talking with Ms. Tewalt of Senator Symms' office, that John Keyes of the Bureau of Reclamation has advised her that the Bureau would not oppose a further delay of thirty to forty-five days. That could be confirmed with Mr. Keyes and it would be appreciated if an Order could be entered granting

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A. Kenneth Dunn - Director
State Department of Water Resources
April 14, 1983

an additional extension of time so that we may attempt to work out and coordinate our activities.

Yours truly,

Paul D. McCabe

PDM/wl

cc:
Gordon Sylte
Sandy Tewalt
Robert G. Haynes

MICROFILMED

April 21, 1983

Paul D. McCabe
SMITH, McCABE AND HOSACK
Suite 200
2005 Ironwood Parkway
Coeur d'Alene, ID 83814

Dear Mr. McCabe:

Re: Application for Transfer of Water Right No. 95-0973

A delay of 45 days asked for by your April 14 letter is not unreasonable as long as progress is being made toward resolving the differences between the protestants and the Bureau of Reclamation.

We feel the success you have in reaching an agreement between the parties will have a long lasting impact on Twin Eakes, therefore, an additional 45 days is granted which will delay our decision until the middle of July.

Sincerely,

BOBBY D. FLEENOR
Chief, Regional Offices Bureau

BDF:rf

cc: Bureau of Reclamation
Bob Haynes
Gordon Sylte

MICROFILMED

DIGEST OF EVENTS PRIOR TO MAY [redacted] 1983 CONCERNING WATER RIGHT N[redacted] 95-0973

The Coeur d'Alene Press Thurs., Oct. 7, 1982

Legal Notice

NOTICE OF APPLICATION FOR TRANSFER OF WATER RIGHT

On August 23, 1982, the United States of America acting through the Regional Regional Director of the Bureau of Reclamation filed with the Department of Water Resources Application for Transfer of Water Right No. 95-0973. The original water right is for 3,730 AF of water from Twin Lakes, tributary to Rathdrum Creek, used for Irrigation Storage and Irrigation from Storage, with a point of diversion in the NENW, Sec. 17, T52N, R4W, B.M., Kootenai County, and with a place of use within the East Green Acres Irrigation District, for a total of 2,287 acres. The date of priority is March 23, 1906. The applicant now wishes to change the nature of use from irrigation storage and irrigation from storage to recreation storage and wildlife storage. The period of use will now be year around and the place of use will now be limited to Twin Lakes, Kootenai County, Idaho.

Protests against the granting of this transfer must be filed with the Director of the Department of Water Resources, 4055 Government Way, Coeur d'Alene, Idaho 83814 on or before October 18, 1982.

A. KENNETH DUNN
Director

Legal 51
Sept. 30, Oct. 7, 1982

THIS NOTIFICATION OF APPLICATION WAS PUBLISHED IN THE LEGAL SECTION OF THE COEUR D' ALENE PRESS ON SEPT. 30, OCT. 7, 1982 WITH PROVISION THAT PROTESTS AGAINST THE GRANTING OF THE TRANSFER MUST BE FILED ON OR BEFORE OCTOBER 18, 1982.

LOCAL PROTESTORS WHO FILED WERE:

CHESTER A. PARK, DIANE J. PARK, HELEN M. WILLARD, MRS. CHESTER R. PARK, SUSAN E. PARK, ELIZABETH STEVENS, ROBERT GOELZER, DON KNOWLES, DEBBIE KNOWLES, ROY C. WATSON, GLEN SILLIMAN, GINGER SILLIMAN, MRS. SHIRLEY WATSON, DON ZIGLER, CHESTER SYLTE, JOHN E. SYLTE, ORVILLE SYLTE, DEAN A. PRIMMER, CLARA PRIMMER, DAVID OSTERBERG, BETTY ROSE HOGAN, MARVIN K. WILLADSEN.

ON OR ABOUT OCT. 20, 1982, PROTESTORS WERE NOTIFIED BY THE DEPT. OF WATER RESOURCES THAT A CONFERENCE AND/OR HEARING WOULD BE SCHEDULED TO CONSIDER APPROVAL OR DENIAL BASED ON THE FOLLOWING CRITERIA:

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 SPECULATION?
4. HAS THE APPLICANT SUFFICIENT FINANCIAL RESOURCES WITH WHICH TO COMPLETE THE PROJECT?
5. WILL THE PROPOSED USE CONFLICT WITH THE LOCAL PUBLIC INTEREST?

14 DEC. 1982

A HEARING DESIGNATED A PUBLIC INFORMATION MEETING CONCERNING "PROPOSED FINDINGS OF WATER RIGHTS" WAS HELD, ALTHOUGH NOT EVERY PROTESTOR WAS INFORMED AND MOST WHO DID WERE POORLY PREPARED. MANY QUESTIONS WERE UNANSWERED BY THE DEPT. OF WATER RESOURCES, AND ADMISSION WAS MADE TH AT STUDIES OF THE TWIN LAKES DRAINAGE AREA ARE INADEQUATE.

10 JANUARY 1983

AFTER THE PROTESTS HAD BEEN RECEIVED CONCERNING THE APPLICATION FOR TRANSFER, THE UNITED STATES OF AMERICA ACTING THROUGH THE REGIONAL DIRECTOR OF THE BUREAU OF RECLAMATION FILED WITH THE DEPARTMENT OF WATER RESOURCES, AMENDED APPLICATION FOR TRANSFER OF WATER RIGHT NO. 95-0973. THE PURPOSE OF THE AMENDMENT IS TO

[redacted]

ADD TO THE EARLIER APPLICATION FOR TRANSFER AND CHANGE OF USE BY CHANGING 45.74 CUBIC FEET PER SECOND NATURAL FLOW FROM RATHDRUM CREEK USED FOR THE IRRIGATION OF 2,287 ACRES WITHN THE EAST GREEN ACRES IRRIGATI ON DISTRICT TO RECREATION AND FISH AND WILDLIFE ENHANCEMENT PURPOSES TO BE USED IN TWIN LAKES TO MAKE UP EVAPORATION, SEEPAGE, AND TRANSPORTATION LOSSES IN ORDER TO MAINTAIN THE LEVEL OF TWIN LAKES AT AN OPTIMUM LEVEL FOR RECREATION AND FISH AND WILDLIFE ENHANCEMENT.

THIS NOTIFICATION WAS PUBLISHED IN THE LEGAL SECTION OF THE COEUR D ' ALENE PRESS ON FEB 3, FEB. 10, 1983 WITH PROVISION THAT PROTESTS MUST BE FILED ON OR BEFORE FEBRUARY 22, 1983. PROTESTOR WHO FILED: ROBERT K. TINDER

AT THIS TIME, SEVERAL OF THE ORIGINAL PROTESTORS MET TO DISCUSS ALTERNATIVES AVAILABLE AND DETERMINED THAT THERE WAS A NEED TO FURTHER EXPLORE THEIR RIGHTS AND TO SEEK PROFESSIONAL ADVICE IN THE MATTER.

THE OFFICES OF SENATORS MCCLURE AND SYMMS WERE CONTACTED AND A MEETING WAS HELD AT SENATOR SYMMS' OFFICE WHICH INCLUDED, BOB HAYNES, REGION AL SUPERVISOR OF THE DEPT. OF WATER RESOURCES, JOHN CARPITA OF THE KOOTENAI CO. ENGINEERS' OFFICE, AND GREG MAUSER, REPRESENTING THE IDAHO DEPT. OF FISH AND GAME.

ON MARCH 24, 1983 A HEARING WAS CONDUCTED UNDER THE CRITERIA SET FORTH BY THE DEPT. OF WATER RESOURCES:

1. ARE OTHER WATER RIGHTS INJURED BY THE TRANSFER?
2. DOES THE CHANGE CONSTITUTE AN ENLARGEMENT IN THE USE OF THE ORIGINAL RIGHT?
3. IS THE CHANGE IN THE LOCAL PUBLIC INTEREST?

PARTICIPANTS INCLUDED: SWORN TESTIMONY FROM; ROY BODINE, OF THE EAST GREEN ACRES IRRIGATION DISTRICT CONDUCTED BY ATTORNEY, PAUL MCCABE; CHESTER A. PARK, GORDON SYLTE, JOHN E. SYLTE, MARVIN WILLADSEN, DAVID OSTERBERG, CHESTER R. PARK, AND ROBERT GREEN.

AFTER TESTIMONY AND QUESTIONS ADDRESSED TO THE REPRESENTATIVES OF THE BUREAU OF RECLAMATION AND THE DEPT. OF WATER RESOURCES, A REQUEST WAS MADE AND GRANTED FOR A 60 DAY POSTPONEMENT IN THE DECISION TO ALLOW THE PROTESTORS TIME TO DISCOVER IF THEY COULD FORM AN ENTITY WHICH WOULD BE ABLE TO DEAL WITH THE MANAGEMENT OF THE TWIN LAKES SYSTEM AS NO INDIVIDUALS COULD.

ROBERT GREEN THEN VOLUNTEERED TO PROVIDE A MEETIN G PLACE AT THE CARRIAGE INN AT TWIN LAKES ON THE FOLLOWING MONDAY, APRIL 4.

ON APRIL 4, 18 PEOPLE WERE IN ATTENDANCE AT A PRELIMINARY MEETING WHERE THE DECISION WAS MADE TO BECOME BETTER INFORMED AND TO SOLICIT PROFESSIONAL EXPERTISE IN THE PROCESS OF FORMING AN ENTITY.

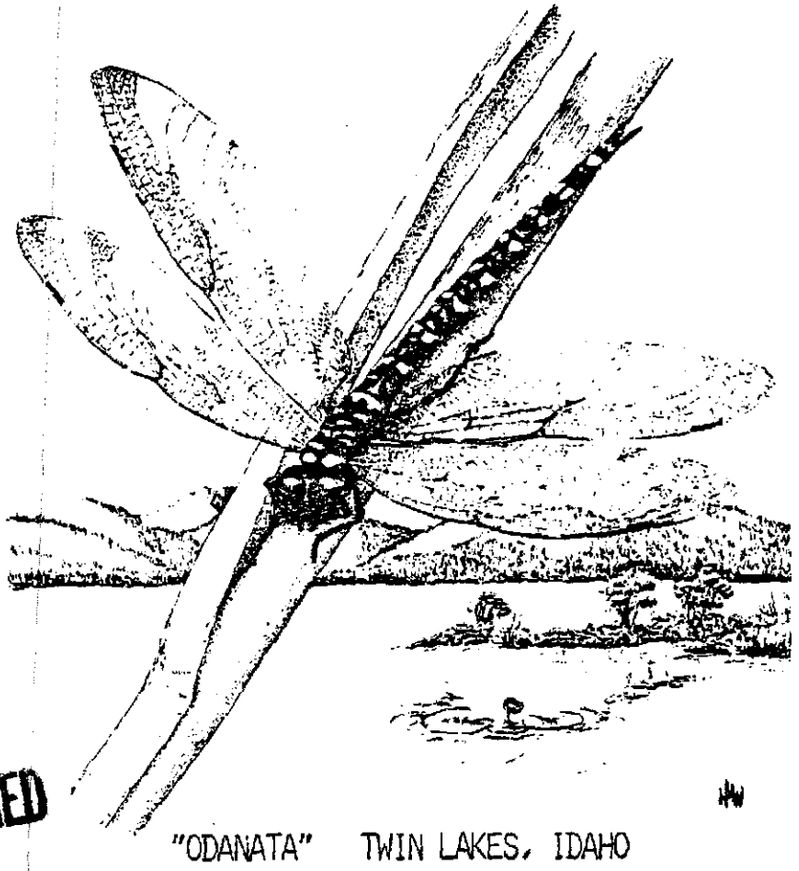
ADJOURNED WITH A MEETING SCHEDULED FOR APRIL 18 WITH PROFESSIONALS FROM SEATTLE AND COEUR D' ALENE TO PRESENT INFORMATION.

ON APRIL 18, PRESENTATIONS WERE GIVEN BY THE DEPT OF ENVIRONMENT, PANHANDLE HEALTH DIST., THE SOIL CONSERVATION SERVICE, A LIMNOLOGICAL VIEWPOINT, AND THE IDAHO FISH AND GAME DEPARTMENT. AN EFFORT WILL BE MADE TO INFORM A LARGER PORTION OF THE PUBLIC. A MEETING WAS SCHEDULED FOR APRIL 25.

THE MEETING ON APRIL 25 WAS HELD AT THE CARRIAGE INN, TWIN LAKES AND GORDON SYLTE AND OTHERS GAVE AN OVERVIEW OF THE PROGRESS TO DATE. BOB TINDER HAS ARRANGED FOR WAYNE FAUDE OF THE BOISE OFFICE OF THE SOIL CONSERVATION SERVICE TO MEET WITH THE INTERESTED PEOPLE ON MAY 4, 1983 AND PRESENT THE MECHANICS OF FORMING A WATERSHED IMPROVEMENT DISTRICT, THE BEST TYPE OF ENTITY TO ACCOMPLISH THE PURPOSE OF THIS GROUP.

THANK YOU TO ALL OF THE PEOPLE WHO HAVE DONATED THEIR TIME AND MONEY TO HELP RESEARCH AND ORGANISE THE MANY RAMIFICATIONS & SOLUTIONS TO THIS CHANGE OF USE TRANSFER OF WATER RIGHTS

PLEASE! DONATIONS & INVOLVEMENT ARE NEEDED AND APPRECIATED!



"ODANATA" TWIN LAKES, IDAHO

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Department of Water Resources

TECHNICAL REPORT

KOOTENAI & SHOSHONE COUNTIES
SHORELINE SURVEY
REPORT

by

Panhandle Health District I
Environmental Staff

The preparation of this report was financed through a Section 208 Areawide Waste Treatment Management Planning Grant from the U.S. Environmental Protection Agency.

1309 Best Avenue
Coeur d' Alene, Idaho
208-667-9461

April, 1977

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ABSTRACT

The shoreline homes within 300 feet of adjacent lakes and rivers were surveyed for all the major bodies of water within the five northern counties of Idaho. The survey consisted of a team of field personnel doing a lot-by-lot inspection to determine the type of individual subsurface sewage system, its location (distance: horizontal & vertical) from the water and the slope. A cursory assessment of the soil was also included. An individual lot sheet was completed for each house with a top and side view sketch on the reverse side. These individual sheets were compiled into tally sheets for convenient areas such as bays or subdivisions.

This represents the first detailed inventory of the numbers, types and distances of individual subsurface sewage systems within 300 feet of open bodies of water in Kootenai and Shoshone counties.

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TWIN LAKES

Twin Lakes consists of an upper and lower lake and these are located in northwestern Kootenai County about six miles north of Rathdrum, Idaho. The upper is the larger of the two lakes but only 20 feet deep as opposed to a 75 foot depth in the lower lake.

The Shoreline survey was conducted during the summer of 1975.

The attached summary sheet shows the types and number of disposal systems found on both Upper and Lower Twin Lakes. A brief run down of that sheet is as follows:

- 419 lots with structures on them were individually assessed; a total of 628 disposal systems were found. The larger number of systems explained by the fact that some lots had a cesspool, privy and a kitchen sump thereby having 3 systems on that one lot.

- The average sewage disposal site was located 13 feet above the lake 73 horizontal feet back from the lake on a 11.5^{o} slope.

- Cesspools represented 47.7% (216 out of 453) of the sewage disposal systems; septic tank and drywells represented 17.0% (77 out of 453) of the sewage disposal systems, privys represented 24.1% (109 out of 453).

- Soil types varied from a sandy loam to a forest loam with gravel. Some areas had a underlying layer of clay, but generally the soil allowed percolation of effluent to follow the natural contours of the land. 17.4% of the lots exhibited large outcroppings of rocks and indicated significant subsurface rock content.

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Additional summary sheets show the compiled data for Upper & Lower Twin Lakes individually plus a distance, height, and slope breakdown by subdivision.

The results of the three week survey on Twin Lakes indicate that the majority of systems are quite antiquated and a number of them exhibit signs of failure; others are in close proximity to the adjacent lake or in the water table.

The ownership breakdown on Twin Lakes shows the extent of out-of-state residents that utilize the lake for recreation.

TWIN LAKES AREA

RESIDENT HOMES		NON-RESIDENT HOMES	UNKNOWN
Kootenai County	Other Counties		
18.3%	1.7%	72.5%	7.5%

LOWER TWIN LAKE

17.6%	2.0%	72.1%	8.3%

UPPER TWIN LAKE

19.8%	0.8%	73.6%	5.8%

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SHORELINE SURVEY

LOCATION: Twin Lakes Area LOTS: 419

SOIL TYPE: Forest Loam - 239 Forest Loam w/gravel - 159 Forest/Sandy Loam - 3
Sandy Loam - 24 Sand Loam w/gravel - 2 Clay - 18

WATER COURSES: 20

SLOPE: 11.5°

Average Height Above Lake - 13'
Average Distance From Lake - 73'

TYPE OF DISPOSAL SYSTEM:

Drainfield Only - 1
Septic tank & drainfield 21 S.T. Only - 2 Septic Tank, Drywell, Drainfield - 1
Septic tank & drywell 75 drywell only - 2
Septic tank & Absorption bed & drywell - 1
Holding tanks open 50 gal. barrel - 1
Cesspools 216 open-1 Kitchen Sump-122 Cesspool,Drainfield-1, Drainfield,
Privys 109 Drywell-1
Direct discharge - Sink wastes 22 Shower - 1 Washer - 2
- All sewage 3
Chemical toilet 2
Electrical Toilet 0
Possible disposal sites 12
None: Sink wastes 25
Toilet wastes 6
Armon: 1
Total Number of Systems: 628

ROCK:

Outcropping 73
Subsurface 77

WATER SOURCE:

Well System Twinlow: Lakeview Add. - Lake Forest
Pack River - Upper Twin Lakes Water
Lake - Individual Pump
utilities
drinking
Carry In Individual
Spring Twinlow Spring System - Individual - Spring Creek System:
Gunning Subdivision Spring - North Area of Lower Twin Lakes
Creek Individual

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SHORELINE SURVEY

LOCATION: Lower Twin Lake LOTS: 272

SOIL TYPE: Forest Loam - 113 Forest Loam w/gravel Mix - 157
Clay - 18 Sandy Loam w/gravel Mix - 2

WATER COURSES: 11

SLOPE: 13°

Average Height Above Lake - 15'
Average Distance From Lake - 63'

TYPE OF DISPOSAL SYSTEM:

Septic tank & drainfield	7	Septic Tank, Drywell, Drainfield - 1	
Septic tank & drywell	37	Drywell Only - 2	
Septic tank & Absorption bed	& Drywell - 1		
Holding tanks	open 50 gal. barrel - 1		
Cesspools	161	Open - 1	Kitchen Sump - 72 Cesspool, Drainfield - 1
Privys	67		
Direct discharge - Sink wastes	12	Shower - 1	Washer - 2
- All sewage	2		
Chemical toilet	2		
Electrical Toilet	0		
Possible disposal sites	9		
None: Sink wastes	16		
Toilet wastes	4		
Armon:	1		

Total Number of Systems: 400

ROCK:

Outcropping	38
Subsurface	42

WATER SOURCE:

Well System	Individual - Twinlow Well System, Lakeview Add.
	System - Pack River well
Lake -	Individual Pump
utilities	
drinking	
Carry In	Individual
Spring	Twinlow Spring System

Spring - Creek System - Gunning Subdivision
Spring - North Area of Lower Twin Lake

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SHORELINE SURVEY

LOCATION: Upper Twin Lake LOTS: 147

SOIL TYPE: Forest Loam - 126 Forest Loam w/gravel - 2
Sandy Loam - 24 Forest/Sandy Loam - 3

WATER COURSES: 9

SLOPE: 10°

Average Height Above Lake - 11'
Average Distance From Lake - 83'

TYPE OF DISPOSAL SYSTEM:

Septic tank & drainfield	14	S. Tank Only - 2 Drainfield Only - 1
Septic tank & drywell	38	
Septic tank & Absorption bed	0	
Holding tanks	0	
Cesspools	55	Kitchen Sump - 50 Cesspool, Drainfield, Drywell - 1
Privys	42	
Direct discharge - Sink wastes	10	
- All sewage	1	
Chemical toilet	0	
Electrical Toilet	0	
Possible disposal sites	3	
None: Sink wastes	9	
Toilet wastes	2	
Armon:		

Total Number of Systems: 228

ROCK:

Outcropping	35
Subsurface	35

WATER SOURCE:

Well System	Pack River Well - 36 Lake Forest Well - 28
Lake -	Upper Twin Lake Water - 42
	18
	utilities
	drinking
Carry In	6
Spring	Individual - 4
Creek	Individual - 4

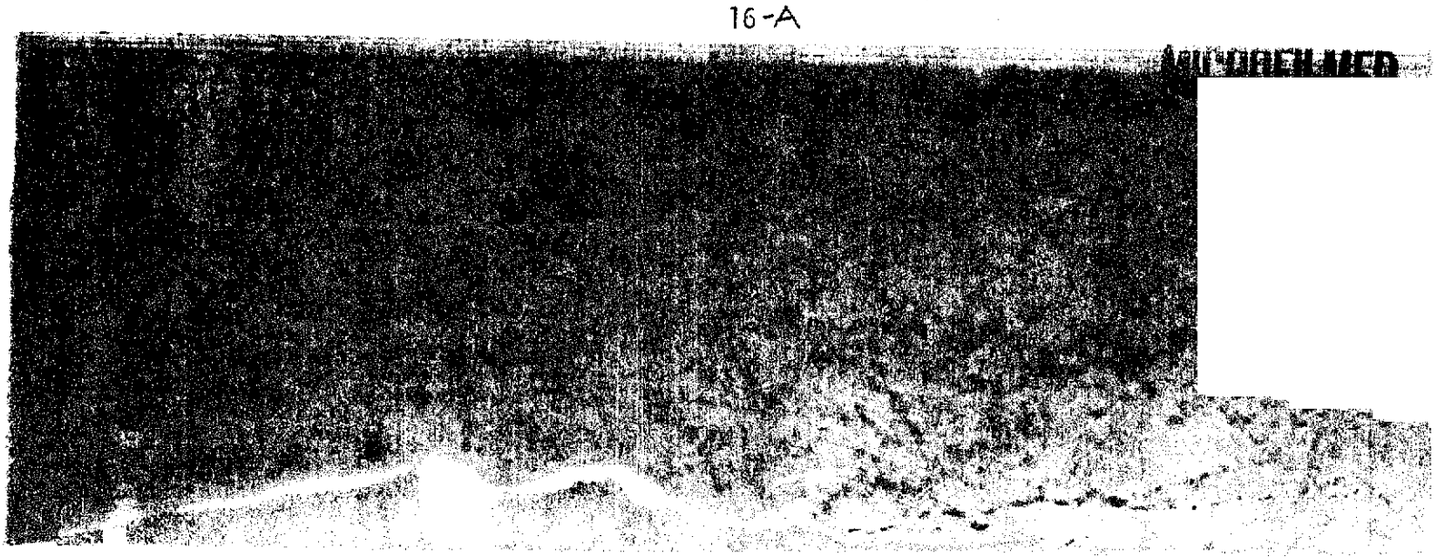
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TWIN LAKES

PRIMARY LOTS

SUBDIVISION	RESIDENCES	DISTANCE TO LAKE	HEIGHT ABOVE LAKE	SLOPE
Gunning	13	106.8'	4.0'	2°
Pinehurst	6	57.36'	16.66'	25°
Percy Cochran Beach	26	60.5'	21.3'	16°
Percy Cochran Tracts	7	42.3'	9.0'	22°
Dellar Beach	19	46.72'	16.35'	17°
Firgrove	22	71'	10.7'	16°
Freeman	15	42.9'	17.3'	26°
St. Joeur Homesites	16	65.1'	16.1'	13°
Echo Beach	30	78.0'	12.6'	11°
Silver Sands	10	46.3'	10.1'	12°
Tillcum	3	27.3'	17.8'	24°
Excelsior Beach	21	100.6'	2.8'	2°
Springwater Addition to Excelsior Beach	10	69.3'	4.1'	3°
Lakeview Addition to Lower Twin Lakes	26	59.9'	19.7'	15°
1st Add. to Lakeview	12	80.9'	2.2'	2°
2nd Add. to Lakeview	5	76.4'	1'	2°
Lake Park	7	114.6'	9.9'	8°
1st Add. to Lake Park	32	98.2'	7.6'	7°
2nd Add. to Lake Park	19	64.0'	6.3'	11°
Lake Forest Homesites	35	115.7'	5.5'	4.8°
Pioneer Park	16	59.4'	16.8'	17°
Leland Homesites	12	53.5'	17.4'	18°
Swan Beach	3	75.8'	10.5'	7°
Total: including individual Lots	419	73.0'	13.0'	12°

Panhandle Health standards = 300'



TECHNICAL REPORT

SWIM BEACH SURVEY

FOR NORTH IDAHO

by

Donald Troy
Environmental Staff
Panhandle Health District

The prepartion of this report was financed in part through a Section 208 Areawide Waste Treatment Management Planning Grant from the U.S. Environmental Protection Agency.

1309 Best Avenue
Coeur d' Alene, Idaho 83814
208-667-9461

October, 1977

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ABSTRACT

A survey of swim areas in the Panhandle District was made during the summers of 1975 and 1976. The purpose was to identify present and potential problem areas, to establish a correlation between number of swimmers at a given site and water quality, and to identify chemical tests for use as a supplement to bacteria counts in judging water quality.

In 1975 some high bacteria counts were found at Sandpoint City Beach on Lake Pend Oreille. Similar counts, though not as high, were found at Sanders Beach on Lake Coeur d' Alene. In 1976 it was found that at least part of the pollution at Sandpoint Beach was coming from Sand Creek, though there may have been other sources. No source was found for the high counts at Sanders Beach, and the high counts were not repeated in 1976.

Unusually cold weather during the summer of 1976 made it impossible to establish any correlation between swimmer usage and water quality, since there were few swimmers. The test for ammonia nitrogen was found to be a potentially useful supplement to bacteria counts as a measure of water quality.

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RESULTS

1. Data

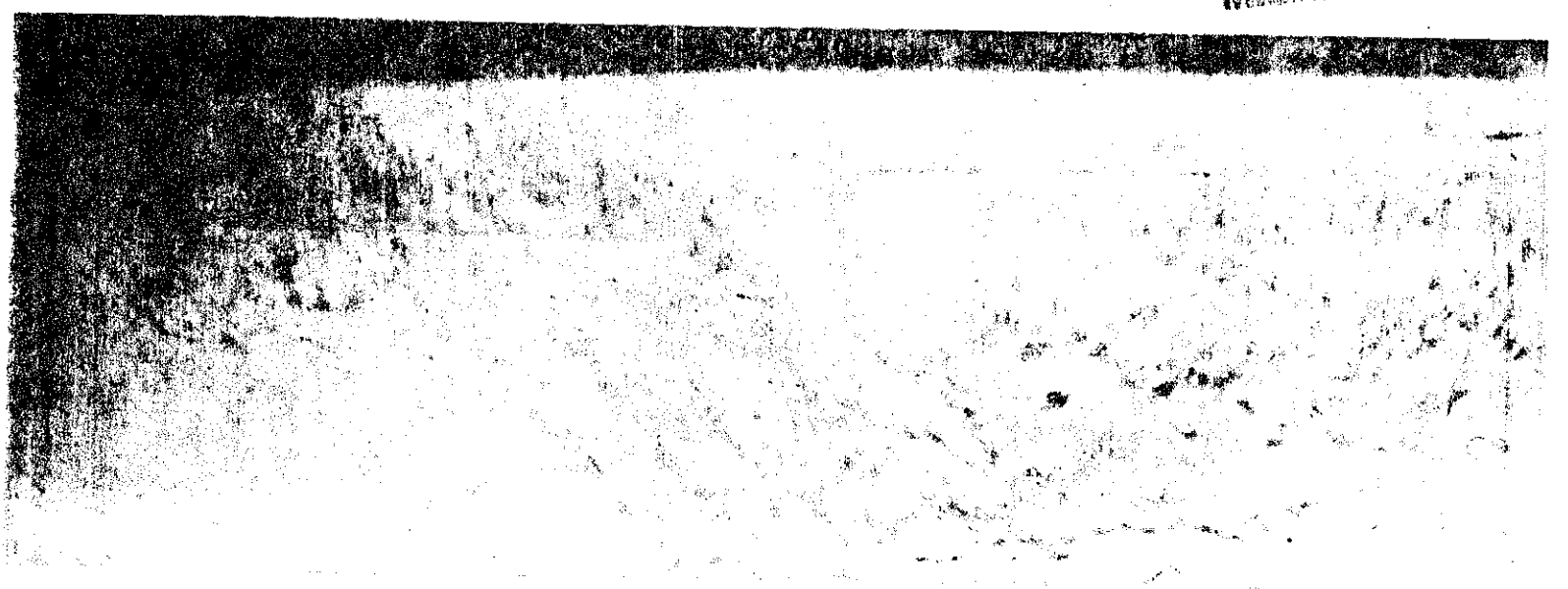
Bacteria counts for 1975 are summarized in Tables I and II. Tables IV and V. countain the bacteria counts for 1976. Chemical tests for 1975 are summarized in Table III; all these tests were done by the Idaho State Dept. of Health & Welfare Laboratory. In 1976, chemical testing was limited to one set of ammonia nitrogens done with Panhandle Health District equipment; results are shown in Table VI.

Figures I through 4 show bacteria counts, water temperatures and air temperatures at four large swimming areas, all in 1975. This was part of the effort to establish a correlation between swimmer usage and bacteria counts.

2. Criteria for Judging Extent of Pollution

Various standards are available for judging when a swimming area is polluted and should be declared unsafe for swimming. The EPA has developed a set of standards which are designed to apply to the entire United States, and are based solely on the risk of acquiring a water-borne illness after swimming in polluted waters. These standards are based on fecal coliform counts, rather than total coliforms. [1]

Though complicated in their formal statement, the EPA rules state in effect that a beach is to be judged unsafe for swimming if fecal counts consistently exceed 200 per 100 milliliters, or if one sample is found with more than 400 fecal coliforms per 100 mls. These standards were developed after a study which compared incidence of water-borne illness with bacteria counts at swim beaches. In brief, the EPA investigators found a definite



increase in water-borne illness among people who went swimming in water containing 400 or more fecal coliforms per 100 mls; applying a safety factor of two, they set the limit at 200 fecal coliforms per 100 mls.

The State of Idaho also has standards for water quality, and these are both stricter and more complicated than the EPA rules. In part this is because the Idaho standards are intended to apply to an entire body of water, not just to a limited portion used for swimming by large numbers of people. The State standards declare water to be "Class A" only if it contains less than 240 total coliforms, and less than 50 fecal coliforms per 100 mls. Note that the body of water has to meet both criteria in order to qualify as "Class A", which means "safe for swimming". "Class B" waters are those judged unsafe for swimming, but safe for such things as boating and fishing, where there is little chance of a person ingesting any significant amount of water. The limits for "Class B" waters are 1000 total coliforms and 200 fecal coliforms per 100 mls.

The State standards do not mention posting a beach against swimming; in practice this is left to the judgement of the local health officer. If it appears that a threat to public health exists, the District will naturally post the area. In practice, if it were found that a beach had bacteria counts that exceeded the recommended limits set by EPA, there would be no option left but to post the beach against swimming. In cases where water was found to be "Class B" by the State standards, but still met the EPA standards, the District may post the area depending on the usage, season of the year, and pending weather conditions. Water that didn't meet the State standards for "Class B" water would be unsafe by EPA rules.

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3. Problem Areas

Certain areas were found where water quality was degraded, and it is altogether possible that some of them would have to be declared unsafe for swimming. In some cases this was expected, in others it was not. The worst sites were:

(a) St. Maries and Riverside Resort

Both sampling sites are on the St. Joe River, the Riverside Resort being about six miles downstream from the city of St. Maries. It is clear that fecal coliforms were dangerously close to the EPA allowable maximum of 200 per 100 mls, and total coliform counts were also high. (Table II).

There are several reasons for this section of the St. Joe River being polluted. For one, at the time these samples were taken, there were at least 8 houses in St. Maries that were connected by mistake to the storm sewer, rather than the sanitary sewer; as a result, these houses discharged sewage directly into the river. (These houses have since been connected to the sanitary sewer.) In addition, certain parts of St. Maries are not on the sewer, and many of the houses there have old and inadequate subsurface sewage disposal systems. Sewage from these houses often surfaces and runs into the river. The sewage collection system itself is overloaded, due in part to a serious infiltration problem, and at times, it bypasses sewage directly into the river. This section of the river is not used much for swimming, and those who do swim there are aware thru notification that they are taking a risk. (St. Maries is now engaged in a project to upgrade the sewage collection system and the treatment ponds. When completed, this will improve the condition of the lower St. Joe River; however there is much work needed before all the sources of pollution are identified and corrected.)

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Chemical tests for 1975 are summarized in Table II; no chemical testing was done in 1976. Bacteria counts were quite high during the period June 13th thru July 1975, though they did not approach the allowable maximum level. In addition there was one kjelldahl nitrogen (July 6, 1975) and two ammonia nitrogens (July 6th and 13th) that was very high for that part of Lake Coeur d' Alene. Since the very high kjelldahl reading occurred at the same time as the elevated bacteria counts, (600 total, 92 fecal), and the ammonia nitrogen was also higher than usual, (.02 mg/l; most samples were less than .01), there is strong evidence of pollution on that particular day. The following day, July 7th, both kjelldahl nitrogen and ammonia nitrogen were back down to what seems to be the normal "background" level for that time and place, and bacteria levels were also back down to the average for the entire set of samples. The next samples were taken on July 13th; the kjelldahl nitrogen was low, but ammonia nitrogen was higher than usual (.04 mg/l), and bacteria counts were as high as any found during the entire set of samples (1260 total, 92 fecal).

Further testing during 1976 did not disclose any notably high counts. It is possible that the high counts resulted from an onshore wind; wave action close to the beach also stirs up bottom sediments, and the sediments can oftentimes contain coliform bacteria. There is also a storm water discharge near the west end of Sanders Beach, and it is possible that the high counts obtained in 1975 originated in storm water discharge.

(e) Other Beaches

Bacteria counts at other beaches did not reveal anything unsuspected. Counts were high at places like Hauser Lake, Rose Lake, and Twin Lakes, but these lakes were known to be in a eutrophic condition, and high counts were expected in summer. These are not primary swimming areas. One high count was obtained at Sammowen, and one at Albeni Cove Park.

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TABLE I-A - Condensation of Table

BACTERIA COUNTS AND SELECTED CHEMICAL TEST RESULTS
SWIMMING BEACHES IN PANHANDLE DISTRICT, IDAHO SUMMER 1975

PLACE	DATE	Kjell-dahl N mg/l	Nitrate N mg/l	Ammo-nia N mg/l	Phosphate: total mg/l	Phosphate: ortho mg/l	Coliforms: total per 100	Coliforms: fecal mls
Sanders-Beach	July 3	2.3	<.1	<.01	.06	.01	0	0
	4	8.3	<.1	<.01	.07	.20	14	0
	5	2.4	<.1	<.01	.04	.03	80	0
	6	25.0	<.1	.02	.01	.03	600	92
	7	2.1	<.1	<.01	.04	.02	52	2
	13	1.6	<.1	.04	.08	.01	1260	92
	Aug. 9	---	<.1	.27	.25	.02	106	2
Sand-point City Beach	July 3	165.0	<.1	.15	.30	.16	580	50
	4	2.7	<.1	.31	.27	.04	---	--
	5	2.8	<.1	.17	.17	.02	---	--
	6	2.2	<.1	<.01	.13	.13	TNTC	0
	7	2.1	<.1	.42	.15	.18	300	10
Cd'A City Beach	3	2.7	<.1	<.01	.07	.06	0	0
	4	3.5	<.1	<.01	.04	.05	32	0
	5	3.5	<.1	<.01	.04	.02	6	2
	6	3.1	<.1	<.01	.09	.23	TNTC	2
	7	1.4	<.1	.01	.01	.02	120	0
	13	1.1	<.1	.01	.05	.05	TNTC	0
	Aug. 9	---		.20	---	.01	640	8
St. Maries	July 18	---	.1	.09	.15	.04	840	146
Riverside Resort	July 18	---	<.1	.05	.15	.09	680	72
Heyburn Park	July 18	---	<.1	.13	.14	.07	12	0
Post Falls City Beach	July 20	---	<.1	.09	.14	.07	840	26
	9	1.1	<.1	.12	.26	.14	600	24
Twin* Echo	July 20	2.9	<.1	.10	.23	.04	2500	8
Blaine* Resort	July 20	1.7	<.1	.09	.36	.10	TNTC	8

*Twin Echo Resort and Blaine's Resort are on Twin Lakes.
TNTC: Too Numerous To Count

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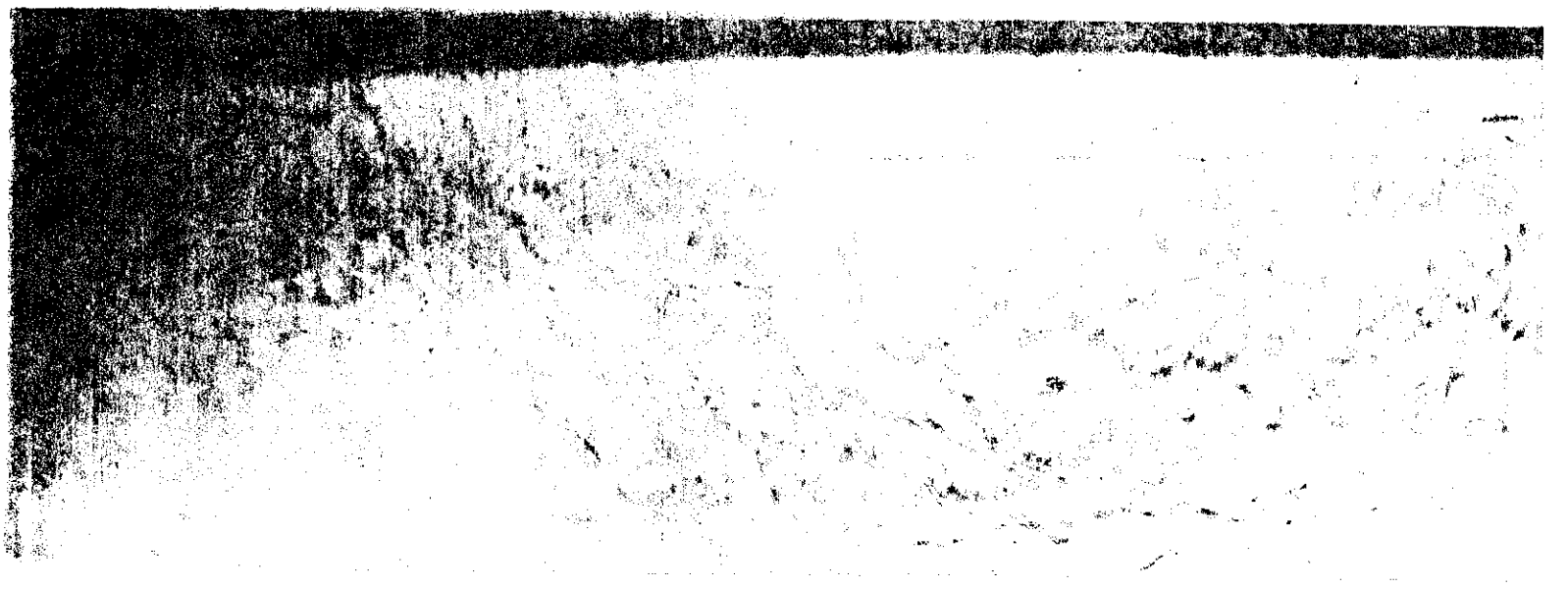


TABLE II

BEACH SAMPLING PROGRAM, SUMMER, 1975 BACTERIA COUNTS
SMALLER SWIM BEACHES

Post Falls (#13)		
20 July	840 total	
	26 fecal	
9 Aug	600	
	24	
Dog Beach (a) (#4)		
3 July	80	
20 July	660	
	4	
1 Aug	166	
	14	
4 Aug	520	
	108	
8 Aug	640	
	52	
10 Aug	1700	
	0	
15 Aug	360	
	0	
17 Aug	46	
	4	
Sammowen (#5)		
3 July	14	
	0	
6 July	68	
	8	
20 July	1600	
	10	
25 July	300	
	0	
27 July	300	
	148	
Sammowen (#5)		
1 Aug	160	
	0	
4 Aug	260	
	0	
8 Aug	840	
	20	
10 Aug	0	
	0	
15 Aug	2	
	0	
22 Aug	22	
	4	
25 Aug	6	
	0	
Harrison (#18)		
18 July	18	
	2	
Twin Echo (b) (#10)		
20 July	2500	
	8	
27 July	20	
	2	
22 Aug	4	
	0	
Blaine's Resort (c) (#9)		
20 July	TNTC	
	8	
27 July	400	
	6	
2 Aug	2	
	0	
Spirit Lake (#8)		
20 July	102	
	8	
22 Aug	0	
	0	
Hauser Lake (#12)		
20 July	TNTC	
	2	
22 Aug	160	
	8	
Rose Lake (#17)		
18 July	940	
	4	
Round Lake (#7)		
20 July	2	
	0	
22 Aug	100	
	0	
Priest River (#2)		
25 July	200	
	34	
27 July	760	
	22	
15 Aug	60	
	0	
17 Aug	10	
	16	
Laclede (#3)		
25 July	1460	
	22	
27 July	340	
	6	

(a) Sandpoint, at north end of long highway bridge.
(b) Twin Lakes, about midpoint of lower Twin lakeshore.
(c) Twin Lakes, Upper Twin.

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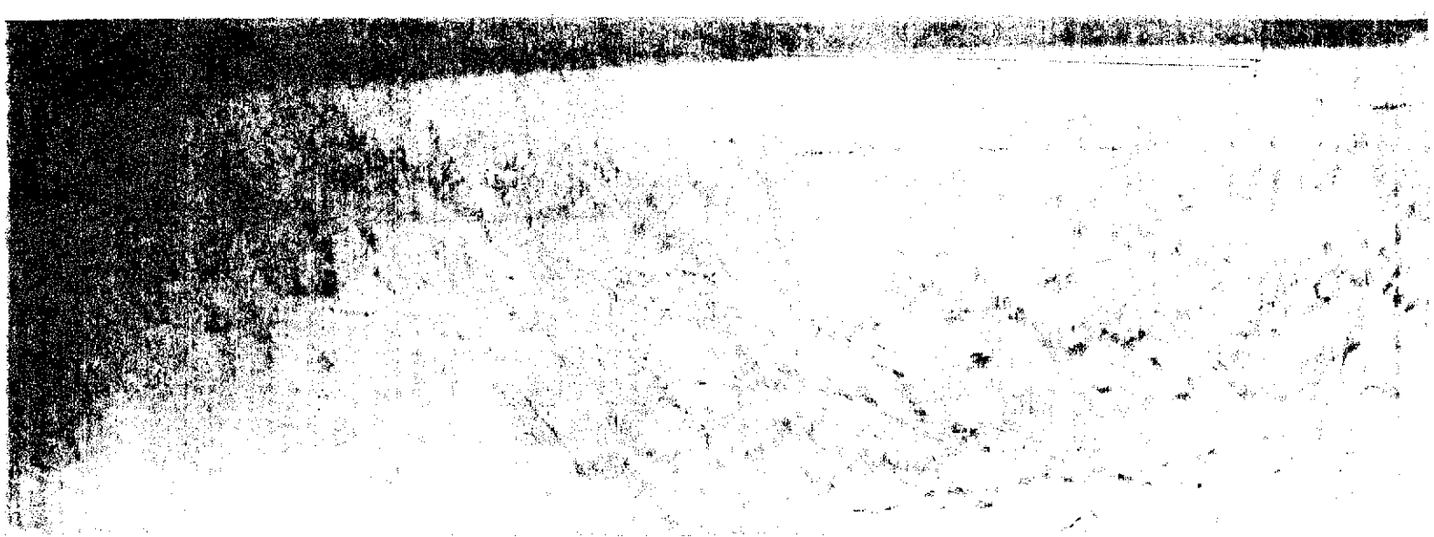


TABLE III (Continued)

CHEMICAL TEST RESULTS, SMALLER SWIM BEACHES 1975

H'son	July 18
chloride, ppm	5.9
nitrate, ppm	<.1
kjeldahl N_2, ppm	
total phos., ppm	.16
orthophos., ppm	.1
ammonia N_2, ppm	.06
turbidity, JTU	1.4
pH	7.4
spec. cond., mmho	61

Rose Lake	July 18
chloride, ppm	5.9
nitrate, ppm	<.1
kjeldahl N_2, ppm	
total phos., ppm	.21
orthophos., ppm	.1
ammonia N_2, ppm	.14
turbidity, JTU	1.6
pH	7.4
spec. cond., mmho	55

St. Maries	July 18
chloride, ppm	4.9
nitrate, ppm	.1
kjeldahl N_2, ppm	
total phos., ppm	.15
orthophos., ppm	.04
ammonia N_2, ppm	.09
turbidity, JTU	1.7
pH	7.5
spec. cond., mmho	45

Riverside	July 18
chloride, ppm	3.9
nitrate, ppm	<.1
kjeldahl N_2, ppm	
total phos., ppm	.15
orthophos., ppm	.09
ammonia N_2, ppm	.05
turbidity, JTU	.9
pH	7.3
spec. cond., mmho	44

Heyburn	July 18
chloride, ppm	3.9
nitrate, ppm	<.1
kjeldahl N_2, ppm	
total phos., ppm	.14
orthophos., ppm	.07
ammonia N_2, ppm	.13
turbidity, JTU	1.8
pH	8.4
spec. cond., mmho	42

Post Falls	July 20
chloride, ppm	3.9
nitrate, ppm	<.1
kjeldahl N_2, ppm	1.1
total phos., ppm	.26
orthophos., ppm	.22
ammonia N_2, ppm	.12
turbidity, JTU	7.8
pH	7.5
spec. cond., mmho	44

Twin Echo	July 20
chloride, ppm	6.9
nitrate, ppm	<.1
kjeldahl N_2, ppm	2.9
total phos., ppm	.23
orthophos., ppm	.04
ammonia N_2, ppm	.10
turbidity, JTU	1.1
pH	7.7
spec. cond., mmho	23

Blaine Resort	July 20
chloride, ppm	6.9
nitrate, ppm	<.1
kjeldahl N_2, ppm	1.7
total phos., ppm	.36
orthophos., ppm	.10
ammonia N_2, ppm	.09
turbidity, JTU	2.0
pH	7.4
spec. cond., mmho	24

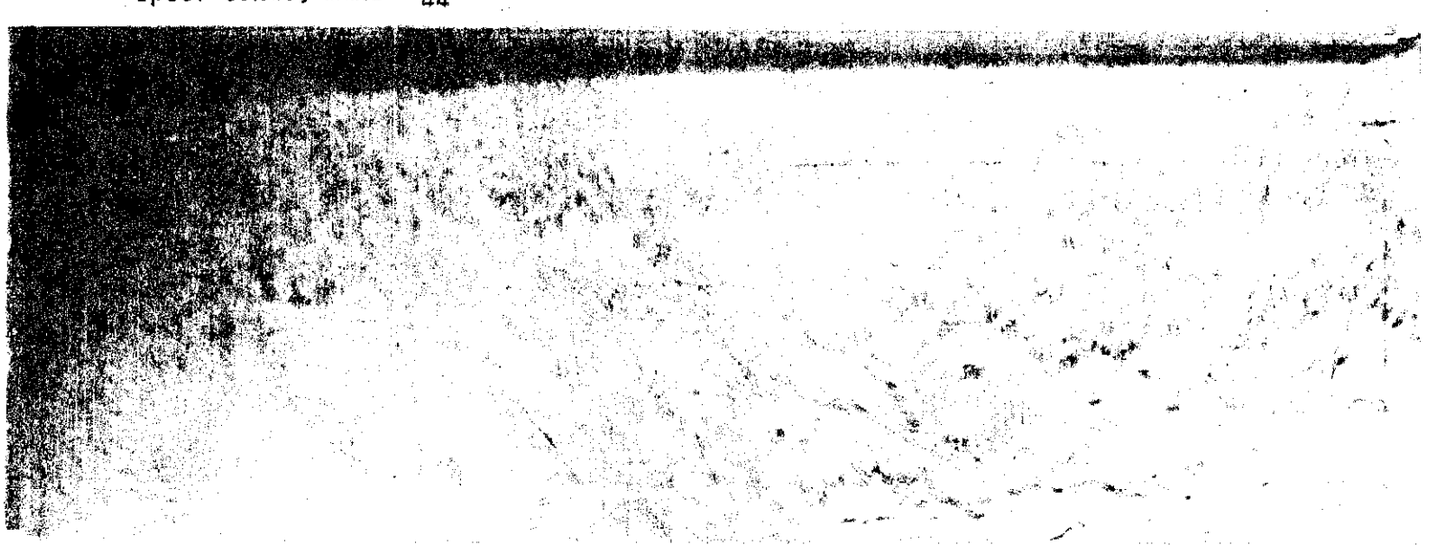
Spirit Lake	July 20
chloride, ppm	6.9
nitrate, ppm	<.1
kjeldahl N_2, ppm	1.7
total phos., ppm	.28
orthophos., ppm	.16
ammonia N_2, ppm	.09
turbidity, JTU	1.1
pH	8.0
spec. cond., mmho	23

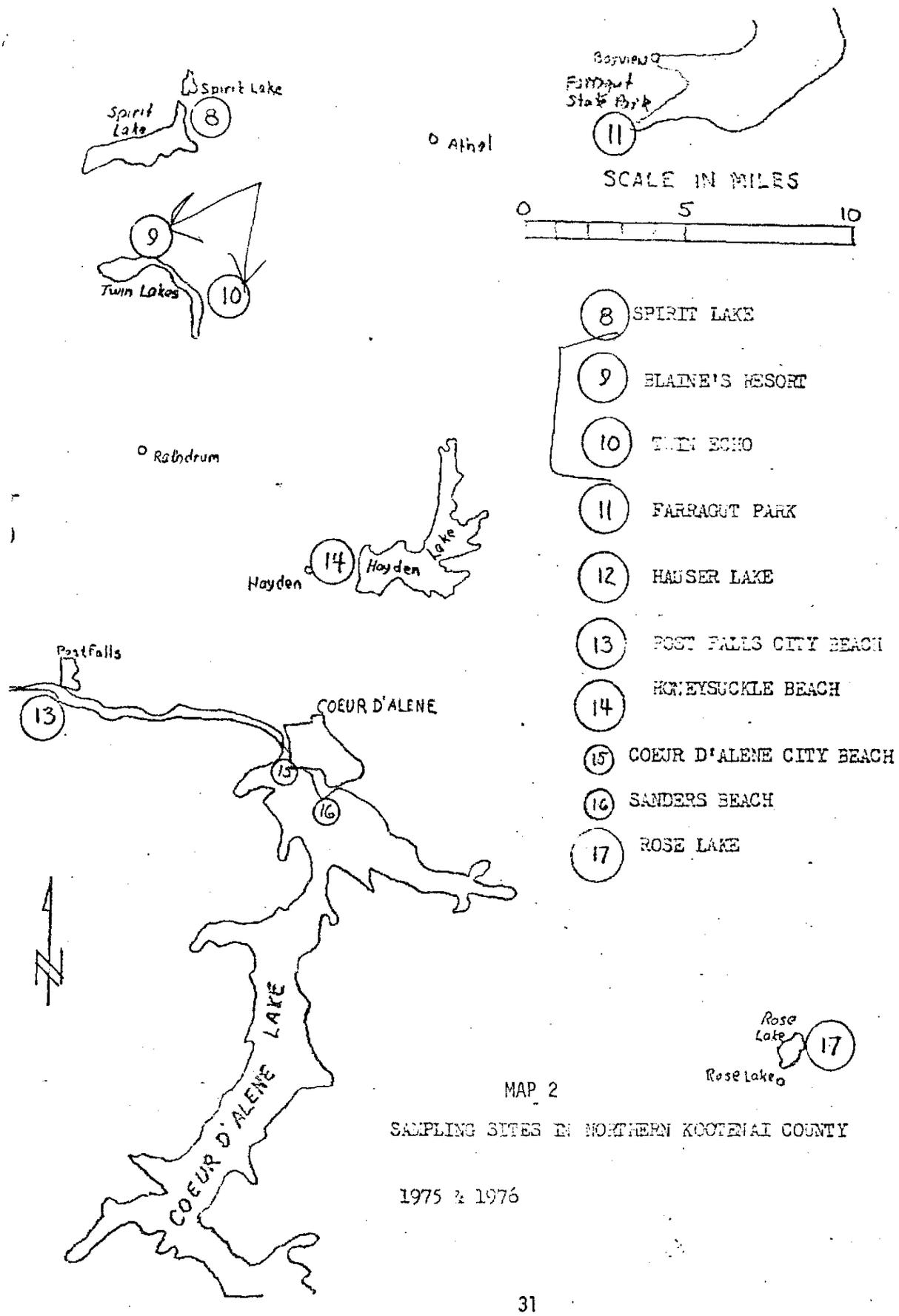
Hauser Lake	July 20
chloride, ppm	7.8
nitrate, ppm	<.1
kjeldahl N_2, ppm	1.9
total phos., ppm	.37
orthophos., ppm	.12
ammonia N_2, ppm	.17
turbidity, JTU	2.6
pH	7.8
spec. cond., mmho	

Laclede	July 28
chloride, ppm	5.9
nitrate, ppm	<.1
kjeldahl N_2, ppm	1.5
total phos., ppm	.39
orthophos., ppm	.20
ammonia N_2, ppm	.01
turbidity, JTU	6.6
pH	8.6
spec. cond., mmho	150

Priest River	July 28
chloride, ppm	9.8
nitrate, ppm	<.1
kjeldahl N2, ppm	1.8
total phos., ppm	.21
orthophos., ppm	.07
ammonia N_2, ppm	.05
turbidity, JTU	7.8
ph	7.5
spec. cond., mmho	58

Post Falls	Aug 9
chloride, ppm	6.9
nitrate, ppm	<.1
kjeldahl N_2, ppm	
total phos., ppm	.14
orthophos., ppm	.07
ammonia N_2, ppm	.09
turbidity, JTU	2.8
pH	7.8
spec. cond., mmho	44



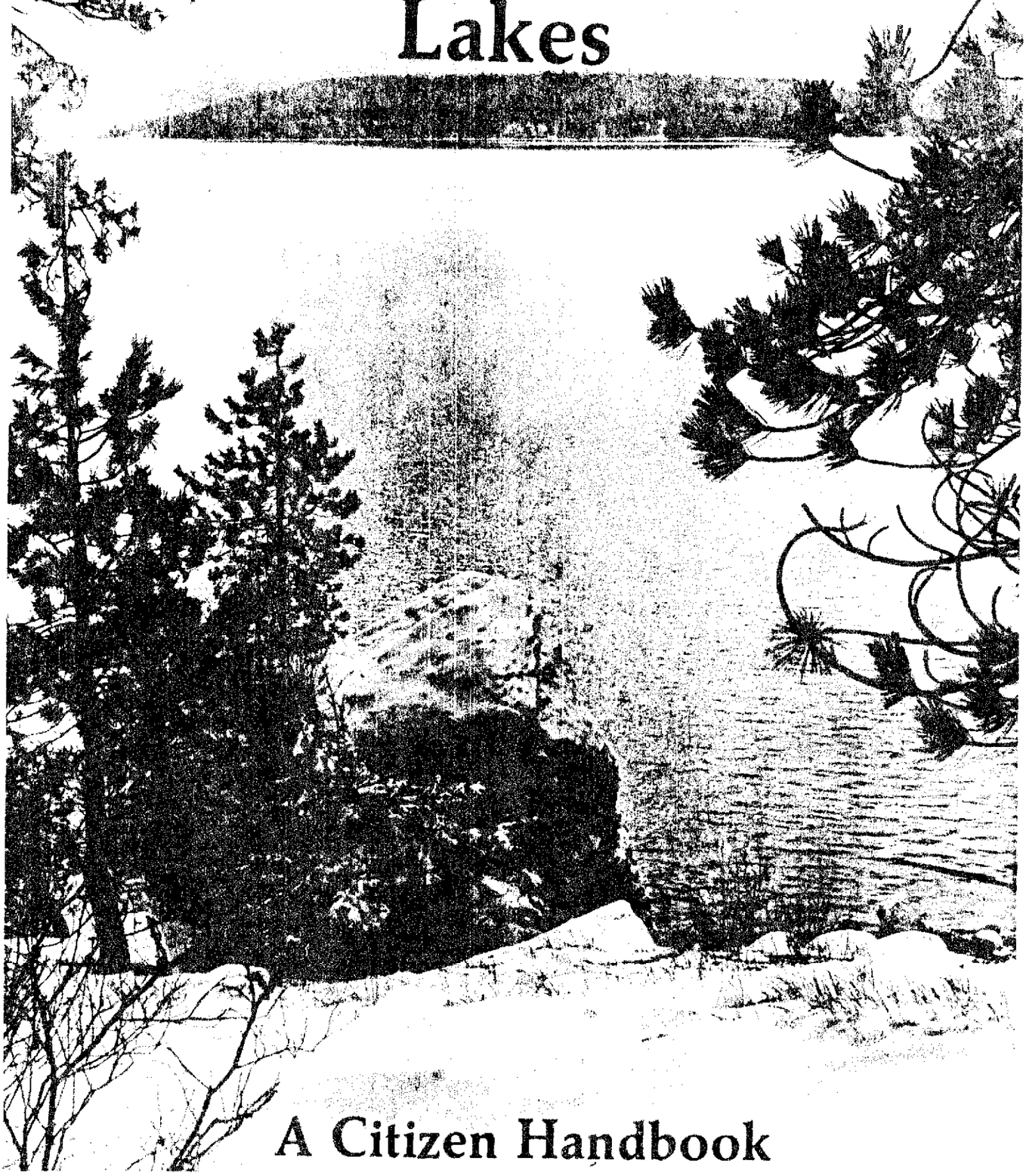


MAP 2

SAMPLING SITES IN NORTHERN KOOTENAI COUNTY

1975 & 1976

Protecting North Idaho's Lakes



A Citizen Handbook

MICROFILMED

Contents

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This Citizen Handbook was prepared by the Kootenai Environmental Alliance and the Idaho Conservation League

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(208) 667-1375

September 1978

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Illustrations by Jim Lillygren

Photo by Michael Fitzpatrick

Hauser Lake

Hauser Lake is generally considered to be of poor water quality. Its "age" is very old (eutrophic), and the lake is not far off from becoming a swamp and then a meadow. Nutrient concentrations are generally quite high, and algae and other water weeds grow rapidly. Bacteria levels have exceeded state standards for swimming waters in the past, especially during the warmer months.

Contributors to pollution include West J.M. Creek and J.M. Creek. Livestock have direct access to both streams, and create very high bacteria levels in the water. Agriculture along the streams, including fertilization, contribute to the nutrients in the lake and therefore add to pollution. Past logging operations contribute eroded soil and accompanying nutrients. Sewage disposal systems from shoreline homes also contribute to the problem, because much of the shoreline has very poor soils for proper functioning of these systems.

The shoreline survey found 77 houses within ¼ mile of the lake, and 51 houses within 300 feet of the shore. There are 126 subdivided lots that are not yet built upon. Of the shoreline homes, 78 percent have outdated sewage disposal systems that could be contributing to lake pollution.

Unless some corrective and preventive action is taken, Hauser Lake could become so polluted that it would not be a pleasant place to live. The population around Hauser Lake can be expected to grow rapidly in coming years, as new industrial development occurs near the state line, providing new jobs in the area.

Fernan Lake

Fernan Lake is considered to be "old," or eutrophic. It has supported dense algae blooms in the summer. Bacteria counts vary depending on the weather, but total bacteria counts (especially coliform) have exceeded state standards for swimming on some occasions.

The tributary creeks are sources of considerable amounts of nutrients to the lake, water quality monitoring indicates. Local water quality officials suspect that cattle grazing adjacent to Fernan Creek contributes a large amount of nutrients. Sewage disposal systems around the lake are also believed to contribute nutrients.

Action has been undertaken to provide sewers to the developed area on the west end of the lake. This may provide some relief from sewage pollution, but water quality officials believe that most of the nutrients that have reached the lake in the past will remain there for several years, because there is little flushing action of the lake. Because Fernan Lake is very small (450 surface acres) and shallow (maximum depth 25 feet), any development on its shoreline or in its watershed should be carefully undertaken to prevent serious lake pollution problems.

Spirit Lake

Generally, Spirit Lake has high water quality, and is considered a "young" lake (oligotrophic) in the aging cycle. Nutrient levels are relatively low. However, some bays have higher nutrient levels and lower water quality.

Some erosion reaches the lake from past logging operations in the watershed. In addition, cattle in Brichel Creek are thought to contribute to high bacteria levels in the creek, which then flows into the lake.

There are 570 subdivided lots within ¼ mile of the lake, 301 of which have houses on them, according to the shoreline survey. Of the 196 houses within 300 feet of the shoreline, 72 percent have outdated sewage disposal systems. The majority of the homes, 126 of them, obtain their drinking water from the lake.

Twin Lakes

The water quality of Twin Lakes is generally rather poor, and the lakes are considered "old" in the lake aging cycle (eutrophic). Algae and other water weeds are abundant, especially in the upper lake and in the narrows between the lakes. Bacteria levels have exceeded state standards for swimming in the past. Because the lakes are not rapidly flushed out through Rathdrum Creek at the south end of the lake, nutrients and bacteria that enter the lake stay there for up to eight years.

Contributors to pollution in the lake include household sewage disposal systems, erosion from logging in the watershed, and cattle grazing in the tributaries.

The Panhandle Health District's shoreline survey identified 272 residences on the lower lake and 141 on the upper. More than 70 percent of these homes have outdated sewage disposal systems that could be causing pollution problems. There are also 754 lots that are subdivided but presently vacant. Eighteen houses rely on the lakes for domestic water.

Lake Pend Oreille

Lake Pend Oreille is characterized as a young (oligotrophic) lake. It remains clear and clean, with nutrient levels below those needed for rapid algae growth. Bacteria levels have been consistently low, even in developed areas such as Bayview. The tremendous volume of Lake Pend Oreille helps prevent it from becoming polluted.

During spring runoff periods, much silt is carried into the lake by the Clark Fork River. Erosion is probably the source of this silt. The Clark Fork River is also used for several sewage discharges in Montana.

Most development on Lake Pend Oreille is of an older nature. The shoreline survey found that there are 644 houses and 742 undeveloped lots within 200 feet of the lake. Of these, 386 houses rely on the lake for drinking water. There are 210 outdated sewage disposal systems. In the 35 bays surveyed, the average sewage disposal system was 114 feet from the lake, which is much closer than present regulations allow.

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The sludge layer in the bottom of the septic tank gets deeper and deeper as more sewage is added year after year. The sludge should be pumped out approximately every three years, depending on the use. If it is not pumped out, it will flow into the drainfield pipe and clog the soil so that no wastewater can seep out. The septic system then stops working correctly, and sewage can back up into the home or puddle on the ground, eventually flowing into the lake.

The septic tank can also stop working properly if there is a high water table. During wet seasons, the groundwater table rises. If the water table rises into the leaching area, sewage may be forced up toward the ground surface. This problem is the result of improper installation of the drainfield system, and can only be corrected by relocating the drainfield system at least four feet higher than the maximum high water table.

Septic systems can also have problems if the sludge or scum from the septic tank area overflows into the drainfield area. The soil will quickly become clogged with organic matter. This situation can often be corrected by allowing the system to rest for six to twelve months. Often this means a new drainfield system must be installed. This problem, however, can be avoided by pumping the tank every three years or so.

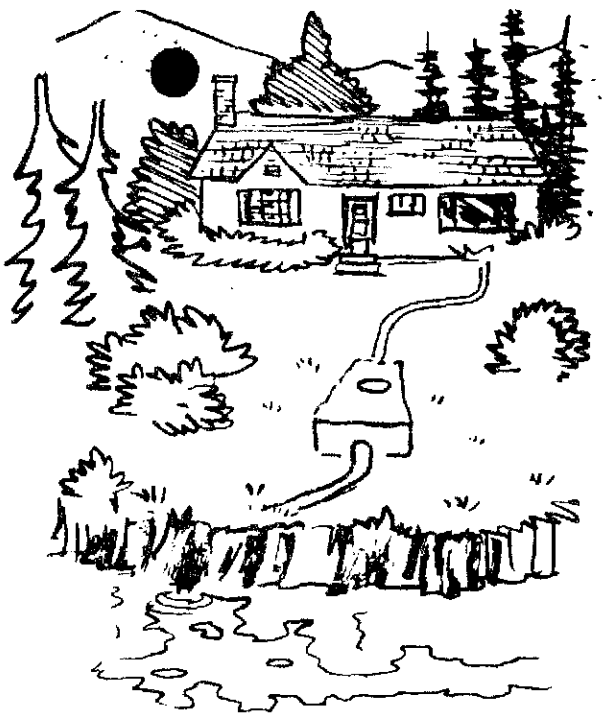
Outdated Sewage Disposal Systems

Many of the sewage disposal systems around the lake were installed years ago when little was known about proper sewage treatment. The Panhandle Health District's shoreline survey found hundreds of these outdated, potentially polluting sewage systems on North Idaho's lakes.

One of the most common of these outdated sewage systems uses a septic tank, but the wastewater, instead of flowing into the shallow, long perforated pipes of a drainfield, flows into a pit known as a "drywell." Drywells do not work well for treating wastewater. They are usually buried deep in the ground, six to ten feet below the surface, where there are few soil organisms to break down the harmful wastewater particles. That far below the ground, there are no roots to use up the fertilizers present in sewage. Instead, the wastewater can flow directly into the lake, under the ground. This is especially true when the drywells are located close to the lake, as many of them are.

Another outdated sewage system is known as a "cesspool." A cesspool is essentially a large pit, lined either with bricks or concrete with holes in it. Sewage flows directly from the house into the cesspool. There, the heavier particles settle to the bottom, similarly to what happens in a septic tank. The wastewater moves into the ground through the holes in the cesspool's walls.

In cesspools, the sludge builds up over the years if it is not pumped out. It eventually flows out the sides of the cesspool into the soil, but since it is so thick it clogs up the soil. Soon, no more wastewater can seep through the cesspool's walls, and the sewage either puddles on top of the cesspool, where it can eventually flow into the lake, or it backs up into the home. Most of the cesspools at lakeshore homes are located very close to the lake, increasing the likelihood that they are causing lake pollution.



Many lakeshore homes have outdated sewage disposal systems that may be polluting the lake. These should be replaced to protect the lakes.

Disposal of water from kitchen sinks can also be a problem for the lakes. Some lakeshore homes let their kitchen wastewater run directly into the lake, rather than into a sewage disposal system. Kitchen wastewater often contains nutrients from detergents, grease and fats, and organic matter such as plate scrapings that all add to lake pollution.

Many lakeshore homes are still using these outdated sewage systems, as the table shows. These sewage systems will continue to threaten the lakes as long as they continue to operate.

OUTDATED SEWAGE DISPOSAL SYSTEMS WITHIN 300 FEET OF THE SHORELINE

LAKE COEUR D'ALENE
425 Septic Tank/Dry Wells
142 Cesspools
40 Direct Discharges of Sink Waste
877 Domestic Water Connections From the Lake

LAKE PEND OREILLE
114 Cesspools
65 Septic Tank/Drywells
15 Direct Discharges of Sink Waste
16 Kitchen Sumps
386 Domestic Water Connections from the Lake

HAYDEN LAKE
300 Septic Tank/ Dry Wells
123 Cesspools
39 Kitchen Sumps
17 Direct Discharges of Sink Waste
498 Domestic Water Connections from the Lake

PRIEST LAKE
156 Privies
2 Cesspools
7 Septic Tank/Drywells
286 Domestic Water Connections From the Lake

TWIN LAKES
216 Cesspools
122 Kitchen Sumps
75 Septic Tanks/Drywells
22 Direct Discharges of Sink Waste
18 Domestic Water Connections From the Lake

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Fishing in North Idaho's Lakes

North Idaho's lakes used to be famous for their excellent fishing, and many old-timers can remember the time when they could catch a fish every time they cast out their line. But fishing has declined in recent years, and it could continue to decline unless positive action is taken to reverse the trend.

The well-being of fish populations in North Idaho is dependent upon the health of the lakes. Fish populations can be greatly affected by changes in their aquatic environment. The aquatic environment is much more susceptible to rapid change than the environment on the land, and these changes can result in drastic changes in fish populations.

The aging, or "eutrophication," of lakes is a natural process which takes thousands of years under natural conditions. But the activities of humans are greatly accelerating that process. In its advanced stages, the aging process of the lakes can be very detrimental to the fish species that are native to North Idaho.

North Idaho's native fish are of what is called the "salmonid" family. This family includes cutthroat trout, Dolly Varden and whitefish. Other popular species which have been introduced in the lakes, such as rainbow trout and kokanee, are also salmonids. Salmonids generally thrive in young lakes (oligotrophic) to middle-aged lakes (mesotrophic).

As the aging process of the lakes is accelerated, the salmonid fish are affected in many ways. Salmonids require water with a high content of oxygen. As the lakes grow older, there is less and less oxygen in the water, especially in the shallow areas. This means that salmonids cannot live in these areas.

High levels of nutrients in the lakes also have a detrimental effect on the salmonid species. The shallow areas become full of water weeds, where non-salmonid fish like to live. Algae grows profusely, and uses up the nutrients which are needed by the small water organisms that kokanee eat.

Shoreline development can also affect fish populations and the fishing public. Fills and other lake encroachments can eliminate fish spawning and rearing areas. The expansion of commercial moorage facilities and private boat docks can eliminate favorite fishing areas, and also lead to increased boating use. Increased boating use of the lakes leads to conflicts among the lake users. Fishermen can be greatly affected by speed boats and water skiers.

LAKE COEUR D'ALENE

Kokanee, sometimes called bluebacks, provide the primary fishing in Lake Coeur d'Alene. Currently, the abundance of small water organisms provide food for a healthy kokanee population. Lake Coeur d'Alene is the most productive of the kokanee lakes in North Idaho.

In recent years, northern pike have been illegally introduced in the Coeur d'Alene River drainage. Pike prefer shallow, nutrient-rich weedy areas, and are not considered to be a threat to Lake Coeur d'Alene kokanee at this time. Increased nutrients in the lake, from septic tanks or erosion or other sources, could eventually lead to the expansion of pike within Lake Coeur d'Alene, to the detriment of kokanee populations.

HAYDEN LAKE

Hayden Lake was once a famous cutthroat lake. Several factors, including over-fishing, led to severe declines in cutthroat populations. The Idaho Department of Fish and Game is now attempting to restore the cutthroat fishery on Hayden Lake. This effort includes restrictive creel limits, closures of the tributaries to fishing, and annual releases of hatchery-reared juvenile cutthroat.

Water quality and lake productivity in Hayden Lake are presently favorable for excellent growth and survival of trout. The success of the cutthroat restoration program depends on maintaining high water quality.

FERNAN, HAUSER, TWIN AND SPIRIT LAKES

These lakes are all managed by the Idaho Department of Fish and Game as hatchery-supported trout lakes. Each lake receives large releases of catchable-sized rainbow trout annually. All of these lakes also provide excellent largemouth bass fishing, and also contain crappie, sunfish, yellow perch and bullhead (non-salmonid species). The aging process, or eutrophication, of Fernan, Hauser and Twin Lakes has proceeded to the point where conditions favor the non-salmonid species over the salmonid species. Release of catchable-sized hatchery fish is the only means of providing trout fishing in these lakes.

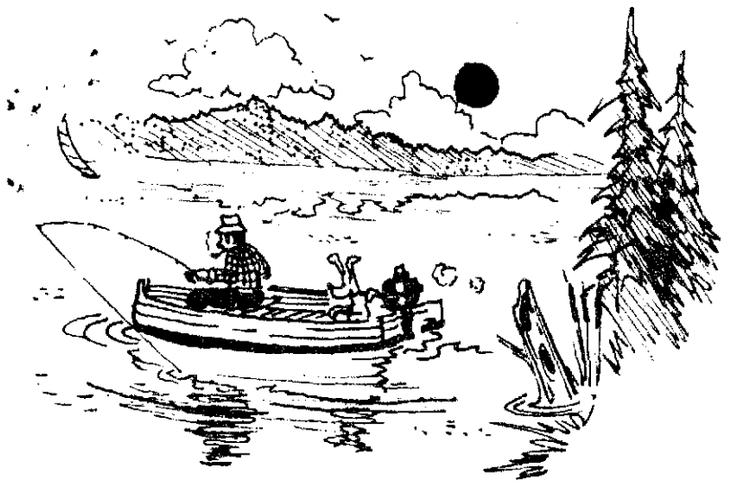
Spirit Lake also receives annual releases of kokanee fry, and in some years produces excellent fishing. The nutrients that reach Spirit Lake must be controlled so the lake will provide a good place for trout to live.

LAKE PEND OREILLE

Lake Pend Oreille was originally a Dolly Varden, cutthroat and whitefish lake. Kokanee entered the lake in the 1920's from Flathead Lake via the Clark Fork River. Pend Oreille has supported the most significant kokanee fishery in the United States. Annual harvests exceeding one million fish were common until the late 1960's.

Kokanee populations are currently half of what they were before 1970. The Idaho Department of Fish and Game believes that the decline is due to exclusion of spawning areas in the Clark Fork River because of construction of the Cabinet Gorge Dam. Lake level fluctuations due to operation of Albeni Falls Dam have resulted in kokanee spawning nests drying out, and have also contributed to the decline. Recovery of the kokanee fishery to former levels will require artificial (hatchery) enhancement.

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Lake water quality must be maintained to provide good trout fishing in the lakes.

Waterfowl and Wildlife

North Idaho's lakes provide habitat areas for waterfowl, such as ducks and geese, and for wildlife such as beaver, muskrat and otter. All of the lakes provide resting and feeding areas for waterfowl during their migration periods in the fall and spring. The sheltered bays are especially important in providing resting areas for large numbers of migrating waterfowl during spring and fall migration.

Certain areas of North Idaho's lakes provide nesting and rearing areas for ducks and geese. Marshes are used as nesting areas by various waterfowl species, depending on the depth. Deep water marshes (six feet deep) are used primarily by red-headed and canvass back ducks, which are becoming more scarce. This scarcity is partly due to a shortage of deep water marshes. Typically, these areas are suited for marinas or other dock facilities because of their depth and accessibility.

Shallow marshes are used by "puddle ducks," which include mallards, pintails, teals and widgeons. These marshes are relatively shallow (two feet deep) and are sometimes lost as habitat areas because farmers drain and farm these lowlands.

The protection of marshes is very important. Marshes should be preserved not only because they act as natural filters, trapping silt and nutrients, but also because they are important for wildlife and waterfowl habitat. Fur-bearing animals such as beaver, muskrat, mink and otter thrive in marshy areas.

Proper management of waterfowl nesting areas is also important for the continued survival of these species in North Idaho. For instance, during geese nesting periods in May and June, motorboats should be restricted in nesting areas. Motorboats can disturb birds during their nesting. In addition, oil spillage from motors has caused serious problems to waterfowl eggs in other parts of Idaho. The eggs will not hatch if even a small amount of oil gets on them. Geese become flightless during their nesting and rearing periods. No dogs and no motorboats should be allowed near the nesting areas at this time.

Continued wildlife and waterfowl populations at North Idaho's lakes are important to many people, both hunters and non-hunters. Lake master plans can include specific management techniques to insure that these animals and birds continue to thrive in our lakes.

PRIEST LAKE

Priest Lake, like Lake Pend Oreille, was historically a whitefish, cutthroat trout and Dolly Varden fishery. Mackinaw (lake trout) and kokanee have been introduced. Since the 1940's, kokanee have been the most important species to fishermen.

A dam at the outlet of Priest Lake is operated to maintain the lake levels during the recreational season. The lake is drawn down in the fall following the recreational season. This drawdown occurs after the onset of kokanee spawning, and many nests and embryos are subsequently dried out. In recent years, kokanee numbers and fishing success have drastically declined. Management of the lake level to maximize the success of spawning could greatly enhance fish populations.

Logging in the area has caused erosion, filling up some areas of tributary streams with silt. These streams are used for cutthroat spawning, and the erosion and silt threatens the success of this spawning. Proper erosion control techniques must be used in the logging operations to maintain cutthroat populations in Priest Lake.

LAKE COCOLALLA

Lake Cocolalla has aged to the point where it is the oldest (most eutrophic) or North Idaho's lakes. It contains excellent spiney-ray fish populations (perch, bass, sunfish, crappie, pike). It is managed as a year-round fishery, and supports a popular ice fishery for yellow perch. Lake Cocolalla receives large annual releases of hatchery-reared rainbow trout. An attempt at eradication of non-salmonid species was carried out in 1958, and resulted in an excellent cutthroat fishery for a brief period. Re-infestation of the lake with non-salmonids was rapid, and hatchery support is the only present method of providing a trout fishery.

During the summer of 1978, an "algae bloom," or rapid growth, of a potentially poisonous strain of blue-green algae occurred. Fortunately, the algae bloom subsided before there was evidence of large-scale fish kills. Control of the amount of nutrients reaching Lake Cocolalla is necessary to prevent future danger to fish and human populations from this potentially poisonous algae.

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Twin Lakes Transfer —

3-24-83

BOR - Ed Thomas

Sylte Ranch - Paul McCabe —

Petion — Gordon Sylte spokesman —

Ed Thomas BOR

Duty ,

Twin Lakes & Rathdrum Creek

History of Use

Use began in 1906

Decree March 30, 1962 ?

Mid 60's a study was

Level reduced later

Plan - to change nature of use — Irrigation to stabalization of Lake Level

Plan supported

Congress authorized the project

Supreme Court uphold 6.4 to 10.4 on gage to level

10.4 = ~~2316.2~~ 2312.4 ?

Contract -

Position —

Transfer — will not injure other water rights — less water will be used —

Request -

Exhibits 1- (1) 14757 - W

(2) House Document

(?) Sub Committee Hearing Record →

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④ Authorizing Document P.L.
⑤ Letter from Director
⑥ Repayment Contract
⑦ Confirmation of Contract
⑧ Memo Decision by RKH
⑨ Deed Transferring title of w.r.

Mr. Primer

Mr. Crooker?
- Concerned with operation —
-

Mr. McCabe
Concerned with operation —
Doesn't like 10.4 level —

— After 15th June flow is not sufficient to keep Lake at 10.4 — Claims there would 1.7 drawdown —

— Bob Tender —
- Proposal —
- Water user from the lake — domestic —

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David Asterburg —
- Concerned about enhancement — extent of enhancement —
- ~~That~~ Impounding of Lake cou

Chet Park —

~~Summaries of~~

- Concerned about effect of tranfer — on lake quality —
- Why haven't documents themselves been entered — ?
- Summarys felt to be sufficient —
- F & W Service & F & G — Around 1964 - 1965 —
-
-
-
-
-
-

Mr McCabe presentation

1st Witness Mr. Bedine — Chairman of East Green Acres I.D.
Water controlled until end of 1975 — Twin Lakes not used since
Was it the intent of I.D. to abandon use of Twin Lakes
for irrigation.

X-exam —

Bob Haynes

X-exam —— Intent —

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Gordon Sylte —
Concerned about the inflow being changed to Lake level protection — stabalization —
Water use would be restricted only to fish and wildlife use —
Doesn't think transfer will serve the public interest —
Suggest that Rathdrum Creek not be omitted from management plan —
Opposes the plan =

Sylte Ranch 1875 — Water Right —

= Bob Tindar — Moved here in 1970 —
Doesn't want level lower than 6.4

→ The decision needs to address the operation of the lake —

Isn't there a record of lake levels — ? —
Concerned about impounding water at 10.4 level and maintaining it at that level —

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Jack Sylte of Sylte Ranch –
Has an old water right –
Has seen Twin Lakes drawn down where it was a mud bottom
Water Right filed in 1882
Found W.R. on page 4 of Water Right Books –

Chester A. Park – resident on the stream –
[redacted]
· Water right will be injured
· Not in public interest
No showing by B.O.R.
· 1968 – WR Inventory –
Table # 38 – Indicates no need for enhancement of water recreation enhancements –
Page 261 – BOR Recommendation –
[redacted]
Concerned about [redacted] Quality
A EPA preliminary report region 10 –
Twin Lakes in a state of eutrophication
Size of Lake – 800 acres
Mean retention time 1.8 year dated 1975 – Was there a final report – ?

Records of precipitation collected by Mr Park at his home –
Flow recently measured at – 150 cfs.
Exhibits 1 thru 4 –
Ragged Ridge –
Concerned about too high of Water Level –
X-exam – By Ed. Thomas –

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Question by Jack Sytte —

David Osterburg

Change is not in the local public interest —

HD 1982 Appl Exhibit #2

Page 80 — What is meant by "if"

Use

24,000 angler day without project

25,000 " " with project

The 1000 additional days come from stabalized level and two additional boat ramps —

Rathdrum Creek not included in the wildlife enhancement study. —

The effect on the Creek and the losses of habitat of wildlife must be considered —

Page 83

Idaho Conservation League publication —

Will slowing of flushing by impoundment cause lake to deteriorate —

Swimbeach Survey

October 1977 Panhandle District Health District

Page 21 —

Shoreline Survey Report Panhandle ~~District~~ Health District

128 disposal systems found —

Raised lake level will caused additional leaching of drain fields

Proposed Flood Control Plan — —

Bakra →

lunch break — 1:10pm —

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Was water taken by Green Acres above Rathdrum [redacted] when irrigation

1:10 pm —

" Robert Greene → Managing of Twin Lake Village —

" - Opposed to change —
- Feels enhancement of fish & wildlife was
- Feels change would be detrimental to wildlife —
- Feels water be managed by local residents —
- Feels use is in balance at the present time —
-

Marvin Willadsen — 36 years —
- Concern about damage to wildlife on Rathdrum Creek —
- Concerned about operation plan
- East Green Acres used to maintain the creek —
- Used for many purposes —
- Propose that the water shald be used for many purposes —

X-exam

Mr Osterberg
No well water is available —

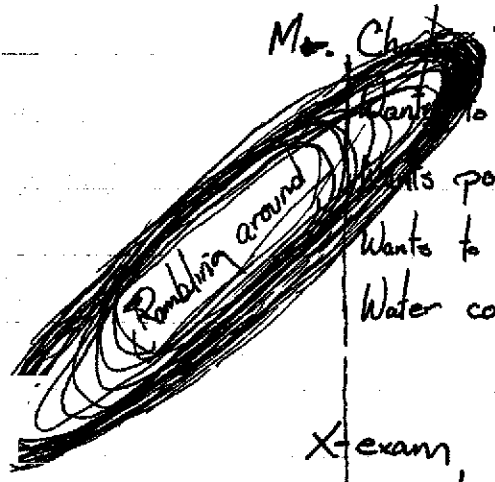
Mr. Crooker
Wells are difficult to obtain.

Mr Greene comments about his use

Chester R. Park - Water user for 30 years MICROFILMED
Location in section 21
Creek Leaks —
Proposes installing check dams along the stream to seal the bottom
Need to do something constructive —
Originally creek was in a different location —

83
48
35

Mr. Ch[illegible] R. Parks 35 years 1 year creek has dried up—
Wants to continue using the water—
Wants power to be generated—
Wants to hold the water on the surface where it can be used.
Water could be put in a ditch to conserve water—



X-exam
Mr Osterberg—

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BEFORE THE DIRECTOR OF THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF PROTESTS AGAINST APPROVAL OF)
TRANSFER AND AMENDED TRANSFER OF WATER RIGHT)
NOS. 95-2059 AND 95-0973 IN THE NAME OF THE) O R D E R
U. S. BUREAU OF RECLAMATION.)

WHEREAS, on March 7, 1983, a Petition to Intervene on behalf of numerous parties was filed in the Department's Northern Regional Office by Gordon Sylte; and,

WHEREAS, Rule 6 of the Department of Water Resources's Rules and Regulations governing practice and procedure for intervention has been complied with by the petitioners.

IT IS, THEREFORE, HEREBY ORDERED that leave to intervene is granted to the petitioners.

DATED: This 18th day of March, 1983.

A. KENNETH DUNN
Director

MICROFILMED

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF PROTESTS AGAINST APPROVAL OF TRANSFER AND AMENDED TRANSFER OF WATER RIGHT NOS. 95-2059 and 95-0973 IN THE NAME OF THE U.S. BUREAU OF RECLAMATION

CERTIFICATE OF MAILING

I, HEREBY CERTIFY, that on this 18th day of March, 1983, true and correct copies of the foregoing Order were mailed, postage prepaid to the parties on the attached list.

KAY WALKER
Sr. Clerk
Idaho Department of Water Resources

U.S. Dept. of the Interior
Bureau of Reclamation
Box 043, 550 West Fort St.
Boise, ID 83724

Ms. Betty Rose Hogan
Route #1, Box 340
Rathdrum, ID 83858

Mr. David Osterberg
Route #4, Box 363
Rathdrum, ID 83858

Mr. and Mrs. Dean Primmer
Route #1, Box 645
Rathdrum, ID 83858

Mr. Orville Sylte
c/o Sylte Ranch
Route #4, Box 854
Rathdrum, ID 83858

Mr. John E. Sylte
Sylte Ranch, Inc.
Route #4, Box 854
Rathdrum, ID 83858

Mr. Chester Sylte
Box 313
Rathdrum, ID 83858

Mr. Donald Zigler, Mayor
Rathdrum City Hall
Rathdrum, ID 83858

Mrs. Shirley Watson
P.O. Box 197
Rathdrum, ID 83858

Mr. and Mrs. Glen Silliman
N. 4425 Cunning Rd.
Rathdrum, ID 83858

Mr. Roy C. Watson
Route #4, Box 728-A
Rathdrum, ID 83858

Mr. and Mrs. Don Knowles
Route #4, Box 728
Rathdrum, ID 83858

Mr. Robert A. Goelzer
P.O. Box [illegible]
Rathdrum, ID 83858

Ms. Elizabeth Stevens
Route #4, Box 727
Rathdrum, ID 83858

Ms. Susan E. Park
Route #4, Box 711
Rathdrum, ID 83858

Mrs. Mrs. Chester R. Park
Route #4, Box 730
Rathdrum, ID 83858

Ms. Helen M. Willard
Route #4, Box 840H
Rathdrum, ID 83858

Mr. Marvin E. Willadsen
E. 700 Willadsen Rd.
Rathdrum, ID 83858

Mr. and Mrs. Chester A. Park
Route #4, Box 712
Rathdrum, ID 83858

Mr. Robert K. Tinder
E. 440 Twin Lakes Rd.
Rathdrum, ID 83858

Gordon Sylte
Sylte Ranch, Inc.
Route #4, Box 854
Rathdrum, ID 83858

Dept. of Water Resources
Northern Regional Office
Route #5, Box 203
Coeur d'Alene, ID 83814

MICROFILMED

Name: U. S. Bureau of Reclamation
File: 95-0973 and 95-2059
Place: Kootenai Cty. Extension Bldg., 106 Dalton Ave., CDA
Date: Thursday, March 24, 1983, at 8:30 a.m.

ROSTER OF ATTENDANCE

	Name	Address	Representing
P	Marvin Willadsen	E 700 Willadsen Rd. Rathdrum	Self
P	Chester R Park	RT#4 Box 730 Rathdrum	Self
P	Daniel M. Park	E 3200 Sturgeon Rd Rath.	Park INC.
P	CHESTER A. PARK	ROUTE 4, Box 712 RATHDRUM, IDA 83858	SELF
P	Diane J. Park	Rt. 4 - Box 712 RATHDRUM, IDA.	SELF
P	Helen M. Willard	E. 3400 DIAGONAL RD RATHDRUM, ID	THE SELKIRK
P	Elizabeth Stevens	E. 1700 Sturgeon Rd., Rathdrum, Idaho	Self.
P	Betty Rose Hogan	N 2425 Hwy 41 Rathdrum, Ida.	self
P	Jerry Hogan	N 2425 Hwy 41 Rathdrum, Ida.	self.
	Mike Hogan Not inter	P.O. Box 416 Rath.	Self & family
P	Don & Debbie Knowles	N 3450 Knowles Rd Rathdrum Ida	Self
P	Mrs. Shirley Watson	P.O. Box 197 Rathdrum, Id. 83858	Self
P	Ginger & Glen Gillman	N. 4425 Running Road Rathdrum	Self
	Roy C. Watson	1895 Prafke Hill Rd. Rathdrum, Ida.	Self
	Roy C. Watson	1895 Prafke Hill Rd. Rathdrum	(Robert A. Goelzer P.O. Box Rathdrum Ida.
P	Dean A Plummer	N. 1795 Hiway 41	Self
P	Clara Plummer	N. 1795 Hiway 41	Self
	Naomi Park Not inter	E. 1900 Sturgeon Rd Rath.	Self.
P	Susan E Park	E 3200 Sturgeon Rd, Rathdrum, ID 83858	Self
P	John E Sylte	Box 854	Rathdrum Ida 83858
	Orrid Alterlerg	Rt. 4, Box 363	Rathdrum, Idaho 83858
P	Robert K. Tinder	E. 4440 - Twin Lakes Rd	Rathdrum, Id. 83858
	Roy Bodine Not inter	W1560 Bodine Ave	Post Falls Id 83854
A	Paul McCabe	2005 Ironwood Parkway CDA	Sylte Ranch Inc and Gordon Sylte
P	Gordon Sylte	Rt #4 Box 854 Sylte Ranch	Rathdrum, Ida 83858
	William A. Foggo	W 1740 LAKE FOREST Rd,	RATHDRUM Id 83858
I	Louis J. Tonani	E 200 Twin Lake Rd	Rathdrum, Id 83858 Self.
I	Ray Kenson	W 1830 LAKE FOREST DR. RATHDRUM ID. 83858	"
I	William M Woody	E-725 Twin Lakes Rd	Rathdrum Id 83858. Jim Blaine

MICROFILMED

Name: U. S. Bureau of Reclamation
File: 95-0973 and 95-2059
Place: Kootenai Cty. Extension Bldg., 106 Dalton Ave., CDA
Date: Thursday, March 24, 1983, at 8:30 a.m.

ROSTER OF ATTENDANCE

Name	Address	Representing
I Robert Green	RT 4 Box A551 RATHDRUM ID.	Twin Lakes Village
I Ray Schultz	W 2550 Twin Lakes Rd Rathdrum Idaho	MYSELF. LAKE FOREST HOMES DEV
P Herb Nagel	Box 907 Coeur d'Alene, Id.	City of Rathdrum
FRANK C CROOK Not Inter.	Box 103 Rathdrum Ido 83868	SILVER SAND UNIT
Tom King Dept Staff	4055 Gut way CDA	TWIN LAKE IDWR

MICROFILMED

CERTIFICATE OF SERVICE

I, GORDON SYLTE, certify that all of the parties below were either mailed copies of the Petition to Intervene or were notified in person:

U. S. Department of the Interior
Bureau of Reclamation
Box 043, 550 W. Fort St.
Boise, Id. 83724

Ms. Betty Rose Hogan
Rt. 1 Box 340
Rathdrum, Id. 83858

Mr. David Osterberg
Rt. 4 Box 363
Rathdrum, Id. 83858

Mr. and Mrs. Dean Primmer
Rt. 1 Box 645
Rathdrum, Id. 83858

Mr. Orville Sylte
c/o Sylte Ranch
Rt. 4 Box 854
Rathdrum, Id. 83858

Mr. John E. Sylte
Sylte Ranch, Inc.
Rt. 4 Box 854
Rathdrum, Id. 83858

Mr. Chester Sylte
Box 313
Rathdrum, Id. 83858

Mr. Donald Zigler, Mayor
Rathdrum City Hall
Rathdrum, Id. 83858

Mrs. Shirley Watson
P. O. Box 197
Rathdrum, Id. 83858

Mr. and Mrs. Glen Silliman
N. 4425 Gunning Rd.
Rathdrum, Id. 83858

Mr. Roy C. Watson
Rt. 4 Box 728-A
Rathdrum, Id. 83858

Mr. and Mrs. Don Knowles
Rt. 4 Box 728
Rathdrum, Id. 83858

Mr. Robert A. Goelzer
P. O. Box 278
Rathdrum, Id. 83858

Ms. Elizabeth Stevens
Rt. 4 Box 727
Rathdrum, Id. 83858

Ms. Susan E. Park
Rt. 4 Box 711
Rathdrum, Id. 83858

Mrs. Chester R. Park
Rt. 4 Box 730
Rathdrum, Id. 83858

Ms. Helen M. Willard
Rt. 4 Box 840H
Rathdrum, Id. 83858

Mr. Marvin E. Willadsen
E. 700 Willadsen Rd.
Rathdrum, Id .83858

Mr. and Mrs. Chester A. Park
Rt. 4 Box 712
Rathdrum, Id. 83858

Mr. Robert K. Tinder
E. 440 Twin Laked Rd.
Rathdrum, Id. 83858

RECEIVED
MAR 7 1983
Department of Water Resources
Northern District Office

MICROFILMED

DATED: This 5 day of March, 1983.

Gordon Sylte
GORDON SYLTE

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
NORTHERN REGION

F John V. Evans
Governor

A. Kenneth Dunn
~~Stephen Allred~~
Director

Suite No. 1
4055 Government Way
Coeur d'Alene, Idaho 83814
(208) 667-6484

March 3, 1983

Mr. Gordon Sylte
c/o Sylte Ranch
Rt. 4 Box 854
Rathdrum, Id. 83858

Re: 95-0973

Dear Gordon:

This is to acknowledge receipt of the petitions. However, we need something a little bit more formal in the way of a certificate of service.

I have enclosed a certificate of service for your signature.

As you are probably aware, the hearing is set for March 24, 1983, at the Kootenai County Extension Building.

Please return the certificate of service at your earliest convenience.

Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH/pms

Enc. - Certificate

MICROFILMED

BEFORE THE DIRECTOR OF THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF PROTESTS AGAINST APPROVAL OF)	
TRANSFER AND AMENDED TRANSFER OF WATER RIGHT)	NOTICE OF CONFERENCE
NOS. 95-2059 AND 95-0973 IN THE NAME OF THE)	AND/OR HEARING
U. S. BUREAU OF RECLAMATION.)	

On June 3, 1982, the United States of America acting through the Regional Director of the Bureau of Reclamation filed with the Department of Water Resources an application to transfer the public waters of the State of Idaho. On January 10, 1983, said applicant also filed with the Department of Water Resources an amended application to transfer the public waters of the State of Idaho. The Department received protests from the following: Chester A. and Diane J. Park on October 12, 1982; Helen M. Willard, Mrs. Chester R. Park, Susan E. Park, Elizabeth Stevens, Robert A. Goelzer, Mr. and Mrs. Don Knowles, Roy C. Watson, Glen and Ginger A. Silliman, Mrs. Shirley Watson, Donald Zigler (Mayor of the City of Rathdrum), Chester Sylte, John E. Sylte, Orville Sylte, Dean A. and Clara J. Primmer, David Osterberg and Betty Rose Hogan on October 15, 1982; Marvin K. Willadsen on October 18, 1982; and Robert K. Tinder on January 28, 1983.

The Department has set the matter of protest for hearing for Thursday, March 24, 1983, at 8:30 a.m., in the Community Room of the Kootenai County Cooperative Extension Service Building, 106 Dalton Ave. (corner of Dalton and Government Way), Coeur d'Alene, Idaho. The hearing will be held in accordance with provisions of Chapters 2 and 17, Title 42 and Chapter 52, Title 67, 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. A pre-hearing conference may be held beginning at the above-set time and prior to the hearing.

DATED: This 1st day of March, 1983.

MICROFILMED

ROBERT G. HAYNES, P.E.
Regional Supervisor

ACCEPTANCE OF REGISTERED, INSURED, C.O.D. AND CERTIFIED MAIL

PS Form 3877, July 1978

NAME AND ADDRESS OF SENDER

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
ROUTE 3, BOX 203, SUITE #1
COEUR D' ALENE, ID 83814

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	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	13665	Ms. Helen M. Willard Rt. 4 Box 840H Rathdrum, Id. 83858	.20	.75		Rec'd 3/3/83		.60			95-0973
2	13666	Mr. Marvin E. Willadsen E. 700 Willadsen Rd. Rathdrum, Id. 83858	"	"		" "		"			
3	13667	Mr. and Mrs. Chester A. Park Rt. 4 Box 712 Rathdrum, Id. 83858	"	"		" "		"			
4	13668	Mr. Robert K. Tinder E. 440 Twin Lakes Rd. Rathdrum, Id. 83858	"	"		Rec'd 3/2/83		"			
5	13669	Mrs. Chester R. Park Rt. 4 Box 730 Rathdrum, Id. 83858	"	"		Rec'd 3/3/83		"			
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

U.S. POSTAGE PAID HAYDEN LAKE, IDA. MAR 1983

TOTAL NUMBER OF PIECES LISTED BY SENDER	TOTAL NUMBER OF PIECES RECEIVED AT POST OFFICE	*POSTMASTER, PER (Name of receiving employee)*
5	5	

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: 1978 270-037

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
Statehouse
[redacted]e, Idaho 83720

MICROFILMED

95-0973

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:
Mr. David Osterberg
Rt. 4 363
Rathdrum, Id. 83858

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

ARTICLE NUMBER
13652

(Always obtain signature of addressee or agent)

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

5. DATE OF DELIVERY
3-2-83

POSTMARK
RATHDRUM MAR 2 198

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

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
ROUTE 5, BOX 203, SUITE #1
COEUR D' ALENE, ID 83814

(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

RECEIVED

MAR 3 1983

Department of Water Resources
Northern District Office

95-0973

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:
Mr. John Sylte & Mr. Orville Sylte
Rt. 4 Box 854
Rathdrum, Id. 83858

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

ARTICLE NUMBER: 13654

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

John E Sylte

5. DATE OF DELIVERY: 3-2-83

POSTMARK: RATHDRUM ID MAR 3 1983

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

7. UNABLE TO DELIVER BECAUSE:

EMPLOYEE'S INITIALS

NITED 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



RETURN TO

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
(Name of Sender)
ROUTE 5, BOX 203, SUITE #1
COEUR D' ALENE, ID 83814
(Street or P.O. Box)

RECEIVED
MAR 3 1983

Department of Water Resources
Northern District Office
(City, State, and ZIP Code)

95-0973

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).

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:
Ms. Susan E. Park
Rt. 4 Box 711
Rathdrum, Id. 83858

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

ARTICLE NUMBER
13664

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

Susan E Park

5. DATE OF DELIVERY
3-2-83

POSTMARK
RATHDRUM MAR 2 1983

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

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300

U.S.MAIL

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.

RETURN TO

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
ROUTE 5, BOX 203, SUITE #1
COEUR D' ALENE, ID 83814

(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

RECEIVED
MAR 3 1983
Department of Water Resources
Northern District Office

95-0973

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).
   - [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:
Mr. Donald Zigler
Rathdrum City Hall
Rathdrum, Id. 83858

4. TYPE OF SERVICE:
   - [ ] REGISTERED [ ] INSURED
   - [X] CERTIFIED [ ] COD
   - [ ] EXPRESS MAIL

ARTICLE NUMBER: 13656

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE [ ] Addressee [ ] Authorized agent

Barbara Zigler

5. DATE OF DELIVERY: 3-2-83

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

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

RATHDRUM MAR 2 1983 PM 1000 88656

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

RECEIVED TO

MAR 3 1983

Department of Water Resources
Northern District Office

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
ROUTE 5, BOX 203, SUITE #1
COEUR D' ALENE, ID 83814

(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

95-0973

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:
Mr. and Mrs. Don Knowles
Rt. 4 Box 728
Rathdrum, Id. 83858

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

ARTICLE NUMBER
13661

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

Don Knowles

5. DATE OF DELIVERY
3-2-83

POSTMARK
RATHDRUM MA 2 PM 1983

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

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
ROUTE 5, BOX 203, SUITE #1
COEUR D' ALENE, ID 83814

(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

RECEIVED

MAR 3 1983

Department of Water Resources
Northern District Office

95-0973

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:
Mr. and Mrs. Chester A. Park
Rt. 4 Box 712
Rathdrum, Id. 8385

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

ARTICLE NUMBER
13667

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

5. Susan E Park

DATE OF DELIVERY
3-2-83

POSTMARK
RATHDRUM MAR 2 1983 PM

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

7. **UNABLE TO DELIVER BECAUSE:**

7a. **EMPLOYEE'S INITIALS** 383

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

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
ROUTE 5, BOX 283, SUITE #2
COEUR D' ALENE, ID 83814

(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

RECEIVED

MAR 3 1983

Department of Water Resources
Northern District Office

92-0973

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:
Mrs. Chester R. Park
Rt. 4 Box 730
Rathdrum, Id. 83858

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

ARTICLE NUMBER
13669

(Always obtain signature of addressee or agent)

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

5. Susan E Park
DATE OF DELIVERY
3-2-83

POSTMARK
RATHDRUM
MAR 2 PM 1983

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

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS
830

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

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
ROUTE 5, BOX 283 - SUITE 351
COEUR D' ALENE, ID 83814
(Name of Sender)

RECEIVED

MAR 3 1983

(Street or P.O. Box)

Department of Water Resources
Northern District Office

(City, State, and ZIP Code)

95-0973

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).
   - [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:
Mr. Marvin E. Willadsen
E. 700 Willadsen Rd.
Rathdrum, Id. 83858

4. TYPE OF SERVICE:
   - [ ] REGISTERED [ ] INSURED
   - [X] CERTIFIED [ ] COD
   - [ ] EXPRESS MAIL

ARTICLE NUMBER: 13666

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE [ ] Addressee [ ] Authorized agent

5. Marvin E Willadsen

DATE OF DELIVERY: 3-2-83

POSTMARK: RATHDRUM MAR 2 1983 U.S.P.O.

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

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS: MK

UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300

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.

RETURN TO

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
~~ROUTE 5, BOX 203, SUITE P1~~
COEUR D' ALENE, ID 83814

(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

RECEIVED

MAR 3 1983

Department of Water Resources
Northern District Office

95-0973

PS Form 3811, Jan. 1979

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

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

1. The following service is requested (check one.)

X ☐ Show to whom and date delivered..... ____¢

☐ Show to whom, date and address of delivery..... ____¢

☐ RESTRICTED DELIVERY
Show to whom and date delivered..... ____¢

☐ RESTRICTED DELIVERY.
Show to whom, date, and address of delivery $ ____

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:

Mrs. Shirley Watson
P.O. Box 197
Rathdrum, Id. 83858

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	13658	

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐Addressee ☐Authorized agent

Shirley Watson

4. DATE OF DELIVERY
3-2-83

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE:

RATHDRUM MAR 2 IAM

CLERK'S INITIALS

☆GPO : 1979-309-459

UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

SENDER INSTRUCTIONS

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

- Complete items 1, 2, and 3 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

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
ROUTE 5, BOX [illegible], SUITE #1
COEUR D' ALENE, ID 83814

(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

RECEIVED

MAR 3 1983

Department of Water Resources
Northern District Office

95-0.73

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).
   - [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:
Ms. Helen M. Willard
Rt. 4 Box 840H
Rathdrum, Id. 83858

4. TYPE OF SERVICE:
- [ ] REGISTERED [ ] INSURED
- [X] CERTIFIED [ ] COD
- [ ] EXPRESS MAIL

ARTICLE NUMBER: 13665

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE [X] Addressee [ ] Authorized agent

Helen M. Willard

5. DATE OF DELIVERY: 3/2/83

POSTMARK: USPO RATHDRUM MAR 2 1983

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

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
(Name of Sender)
ROUTE 3, BOX 238, SUITE #1
COEUR D' ALENE, ID 83814
(Street or P.O. Box)

(City, State, and ZIP Code)

RECEIVED

MAR 3 1983

Department of Water Resources
Northern District Office

95-0973

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:
Ms. Betty Rose Hogan
Rt. 1 Box 340
Rathdrum, Id. 83858

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

ARTICLE NUMBER
13651

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

Betty Rose Hogan

5. DATE OF DELIVERY
3-2-83

POSTMARK
RATHDRUM, ID
MAR 2 1983

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

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS
385

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

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
(Name of Sender)
ROUTE 5, BOX 203, SUITE #1
COEUR D' ALENE, ID 83814

(Street or P.O. Box)

(City, State, and ZIP Code)

RECEIVED
MAR 3 1983
Department of Water Resources
Northern District Office

95-0973

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).
   - [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:
Mr. and Mrs. Glen Silliman
N. 4425 Gunning Rd.
Rathdrum, Id. 83858

4. TYPE OF SERVICE:
- [ ] REGISTERED [ ] INSURED
- [X] CERTIFIED [ ] COD
- [ ] EXPRESS MAIL

ARTICLE NUMBER: 13659

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE [ ] Addressee [ ] Authorized agent

Glen Silliman

5. DATE OF DELIVERY: 3-2-83

POSTMARK: RATHDRUM, IDA. MAR 2 1983

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

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
ROUTE 5, BOX [illegible]
COEUR D' ALENE, ID 83814

(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

RECEIVED

MAR 3 1983

Department of Water Resources
Northern District Office

95-0973

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).
   - [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:
U.S. Dept. of Interior, Bur. of Re
Box 043, 550 W. Fort St.
Boise, Id. 83724

4. TYPE OF SERVICE:
[ ] REGISTERED [ ] INSURED
[X] CERTIFIED [ ] COD
[ ] EXPRESS MAIL

ARTICLE NUMBER
13650

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE [ ] Addressee [X] Authorized agent

Burnett

DATE OF DELIVERY
MAR 07 1983

BOISE, ID
MAR 7 1983

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

RECEIVED

MAR 9 1983

Department of Water Resources
Northern District Office

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
ROUTE 5, BOX 203, SUITE #1
COEUR D' ALENE, ID 83814

(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

95-0973

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).
   - [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:**
Ms. Elizabeth Stevens
Rt. 4 Box 727
Rathdrum, Id. 83858

4. **TYPE OF SERVICE:**
   - [ ] REGISTERED [ ] INSURED
   - [X] CERTIFIED [ ] COD
   - [ ] EXPRESS MAIL

ARTICLE NUMBER
13663

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE [ ] Addressee [ ] Authorized agent

Elizabeth Stevens

5. **DATE OF DELIVERY**
3-7-83

POSTMARK
RATHDRUM, ID 1983 MAR 7

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 RECEIPT TO VE

MAR 8 1983

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
ROUTE 5, BOX 203, SUITE #1
COEUR D' ALENE, ID 83814
(Name of Sender)

Department of Water Resources
Northern District Office
(Street or P.O. Box)

(City, State, and ZIP Code)

95-0973

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).
   - [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:
Mr. Chester Sylte
Box 313
Rathdrum, Id. 83858

4. TYPE OF SERVICE:
   - [ ] REGISTERED [ ] INSURED
   - [X] CERTIFIED [ ] COD
   - [ ] EXPRESS MAIL

ARTICLE NUMBER
13655

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE [ ] Addressee [ ] Authorized agent

5. Chester G. Sylte

DATE OF DELIVERY
3-2-83

POSTMARK
RATHDRUM MAY 2 1983 U.S. POSTAGE

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

7. UNABLE TO DELIVER BECAUSE:

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



RETURN TO

RECEIVED

MAR 3 1983

Department of Water Resources
Northern District Office

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
ROUTE 5, BOX 203, SUITE #1
COEUR D' ALENE, ID 83814

(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

95-0973

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:

Mr. Roy C. Watson
Rt. 4 Box 728A
Ratdhrum, Id. 83858

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

ARTICLE NUMBER: 13660

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

5. Mrs. Shirley Watson
DATE OF DELIVERY: 3-18-83

POSTMARK: POST OFFICE COEUR D'ALENE MAR 18 1983 IDAHO

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

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300

U.S.MAIL

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.

RETURN TO

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
ROUTE 5, BOX [illegible] SUITE [illegible]
[illegible]

(Name of Sender)

RECEIVED
OS
MAR 31 1983

Department of Water Resources
Northern District Office

(Street or P.O. Box)

(City, State, and ZIP Code)

95-0973

PS Form 3800, Dec. 1988

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).

- [X] Show to whom and date delivered ..... ¢
- [ ] Show to whom, date, and address of delivery .. ¢
- [ ] RESTRICTED DELIVERY ¢
  (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $

3. ARTICLE ADDRESSED TO:

Mr. Herb Nagel
P.O. Box 907
Coeur d'Alene, Id. 83814

4. TYPE OF SERVICE:
- [ ] REGISTERED [ ] INSURED
- [X] CERTIFIED [ ] COD
- [ ] EXPRESS MAIL

ARTICLE NUMBER: 13657

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE [X] Addressee [ ] Authorized agent

Donna J Kirsch

5. DATE OF DELIVERY: MAR 2 1989

POSTMARK: MAR 2 198

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

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

UNITED STATES POSTAL SERVICE
OFFICIAL BUSINESS

SPOKANE, WA 992
2 PM
2 MAR
1983

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300

U.S.MAIL

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.

RETURN TO

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
ROUTE 5, BOX 303, SUITE #1
COEUR D' ALENE, ID 83814

(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

RECEIVED

MAR 3 1983

Department of Water Resources
Northern District Office

95-0973

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:

Mr. Robert K. Tinder
E. 440 Twin Lakes Rd.
Rathdrum, Id. 83858

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

ARTICLE NUMBER: 13668

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

5. Catherine E. Tinder

DATE OF DELIVERY: 3-18-83

POSTMARK: RATHDRUM, ID MAR 1983 USPO

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

7. UNABLE TO DELIVER BECAUSE:

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

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
ROUTE 5, BOX 203, SUITE #1
COEUR D' ALENE, ID 83814

RECEIVED
MAR 21 1983

(Name of Sender)

Department of Water Resources
Northern District Office

(Street or P.O. Box)

(City, State, and ZIP Code)

95-0973

PS Form 3811, Dec. 1990

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).
   - [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:
Mr. Robert A. Goelzer
P.O. Box 278
Rathdrum, Id. 83858

4. TYPE OF SERVICE:
   - [ ] REGISTERED [ ] INSURED
   - [X] CERTIFIED [ ] COD
   - [ ] EXPRESS MAIL

ARTICLE NUMBER
13662

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE [ ] Addressee [ ] Authorized agent

5. DATE OF DELIVERY
3-3-83

POSTMARK
RATHDRUM, ID
MAR
3
1983

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



RETURN RECEIPT

MAR 3 1983

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
ROUTE 5, BOX 203, SUITE #1
COEUR D' ALENE, ID 83814

(Name of Sender)

(Street or P.O. Box)

Department of Water Resources
Northern District Office

(City, State, and ZIP Code)

95-0973

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:
Mr. and Mrs. Dean Primmer
Rt. 1 Box 645
Rathdrum, Id. 83858

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

ARTICLE NUMBER
13653

(Always obtain signature of addressee or agent)

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

5. X Dean A Primmer
DATE OF DELIVERY 3-2-83

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

7. UNABLE TO DELIVER BECAUSE:

POSTMARK
RATHDRUM, ID
MAR 2
1983
83856

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- Endorse article "Return Receipt Requested" adjacent to number.

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RECEIVED

MAR 3 1983

Department of Water Resources
Northern District Office

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
ROUTE 5, BOX 209, SUITE #1
COEUR D' ALENE, ID 83814

(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

CERTIFIED MAIL

ACCEPTANCE OF REGISTERED, INSURED, C

PS Form 3877, July 1978

NAME AND ADDRESS OF SENDER

IDAHO DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT OFFICE
ROUTE 5, BOX 203, SUITE #1
COEUR D' ALENE, ID 83814

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1	13650	Dept. of Interior, Bur. of Reclamation, Box 043, 550 W. Fort St., Boise, Id. 83724	.20	.75				.60			95 0973
2	13651	Ms. Betty Rose Hogan Rt.1 Box 340, Rathdrum, Id. 83858	"	"				"			
3	13652	Mr. David Osterberg Rt. 4 Box 363, Rathdrum, Id.83858	"	"				"			
4	13653	Mr. and Mrs. Dean Primmer Rt. 1 Box 645, Rathdrum, Id. 83858	"	"				"			
5	13654	Mr. Orville Sylte, c/o Sylte Ranch, & Mr. John Sylte, Rt. 4 Box 854, Rathdrum, Id. 83858	"	"				"			
6	13655	Mr. Chester Sylte Box 313, Rathdrum, Id. 83858	"	"				"			
7	13656	Mr. Donald Zigler, Mayor Rathdrum City Hall, Rathdrum, Id. 83858	"	"				"			
8	13657	Mr. Herb Nagel, Attorney at Law (for City of Rathdrum) P.O. Box 907, Coeur d'Alene, Id. 83814	"	"				"			
9	13658	Mrs. Shirley Watson P.O. Box 197, Rathdrum, Id. 83858	"	"				"			
10	13659	Mr. and Mrs. Glen Silliman N. 4425 Gunning Rd. Rathdrum, Id. 83858	"	"				"			
11	13660	Mr. Roy C. Watson Rt. 4 Box 728A, Rathdrum, Id. 83858	"	"				"			
12	13661	Mr. and Mrs. Don Knowles Rt. 4 Box 728 Rathdrum, Id. 83858	"	"				"			
13	13662	Mr. Robert A. Goelzer P. O. Box 278 Rathdrum, Id. 83858	"	"				"			
14	13663	Ms. Elizabeth Stevens Rt. 4 Box 727, Rathdrum, Id. 83858	"	"				"			
15	13664	Ms. Susan E. Park Rt. 4 Box 711, Rathdrum, Id. 83858	"	"				"			

TOTAL NUMBER OF PIECES LISTED BY SENDER	TOTAL NUMBER OF PIECES RECEIVED AT POST OFFICE	*POSTMASTER, PER (Name of receiving employee)*
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2-28-83

Bob Haynes,

Enclosed are the petitions you returned. The proper people have been notified, letters sent etc.

Please note that one of these petitions has not been made "received" by your office.

See you soon.

Bob Sylte

RECEIVED
MAR 11 1983
Department of Water Resources
Northern District

MICROFILMED

BEFORE THE IDAHO DEPARTMENT OF WATER RESOURCES

RECEIVED
MAR 1 1983
Department of Water Resources
Northern District Office

In the Matter of the Transfer of Water Right No. 95-0973.

PETITION TO INTERVENE

The undersigned Petitions The Idaho Department of Water Resources for leave to intervene in this matter for the purpose of protesting the transfer and/or change in use proposed by the United States Bureau of Reclamation.

The undersigned is presently a user of water from the same source and the proposed change will directly effect the undersigned's ability to continue said use.

PETITIONER: (Name)	ADDRESS:	DATE:
Lyle Roth	W1190 Twin Lakes Rd Rathdrum, Ida.	1-12-83
Bonnie Roth	W1190 Twin Lakes Rd Rathdrum Idaho	1-12-83
Eugene Fink	N. 6520 Sutherlin Spokane 99208	1/12/83
Ray H Schultz	W2550 Twin Lakes Rd Rathdrum Idaho	1-12-83
Emma Schultz	W 2550 Twin Lakes Rd Rathdrum Idaho 83858	1-12-83
James E Blaine	W. 1700 LAKE FOREST DRIVE RATHDRUM IDAHO 83858	1-15-83
Sylvia J Blaine	W. 1700 Lake Forest Dr. Rathdrum, ID. 83858	1-15-83
William A Foggo	W. 1740 Lake Forest Rd Rathdrum Id 83858	1-15-83
Bonnie R. Foggo	W 1740 Lake Forest Dr. Rathdrum, Idaho 83858	1-15 83

MICROFILMED

PETITIONER: (Name)	ADDRESS:	DATE
Mark G. Waddell	Rt 4, Box 280 Rathdrum Id.	1-15-83
Raymond J. Kensek W.	1830 LAKE FOREST DR. RATHDRUM, ID. 83858	1-15-83
Patty L. Kensek	W. 1830 Lake Forest Dr. Rathdrum Id. 83858	1-15-83
Arnold G. Riggers	E 415-23 rd Apokane, Wa. 99203	1-15-83
Delbert E. Gillam	W2260 Lake Forest Dr. Rathdrum Id 83858	1-15-83
Angela Gillam	W2260 Lake Forest Dr. Rathdrum, Id. 83858	1-15-83
James H. Flanigan	P.O. Box 320 Rathdrum Id.	1-15-83
Mary Ellen Flanigan	P.O. Box 320 Rathdrum Id	1-15-83
Chester Wattenburg	Twin Lakes Road West 1415	
Joanne Tester	W 1300 Twin Lakes Rd. Rathdrum Ida	1-27-83
Edward A Tester	W 1300 Twin Lake Rd Rathdrum, Idaho 83858	1-27-83
Harold M Manos	W 2410 Lake Forest Rd Rathdrum Id. 83858	2-23-83

MICROFILMED

BEFORE THE IDAHO DEPARTMENT OF WATER RESOURCES

In the Matter of the Transfer of Water Right No. 95-0973.

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PETITIONER: (Name)	ADDRESS:	DATE:
Lisa Manos	W3410 Lake Forest Dr. Rathdrum Ida. 83858	2-23-83
Elaine Landy	E725 Twin Lakes Rd Rathdrum Idaho 83858	2-23-83
William M Woody	E-725 Twin Lakes Rd Rathdrum Idaho 83858	2-23-83
Louis Bonomi	E706 Twin Lake Rd Rathdrum, Idho 83858	2-23-83
Patty Kilcup	53403 Cable Spokane, Wa	2-24-83

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RECEIVED
JAN 28 1983
Department of Water Resources
Northern District Office

BEFORE THE IDAHO DEPARTMENT OF WATER RESOURCES

RECEIVED
MAR 1 1983
Department of Water Resources
Northern District Office

In the Matter of the Transfer of Water Right No. 95-0973.

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PETITIONER: (Name)	ADDRESS:	DATE:
Bruce A Simpson	Twin Lakes	JAN 16-83
Maureen Gustad	" "	Jan 16-83
George Mecham	RT4 BOX 322A RATHDRUM	1-16-83
Dennis Quinn	E. 500 TWIN LKS Rd	1-16-83
[illegible] Meadows	ID 923 S Tyler Rd	1-16-83
Scott Pondroe	Twin Lakes	1-16-83
Bernie Henderweck	RT 4 BOX 322B Twin Lakes	1-16-83
J M [illegible]	Twin Lakes	1-16-83
E D Hansen	Twin Lake	1-16-83
Ted Thompson	Rathdrum	1-16-83

MICROFILMED

PETITIONER: (Name)	ADDRESS:	DATE
Mon Freeman	RT4-Box 199 RAthdrum (TWINLAKES)	1-16-83.

MICROFILMED

RECEIVED
MAR 1 1983
Department of Water Resources
Northern District Office

BEFORE THE IDAHO DEPARTMENT OF WATER RESOURCES

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The undersigned is presently a user of water from the same source and the proposed change will directly effect the undersigned's ability to continue said use.

PETITIONER: (Name)	ADDRESS:	DATE:
Dean A Pimmer	N 1795 Hiway 41 Rathdrum Idaho	1-27-83

MICROFILMED

RECEIVED
JAN 28 1983
Department of Water Resources
Northern District Office

BEFORE THE IDAHO DEPARTMENT OF WATER RESOURCES

RECEIVED
MAR 1 1983
Department of Water Resources
Northern District Office

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The undersigned is presently a user of water from the same source and the proposed change will directly effect the undersigned's ability to continue said use.

PETITIONER: (Name)	ADDRESS:	DATE:
K M Degerman	10th Lake, Rathdrum	1-16-83
Dawn Davidson	Twin Lake, Rathdrum	1-16-83
Pete Wolchelk	Cedar Rt 2 Box 21 Spokane, Wa. 99203	1-16-83
Phyllis J Nottingham	Twin Lakes Village Rt. 4 Box A 555 Rathdrum, Id 83858	1-16-83
Ruth Benson	Twin Lakes Village Rt. 4 Box A 555 Rathdrum, Id 83858	1-16-83
Dean C. Benson	Twin Lakes Village Box V-554	1/16/83
Peggy K. Lalo	Twin Lakes Village Box V-554	1/16/83
Jake Lalo	Twin Lakes Village	1-16-83
Betty B. Dean	Twin Lakes Village Rt 4 Box L-355 Rathdrum Id 83858	1-16-83

PETITIONER: (Name)	ADDRESS:	DATE
O.W. Hammersley	Twin Lakes Village	1-16-83
Nancy Lee	Twin Lakes Village	1-16-83
Joseph Theissen	TLV	1-16-83
Roland Ole Coons	MOUNTAIN VIEW CT. #6 ~~Twin Lakes Village~~	1-16-83
Phyllis Hardy	Twin Lakes Village Rt. 4 Box P-553 Rathdrum, Id. 83858	1-16-83
Marge Hogan	Rt 4, Box T-551 Rathdrum, Id. 83858	1-16-83
Audree Storms	Rt 4 Box 5002	1-16-83
Scott Hoga	Rathdrum, Idaho 83858 Rt 4 Box T 551 Rathdrum, Id. 83858	1-16-83
J.T. Steinbrecht	Cedars #5 - Twin Lakes Village	1/16/83
Robert B Williams	Rt 4 Box 5000 Rathdrum Id 83858	1/16/83
		~~1/16/83~~
Gordon E Burke	Twin Lakes Village	1/16/83

FILMED

RECEIVED
JAN 28 1983
Department of Water Resources
Northern District Office

BEFORE THE IDAHO DEPARTMENT OF WATER RESOURCES

RECEIVED
MAR 1 1983
Department of Water Resources
Northern District Office

In the Matter of the Transfer of Water Right No. 95-0973.

PETITION TO INTERVENE

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PETITIONER: (Name)	ADDRESS:	DATE:
Jeanne D. Sweeney	E2104- 30th St Wa	1-18-83
June M. Lehmyer	Rt 4 Box A-552 Rathdrum, Id. 83858	1-16-83
Bill Hogan	Rt 4 Box P-551 Rathdrum Id. 83858	Jan 16-83
Charles A. Lesma	Rt 4 Box L555 Rathdrum Id 83858	16 Jan 83
Stanley B Moore	T.L.V RATHDRUM, ID.	1-23-83
Jane E Hogan	Rt 4 - Box P551	1-24-83
Sandy Green	Rt 4 Bx A551	1-24-83
Robert E Green	Rt 4 Box A551 Rathdrum Id.	1-24-83

PHOTOGRAPHED

PETITIONER: (Name)	ADDRESS:	DATE

MICROFILMED

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
NORTHERN REGION

John V. Evans
Governor
A. Kenneth Dunn
~~Stephen Stuteck~~
Director

Suite No. 1
4055 Government Way
Coeur d'Alene, Idaho 83814
(208) 667-6484

February 24, 1983

Mr. David Barber
Idaho Department of Fish & Game
Statehouse
Boise, Id. 83720

Re: 95-0973

Dear Mr. Barber:

Attached is a list of parties of record in the Bureau of Reclamation's transfer filing.

As you are aware, our rules of practice and procedure require you to notify the applicant and all parties of record of your Petition to Intervene and provide us with a certificate of service on the parties of record.

If you have any questions, please don't hesitate to contact me.

Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH/pms

Enc. - List

MICROFILMED

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
NORTHERN REGION

John V. Evans
Governor

A. Kenneth Dunn
~~Director~~
Director

Suite No. 1
4055 Government Way
Coeur d'Alene, Idaho 83814
(208) 667-6484

Febraary 4, 1983

Mr. Gordon Sylte
c/o Sylte Ranch
Rt. 4 Box 854
Rathdrum, Id. 83858

Re: 95-0973

Dear Gordon:

I am returning the Petition to Intervene copies which you brought in last week relating to the Bureau of Reclamation transfer.

There are some things which need to be done in order to comply with the rules and regulations. Ken was not aware of this when he talked to you.

A Petitioner to Intervene must send a copy of the petition to all the parties of record including the applicant and other protestants. I amenclosing a list of those parties for your use. In addition, when the petition is filed, it must be accompanied by a statement certifying that all of the parties of record have been served with a copy of the petition.

We anticipate scheduling the hearing toward the end of March, so you have plenty of time to take care of these matters. If you have any questions, please don't hesitate to contact me.

Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH/pms

Enc. - Petitions to Intervene (4)
List of Parties of Record

MICROFILMED

E. 440 Twin Lakes Rd.
Rathdrum, Id. 83858

January 28, 1983

Idaho Dept. of Water Resources
4055 Government Way
Coeur d'Alene, Id. 83814

Re: Transfer No. 95-0973 (Amended)

Gentlemen:

I wish to protest the granting of the above-referenced Amended Transfer filed by the Bureau of Reclamation because if it is granted I will be unable to use the water out of Twin Lakes under my existing water right.

Sincerely,

Robert K. Tinder

Robert K. Tinder

pms

RECEIVED
JAN 28 1983
Department of Water Resources
Northern District Office

MICROFILMED

United States Department of the Interior
BUREAU OF RECLAMATION
PACIFIC NORTHWEST REGION
FEDERAL BUILDING & U.S. COURTHOUSE
BOX 043-550 WEST FORT STREET
BOISE, IDAHO 83724

IN REPLY REFER TO: PN 420
870.

JAN 20 1983

RECEIVED
JAN 24 1983
Department of Water Resources
Northern District Office

Mr. Homer F. Pointer
Twin Lakes Improvement Association
3408 West Hartson
Spokane, Washington 99204

Dear Mr. Pointer:

Enclosed as requested in the recent telephone conversation with Ed Thomas of this office are copies of recent correspondence regarding the water right proceedings for Twin Lakes and Rathdrum Creek, together with a summary sheet.

The course of action the Idaho Department of Water Resources has suggested is to first complete processing of the application for change in nature of use, and then complete the adjudication. However, it is somewhat confusing since actions are being taken on both steps at the same time.

As indicated, we recently filed an amended application for change to clarify that we intended to change both the natural flow right as well as the storage right from irrigation to recreation and fish and wildlife enhancement. We anticipate that the Department of Water Resources will advertise the amendment and then hold a hearing. The hearing will probably be in March or April.

As for the adjudication, the proposed findings have been distributed, and a public information meeting was held December 14, 1982. We indicated our objection to the proposed finding of forfeiture of the natural flow right both at the meeting and by letter of January 3, 1983. We presume a revised proposed findings will not be filed with the court until after the application for change is acted upon.

Please advise us if we can be of further assistance.

Sincerely yours,

L W. LLOYD

Regional Director

MICROFILMED

Enclosures

cc: ✓Idaho Department of Water Resources, 4055 Government Way,
Coeur d'Alene, Idaho 83814
Kootenai County Commissioners, Kootenai County Courthouse
Coeur d'Alene, Idaho 83814

8-20-82 - Regional Director to Department of Water Resources	Application to change the nature of use of Twin Lakes Water Right
10-29-82 - Water Resources Department of Bureau of Reclamation	Protests to Application for Change
11-18-82 - Regional Director to Department of Water Resources	Protests to Application for change
11-26-82 - Department of Water Resources to Water Users	Proposed Findings in adjudication proceeding
12-27-82 - Regional Director to Kootenai County Commissioners	Transfer of Twin Lakes land and water rights to Kootenai County
1-3-83 - Regional Director to Department of Water Resources	Objection to Proposed Findings of Department of Water Resources
1-10-83 - Regional Director to Department of Water Resources	Amended application for Change of Nature of Use

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NOTICE OF AMENDED APPLICATION FOR TRANSFER OF WATER RIGHT

On January 10, 1983, the United States of America acting through the Regional Director of the Bureau of Reclamation filed with the Department of Water Resources, Amended Application for Transfer of Water Right No. 95-0973. The purpose of the amendment is to add to Application for Transfer of Water Right No. 95-0973 filed on August 23, 1982, by changing 45.74 cubic feet per second natural flow from Rathdrum Creek used for the irrigation of 2,287 acres within the East Green Acres Irrigation District, to Recreation and Fish and Wildlife Enhancement purposes to be used in Twin Lakes to make up evaporation, seepage, and transportation losses in order to maintain the level of Twin Lakes at an optimum level for recreation and fish and wildlife enhancement. Protests against the granting of this Amended Transfer must be filed with the Director of the Department of Water Resources, 4055 Government Way, Coeur d'Alene, Idaho 83814 on or before February 22, 1983.

A. KENNETH DUNN

Director

Published in the Coeur d'Alene Press, Coeur d'Alene, Idaho, on February 3 and 10, 1983.

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Form No. 222 10/80

Transfer No. _____

Water Right No. 95-0973

RECEIVED
AUG 23 1982
Department of Water Resources

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES

APPLICATION FOR TRANSFER OF WATER RIGHT

To Change the Point of Diversion and/or the Nature of Use

Name of applicant The United States of America Acting Through the Regional Director, Bureau of Reclamation / U.S. Department of Interior Phone (208)334-1165

Post Office address Box 043, 550 West Fort Street, Boise, Idaho 83724

A. DESCRIPTION OF RIGHT AS RECORDED

1. Right evidenced by:

   a. Decree No. 95-0973 Decreed to East Greenacres Irrigation District (Name)

   in case of Twin Lakes Imp. Assn., Inc., et.al vs East Greenacres Irrig. Dist.

   dated in June 4, 1969 in First District Court (Name of court) county of Kootenai (Affirmed by Supreme Court of Idaho)

   b. License No. _____ issued by the Idaho Department of Water Resources

   c. Claim No. _____ on file with the Idaho Department of Water Resources

2. If applicant is not the original holder of this right, explain how it was acquired and attach a copy of the deed or other evidence of ownership of the land to which the right is appurtenant Rights conveyed by deed (copy attached).

3. Source of water Twin Lakes tributary to Rathdrum Creek

4. Date of priority March 23, 1906

5. Water is used for the following purposes:

   amount 3730 AF* for ~~Storage~~ Irrigation purposes from Undefined to _____

   amount 3730 AF for From Storage Irrigation purposes from Undefined to _____

   amount _____ for _____ purposes from _____ to _____ (month/day — both dates inclusive)

   *Storage between gage heights of 6.4' and 10.4' (see decree) (2308.39' to 2312.39', msl)

6. Total amount of water under right: a. _____ cubic feet per second &/or

   b. 3730 acre feet per annum

7. Location of original point of diversion is NE ¼ of NW ¼ of Section 17

   Township 52 N Range 4 W, B.M., in Kootenai County

   Additional points of diversion, if any _____

8. Lands irrigated or place of use: SEE ATTACHMENT

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 2287

9. Describe any other water rights used for the same purpose as described above License No. 95-7055 (Groundwater)

10. To your knowledge, has any portion of this water right undergone a period of five or more consecutive years of nonuse? No If yes, describe in item D, REMARKS.

MICROFILMED

B. DESCRIPTION OF ~~PORTION~~ OF RIGHT OWNED BY APPLICANT (If the entire right is owned by the applicant, omit part B).

1. Amount of water: a. _____ cubic feet per second
&/or
b. _____ acre feet per annum

MICROFILMED

2. Point of diversion _____ ¼ _____ ¼, Section _____ Township _____
Range _____, B.M., _____ County
Additional points _____

3. Place of use:

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. DESCRIPTION OF RIGHT OR PORTION THEREOF, AFTER THE REQUESTED CHANGE

1. General Information

a. Amount of water to be diverted _____ c.f.s. &/or _____ acre feet

b. Description of diverting works _____

c. Describe the reasons for the proposed changes Article 25 of the repayment contract dated June 1, 1972, between the United States of America and the East Greenacres Irrigation District, as confirmed by the District Court of Kootenai County (Case No. 27822) provides for transfer of the District's Dam and water rights to maintain Twin Lakes for recreation and fish and wildlife enhancement which is a project purpose under 84 Stat. 319. Change in use of the District's water rights for recreation and fish and wildlife enhancement first occurred during 1976 irrigation season.

2. Change in point of diversion Change in Nature of Use
Point of diversion _____ ¼ _____ ¼, Section _____ Township _____
Range _____, B.M., _____ County
Additional points The intent of this transfer is to change the nature of use from irrigation storage and irrigation from storage to recreation storage and wildlife storage.

3. Change in place of use

a. Are there leins, mortgages, or contracts on the lands from which you propose to transfer the water right which limit your authority to make the proposed change? Yes _____ No _____. If yes, provide a statement agreeing to the proposed change from the holder of the lien, mortgage or contract.

b. Describe the affect on the land now irrigated if the place of use is changed pursuant to this transfer Replacement water supply has been provided from groundwater under License No. 95-7055.

c. Describe the lands[redacted]lace of use to which the right will be tr[redacted]erred:

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

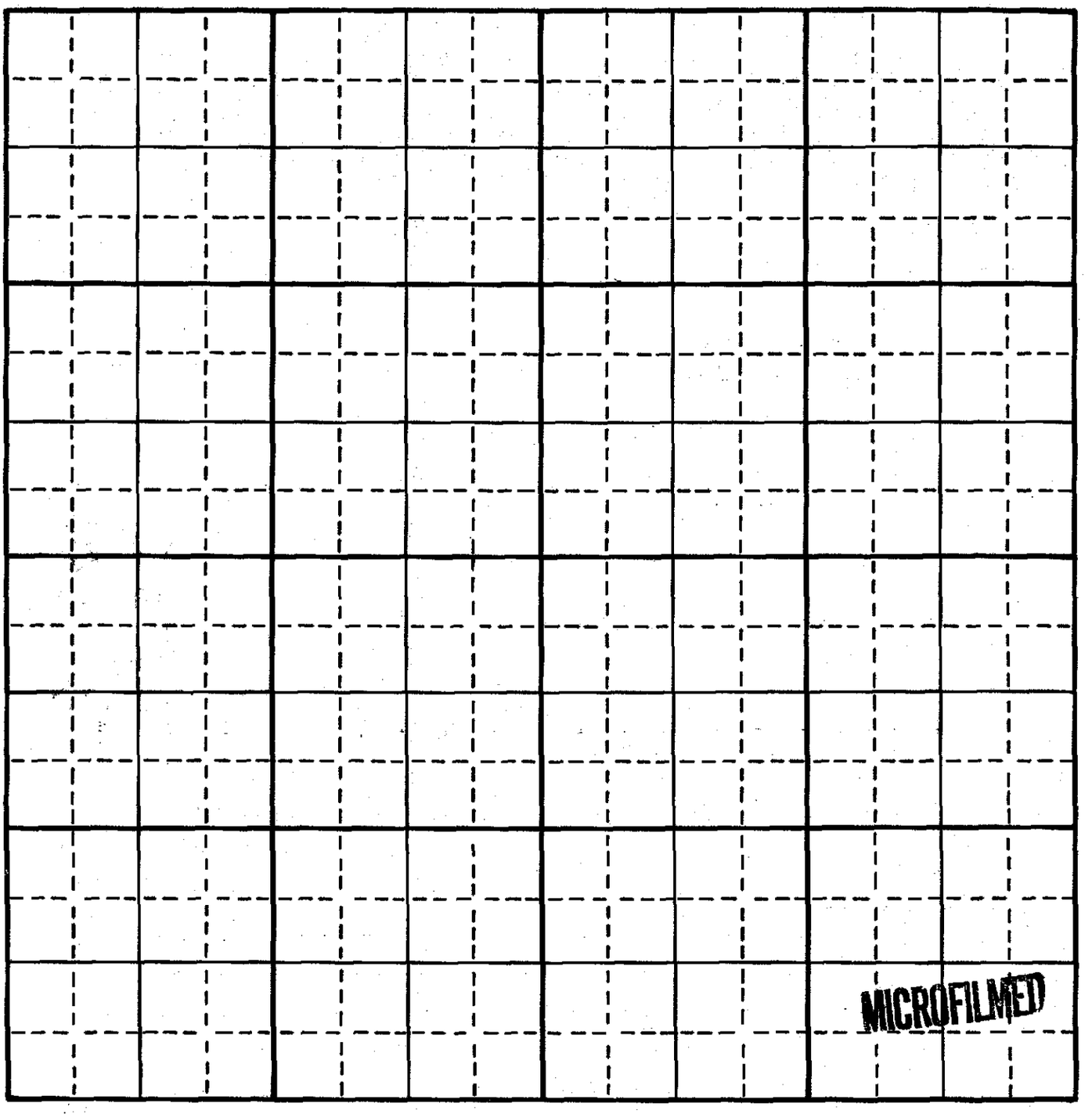
TWIN LAKES - KOOTENAI COUNTY, IDAHO

Total number of acres to be irrigated _____

4. Describe any other water rights used for the same purpose as described above. _____

_____

5. Draw a map indicating the new point(s) of diversion and/or the new land to be irrigated. Show clearly the land involved by section, township and range number.



MICROFILMED

SCALE: 2 inches equal 1 mile. Draw plan in ink.

MICROFILMED

D. REMARKS

The water supply for the 2287 acres identified in Part A has been converted from Twin Lakes and Rathdrum Creek to groundwater pursuant to authorization and construction of the East Greenacres Unit of the Rathdrum Prarie Federal Reclamation Project which was specifically authorized by the Congress at the request and approval of the State of Idaho.

I hereby assert that no one will be injured by such change and that the change does not constitute an enlargement in use of the original right. The information contained in this application is true to the best of my knowledge.

I understand that any willfull misrepresentations made in this application may result in voiding its approval.

John W. Keys, III
(Signature of Applicant)

Subscribed and sworn to before me this 19th day of August, 1982.

Ed Thomas
(Notary Public)

My commission expires Life

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

This is to certify that I have examined Application for Transfer of Water Rights No. _____ and said application is hereby _____, subject to the following limitations and conditions:

Witness my hand this _____ day of _____, 19____

FOR DEPARTMENT USE ONLY

Rec'd 6-3-82. Changed and returned on

Received by DRT Date 8-23-82 Protest filed by see list of 18 names in file.

Prelim. check by _____ Fee 50.00

Receipted by J.J. Date 6-14-82

Published in Coeur d'Alene Press

Pub. dates 9/30 & 10/7/82

Copies of protest forwarded by mw

Hearing held by _____ Date _____

Watermaster recommendation requested on _____

_____ rec'd. _____

Recommended for approval denial

by _____

United States Department of the Interior
BUREAU OF RECLAMATION
PACIFIC NORTHWEST REGION
FEDERAL BUILDING & U.S. COURTHOUSE
BOX 043-550 WEST FORT STREET
BOISE, IDAHO 83724

IN REPLY
REFER TO: PN 420
870.

JAN 10 1983

Mr. Dave Tuthill
Idaho Department of Water Resources
Statehouse
Boise, Idaho 83720

Dear Mr. Tuthill: Re: 95-2059 & 95-0973

Attached is an amendment to our August 20, 1982, Application for Transfer of the Twin Lakes Water Rights as recently discussed by telephone. As agreed, this is the identical form transmitted with our June 3, 1982, memorandum except that the number currently used to identify the storage right has been added under item A.1.b.; and, an explanation of the proposed utilization of these rights has been added under item B.3. of the form. The $20 filing fee will be paid from impress funds.

Please advise if more information is needed.

Sincerely yours,

John W. Keys, III
Assistant Regional Director

Enclosure

INTER-DEPARTMENT MEMO — 1

FROM Dave Tuthill

DATE ~~1-11-83~~ 1-17-83 (Briefed Ka Donna on this date Dwt)

TO Bob Haynes

SUBJECT

The Bureau has decided to Amend Veir trans app before any on more permanent conveyance to the County.

RECEIVED

JAN 20 1983

Department of Water Resources
Northern District Office

Dave

SIGNATURE

These letters replace the ones sent on 10/20/82 which was sent in error.

The 10/20/82 letter is used to acknowlege protests against [redacted] applications for new permit.

DDF

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 29, 1982

Mr. and Mrs. Chester A. Park
Rt. 4 Box 712
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. and Mrs. Park:

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 that 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 the application for transfer (Section 42-222, IDAHO CODE):

1. Are other water rights injured by the transfer?

2. Does the change constitute an enlargement in the use of the original right?

3. Will the proposed use conflict with the local public interest?

You will be notified at a later date of the time and place of the conference and/or hearing. If we can be of any assistance, please contact us.

Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
R. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 29, 1982

Mr. Marvin K. Willadsen
E. 700 Willadsen Rd.
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. Willadsen:

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 that 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 the application for transfer (Section 42-222, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 29, 1982

Ms. Helen Willard
Rt. 4 Box 840H
Rathdrum, Id. 83858

RE: 95-0973

Dear Ms. Willard:

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 that 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 the application for transfer (Section 42-222, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6494

October 29, 1982

Mr. Roy C. Watson
Rt. 4 Box 728A
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. Watson:

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 that 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 the application for transfer (Section 42-222, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 29, 1982

Mrs. Shirley Watson
P. O. Box 197
Rathdrum, Id. 83858

RE: 95-0973

Dear Mrs. Watson:

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 that 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 the application for transfer (Section 42-222, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 29, 1982

Hon. Donald Zisler, Mayor
City of Rathdrum
City Hall
Rathdrum, Id. 83858

RE: 95-0973

Dear Mayor Zisler:

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 that 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 the application for transfer (Section 42-222, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: rms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 29, 1982

Mr. Chester Sylte
Box 313
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. Sylte:

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 that 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 the application for transfer (Section 42-222, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 29, 1982

Mr. John E. Sylte
Sylte Ranch
Rt. 4 Box 854
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. Sylte:

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 that 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 the application for transfer (Section 42-222, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 29, 1982

Mr. Orville Sylte
c/o Sylte Ranch
Rt. 4 Box 854
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. Sylte:

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 that you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 29, 1982

Mr. and Mrs. Dean A. Primmer
Rt. 1 Box 645
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. and Mrs. Primmer:

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 that 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 the application for transfer (Section 42-222, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
R. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 29, 1982

Mr. David Osterberg
Rt. 4 Box 363
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. Osterberg:

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 that 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 the application for transfer (Section 42-222, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
R. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 29, 1982

Mrs. Betty Rose Hogan
Rt. 1 Box 340
Rathdrum, Id. 83858

RE: 95-0973

Dear Mrs. Hogan:

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 that 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 the application for transfer (Section 42-222, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 29, 1982

Mrs. Chester R. Park
Rt. 4 Box 730
Rathdrum, Id. 83858

RE: 95-0973

Dear Mrs. Park:

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 that 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 the application for transfer (Section 42-222, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
R. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 29, 1982

Mr. Susan E. Park
Rt. 4 Box 711
Rathdrum, Id. 83858

RE: 95-0973

Dear Ms. Park:

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 that 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 the application for transfer (Section 42-222, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 29, 1982

Ms. Elizabeth Stevens
Rt. 4 Box 727
Rathdrum, Id. 83858

RE: 95-0973

Dear Ms. Stevens:

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 that you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 29, 1982

Mr. Robert A. Goelzer
P. O. Box 278
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. Goelzer:

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 that 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 the application for transfer (Section 42-222, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 29, 1982

Mr. and Mrs. Don Knowles
Rt. 4 Box 728
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. and Mrs. Knowles:

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 that 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 the application for transfer (Section 42-222, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 29, 1982

Mr. and Mrs. Glen Silliman
N. 4425 Gunning Rd.
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. and Mrs. Silliman:

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 that 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 followings are the principle items the Department can consider in either approving or denying the application for transfer (Section 42-222, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
R. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 29, 1982

U. S. Dept. of Interior
Bureau of Reclamation
Box 043
Boise, Id. 83724

RE: 95-0973

Gentlemen:

Enclosed is a copy of a protest filed against the approval of a transfer pursuant to the above-referenced application. The Department suggests you contact the protestants directly in an effort to determine the nature of the protest and 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 transfer (Section 42-222, IDAHO CODE):

1. Are other water rights injured by the transfer?

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3. Will the proposed use conflict with the local public interest?

You will be notified at a later date of the time and place of the conference and/or hearing. If we can be of any assistance, please contact us.

Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

Enclosure

MICROFILMED

These letters attached are incorrect for acknowlegement of Transfer and have been replaced by the correct letter.



STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 20, 1982

Mr. and Mrs. Chester A. Park
Rt. 4 Box 712
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. and Mrs. Park:

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 that 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 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 speculation?

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

5. Will the proposed use conflict with the local public interest?

You will be notified at a later date of the time and place of the conference and/or hearing. If we can be of any assistance, please contact us.

Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 20, 1982

Mr. Marvin K. Willadsen
E. 700 Willadsen Rd.
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. Willadsen:

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 that 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 the 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 speculation?

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

5. Will the proposed use conflict with the local public interest?

You will be notified at a later date of the time and place of the conference and/or hearing. If we can be of any assistance, please contact us.

Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

UNCONFIRMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 20, 1982

Ms. Helen Willard
Rt. 4 Box 840H
Rathdrum, Id. 83858

RE: 95-0973

Dear Ms. Willard:

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 that 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 the application for permit (Section 42-203, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

RECEIVED
OCT 20 1982

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 20, 1982

Mrs. Chester R. Park
Rt. 4 Box 730
Rathdrum, Id. 83858

RE: 95-0973

Dear Mrs. Park:

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 that 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 the application for permit (Section 42-203, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RECEIVED

RGH: pms

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 20, 1982

Ms. Susan E. Park
Rt. 4 Box 711
Rathdrum, Id. 83858

RE: 95-0973

Dear Ms. Park:

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 that 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 the application for permit (Section 42-203, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 20, 1982

Ms. Elizabeth Stevens
Rt. 4 Box 727
Rathdrum, Id. 83858

RE: 95-0973

Dear Ms. Stevens:

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 that 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 the application for permit (Section 42-203, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 20, 1982

Mr. Robert A. Goelzer
P. O. Box 278
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. Goelzer:

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 that 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 the application for permit (Section 42-203, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
R. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 20, 1982

Mr. and Mrs. Don Knowles
Rt. 4 Box 728
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. and Mrs. Knowles:

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 that 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 the application for permit (Section 42-203, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 20, 1982

Mr. Roy C. Watson
Rt. 4 Box 728A
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. Watson:

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 that 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 the application for permit (Section 42-203, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 20, 1982

Mr. and Mrs. Glen Silliman
N. 4425 Gunning Rd.
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. and Mrs. Silliman:

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 that you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 20, 1982

Mrs. Shirley Watson
P. O. Box 197
Rathdrum, Id. 83858

RE: 95-0973

Dear Mrs. Watson:

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 that 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 the application for permit (Section 42-203, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 20, 1982

Mr. Donald Zisler
City Hall
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. Zisler:

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 that you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

RECORDED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 20, 1982

Mr. Chester Sylte
Box 313
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. Sylte:

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 that 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 the application for permit (Section 42-203, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 20, 1982

Mr. Orville Sylte
c/o Sylte Ranch
Rt. 4, Box 854
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. Sylte:

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 that you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

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ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 20, 1982

Mr. John E. Sylte
Sylte Ranch
Rt. 4 Box 854
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. Sylte:

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

RECEIVED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
R. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 20, 1982

Mr. and Mrs. Dean A. Primmer
Rt. 1 Box 645
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. and Mrs. Primmer:

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 that you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 20, 1982

Mr. David Osterberg
Rt. 4 Box 363
Rathdrum, Id. 83858

RE: 95-0973

Dear Mr. Osterberg:

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 that 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 the application for permit (Section 42-203, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 20, 1982

Mrs. Betty Rose Hogan
Rt. 1 Box 340
Rathdrum, Id. 83858

RE: 95-0973

Dear Mrs. Hogan:

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 that 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 the application for permit (Section 42-203, IDAHO CODE):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Northern Region

JOHN V. EVANS
Governor
A. KENNETH DUNN
Director

4055 Government Way
Coeur d'Alene, ID 83814
(208) 667-6484

October 20, 1982

Bureau of Reclamation
Box 043
550 W. Fort St.
Boise, Id. 83724

RE: 95-0973

Gentlemen:

Enclosed is a copy of a protest filed against the approval of a permit pursuant to the above-referenced application. The Department suggests you contact the protestants directly in an effort to determine the nature of the protest and 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):

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Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

RGH: pms

Enclosure

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
NORTHERN REGION

John V. Evans
Governor
A. Kenneth Dunn
~~Executive Officer~~
Director

Suite No. 1
4055 Government Way
Coeur d'Alene, Idaho 83814
(208) 667-6484

October 21, 1982

Mr. Lloyd Wiemers
S. 424 Post St.
Rathdrum, Id. 83858

Re: 95-0973 (Transfer)

Dear Mr. Wiemers:

Pursuant to law, the last date for accepting protests for the above-referenced application for transfer of a water right was October 18, 1982. Your letter of protest was received by this office on October 20, 1982, and therefore, cannot be considered as an official protest.

You may, however, intervene in the proceedings. Enclosed is the Department's Practice and Procedure Rules and Regulations which contains instructions for intervention (Rule 6, page 3) should you decide to do so.

If you have any questions, please contact this office.

Sincerely,

ROBERT G. HAYNES, P.E.
Regional Supervisor

pms

Enc. - Rules and Regulations

MICROFILMED

Not timely filed.

RECEIVED
OCT 20 1982
Department of Water Resources
Northern District Office

October 15, 1982

Concerns Legal 51, Sept. 30, Oct. 7, 1982 more specifically the transfer of Water Right No. 95-0973 from the Greenacres Irrigation Dist. to the Bureau of Reclamation. (Note the attached)

To Whom It May Concern:

This is a letter protesting the above mentioned transfer on two counts:

1. The nature of use - which changes from irrigation storage and irrigation to recreation storage and wildlife storage.

2. The year around place of storage - which limits the storage to Twin Lakes.

I would further hope to be personally contacted by mail if there is any additional action regarding this transfer. My address is listed below.

Thank you.

Respectfully,

NOTICE OF APPLICATION FOR TRANSFER OF WATER RIGHT

On August 23, 1982, the United States of America acting through the Regional Regional Director of the Bureau of Reclamation filed with the Department of Water Resources Application for Transfer of Water Right No. 95-0973. The original water right is for 3,730 AF of water from Twin Lakes, tributary to Rathdrum Creek, used for Irrigation Storage and Irrigation from Storage, with a point of diversion in the NENW, Sec. 17, T52N, R4W, B.M., Kootenai County, and with a place of use within the East Green Acres Irrigation District, for a total of 2,287 acres. The date of priority is March 23, 1906. The applicant now wishes to change the nature of use from irrigation storage and irrigation from storage to recreation storage and wildlife storage. The period of use will now be year around and the place of use will now be limited to Twin Lakes, Kootenai County, Idaho.

Protests against the granting of this transfer must be filed with the Director of the Department of Water Resources, 4055 Government Way, Coeur d'Alene, Idaho 83814 on or before October 18, 1982.

A. KENNETH DUNN
Director

Legal 51
Sept. 30, Oct. 7, 1982

Lloyd Wiemers
S 424 Post St.
Rathdrum, Ida. 83858

MICROFILMED

NOTICE OF APPLICATION FOR TRANSFER OF WATER RIGHT

On August 23, 1982, the United States of America acting through the Regional Regional Director of the Bureau of Reclamation filed with the Department of Water Resources Application for Transfer of Water Right No. 95-0973. The original water right is for 8,730 AF of water from Twin Lakes, tributary to Rathdrum Creek, used for Irrigation Storage and Irrigation from Storage, with a point of diversion in the NENW, Sec. 17, T52N, R4W, B.M., Kootenai County, and with a place of use within the East Green Acres Irrigation District, for a total of 2,287 acres. The date of priority is March 22, 1906. The applicant now wishes to change the nature of use from irrigation storage and irrigation from storage to recreation storage and wildlife storage. The period of use will now be year around and the place of use will now be limited to Twin Lakes, Kootenai County, Idaho.

Protests against the granting of this transfer must be filed with the Director of the Department of Water Resources, 4055 Government Way, Coeur d'Alene, Idaho 83814 on or before October 18, 1982.

A. KENNETH DUNN
Director

Legal 51
Sept. 30, Oct. 7, 1982

October 14, 1982

Director of the Department of Water Resources
4055 Government Way
Coeur d' Alene, Idaho 83814

RECEIVED
OCT 18 1982
Department of Water Resources
Northern District Office

A Kenneth Dunn, Director

Dear Sir:

I am protesting the transfer and changing the nature of use, of Water Right No 95-0973

I protest the total conversion to recreational water storage and wildlife use.

I protest the period of year around use and limited to Twin Lakes, Kootenai County, Idaho.

I have a farm, which Rathdrum Creek, outlet for Twin Lakes, passes thru in one mile of its flow. The Rathdrum Creek is a natural stream, in it's self a recreational and wildlife stream, which would be damaged or destroyed under the proposed transfer.

I also believe the inevitable control of the higher storage water in Twin Lakes would result in my fields being flooded, damaged and crops destroyed.

I have a Claim To a Water Right No 95-0731 for year around stockwater which would not be usable if all the water was impounded in Twin Lakes.

I also have a Water Permit No 95-7617 to use water out of Rathdrum Creek for irrigation, which would seemingly be adversely effected and probably not economical.

Sincerely yours.
Marvin F. Willadsen
E700 Willadsen Rd
Rathdrum, Id. 83858

MICROFILMED

October 15, 1982

A. Kenneth Dunn
Director of the Department of Water Resources
4065 Government Way
Coeur d'Alene, Idaho

Re:Protest against granting of transfer of Water Right No. 95-0973

Dear Mr. Ross

I would like at this time to state the reasons I am protesting the transfer of Water Right No. 95-0973

1. It is my one and only source of domestic water. At this time there is four adults living here.
2. It is the only source of water for my stock.
3. It is the only water I have for my crops or gardens.
4. In August I purchased a new gas pump for irrigation which I am still making payments on.

One of the reasons for the transfer was listed as wildlife atorage; on my property there are:

1. Three pairs of wild ducks that nest on thecreek every year.
2. there are deer and bear.
3. white owl and hawks
4. other varity of birds that eat the berries and use the creek. I can't even began to guess a number it is so large.

I sincerely hope you will take this all under consideration and refuse the Water Right transfer.

Very sincerely yours,

Betty Rose Hogan

Betty Rose Hogan

Permit No. 95-7615

Rt. 1 Box 340

Rathdrum Id. 83858

RECEIVED
OCT 15 1982
Department of Water Resources
Northern District Office

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October 15, 1982

Concerns Legal 51, Sept. 30; Oct. 7, 1982 more specifically the transfer of Water Right No. 95-0973 from the Greenacres Irrigation Dist. to the Bureau of Reclamation. (Note the attached)

To Whom It May Concern:

This is a letter protesting the above mentioned transfer on two counts:

1. The nature of use - which changes from irrigation storage and irrigation to recreation storage and wildlife storage.

2. The year around place of storage - which limits the storage to Twin Lakes.

I would further hope to be personally contacted by mail if there is any additional action regarding this transfer. My address is listed below.

Thank you.

Respectfully,

Wm. L. Osterberg

Property Owner on Rathdrum Creek.
Rt. 4, Box 363
Rathdrum, Idaho 83858

NOTICE OF APPLICATION FOR TRANSFER OF WATER RIGHT

On August 23, 1982, the United States of America acting through the Regional Regional Director of the Bureau of Reclamation filed with the Department of Water Resources Application for Transfer of Water Right No. 95-0973. The original water right is for 3,730 AF of water from Twin Lakes, tributary to Rathdrum Creek, used for Irrigation Storage and Irrigation from Storage, with a point of diversion in the NENW, Sec. 17, T52N, R4W, B.M., Kootenai County, and with a place of use within the East Green Acres Irrigation District, for a total of 2,287 acres. The date of priority is March 18, 1906. The applicant now wishes to change the nature of use from irrigation storage and irrigation from storage to recreation storage and wildlife storage. The period of use will now be year around and the place of use will now be limited to Twin Lakes, Kootenai County, Idaho.

Protests against the granting of this transfer must be filed with the Director of the Department of Water Resources, 4085 Government Way, Coeur d'Alene, Idaho 83814 on or before October 18, 1982.

A. KENNETH DUNN
Director

Legal 51
Sept. 30, Oct. 7, 1982

RECEIVED
OCT 15 1982
Department of Water Resources
Northern District Office

MICROFILMED

October 14, 1982

Mr Kenneth Dunn, Director
Department of Water Resources
4055 Government Way
Coeur d'Alene, Idaho 83814

RECEIVED
OCT 15 19?
Department of Water Resources
Northern District Office

Dear Mr. Dunn,

This letter is to protest an action taken on august 23, 1982 by the United States of America acting through the Regional Director of the Bureau of Reclamation to apply for Transfer of Water Right No. 95-0973 used for irrigation to recreation storage and Wildlife storage limited to Twin Lakes.

This action would interfere with our ability to obtain water from Rathdrum Creek to irrigate 10 acres of property within the boundries of Sec 19, Twp 52 N, R 04W B.M. S2-SE, SE of RW & ABAND. RW. Rathdrum Creek, which is fed by Twin Lakes, is a necessary source of irrigation and livestock water supply to adjacent property owners.

Wildlife is not limited to Twin Lakes being abundant along the entire Creek between Rathdrum and Twin Lakes. The Creek is also used for recreation by adjoining property owners and by the citizens of Rathdrum and surrounding areas who freguent Rathdrum City Park.

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Sincerely,
Dean A Rimmer
Clara J Rimmer

Rt. 1 Box 645
Rathdrum, ID. 83858

October 15, 1982

Concerns Legal 51, Sept. 30; Oct. 7, 1982 more specifically the transfer of Water Right No. 95-0973 from the Greenacres Irrigation Dist. to the Bureau of Reclamation. (Note the attached)

To Whom It May Concern:

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1. The nature of use - which changes from irrigation storage and irrigation to recreation storage and wildlife storage.

2. The year around place of storage - which limits the storage to Twin Lakes.

I would further hope to be personally contacted by mail if there is any additional action regarding this transfer. My address is listed below.

Thank you.

Respectfully,

Arnella Leyte

c/o Leyte Ranch
R. # Box 854
Rathdrum, Id 83858

NOTICE OF APPLICATION FOR TRANSFER OF WATER RIGHT

On August 23, 1982, the United States of America acting through the Regional Regional Director of the Bureau of Reclamation filed with the Department of Water Resources Application for Transfer of Water Right No. 95-0973. The original water right is for 3,730 AF of water from Twin Lakes, tributary to Rathdrum Creek, used for Irrigation Storage and Irrigation from Storage, with a point of diversion in the NENW, Sec. 17, T52N, R4W, B.M., Kootenai County, and with a place of use within the East Green Acres Irrigation District, for a total of 2,287 acres. The date of priority is March 22, 1906. The applicant now wishes to change the nature of use from irrigation storage and irrigation from storage to recreation storage and wildlife storage. The period of use will now be year around and the place of use will now be limited to Twin Lakes, Kootenai County, Idaho.

Protests against the granting of this transfer must be filed with the Director of the Department of Water Resources, 4053 Government Way, Coeur d'Alene, Idaho 83814 on or before October 18, 1982.

A. KENNETH DUNN
Director

Legal 51
Sept. 30, Oct. 7, 1982

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OCT 15 1982
Department of Water Resources
Northern District Office

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OCT 15 1982

Department of Water Resources
Northern District Office

Sylte Ranch
Route 4, Box 854
Rathdrum, Idaho 83858

October 13, 1982

Director
Department of Water Resources
4065 Government Way
Coeur d'Alene, Idaho 83814

RE: TRANSFER OF WATER RIGHT APPLICATION NO. 95-0973

Dear Sir:

On behalf of the Sylte Ranch, Inc., I am formally protesting the Department of Water Resources Application for Transfer of Water Right No. 95-0973. Specifically, we challenge the applicant's proposed change in 'nature of use' and 'place of use' insofar as it will result in altering the natural character of Rathdrum Creek from a 'year-around' to a 'seasonal' waterway and consequently, deprive the Sylte Ranch of its long-standing right to water on Rathdrum Creek, the priority of which dates back to 1873, and is protected under the Appropriation Law of the State of Idaho.

Our protest is based on the following facts and circumstances:

1--The Sylte Ranch has a prior right on Rathdrum Creek. In the applicant's Notice of Application reference is made to the water right which the Bureau of Reclamation wishes to transfer as having a date of priority of March 23, 1906. The Sylte Ranch water right was originally filed for record at the Kootenai County Courthouse on August 5, 1882, in Book A of Water Rights, page 4. Furthermore, this right was based on improvements and actual water usage that began in 1873.

2--The Sylte Ranch water right has been in continuous use. Ever since the original claim was made for water rights to the Rathdrum Creek by Frederick Post, the Sylte Ranch's predesessor in the chain of title, the use and diversion of Rathdrum Creek has been continuous and uninterrupted.

3--The Sylte Ranch's water right has already been recognized by the District Court of Idaho. On the 24th of July, 1973, Judge James G. Towles, Judge of the First Judicial District of the State of Idaho, recognized the Sylte Ranch's water right in his judgement when he ordered the East Greenacres Irrigation District, et. al., not to close beyond two inches the gate which controls the flow of Rathdrum Creek.

4--The Sylte Ranch's water right is protected by the laws of the State of Idaho. Because claims made in county records are recognized by Idaho law as constituting evidence of water right; and because Idaho's Appropriation Law is based on a priority of "first in time is first in right"' and because there is, under Idaho's Appropriation Laws, a specific intent not to injure by reason of appropriation any prior right; and because the Sylte Ranch has not forfeited its right by non-use; the water rights of the Sylte Ranch are protected by the State Appropriation Laws and the applicant must be enjoined from causing any changes in the year-around flow of Rathdrum Creek which will result in damages to those rights.

The applicant furthermore implies in his proposed changes in the nature of use of Rathdrum Creek that such changes will cause no injury to prior downstream rights because Rathdrum Creek is only a "seasonal waterway". This is most incorrect. As far back as the historical record reaches, Rathdrum Creek has

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always been known as a "year-around" creek. Even in such low-water periods as late summer to early fall and early spring before run-off, a flow of water has been observed in Rathdrum Creek. This contention is not only supported by our continuous use and knowledge of the creek that dates back to the early 1930's, but also by a variety of indications that preceed that date. To wit:

1--Shortly after the turn of the century the City of Rathdrum for a number of summers regularly diverted water from Rathdrum Creek to provide water for its public swimming pool that was located in the City Park at the west end of town. It should be noted that this occured during a seasonally "low-water" period.

2--Field work for the original General Land Office surveys of Rathdrum Creek was conducted in September and October 1880--typically low-water periods. Both the GLO map and GLO survey notes make no mention of the creek being only "seasonal". Indeed, given the time of year when the survey was conducted, one would expect that if ever the creek was seasonal, it would be observed as such in September and October.

3--In 1873, Frederick Post built a saw and grist mill on the banks of Rathdrum Creek and diverted water from the creek. The mill continued to operate into the early 1900's when it was displaced by a railroad line. Although Mr. Post left no record commenting on the alleged seasonal nature of Rathdrum Creek, one must assume that Mr. Post--being one of the very first white settlers in the county, and certainly the first to construct a water driven mill--would not have expended such effort and money for a mill on a "seasonal" creek when all the other water-ways in the area were still quite available to him.

4--Preceeding Mr. Post by many decades were the first historical observations of Rathdrum Creek. These were made and recorded by the original fur traders. On two occasions David Thompson made specific reference to the creek. Once in mid-November 1811 he noted its being "3 yards across" and is"lost in the ground"--which, of course, it is a short distance west of the city of Rathdrum. Thompson's other observation was in late March 1812, prior to the Spring run-off, and here he again made reference to its disappearing into the ground.

On August 10 and again on August 24, 1825, the Hudson's Bay Company trader John Work,observed Rathdrum Creek as being "a little River"--despite the fact that late August is typically the low-water period for seasonal creeks.

There is, therefore, no basis for the implied allegation that Rathdrum Creek is, or ever has been only a seasonal creek. Indeed, it has served both the Sylte Ranch and the community at large, not only in our ranch-work endeavors, but also as a fine place for recreation and fishing. It occupies an important place in our lives and, as can be seen, in the history of the area. We are strongly opposed to any changes in its flow or the impounding of its water. If events lead to such an undesirable eventuality we are prepared to protect our rights to the full extent of the law.

Yours sincerely,

John E. Sylte

John E. Sylte
President
Sylte Ranch, Inc.

MICROFILMED

October 15, 1982

Concerns Legal 51, Sept. 30; Oct. 7, 1982 more specifically the transfer of Water Right No. 95-0973 from the Greenacres Irrigation Dist. to the Bureau of Reclamation. (Note the attached)

To Whom It May Concern:

This is a letter protesting the above mentioned transfer on two counts:

1. The nature of use - which changes from irrigation storage and irrigation to recreation storage and wildlife storage.

2. The year around place of storage - which limits the storage to Twin Lakes.

I would further hope to be personally contacted by mail if there is any additional action regarding this transfer. My address is listed below.

Thank you.

Respectfully,

Chester Sylte
Box 313
Rathdrum Idaho.

NOTICE OF APPLICATION FOR TRANSFER OF WATER RIGHT

On August 23, 1982, the United States of America acting through the Regional Regional Director of the Bureau of Reclamation filed with the Department of Water Resources Application for Transfer of Water Right No. 95-0973. The original water right is for 3,730 A.F of water from Twin Lakes, tributary to Rathdrum Creek, used for Irrigation Storage and Irrigation from Storage, with a point of diversion in the NENW, Sec. 17, T52N, R4W, B.M., Kootenai County, and with a place of use within the East Green Acres Irrigation District, for a total of 2,287 acres. The date of priority is March 23, 1906. The applicant now wishes to change the nature of use from irrigation storage and irrigation from storage to recreation storage and wildlife storage. The period of use will now be year around and the place of use will now be limited to Twin Lakes, Kootenai County, Idaho.

Protests against the granting of this transfer must be filed with the Director of the Department of Water Resources, 4056 Government Way, Coeur d'Alene, Idaho 83814 on or before October 18, 1982.

A. KENNETH DUNN
Director

Legal 51
Sept. 30, Oct. 7, 1982

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Department of Water Resources
Northern District Office

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October 15, 1982

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Thank you.

Respectfully,

Donald E. Zigler
mayor Rathdrum ID

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Protests against the granting of this transfer must be filed with the Director of the Department of Water Resources, 4053 Government Way, Coeur d'Alene, Idaho 83814 on or before October 18, 1982.

A. KENNETH DUNN
Director

Legal 51
Sept. 30, Oct. 7, 1982

RECEIVED

OCT 15 1982

Department of Water Resources
Northern District Office

MICROFILMED

October 15, 1982
P.O Box 197
Rathdrum, Idaho 83858
Phone 687-0858

TO: The United States Government, acting through the Regional Director of the B ureau of Reclamation!!!!!

This letter is in strong protest of the transferring of water from irrigation and irrigation storage, to the sole purpose of recreational and wildlife storage use of Twin Lakes.

As a property owner and taxpayer along Rathdrum Creek, I use water from this creek for irrigation purposes as well as having it available in the event of fire at my home, property or sawmill.

There is also numerous kinds of wildlife that utilize this creek water for drinking, living and reproducing. There are all kinds of birds, ducks, deer, fish, beaver and raccoons, as well as a huge Shy Poke that's been here for years. There are also bears and an occasional moose that use it also; this I can attest to. Accordingly, there is probably as much wildlife using the creek as the lake, due to fewer people to disturb them.

Young kids from Rathdrum fish this creek with much success. Others raft down the creek all summer on inner tubes, as all people cannot afford to own a boat for recreation on the lake. We also swim in the creek in warm weather, as well as fish in it too.

So, the creek's water is just as important to us small property owners and wildlife along the creek as it is to the lake property owners.

PLEASE DON'T TAKE OUR & OUR WILDLIFE'S WATER RIGHTS AWAY!!!!!!!!!!

RECEIVED
OCT 15 1982
Department of Water Resources
Northern District Office

Sincerely,
Mrs. Shirley Watson
Mrs. Shirley Watson

MICROFILMED

October 15, 1982

Concerns Legal 51, Sept. 30; Oct. 7, 1982 more specifically the transfer of Water Right No. 95-0973 from the Greenacres Irrigation Dist. to the Bureau of Reclamation. (Note the attached)

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This is a letter protesting the above mentioned transfer on two counts:

1. The nature of use - which changes from irrigation storage and irrigation to recreation storage and wildlife storage.

2. The year around place of storage - which limits the storage to Twin Lakes.

I would further hope to be personally contacted by mail if there is any additional action regarding this transfer. My address is listed below.

Thank you.

Respectfully,

Glen Gillisman N. 4425 Gunning Rd
Ginger A. Gillisman "

Rathdrum, Id 83858

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Protests against the granting of this transfer must be filed with the Director of the Department of Water Resources, 4056 Government Way, Coeur d'Alene, Idaho 83814 on or before October 18, 1982.

A. KENNETH DUNN
Director

Legal 51
Sept. 30, Oct. 7, 1982

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Department of Water Resources
Northern District Office

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2. The year around place of storage - which limits the storage to Twin Lakes.

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Thank you.

Respectfully,

Roy C Watson

RT 4 Box 728-A

Rathdrum, Ida.

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Protests against the granting of this transfer must be filed with the Director of the Department of Water Resources, 4065 Government Way, Coeur d'Alene, Idaho 83814 on or before October 18, 1982.

A. KENNETH DUNN
Director

Legal 51
Sept. 30, Oct. 7, 1982

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Department of Water Resources
Northern District Office

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October 15, 1982

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2. The year around place of storage - which limits the storage to Twin Lakes.

I would further hope to be personally contacted by mail if there is any additional action regarding this transfer. My address is listed below.

Thank you.

Respectfully,

Mr. Emmanuel Knowles
RT 4 Box 728
Rathdrum, Idaho
83858

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A. KENNETH DUNN
Director

Legal 51
Sept. 30, Oct. 7, 1982

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2. The year around place of storage - which limits the storage to Twin Lakes.

I would further hope to be personally contacted by mail if there is any additional action regarding this transfer. My address is listed below.

Thank you.

Respectfully,

Robert A. Goelzer

Robert A. Goelzer
P.O.B. 278
Rathdrum Id. 83858

RECEIVED
OCT 15 1982
Department of Water Resources
Northern District Office

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Protests against the granting of this transfer must be filed with the Director of the Department of Water Resources, 4086 Government Way, Coeur d'Alene, Idaho 83814 on or before October 18, 1982.

A. KENNETH DUNN
Director

Legal 51
Sept. 30, Oct. 7, 1982

MICROFILMED

95-0973

We are protesting the proposal to hold back all the water in Twin Lakes, Idaho — changing the irrigation rights.

Chester A. Park
Diane J. Park
Rt. 4 - Box 712
Rathdrum, Ida. 83858
208-687-0535
work ph: Chet 509-456-4144
Diane 509-838-1295

RECEIVED
OCT 12 1982
Department of Water Resources
Northern District Office

MICROFILMED

United States Department of the Interior
BUREAU OF RECLAMATION
PACIFIC NORTHWEST REGION
FEDERAL BUILDING & U.S. COURTHOUSE
BOX 043-550 WEST FORT STREET
BOISE, IDAHO 83724

IN REPLY
REFER TO: PN 420
870.

NOV 18 1982

Mr. Robert G. Haynes, P.E.
Department of Water Resources
4055 Government Way
Coeur d'Alene, Idaho 83814

Dear Mr. Haynes:

This is in reply to your November 1, 1982, letter regarding our application to transfer water right No. 95-0973 from irrigation of East Greenacres Irrigation District lands to recreation and wildlife storage at Twin Lakes. Your letter transmits copies of 18 protests to the transfer which were filed with your office, and suggests we contact each protestant and attempt to resolve the protest.

The protests are filed by individuals concerned that the proposed transfer will have an adverse effect upon the availability of water in Rathdrum Creek below Twin Lakes. Because of the number and complexity of the issues, and the distance involved, we do not believe that individual contacts with the protestants is practical. Rather, it appears that a thorough explanation of the purpose and anticipated effects of the transfer as well as the legal issues involved by representatives from both your department and this agency will likely best resolve the protestants concerns. Therefore, we suggest that a conference or hearing be scheduled in order to offer such an explanation to the protestants.

Sincerely yours,

John W. Keys, III

ACTING Regional Director

cc: Kootenai County Commissioners
Courthouse
Coeur d'Alene, Idaho 83814

MICROFILMED

RECEIVED
NOV 22 1982
Department of Water Resources
Northern District Office

RECEIVED
OCT 15 1982
Department of Water Resources
Northern District Office

DIRECTOR OF THE DEPARTMENT OF WATER RESOURCES
4055 GOVERNMENT WAY,
COEUR D'ALENE, IDAHO 83814

DEAR SIR:

I, THE UNDERSIGNED, A RESIDENT AND TAXPAYER OF KOOTENAI COUNTY IDAHO, PROTEST THE PENDING TRANSFER ACTION INITIATED BY THE BUREAU OF RECLAMATION REGARDING APPLICATION FOR TRANSFER OF WATER RIGHT NO. 95-0973.

DATED: OCTOBER 15, 1982

Idan M. Wilard

Route 4 Box 840H
Rathdrum, Idaho 83858

MICROFILMED

DIRECTOR
THE DEPARTMENT OF WATER RESOURCES
4055 GOVERNMENT WAY
COEUR D'ALENE, IDAHO 82814

DEAR SIR:

I, THE UNDERSIGNED, A RESIDENT AND TAXPAYER OF KOOTNEAI COUNTY IDAHO, PROTEST THE PENDING TRANSFER ACTION INITIATED BY THE BUREAU OF RECLAMATION REGARDING APPLICATION FOR TRANSFER OF WATER RIGHT NO. 95-0973.

DATED: OCTOBER 15, 1982

Mrs Chester R. Park

Rt 4, Box 730
Rathdrum, ID 83858

RECEIVED
OCT 15 1982
Department of Water Resources
Northern District Office

MICROFILMED

RECEIVED
OCT 15 1982
Department of Water Resources
Northern District Office

DIRECTOR OF THE DEPARTMENT OF WATER RESOURCES
4055 GOVERNMENT WAY.
COEUR D'ALENE, IDAHO 83814

DEAR SIR:

I, THE UNDERSIGNED, A RESIDENT AND TAXPAYER OF KOOTENAI COUNTY IDAHO, PROTEST THE PENDING TRANSFER ACTION INITIATED BY THE BUREAU OF RECLAMATION REGARDING APPLICATION FOR TRANSFER OF WATER RIGHT NO. 95-0973.

DATED: OCTOBER 15, 1982

Elizabeth Stevens
Route #4 Box 727
Rathdrum, Idaho 83853

MICROFILMED

DIRECTOR
THE DEPARTMENT OF WATER RESOURCES
4055 GOVERNMENT WAY
COEUR D'ALENE, IDAHO 82814

DEAR SIR:

I, THE UNDERSIGNED, A RESIDENT AND TAXPAYER OF KOOTNEAI COUNTY IDAHO, PROTEST THE PENDING TRANSFER ACTION INITIATED BY THE BUREAU OF RECLAMATION REGARDING APPLICATION FOR TRANSFER OF WATER RIGHT NO. 95-0973.

DATED: OCTOBER 15, 1982

RECEIVED

OCT 15 1982

Department of Water Resources
Northern District Office

Susan E Park

Rt 4, Box 711
Rathdrum, ID 83858

MICROFILMED

July 22, 1982

U.S. Department of Interior
Bureau of Reclamation
Box 043, 550 W. Fort Street
Boise, Idaho 83724

ATTN: Mr. Ed Thomas

Dear Ed:

Enclosed please find the Application For Transfer that you submitted for Water Right No. 95-0973 on June 3, 1982, as well as another version of the transfer that we have prepared per our telephone discussion. We did not officially receipt the original application, although I am informed that we have received the filing fee of $50.00.

Please review the modified application. If it meets with your approval it should be signed and returned to my attention.

Sincerely,

DAVID R. TUTHILL, JR., P. E.
Supervisor, Water Allocation Section

DRT:jg

Enclosure

MICROFILMED

RECEIVED

JUL 19 1982

Department of Water Resources

INTER-DEPARTMENT MEMO — 1

FROM Bob Haynes

DATE 7/15/82

TO Dave Tuthill

SUBJECT The datum on the Twin Gauge is 2301.99. We probably should relate the gage heights to msl. Also since the Bureau's orginal claim was for heights between 0 and 13.58 on the gage pethaps the transfer application should be made in that manner too. I realize that in considering an approval we would probably restrict it to 6 ft and 10 ft

BH

SIGNATURE

United States Department of the Interior
BUREAU OF RECLAMATION
~~WATER AND POWER RESOURCES SERVICE~~
PACIFIC NORTHWEST REGION
FEDERAL BUILDING & U.S. COURTHOUSE
BOX 043-550 WEST FORT STREET
BOISE, IDAHO 83724

RECEIVED
JUN 8 1982
Department of Water Resources

IN REPLY
REFER TO: PN 420
870.-

JUN 3 1982

Mr. Jim Johnson
Idaho Department of Water Resources
Statehouse
Boise, Idaho 83720

Dear Mr. Johnson:

Enclosed is an Application for Transfer of Water Rights regarding License No. 14757/95-2059; we have also enclosed the $50 filing fee. This matter was discussed between you and Ed Thomas of this office. Please advise if more information is required.

Sincerely yours,

L. W. Lloyd

Regional Director

Enclosures

(No Fee yet Rec'd)
DRT 6-29-82

MICROFILMED

NOTICE OF APPLICATION FOR TRANSFER OF WATER RIGHT

On August 23, 1982, the United States of America acting through the Regional Regional Director of the Bureau of Reclamation filed with the Department of Water Resources Application for Transfer of Water Right No. 95-0973. The original water right is for 3,730 AF of water from Twin Lakes, tributary to Rathdrum Creek, used for Irrigation Storage and Irrigation from Storage, with a point of diversion in the NENW, Sec. 17, T52N, R4W, B.M., Kootenai County, and with a place of use within the East Green Acres Irrigation District, for a total of 2,287 acres. The date of priority is March 23, 1906. The applicant now wishes to change the nature of use from irrigation storage and irrigation from storage to recreation storage and wildlife storage. The period of use will now be year around and the place of use will now be limited to Twin Lakes, Kootenai County, Idaho.

Protests against the granting of this transfer must be filed with the Director of the Department of Water Resources, 4055 Government Way, Coeur d'Alene, Idaho 83814 on or before October 18, 1982.

A. KENNETH DUNN

Director

Published in the Coeur d'Alene Press on September 30 and October 7, 1982.

MICROFILMED

United States Department of the Interior
BUREAU OF RECLAMATION
PACIFIC NORTHWEST REGION
FEDERAL BUILDING & U.S. COURTHOUSE
BOX 043-550 WEST FORT STREET
BOISE, IDAHO 83724

RECEIVED
AUG 1982
Department of Water Resources

IN REPLY
REFER TO: PN 420
870.-

AUG 20 1982

Mr. David R. Tuthill, Jr.
Supervisor, Water Allocation Section
State of Idaho
Department of Water Resources
450 West State Street
Boise, Idaho 83720

Dear Mr. Tuthill:

Re: Water Right Decree No. 95-0973
East Greenacres Irrigation District
Rathdrum Prairie Project

The revised application for transfer to changing the nature of use of the Twin Lakes storage right has been executed as requested in your letter of July 22, 1982, and is enclosed herewith. The only change made in the revised application was to show the application in the name of the United States rather than the Bureau of Reclamation. This is consistent with the deed and delegations and authorizations of this agency.

Sincerely yours,

John W. Keys, III

ACTING Regional Director

Enclosure

RECORDED

Certified Copy $ ____
$ ____
$ ____
TOTAL - - - $ ____ 1 —

Roberta Garrett

STATE OF IDAHO
Department of Water Resources

No 23722

Boise, Idaho, June 14, 1982

RECEIVED FROM Nelson, Eshcott, of Twin Falls $ 1 25/100
One and 25/100 DOLLARS
ck No. 5397 92-39/1241

FOR Copy - $ ____
#37-7722 $ ____
$ ____
$ ____
TOTAL - - - $ ____ 1 25

Roberta Garrett

STATE OF IDAHO
Department of Water Resources

No 23723

Boise, Idaho, 6-14, 1982

RECEIVED FROM Bureau of Reclamation of Boise ID. $ 50 00
FIFTY AND 00/100 DOLLARS
Cash

FOR Transfer App. $ 50 00
$ ____
$ ____
$ ____
TOTAL - - - $ 50 00

Jan Johnson

STATE OF IDAHO
Department of Water Resources

No 23724

Boise, Idaho, June 15, 1982

RECEIVED FROM Zenkovich's Well Drilling Co. of Spokane $ 10 00
Ten and 00/100 DOLLARS
ck No. 13379 38-7/351

FOR Drillers Lic $ ____
#59 $ ____
$ ____
$ ____
TOTAL - - - $ ____ 10 —

Roberta Garrett

MICROFILMED