

# State of Idaho DEPARTMENT OF WATER RESOURCES

322 E Front Street, Suite 648 • PO Box 83720 • Boise ID 83720-0098

Phone: (208) 287-4800 • Fax: (208) 287-6700

Website: idwr.idaho.gov • Email: idwrinfo@idwr.idaho.gov

BRAD LITTLE Governor

GARY SPACKMAN Director

10/17/2019

AMERICAN FALLS RESERVOIR DIST NO 2 409 N APPLE ST SHOSHONE ID 83352

Re: Notice of Exempt Hydropower Use - Acknowledgement

Dear Water User:

The Idaho Department of Water Resources has received your notice of exempt hydropower use. The notice meets the requirements of Idaho Code § 42-201(9) and is therefore considered complete and has been filed. Thank you for submitting your notice. If you have any questions regarding this matter, please call the state office at 208-287-4800.

Sincerely,

Phill Hummer

Water Rights Supervisor, State Office Idaho Department of Water Resources Email: phill.hummer@idwr.idaho.gov

Cc:

Craig Hobdey, Hobdey Law Office PPLC Tony Olenichak, Watermaster WD01

FEB 2 1 2019

DEPARTMENT OF WATER RESOURCES

## HOBDEY LAW OFFICE, PLLC

Craig D. Hobdey (208) 934-4429 hobdeycraig@gmail.com 125 Fifth Avenue West P.O. Box 176 Gooding, Idaho 83330-0176

Facsimile (208) 934-4420

February 19, 2019

IDWR P.O. Box 83720 Boise, ID 83720-0098 ATTN: Jean Hersley

RE: Notice of Exempt Hydropower Use AFRD#2

Dear Ms. Hersley:

Enclosed please find acopy of the original FERC license and a copy of Order Approving Transfer of License. I apologize for omitting them in my original request, it was merely an oversight.

Thank you for your cooperation and assistance in processing this notification.

If you have any questions, please call, write or email at the above address.

Sincerely,

Craig D. Hobdey Attorney for AFRD#2

Encl.

## Hersley, Jean

From:

Hersley, Jean

Sent:

Tuesday, February 12, 2019 8:09 AM

To:

'hobdeycraig@gmail.com'

Subject:

AFRD #2 Notice of Hydropower Use

Attachments:

checklist-for-notice-of-exempt-hydropower-use.pdf

## Craig,

The Department received the notice of hydropower use you filed on behalf of the American Falls Reservoir District #2. As I was going through the checklist, attached, it seems there is some information missing.

Item #4- The Department needs a copy of the government order or document authorizing the hydro power project.

The letter from the reservoir district states a copy of the original FERC license is attached as well as assignments to the American Falls Reservoir District No. 2. These items were not included.

Please provide the requested information within 60 days or the notice will be returned. Let me know if you have any questions. Thank you.

Jean Hersley Idaho Dept Water Resources Technical Records Specialist II 208-287-4942

## RECEIVED

FEB 07 2019

125 Fifth Avenue West P.O. Box 176 Gooding, Idaho 83330-0176 (208) 934-4420

Craig D. Hobdey (208) 934-4429 hobdeycraig@gmail.com

February 5, 2019

**IDWR** P.O. Box 83720 Boise, ID 83720-0098

RE: Notice of Exempt Hydropower Use

To whom it may concern:

Enclosed please find a notice pursuant I.C. 42-201(9). American Falls Reservoir District #2 (AFRD#2) is planning on using the Gooding-Milner Canal, which is owned by AFRD#2, to run water through an existing hydropower plant located on the Gooding-Milner Canal. There is presently a water right for Hydro valid April through October. If there is water in the canal after October AFRD#2 would like to use the water for power generation.

HOBDEY LAW OFFICE, PLLC

If you have any questions, please call, write or email at the above address.

Sincerely,

Craig D. Hobdey Attorney for AFRD#2

copy-WD-01

## RECEIVED

American Falls Reservoir District No. 2 FFB 0 7 2019

409 North Apple Street Shoshone, Idaho 83352 208-886-2331 DEPARTMENT OF WATER RESOURCES

January 21, 2019

Idaho Department of Water Resources PO Box 83720 Boise, ID 837200-0098

Re: Notice of Exempt Hydropower Use - Mile 28 Hydro Project

To Whom It May Concern,

This notice is served pursuant to Idaho Code § 42-201(9) for purposes of establishing an exempt hydropower use of the Mile 28 Hydropower Project near Jerome, Idaho (the "Project"). The Project is located on the Milner-Gooding Canal (the "Canal"). The Canal is operated by the following:

American Falls Reservoir District No. 2 409 North Apple Street Shoshone, ID 83352 208-886-2331

The Project is owned by American Falls Reservoir District No. 2, but is leased and operated by Wood Hydro LLC, whose address is 1032 Grandview Drive, Ivins, Utah 84738.

The water rights authorizing diversion of water from the natural watercourse into the Milner-Gooding Canal are 1-7054 and 1-10609. A map with the point of diversion and the powerhouse are attached hereto. The maximum rate of flow is 1400 cfs and the maximum amount of power produced by the plant will be 1600 kw. There is a current permit (Permit 01-07124) to operate the hydro facility during the irrigation season from April 1 to October 31. Therefore, this exemption would be for the period from October 31 to April 1.

Attached also please find a copy of the original FERC License for the project, as well as the assignment to American Falls Reservoir District No. 2.

Please don't hesitate to let us know if you have any further questions.

I hereby certify that the incidental use of water for hydropower generation meets all the requirements of Idaho Code § 42-201(9).

Sincerely,

David Stephenson, Manager
American Falls Reservoir District No. 2

## 165 FERC ¶ 62,066

## UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION

Contractor's Power Group, Inc.
American Falls Reservoir District No. 2

Project No.10552-016

## ORDER APPROVING TRANSFER OF LICENSE

(Issued October 31, 2018)

- 1. On July 13, 2018, Contractor's Power Group, Inc. (transferor) and American Falls Reservoir District No. 2 (transferee) filed an application for the transfer of license of the Mile 28 Hydroelectric Project No. 10552 from the transferor to the transferee. The project is located on the Bureau of Reclamation's Milner-Gooding Canal, in Jerome County, Idaho.
- 2. The Commission issued a 50-year license to Contractor's Power Group, Inc. on August 12, 1992. The license is being transferred to the proposed transferree American Falls Reservoir District No. 2.

## Public Notice

3. The Commission issued a public notice of the current application for transfer of license on August 16, 2018, establishing September 16, 2018, as the deadline for filing comments, motions to intervene, and protests. No comments, motions to intervene, or protests were filed.

## Review

4. The transferor agrees to pay annual charges that have accrued up to the date of the transfer. The transferee will be required to comply with the requirements of the license as though it were the original licensee. The transfer of license for this project is consistent with the Commission's regulations and is in the public interest.

## The Director orders:

Order Issuing License (Minor Project). Contractor's Power Group, Inc., 60 FERC ¶ 62,104 (1992).

- (A) The transfer of the license for the Mile 28 Hydroelectric Project No. 10552 from Contractor's Power Group, Inc. to American Falls Reservoir District No. 2 filed on July 13, 2018 is approved as modified by paragraphs (B) and (C) below.
- (B) Contractor's Power Group, Inc. shall pay all annual charges that accrue up to the effective date of the transfer.
- (C) Approval of the transfer of license is contingent upon: (1) transfer of title of the properties under license, transfer of all project files including all dam safety related documents, and delivery of all license instruments to American Falls Reservoir District No. 2 which shall be subject to the terms and conditions of the license as though it were the original licensee; and (2) American Falls Reservoir District No. 2 acknowledging acceptance of this order and its terms and conditions by signing and returning the attached acceptance sheet. Within 60 days from the date of this order, American Falls Reservoir District No. 2 shall submit certified copies of all instruments of conveyance and the signed acceptance sheet.
- (D) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. § 8251 (2012), and the Commission's regulations at 18 C.F.R. § 385.713 (2018). The filing of a request for rehearing does not operate as a stay of the effective date of this order, or of any other date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

CarLisa Linton
Acting Director
Division of Hydropower Administration
and Compliance

IN TESTIMONY of its acknowledgment of acceptance of all	of the terms and conditions
of this order, America Folls (1850, 1950, 197) taid "2 this 300 de	y of December, 2014.
has caused its corporate name to be signed hereto by 61110	60. :h
, its President, and its co	orporate seal to be affixed
hereto and attested by MARK Sp. S. S.	its Secretary, pursuant to a
resolution of its Board of Directors duly adopted on the 3,~	day of Diamine.
20 18, a certified copy of the record of which is attached her	eto.

By Ellis Dooch

Attest:

Secretary
(Executed in triplicate)

As proposed by CPG, the project's levelized annual cost of energy would be about 65 mills/kWh; the project would be economically beneficial with a levelized net annual benefit of about 4 mills/kWh or \$19,900.

CPG doesn't have a power sales agreement for the project with IPCO. Using IPCO's long-term avoided cost rates, we find the 100-percent equity rate of raturn of the proposed project would be about 10 percent: therefore the proposed project would be marginally attractive financially.

#### I. ENVIRONMENTAL INPACTS

 Assessment of impacts expected from the applicant's proposed project (P), with the applicant's proposed mitigation and any conditions set by a federal land management agency; the proproposed project with any additional mitigation recommended by the staff (Ps); and any action alternative considered (A). Assessment symbols indicate the following impact lavels:

O - None; 1 - Minor; 2 - Moderate; 3 - Major; A - Adverse; B - Beneficial; L - Long-term; S - Short-term.

	1	apac	t			Impact		
Resource	P	Ps		Resource	₽ —	Ps	^	
a. Geology-Boils		0		f. Wildlife	IAS	135		
b. Streamflow	0			g. Cultural: Archeological	0			
c. Water quality: Temperature				Historical	INL	Q		
Dissolved				h. Visual quality	١.			
Turbidity and sedimentation	0			i. Recreation				
d. Fisheries: Anadromous	a			i. Land use	0			
Resident	IAL	- 22		k. Socioeconomics				
e. Vegetation	1AS						_	

#### Remarks:

d. Impacts to resident fish would remain the same, even with the use of an unscreened intake, since stray fish in the canal are likely killed when the canal is devatered.

- e. Project construction would disturb 1 to 2 acres of grassland with scattered sagebrush. Revegetating disturbed areas as part of the recommended erosion and sediment control plan would speed the restoration of vegetative cover.
- g. Impacts to cultural resources would be avoided if CPG implements procedures to avoid impacts to a historic site near the Milner-Gooding Canal from construction, operation, and maintenance of the project powerhouse and associated facilities.
- 2. Impacts of the no-action alternative.

Under the no-action alternative, there would be no construction of project facilities or changes to the existing physical, biological, or cultural components of the area. Electrical power that would be generated by the proposed hydroelectric project would have to be generated from other available sources or offset by conservation measures.

#### J. UNAVOIDABLE ADVERSE IMPACTS OF THE RECOMMENDED ALTERNATIVE

The project would result in minor increases in noise levels and dust during project construction. Minor impacts from project operation would occur to fish, vegetation, and wildlife resources.

#### K. COMPREHENSIVE DEVELOPMENT

In this environmental assessment, we evaluate the effects of project construction and operation on the resources of the project area and recommend additional measures to protect cultural resources.

The project as proposed, with the staff recommended mitigative measure, would generate about 5.8 gigawatt hours (GWh) of electrical energy per year, with net annual benefits of \$19,900 and an internal rate of return of about 10.0%. The project would displace fossil-fueled electrical generation and contribute to improved air quality.

#### 1. Recommended Alternative

We examined the proposed project including CPG's proposed mitigation measures, the project with the staff recommended mitigation, and the no-action alternative. The recommended option is to issue a license for the project as proposed by CPG with the staff's recommended mitigation. We recommend this option because: (1) the environmental and cultural effects of the proposed project with the mitigation measures would be negligible; and (2) the project would reduce the use of fossil

addition to this moderate mortality rate, the protection that would be afforded by constructing and operating a fish screen at the proposed project intake would not result in a long-term benefit to fish that stray into the irrigation canal.

Requiring CPG to provide fish screens at the entrance to the Milner-Gooding canal would be cost-prohibitive on the project, and would unequally burden the proposed project with mitigating effects from the ongoing irrigation canal diversions. Therefore, we do not recommend that CPG install fish screens at the project site or the mouth of the Milner-Gooding Canal.

1. Seasonal availability of flows for project operation: CPG originally proposed in their application for license that additional project flows beyond the irrigation season could become available, increasing the annual generation by as much as 12 percent. Altering the current flow regime to appropriate flows above irrigation flows for power generation, would result in a change in the nature and the time of use of flows in the project area, either of which would require a new application for water right. CPG has since modified its position to state that additional flows could potentially become available if existing supplemental water agreements are enacted, but that the proposed project would not divert additional flows solely for the purpose of power generation.

Interior is concerned that the proposed project would attempt to extend the time during which supplemental irrigation flows would be released into the Milner-Gooding canal for purposes of power generation. Interior recommends that CPG operate the project in a manner consistent with the irrigation season from April 15 through October 15. Interior also recommends that if operation of the project extends beyond April 15 through October 15 for the sole purpose of power generation, that additional environmental studies and analysis be conducted. After the additional studies, Interior would recommend implementation of appropriate mitigation measures to maintain and protect aquatic resources in the Milner-Gooding Canal and in the mainstem Snake river below the point of diversion. IDFG recommends that the project be limited to diversion of water into the canal from March 15 to November 15, the normal irrigation SGASOR.

withdrawing additional diversion flows from the Snake River into the Milner-Gooding Canal solely for power generation purposes would result in additional impacts from reduced flows beyond those which already exist in the Snake River below Milner Dam. Currently, flows in the Milner-Gooding canal are structured around the irrigation season from April 15 to October 15, with supplemental flows released in some years. Flow records from 1980 to 1992 indicate that the canal has operated as early as

April 1, and continued passing flows as late as December 5 in some years.

Since the project's operation would be entirely dependant on managed flows released into the canal by AFRD2, the only flows available to the project would be the existing flow regime, perhaps augmented in seasons of good supply, by diversions from recharge districts. The BR states that changing the nature of use of water requires an application procedure that allows the opportunity to protest to all whose rights may be affected, and would likely draw protests from other existing and pending water rights. Therefore, the proposed project would not likely be able to appropriate additional water rights beyond the non-consumptive use of flows during the normal irrigation season (Bureau of Reclamation 1990).

We agree with the agencies that if CPG draws additional flow through Milner-Gooding Canal beyond the irrigation season solely for power generation purposes, then CPG would need to conduct additional studies to assess the environmental impacts from the diversion and file an amendment of license application. We recommend therefore, that CPG operate the project with all available flows in the canal, provided that the flows are not diverted solely for hydropower generation at the proposed project.

4. Raptor protection: Raptors have been identified as a target resource for the upper Snake River Basin. Raptors found in the proposed project area include golden eagles, ferruginous hawks, and owls. Birds in the project vicinity would be expected to use the project transmission line poles for perching and roosting because of the lack of trees along the Milner-Gooding Canal and the transmission line alignment. Transmission lines may be an electrocution hazard for raptors and other birds large enough to simultaneously touch two energized wires or other hardware. CPG proposes to install a 34.5-kV transmission line, about 3 miles long.

Interior recommends that CPG prepare and implement a plan to prevent transmission line electrocution of raptors and other perching birds, in accordance with the 1981 guidelines of the Raptor Research Foundation, Inc. CPG proposes to raptor-proof the project transmission line. Raptor-proofing the transmission line according to the guidelines of the Raptor Research Foundation, Inc. would adequately protect raptors using the project area, and would prevent a cumulative impact on this target resource. Therefore, CPG should construct the 3-mile-long transmission line according to the guidelines of the Raptor Research Foundation, Inc.

g. Wildlifg: Big game animals in the project area are mule deer and pronghorn antelope. Smaller animals include coyote, badger, skunk, weasel, muskrat, red fox, raccoon, ground squirrel, and jackrabbit. Waterfowl using the Milner-Gooding Canal are mallard, blue-winged teal, green-winged teal, cinnamon teal, and common pintail. Raptors include Swainson's hawk, Northern harrier, Cooper's hawk, rough-legged hawk, ferruginous hawk, redtailed hawk, American kestral, great horned owl, burrowing owl, and golden eagle. Game birds using upland habitat along the canal are ring-necked pheasant and mourning dove. The canal supports very little riparian vegetation in the project reach, so riparian-associated wildlife doesn't use the project area

#### h. Cultural:

- National Register (listed and eligible) properties have not been recorded.
- There are properties listed on, or eligible for listing on, the National Register of Historic Places in the area of the project's potential environmental impact.

Description: The historical integrity of the Milner-Gooding Canal, a National Register eligible site, would not be affected by the project (Green 1991).

The historic habitation site near the canal, the other eligible site in the project area, would not be affected by the project if construction activities are not undertaken in the vicinity of the site (Green 1992).

No other cultural resources would be affected.

- i. Visual quality: The project would be located in south-central Idaho, in a semi-arid, high desert area. The region is flat desert with outcrops of basaltic lava. The dominant vegetation is sagebrush and grasses. The spoil material from the original excavation is primarily located on one side of the canal. This is the only visible man-made landform in the project area.
- j. Recreation: Little to no recreation occurs in the project area. Recreational use of the project area is limited because the project site is in a remote area that's used primarily for ranching and agriculture. Fishing along the canal is virtually nonexistent in the project area due to annual dewatering and remoteness. Some hunting for pheasant and ducks occurs along the canal, but this activity is infrequent in the project area.
- k. Land use: Livestock grazing and irrigated agriculture are the primary land uses throughout the project area. The proposed project facilities are adjacent to, and access is through, an

operating ranch. The canal is located on federal lands owned by the BR and managed by the AFRD2.

#### G. ENVIRONMENTAL ISSUES AND PROPOSED RESOLUTIONS

There are 6 issues addressed below.

- 1. Need for an erosion and addiment control plan: Soil-disturbing activities are scheduled to take place when the canal would be dry. CPG would have to remove vegetation for the construction of the diversion and powerhouse. If it were to rain with the vegetation removed, erosion and sedimentation could occur. Therefore, CPG should provide a detailed erosion and sediment control plan. The plan would provide procedures and locations of control measures CPG would use during construction, as well as actions CPG would take to prevent erosion and sedimentation if inclement weather should develop during project construction.
- 2. Fish screens: During project operation, there would be some entrainment of fish and possible turbine related injury or mortality. Without screening protection for fish, the diversion of flows from the Milner-Gooding Canal would pass fish from upstream of the diversion through the proposed inclined Kaplan turbines.

CPG has not proposed to construct or operate fish ecreens at the project intake. CPG maintains that the canal does not support an appreciable fishery, and that fish that enter the system would be killed by existing mechanisms (atream dewatering, contact with irrigation pumps, poor water quality) even if screens were provided. Fish that either avoid entrainment and remain upstream of the project, or are passed around the turbine, would be subject to mortality when the canal is dewatered.

The IDFG and AFRD2 do not favor the construction or operation of fish screens at the project site, nor do they recommend that CPG be responsible for screening the entire canal. AFRD2 states that installing a fish screen at the inlet to the canal would hinder AFRD2 from fully diverting irrigation flows. CPG estimates the cost of screening the entire canal at the headwaters (i.e. 28 miles upstream at the Milner Reservoir) as ranging from \$360,000 to \$600,000. Yn addition, CPG maintains that existing projects along the canal between the Milner Reservoir and the proposed project site do not have fish protection devices installed. Thus CPG states that they should not have to bear the cost of screening the entire canal.

Hortality astimates from low-head, Kaplan turbines in similar configurations have been observed to be between 8 percent and 19 percent (Electric Power Research Institute 1987). In

of project construction or operation, if the project is constructed and operated with CPG's and our proposed mitigative

2. Descriptions of the resources in the project impact area (Source: Contractors Power Group, Inc. 1991 Application for License, and Contractors Power Group, Inc. 1992, Additional Information, unless otherwise indicated).

a. Geology and soils: CPG would construct the project using the existing canel that was constructed in the 1930's. The canal was excavated through baselt rock with a thin earth sentle. This spoil material was deposited along the canal and was left in a windraw. Therefore, the soil cover consists largely of excavated basalt with large to small rocks and a thin layer of sandy loam. The thin layer of sandy loam supports sparsely covered areas of sagebrush and rangeland grasses with outcrops of lava.

b. Streamflow: The Milner-Gooding canal operates as a seasonal irrigation system, with flows provided for irrigation, stock watering, and for limited groundwater recharge. Flows in the canal are typically limited to the irrigation season from April 15 to October 15. Flow records from 1980 to 1992 indicate that the canal has operated as early as April 1, and continued passing flows as late as December 5 in some years.

Historical flow data from the gauge station at mile 3, adjusted for diversions between the gauge and mile 28 (the proposed project site) show that average flows range from 608 cubic feet per second (cfs) in April to 1,490 cfs in July (table 1). Supplemental flows released in November have averaged 182 cfs for the period from 1980-1997.

Table 1. Adjusted monthly average flows in cubic feet per second (cfs) at the proposed diversion site of the Mile 28 Project (Source: Contractors Power Group, Inc. 1991).

Honth	Mean Flow	Month	Hean Flow
January	-0-	July	1335
February	-0-	August	1298
March	-0-	September	1209
April	608	October	675
Hay	1176	November	182
June	1263	December	-0-

c. Water Rights: The existing flows in the Milner-Gooding Canal are from stored water in the American Falls Reservoir, and consist of flow rights for agricultural uses and a natural flow right for agulfer recharge near Shoshone.

CPG and the American Falls Reservoir District Two (AFRD2), which distributes water on the system, would jointly apply for a water permit to appropriate flows for hydroelectric power. The project would be a non-consumptive, run-of-river operation, and would not extend the season of irrigation diversions. Thus project operation would be entirely dependent on managed flows released into the canal by AFRD2.

CPG would use gunnite or concrete slurry to seal all cracks in the new excavation, ensuring that minimal water loss occurs in the canal at the project site and that downstream users would not be affected. Staff therefore believes that the project would not impact any existing water rights within the project area or downstream of the proposed project.

d. Water quality: Water quality in the project area is typical of irrigation flows in the canals in the project area. The water quality various from spring to fall as a direct result of the irrigation use regime. No site-specific water quality studies of the project area have been conducted.

Reservoirs, irrigation flows, and low river flows have increased the water temperatures in the upper Snake River. Water temperature commonly exceeds 20' celsius (C) during the summer. Nutrients loads are high due to irrigation returns, livestock feedlots, and high groundwater concentrations.

#### e. Pisheries:

Anadromous: x Absent,

Resident: During the irrigation season some gamefish and nongamefish that enter the canal from the Milner Dam reservoir at the Snake River probably pass through the project area. No qualitative or quantitative studies have been conducted to determine the numbers or species of fish typically transported into the system. Since the canal is a terminal irrigation canal, fish that enter into the system likely are killed from contact with pumping systems or when irrigation flows are discontinued at the end of the season.

f. Yegetation:

Cover type sagebrush-grass

Dominant species magebrush, bitterbrush. rabbitbrush, cheatgrass, wheatgrass

riparian

cattails, grasses, forbs

#### Y. AFFECTED ENVIRONMENT

- 1. General description of the locale,
- a. Upper Snake River Basin.

The proposed project would be located within the upper Snake River Basin in Jerome County, Idaho, about 7 miles north of the town of Eden. The project area receives approximately 10 inches of precipitation annually and is dominated by semi-arid, desert vegetation.

The upper Snake River Basin is a large, sparsely populated area that includes most of south-central Idaho. The basin is diverse in natural resources, including spectacular natural landforms, forested mountainous regions, and extensively irrigated agriculture.

The current condition of the Snake River is a result of changing stream dynamics due to natural phenomena such as lava flows (redirecting drainage), slope failures (increased load of sediment), and climatic and weather influences (i.e. changes in annual or seasonal precipitation) and is due to the effects of water resources development, particularly that associated with irrigated agriculture and hydroelectric development (Federal Energy Regulatory Commission 1990).

Development, including agriculture, livestock raising, irrigation, human habitation, and hydroelectric power, has greatly altered water quality of the upper Snake River. Water storage, hydroelectric reservoirs, and irrigation diversions have changed flow patterns in the river. Currently, all surface flow reaching Milner reservoir during the summer is designated for irrigation diversion (Faderal Energy Regulatory Commission 1990).

b. Existing licensed, exempted, or pending projects in the upper Snake River Basin, as of  $\frac{7/09/92}{2}$ .

As of July 17, 1992, in the upper Snake River Basin, there were 50 FERC licensed hydroelectric projects. The BR operates five projects in the upper Snake River Basin with a total installed capacity of 181 MW. There are two existing nonfederal, unlicensed projects with a total installed capacity of 11.3 MW.

c. Pending license applications in the upper Snake River basin, as of 7/17/92.

Project No.	Project name	Hater body
5090	Shelley Project	Snake River
5797	Star Falls Project	Snake River

10552	Mile 28 Project	Hilner-Gooding Canal
10772	Boulder Rapids Project	Snake River
10930	Kanaka Rapids Project	Snake River
10849	Empire Rapids Project	Snake River

d. Target resources (important resources that may be cumulatively affected by multiple development within the basin).

The staff based its selection of target resources on the regional significance and geographic distribution of the resource within the river basin. Target resources for the upper Snake River Basin were identified as drainage morphology, water quality, resident trout, white sturgeon, wintering waterfowl, raptors, riparian-associated wildlife, riparian vegetation, aesthetic quality, recreation, the local economy, and cultural resources. These target resources, and how they would be affected in the basin by hydropower projects, were addressed in the Final Supplemental Environmental Impact Statement (FEIS) issued in July 1990 for the Hilner, Twin Falls, Auger Falls, and Star Falls Projects, Idaho (Federal Energy Regulatory Commission 1990).

The target resources listed above are discussed below in section F(2). Impacts to target resources are discussed in section G.

#### e. Cumulative impacts.

The Council on Environmental Quality defines cumulative impacts as impacts on the environment that result from adding the impact of an action to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions. The Council says cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR, Part 1508.7). The geographical area included in this cumulative impact analysis is limited to the upper Snake River Basin.

Cumulative impacts on target resources in the upper Snake River Basin have occurred primarily as the result of hydropover operations and extensive alteration of water resource allocations for irrigation purposes. The proposed project would be located on an existing irrigation canal far away from the natural flowage. Flows to operate the project would be available only from authorized canal users and the project would have no effect on water quality or flows. Transmission line design and routing would mitigate any minor impacts that might occur to raptors and cultural resources.

No significant adverse cumulative impacts to target resources in the upper Snake River basin would occur as a result

In addition to CPG's own measures, staff's alternative includes:

- A cultural resources management plan to avoid impacts to a historic habitation site adjacent to the Milner-Gooding Canal.
- b. Alternative of no action.

No action, denial of the license, would preclude CPG from developing the site. The energy that would have been produced by CPG's proposed project would not be available. No action would involve no alterations to the existing environment and would preclude CPG from producing electrical power at the site. The existing environment would not be changed.

D -	COMMULT	KOTTA	AWD	COMPLIA	KCE

1.	rish	and	vildlife	agency	consultation	(Fish	4	Wildlife
	Coord	iinat	tion Act)	•				

A.	U.S. Fish & Wildlife Service (FWS):	X Yes.	Ho
ъ.	State(s):	X Yes.	No
α.	National Marine Picharies Service (NHFS):	X Yas.	Ho

- 2. Section 7 consultation (Endangered Species Act).
- a. Listed species: X None. \_\_Present.

ь.	Consultation:	_X_Not required.	
		Required; completed:	

Remarks: No listed or proposed threatened or endangered species are known to occur in the project area. 1/

3. Section 401 certification (Clean Water Act).

\_\_\_Not required. \_\_x Required; applicant requested certification on \_7/19/91.

Status: x Granted by the certifying agency on 7/06/92.

- 4. Cultural resource consultation (Historic Preservation Act).
- a. State Historic Preservation Officer (SHPO): X Yes. \_\_\_No.
- b. National Park Service (NPS): X Yes. No.
- c. National Register status: \_\_\_None. X Eligible or listed.

`	
d. Council: $X$ Not required. Consultation: $X$ Not required	napleted: Required.
Remarks: There are two sites in the presignible for inclusion in the National Regist Places: (1) the Milner-Gooding Canal, and (Shistoric habitation site near the canal.	ter of Historic
5. Recreational consultation (Federal Power )	Act).
a. U.S. Cymers: X Yes. No. b. NPS: X Yes. No. c. State(s): X Yes. No.	
6. Wild and acenic rivers (Wild and Scenic R	ivers Act).
Status: X NoneListed.	
<ol> <li>Land and Water Conservation Fund lands and and Water Conservation Fund Act).</li> </ol>	d facilities (Land
Status: _X_NoneDesignated,	
в. союшентя	
<ol> <li>The following agencies and entities provide application or filed a motion to intervene public notice dated April 9, 1992.</li> </ol>	ded comments on the in response to the
Commenting agencies and other entities	Date of letter
Idaho Department of Health and Welfare Division of Environmental Quality	April 24, 1992
U.S. Department of the Interior	June 4, 1992
Idaho Department of Fish and Game	July 8, 1992*
*Late filing	
Motions to intervene	Date of motion
Idaho Department of Fish and Game (IDFG)	February 13, 1992
The applicant responded to the comments intervene by letter(s) dated	s or motion(s) to
y The applicant did not respond to the c	omments or motion(s

to intervene.

6

Personal communication, Stave Duke, U.S. Fish and Wildlife Service, Boise, Idaho, June 25, 1992.

10

According to the Council's adopted Northwest Conservation and Electric Power Plan and the load projections and needs analyses of the Pacific Northwest Utilities Conference Committee, a need for more power is likely to occur in the Pacific Northwest starting sometime in the 1990's. Firm energy provided by the project would, depending on cost, be useful in meeting a part of the projected need.

#### C. PROPOSED PROJECT AND ALTERNATIVES

1. Description of the proposed action (see figure 2).

The proposed project would be constructed on the existing Milner-Gooding Canal, approximately 28 miles from the head of the canal at the Milner Dam Reservoir on the Snake River. The project would consist of: (1) a 210-foot-long, concrete diversion/overflow spillway; (2) a 34-foot-wide, 55-foot-long powerhouse, containing two Kaplan turbine/generator units, with a total rated capacity of 1.5 MW; (3) a 1,200-foot-long tailrace channel; (4) about 3 miles of 34.5-kilovolt primary transmission line, connecting to a local distribution line; and (4) appurtenant facilities. The mode of operation would be run-of-river.

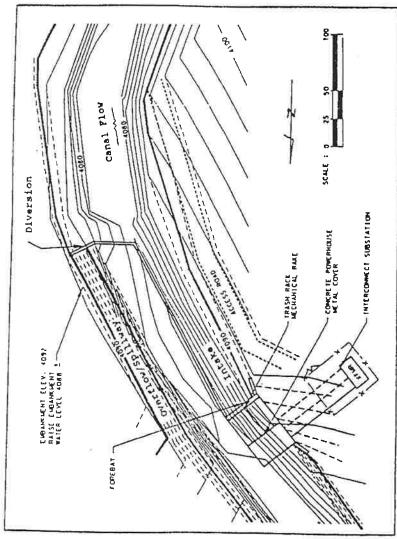
- 2. Applicant's proposed mitigative measures.
- a. Construction.

CPG proposes to: (1) limit excavation of the canal to the non-irrigation season: (2) prepare a site-specific restoration and stabilization plan, prior to construction: and (3) design the project structures as low-profile facilities with earth tone colors.

b. Operation.

None.

- 3. Pederal lands affected.
  - x Yes; Bureau of Reclamation (BR); acreage = 12.0;
  - \_x Conditions have not been provided.
- 4. Alternatives to the proposed project.
- a. \_\_\_No reasonable action alternative has been found.
- b. x Staff alternative: proposed action with our recommended environmental recommendations.



factures for the proposed Mils 28 Mydroslectric Project, Idaho (Source: Contractors Power Group, Inc. 1991). Location of project Project No. 10552, .

Pigure

#### EMVIRONMENTAL ASSESSMENT

#### FEDERAL EMERGY REGULATORY COMMISSION OFFICE OF STOROPOWER LICENSING DIVISION OF PROJECT REVIEW

July 22, 1992

## Mile 28 Hydroelectric Project FERC Project No. 10552-002

#### A. APPLICATION

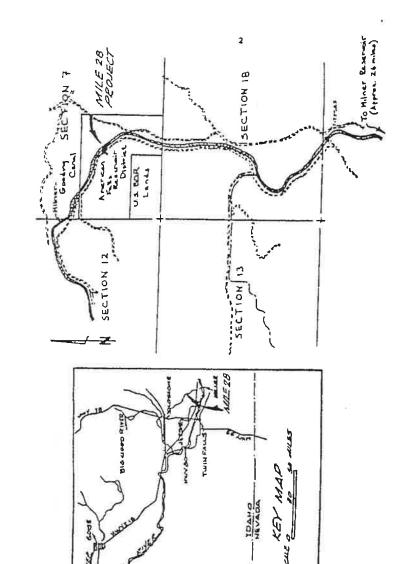
- 1. Application type: Minor licenss
  2. Date filed with the Commission: May 13, 1991:
  Revised September 26, 1991
  3. Applicant: Contractor's Power Group, Inc. (CPG)
  4. Water body: Milner-Gooding Canal River basin: Snake
  5. Nearest city or town: Eden (see figure 1)
  6. County: Jerome County State: Idaho
- 2. PURPOSE AND MEED FOR ACTION
- 1. Purpose.

The purpose of this project is to make electric power from a renewable resource available to electric utilities. The proposed project would produce about 5.8 gigawatthours of energy annually and would cost about \$1.7 million to construct.

#### 2. Reed for power.

CPG proposes to sell the Mile 28 Hydroelectric Project output to the Idaho Power Company, which is a member of the Northwest Power Pool serving customers in the Northwest Power Planning Council region.

The combined effect of (1) electrical load growth and (2) a fixed or declining level of existing generation makes adding conservation or generating resources, or both, necessary if adequacy and reliability levels are to be maintained. Four aspects affect the timing for adding more resources: the rate of load growth, load characteristics, the age and condition of existing resources, and system reliability criteria.



ROOSHO

Location of the proposed Mile 28 Mydroelectric Pro Idabo (Source: Contractors Power Group, Inc. 1991)

1

Upon Commission approval the licensee shall implement the plans. The survey and the plans shall be based on the recommendations of the SHPO, shall be conducted and prepared by a qualified cultural resources specialist, and shall adhere to the Secretary of the Interior's Guidelines for Archeology and Historic Preservation.

The report and plans shall contain the following: (1) a description of each discovered site, indicating whether it is listed or eligible to be listed on the <u>National Register of Historic Places</u>; (2) a description of the potential effect of each discovered site; (3) proposed measures for avoiding or mitigating the effects; (4) documentation of the nature and extent of consultation with the SHPO; and (5) a schedule for mitigating effects and conducting additional studies. The Commission may require changes to the plan.

The licensee shall not implement a cultural resources management plan or begin any land-clearing or land-disturbing activities until informed by the Commission that the requirements of this article have been fulfilled.

Article 406. The licenses shall, prior to starting any land-disturbing or land-clearing that affects the historical integrity of the Hilner-Gooding Canal, implement a cultural resources management plan to avoid and mitigate impacts to the canal. The plan shall consist of documenting the affected portions of the canal according to the standards of the Historic American Engineering Record (HAER) of the National Park Service (HPS), and shall be based on the recommendations of the Idaho State Historic Preservation Officer (SHPO) and the HAER staff of the NPS's Western Regional Office (WRO).

Within 2 years of the date of the license, the licensee shall file, for Commission approval, a report containing: (1) the HAZR documentation; and (2) letters from the SHPO and the HAZR staff of the WRO commenting on this work. The Commission may require changes to the plan based on this filing. No land-disturbing or land-clearing that will affect the integrity of the Milner-Gooding Canal shall begin until the licensee is notified that the report complies with requirements of the article.

Articls 407. The Commission, upon its own motion or upon the recommendation of federal or state fish and wildlife agencies or affected Indian Tribes, reserves the authority to order alterations of project structures or operations to take into account to the fullest extent practicable at each stage of the decision-making process the Columbia River Basin Pish and Wildlife Program developed and amended in accordance with the Pacific Northwest Power Planning and Conservation Act.

(F) The licensee shall serve copies of any Commission

filing required by this order on any satisty specified in this order to be consulted on matters related to that filing. Proof of service on these entitles must accompany the filing with the Commission.

(G) This order is issued under authority delagated to the Director and constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. 385.713.

Fred E. Springer / Director, Office of Hydropower Licensing

5

- (a) A description of the actual site conditions;
- (b) The land-disturbing activities the licensee plans and how much land the licenses would disturb during construction;
- (c) Heasures proposed to control erosion during construction, site access, and site restoration;
- (d) Details of spreading and leveling spoils along with revegetation measures; and
- (e) A detailed topographic map (with a scale of 1 inch equal to no more than 50 feet; showing where the licensee plans the construction and what control measures the licensee intends to use.

The licenses shall prepare the plan after consultation with the Bureau of Reclamation and the Soil Conservation Service. The licenses shall include with the plan documentation of consultation and copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licenses shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing the plan with the Commission. If the licenses does not adopt a recommendation, the filing shall include the licensee's reasons, based on geological, soil, and groundwater conditions at the site.

The Commission reserves the right to require changes to the plan. No land-disturbing or land-clearing activities shall begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission.

Article 402. The licensee shall operate the project in a run-of-river mode for the protection of existing water rights in the Milner-Gooding Canal. The licensee shall at all times act to minimize the fluctuation of the forebay surface elevation by maintaining a discharge from the project so that, at any point in time, flows as measured downstream from the project tailrace approximate the inflow to the project forebay. The licensee shall not appropriate the rights to additional flows solely for the purpose of hydropower generation without (a) conducting additional studies to assess the environmental impacts from the diversion; and (b) filing an amendment of license application.

Article 401. The licenses shall design and construct the transmission line in accordance with guidelines set forth in "Suggested Practices for Raptor Protection on Power Lines--the State of the Art in 1981," by Raptor Research Foundation, Inc. Further, the licenses, after consulting with the U.S. Fish and

Wildlife Service and the Idaho Department of Fish and Game, and within 90 days of the start of construction, shall fits a transmission line design plan that considers adequate separation of energized conductors, groundwires, and other metal hardware, adequate insulation, and any other measures necessary to protect raptors from electrocution hazards. Agency comments on the design plan shall be included in the filing. Unless the Commission instructs otherwise within 60 days after the filing, the licensee may begin transmission line construction at the end of the 60-day period.

Article 404. The licensee, before starting any landclearing or land-disturbing activities in the vicinity of the historic habitation located near the Milner-Gooding Canal, shall implement a cultural resources management plan to avoid any inpacts to the site from construction, operation, or maintenance activities associated with the project. The plan shall be based on the recommendations of the Idaho State Historic Preservation Officer (SHPO). Within 3 years after the date of this license, the licensee shall file for Commission approval a report documenting avoidance of the site and a plan for avoidance during project operation, and a letter from the SHPO commenting on the acceptability of the report. Commercial operation of the project may not commence until this information has been approved. The licenses shall make funds available in a reasonable amount for implementation of the plan. If the licensee and the SHPO cannot agree on the amount of money to be spent for implementation of the plan, the Commission reserves the right to require the licensee to conduct the necessary work at the licensee's own expense.

Article 405. The licensee, before starting any future land-clearing or land-disturbing activities associated with the project, other than those activities authorized in this license, shall consult with the Idaho State Historic Preservation Officer (SHPO) and shall conduct a cultural resources survey of the affected areas. Further, the licensee shall file the following: (1) a report containing the survey results; (2) a cultural resources management plan, approved by the Commission, to avoid or mitigate impacts to any significant archeological or historic sites identified during the survey; and, (3) the written comments of the SEPO on the report and the plan.

If the licensee discovers any previously unidentified archeological or historic sites during the course of constructing or developing project works or other facilities at the project, the licensee shall stop all land-clearing or land-disturbing activities in the vicinity of the sites, shall consult with the SHPO, and shall file for Commission approval a cultural resources management plan to avoid or mitigate impacts to significant resources, together with the written comments of the SHPO on the plan.

Regional Director and the Bureau of Reclamation, of the approved cofferdam construction drawings and specifications and the letter(s) of approval.

Article 306. Within 60 days after issuance of this license, the licensee shall contact the Regional Director, Bureau of Reclemation (Reclamation), to ascertain the necessary coordination of the plane to conclude a memorandum of agreement (MOA) as required by Reclamation for access to and site activities on lands and property administered by Reclamation, and for construction, operation, and maintenance of the licensed project so that the physical structures and authorized purposes, including operations, safety, integrity and environment of the federal facility or reservation are protected. In general, the MOA shall identify the facility, the applicable study and construction activities and schedule, and terms and conditions under which the studies and construction shall be conducted. The MOA shall include, but not be limited to, reasonable arrangements for access to the federal facility or reservation to conduct studies and construction activities, such access to be conditioned by Reclamation as may be necessary to protect the federally authorized project purposes and operations. The Commission's Portland Regional Director shall be invited to attend meetings regarding the MOA, which shall be subject to revision by mutual consent of Reclamation and the licensee as experience is gained through project operation. Should Reclamation fail to reach an agreement with the licensee, the matter will be referred to the Commission for resolution, summarizing the areas of disagreement. Two copies of the final agreement shall be filed with the Commission (one of these shall be a courtesy copy sent to the Director of the Division of Dam Safety and Inspections), and one additional copy shall be filed with the Commission's Portland Regional Director.

Article 107. The licenses's construction, operation, and maintenance of the project works and project investigations related to hydropower development, as determined by the Bureau of Reclamation (Reclamation), must not weaken, damage, or affect the structural integrity or operation of the federal facilities or reservation, or reduce or impair the capability to provide for the purposes and services of the reservation, and shall be subject to periodic or continuous inspections by Reclamation as appropriate. In those cases when a construction, operation, or maintenance practice or deficiency may result in a mituation that would or could endanger the structural integrity, environmental quality, safety, or operational commitment of the federal facility or reservation, on direction by Reclamation the licensee shall stop construction, operation, or maintenance activities on the project works. The licensee shall immediately inform the Commission's Portland Regional Director of the circumstances surrounding the cessation of construction, operation, or maintenance activities. The licensee shall not resume

construction, operation or maintenance activities until notified by the Commission's Regional Director that the problem or situation has been resolved to the Regional Director's satisfaction.

Article 308. The design and construction of those facilities that would be an integral part of, or could affect the structural integrity or operation of the federal reservation. shall be done in consultation with and subject to the review and approval of the Bureau of Reclamation (Reclamation). The licensee shall submit copies of the design drawings. specifications, and design computations to the Regional Director. Reclamation, at a time which allows a sufficient review period prior to construction. The Regional Director, Reclamation, will inform the licensee of the required number of submittal copies and the Reclamation review period. Any changes in the design and construction of those facilities that would be an integral part of, or could affect the structural integrity or operation of the federal reservation must also be approved by Reclamation prior to implementation. Should the licensee and Reclamation disagree regarding any of the requirements of this article, the licenses shall refer the matter to the Commission for resolution, summarizing the areas of disagreement.

Article 309. The licenses shall have no claim against the United States arising from any future construction changes in the Bureau of Reclamation's project to meet authorized federal purposes, from the effect of any changes made in releases from or operation of the federal facility or reservation, from modifications resulting from dam safety requirements, or from any changes in reservoir levels of the Reclamation project.

Article 310. The licensee shall provide the Commission's Portland Regional Director an original and two copies of all correspondence between the licensee and the Bureau of Reclamation. The Commission's Regional Director shall not authorize construction of any project work affecting Reclamation's facilities until Reclamation's written approval of the project's: (1) construction plans and specifications; (2) quality control and inspection program; and (3) temporary emergency action plan; has been received by the Commission's Regional Director.

Article 401. At least 90 days before the start of any landdisturbing or land-clearing activities, the licensee shall file with the Commission for approval a plan to control erosion and sedimentation resulting from project construction and operation.

The plan shall be based on actual site geological, soil, and groundwater conditions and on project design, and shall include, at a minimum, the following:

- (3) The instrument of conveyance must include the following covenants running with the land: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; (ii) the grantee shall take all reasonable precautions to insure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project; and (iii) the grantee shall not unduly restrict public access to project waters.
- (4) The Commission reserves the right to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.
- (f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoraline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised exhibit G or K drawings would be filed for approval for other purposes.
- (g) The authority granted to the licensee under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

Article 301. The licensee shall commence construction of the project works within 2 years from the issuance date of the license and shall complete construction of the project within 4 years from the issuance date of the license. Article 302. Within 90 days after finishing construction, the licensee shall submit for Commission approval eight copies of ravised oxhibits A, P, and G describing the project as built. The licensee shall submit six copies to the Commission, one copy to the Commission's Regional Director, and one to the Director, Division of Project Compliance and Administration.

Article 101. The licensee shall, at least 60 days prior to the start of construction, submit one copy to the Commission's Regional Director and two copies to the Commission (one of these shall be a courtesy copy to the Director, Division of Dam Safety and Inspections) of the final contract drawings and specifications along with an accompanying supporting design report for pertinent features of the project, such as water retention structures, powerhouse, and water conveyance structures. The supporting design report should be consistent with the Commission's Engineering Guidelines. The Commission may require changes in the plans and specifications to assure a safe and adequate project. If the licensee plans substantial changes to location, size, type, or purpose of the water retention structures, the plans and specifications must be accompanied by Exhibit F and G drawings, as necessary.

Article 304. The design and construction of those permanent and temporary facilities, including reservoir impounding cofferdams and deep excavations, that would be an integral part of, or that could affect the structural integrity or operation of the Government project shall be done in consultation with and subject to the review and approval of the Bureau of Reclamation (Reclamation). Reclamation's review of the cofferdams will be in addition to the licensee's review and approval of the final plans, and shall in no way relieve the licenses of responsibility and liability regarding satisfactory performance of the cofferdams. Within 90 days from the issuance date of the license, the licensee shall furnish Reclamation and the Commission's Portland Regional Director, a schedule for submission of design documents and the plans and specifications for the project. The schedule shall provide for sufficient review and approval time by Reclamation. If Reclamation does not believe sufficient time has been provided, the licensee, upon request of Reclamation, shall meet with Reclamation and the Commission's staff to revise the schedule accordingly.

Article 305. The licensee shall review and approve the design of contractor designed cofferdams and deep excavations prior to the start of construction and shall ensure that construction of cofferdams and deep excavations are consistent with the approved design. At least 30 days prior to start of construction of the cofferdam, the licensee shall file two copies with the Commission, (one of which shall be a courtesy copy to the Commission's Director, Division of Dam Safety and Inspections), and submit one copy each to the Commission's

protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licenses shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

- (b) The type of use and occupancy of project lands and water for which the licenses may grant permission without prior Commission approval are: (1) landscape plantings; (2) noncommercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where said facility is intended to serve single-family type dwellings; (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline; and (4) food plots and other wildlife enhancement. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licenses shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the licenses may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licenses to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.
- (c) The licensee may convey easements or rights-of-way scross, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges or roads where all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) severs that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or

major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallohs per day from a project reservoir. No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

- (d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) wever or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require eraction of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least onehalf mile (measured over project waters) from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E: and (7) other uses, if: (1) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from project waters at normal surface elevation; and (111) no more than 50 total acres of project lands for each project development are conveyed under this clause (d) (7) in any calendar year. At least 60 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the licenses to file an application for prior approval, the licenses may convey the intended interest at the end of that period.
- (e) The following additional conditions apply to any intended conveyance under paragraph (c) or (d) of this article:
  - (1) Before conveying the interest, the licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

Exhibit F-2 6/	10552-2	Plan - Powerhouse & Spillway
Exhibit F-3	10552-3	Profiles - Powerhouse & spillway
Exhibit F-4	10552-4	Plan and Profile - Existing Water Surface
Exhibit F-5	10552-5	Section (Canal Opstream)
Exhibit 7-6	10552-6	Bection (Tailrace Downstress)
Exhibit F-7	10552-7	Section (at Powerhouse/Spillway) - Existing and Proposed Cut
Exhibit F-8	10552-8	Profile (at Canal Centerline) - Existing and Proposed
Exhibit F-9	10552~9	Plan - Site
Exhibit F-10	10552-10	Plan - General Topography

<sup>(3)</sup> All of the structures, fixtures, equipment, or facilities used to operate or maintain the project and located within the project boundary, all portable property that may be amployed in connection with the project and located within or outside the project boundary, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

depreciation reserves; 10(d): 10(f): 14, except insofar as the power of condemnation is reserved; 15: 16: 19: 20; and 22.

(E) This license is also subject to the articles set forth in Form L-17, (October 1975), entitled "Terms and Conditions of License for Unconstructed Minor Project Affecting the Lands of the United States", except article 15, and the following additional articles:

Article 201. The licensee shall pay the United States the following annual charges as determined by the Commission, effective the first day of the month in which this license is issued for the purposes of:

- a. Reimbursing the United States for the cost of administration of Part I of the Act. The authorized installed capacity for that purpose is 2,000 horsepower.
- b. Recompensing the United States for utilization of surplus water or water power from a government structure.
- c. Recompensing the United States for the use, occupancy and enjoyment of one acre of its lands for transmission line right-of-way.

Article 202. The licensee shall clear and keep clear to an adequate width all lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which result from maintenance, operation, or alteration of the project works. All clearing of lands and disposal of unnecessary material shall be done with due diligence to the satisfaction of the authorized representative of the Commission and in accordance with appropriate federal, state, and local statutes and regulations.

Article 20]. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licenses may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licenses shall also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this articls or any other condition imposed by the licensee for

1

<sup>(</sup>C) Exhibits A, F, and G, as designated in ordering paragraph (B), are approved and made part of the license.

<sup>(</sup>D) The following sections of the Act are waived and excluded from the license for this minor project:

<sup>4(</sup>b), except the second sentence; 4(e), insofar as it relates to approval of plans by the Chief of Engineers and the Secretary of the Army; 6, insofar as it relates to public notice and to the acceptance and expression in the license of terms and conditions of the Act that are waived here; 10(c), insofar as it relates to

<sup>6/</sup> On August 6, 1992, the applicant submitted a revised Exhibit F-2 showing (1) two gates in the diversion structure which will be automatically triggered to open by a plant shutdown and (2) two gates in the powerhouse to isolate turbines for maintenance.

article 8. The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission may direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

Article 2. The operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Commission may prescribe for the purposes herein-before mentioned.

article 10. On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the vaterway or vaterways involved and the conservation and utilization of the vater resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licenses and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

article 11. The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such

reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

Article 12. Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

Article 11. So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project vaters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

Article 14. In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lends adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon the request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

Article 13. The Licensee shall consult with the appropriate State and Federal agencies and, within one year of the date of issuance of this license, shall submit for Commission approval a plan for clearing the reservoir area. Further, the Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In

Upon the completion of the project, or at such other time as the Commission may direct, the Licensee shall submit to the Commission for approval revised exhibits insofar as necessary to show any divergence from or variations in the project area and project boundary as finally located or in the project works as actually constructed when compared with the area and boundary shown and the works described in the license or in the exhibits approved by the Commission, together with a statement in writing setting forth the reasons which in the opinion of the Licensee necessitated or justified variation in or divergence from the approved exhibits. Such revised exhibits shall, if and when approved by the Commission, be made a part of the license under the provisions of Article 2 hereof.

Article 4. The construction, operation, and maintenance of the project and any work incidental to additions or alterations shall be subject to the inspection and supervision of the Regional Engineer, Federal Energy Regulatory Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licenses shall cooperate fully with said representative and shall furnish him a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of the project and for any subsequent alterations to the project. Construction of the project works or any features or alteration thereof shall not be initiated until the program of inspection for the project works or any such feature thereof has been approved by said representative. The Licensee shall also furnish to said representative such further information as he may require concerning the construction, operation, and maintenance of the project, and of any alteration thereof, and shall notify him of the date upon which work will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licenses shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

Article 5. The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, nacessary or appropriate for the construction, maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license,

retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights of occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licenses may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

Article 6. The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may be mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

Article 7. The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

negligible: and (2) the project would reduce the use of fossil fuels, thereby conserving nonrenewable energy resources and reducing atmospheric pollution and global warming.

Section 10(a)(2) of the Act requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project.

Under Section 10(a)(2), federal and state agencies filed 25 plans that address various resources in Idaho. Of these, staff identified and reviewed 5 plans relevant to this license. 5/ They found no conflicts.

Based on the staff's review under sections 4(a) and 10(a), and their independent analysis, I find that the Mile 28 Hydroelectric Project, with the mitigative measures required by this license, is best adapted to a comprehensive plan for the Milner Gooding Canal.

#### Recommendations of Federal and State Fish and Wildlife Agencies

Section 10(j) of the Act requires the Commission to include license conditions, based on recommendations of federal and state fish and wildlife agencies, for the protection, mitigation of damage to, and enhancement of fish and wildlife. In Section G of the EA, the staff addresses the concerns of the fish and wildlife agencies, and this license includes conditions consistent with their recommendations.

#### Summary of Findings

The EA gives background information, analysis of impacts, support for related license articles, and the basis for a finding of no significant impact on the environment. Issuing this license is not a major federal action significantly affecting the quality of the human environment.

The project will be safe if constructed, operated, and maintained in accordance with the requirements of this license.

Based on the staff's analysis, I conclude that the proposed project would not conflict with any planned or authorized development, and is best adapted to comprehensive development of the vaterway for beneficial public uses.

#### The Director orders:

- (A) This license is issued to Contractor's Power Group, Inc., (licensee), for a period of 50 years, effective the first day of the month in which this order is issued, to construct, operate, and maintain the Mile 28 Hydroelectric Project. This license is subject to the terms and conditions of the Act, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the Act.
  - (B) The project consists of:
- (1) All lands, to the extent of the licensee's interests in those lands, enclosed by the project boundary shown by exhibit G:

#### Exhibit G- FERC No. 10552- Showing

1 11 Project Location and Boundary

(2) Project works consisting of: (a) a 210-foot-long, 10 to 15-foot-high concrete diversion/overflow spillway; (b) a 34-foot-wide, 55-foot-long concrete powerhouse containing two Kaplan turbine/generator unite with a total rated capacity of 1.5 MW; (c) a 1200-foot-long, 40-foot-wide (bottom width) tailrace channel; (d) a 3-mile-long, 35-kilovolt (kV) transmission line connecting to a local distribution line; and (d) appurtenant facilities.

The project works generally described above are more specifically shown and described by the following exhibits that also form a part of the application for license and that are designated and described as:

Exhibit A: Project Data

Exhibit F:

Application FERC No. Showing Praying No.

Exhibit F-1 10552-1 Elevation - Powerhouse/ Spillway (Upstream)

<sup>[1]</sup> Columbia River Basin fish and wildlife program, 1987, Northwest Power Planning Council; (2) Northwest conservation and electric power plan, 1986, Northwest Power Planning Council; (3) Idaho state water plan and policies, 1986, Idaho State Water Resources Board; (4) Idaho fisheries management plan, 1986, Idaho Department of Fish and Game; and (5) Idaho state comprehensive outdoor recreation plan, 1983, Idaho Department of Parks and Recreation.

DC-+

البيا ليما ليما ليما ليما ليما

#### UNITED STATES OF AMERICA FEDERAL EMERGY REGULATORY COMMISSION

Contractor's Power Group, Inc.

Project No. 10552-002 Idabo

#### ORDER ISSUING LICENSE (Minor Project) (Issued August 12, 1992)

Contractor's Power Group, Inc. (CPG or applicant) filed a license application 1/ under Part I of the Federal Power Act (Act) to construct, operate, and maintain the Hile 28 Hydroelectric Project, to be located on the Bureau of Reclamation's Milner-Gooding Canal, in Jerome County, Idaho.

The run-of-river project would consist of a diversion/overflow spiilway, a powerhouse containing two Kaplan turbine/generator units with a total rated capacity of 1.5 megawatts (NW), a tailrace channel, and a transmission line. The proposed project would produce an estimated 5.8 gigawatthours (GMh) annually and would cost about 91.7 million to construct. The applicant plans to sell the project's energy to the Idaho Power Company (IPCO).

Notice of the application has been published. A motion to intervene was filed by the Idaho Department of Fish and Game (DFG). DFG is concerned about the loss of fish from the Snake River through the canal and the further impact on fish habitat in the Snake river resulting from diversions beyond the irrigation season. DFG's concerns are addressed in the attached environmental assessment (FA) 2/, and appropriate mitigative measures are required by articles of this license. No agency objected to issuance of this license. Comments received from interested agencies and individuals have been fully considered in determining whether to issue this license.

On July 31, 1992, the National Park Service (NPS) reiterated earlier comments that, contrary to the findings of the Idaho State Historic Preservation Officer, construction of the project's diversion structure and powerhouse would have an adverse effect on the historical integrity of the Milner-Gooding Canal, a site eligible for listing in the National Register of Historic Places. 1/ The NPS recommended recording the affected portions of the canal according to the documentation standards of the Historic American Engineering Record (HAER), contained in the

Secretary of the Interior's Standards for Archeology and Historic Preservation, to mitigate impacts. Based on staff's further discussion 1/ with the NPS, I conclude that the affected portions of the canal should be documented according to HAER standards. Article 406 requires HAER documentation.

#### Comprehensive Development

Sections 4(e) and 10(a)(1) of the Act require the Commission to give equal consideration to all uses of the waterway on which a project is located. When the Commission reviews a proposed project, the recreational, fish and wildlife, and other nondevelopmental values of the involved waterway are considered equally with power and other developmental values. In determining whether, and under what conditions, a hydropower license should be issued, the Commission must weigh the various economic and environmental trade-offs involved in the decision.

In the EA, the staff did the following: (1) evaluated the effects of the construction and operation of the project on the environmental resources of the project area; (2) discussed measures that should be implemented to protect and mitigate damages to these resources; and (3) evaluated the need for power in the region.

The applicant proposes to excavate the canal only in the non-irrigation season, implement a restoration plan, use low-profile facilities with earth tone colors, and raptor-proof the project transmission line to prevent electrocution of raptors and other perching birds. The staff recommended in the EA that the applicant also implement procedures to avoid impacts to a historic habitation site from construction, operation, and maintenance of the project powerhouse and other associated project facilities. In addition, this order requires HAER documentation of the disturbed portions of the historic Milner-Gooding Canal. The staff estimates that, with the mitigative measures required in this order, the project has a net annual benefit of 4 mills/kilowatthour (kWh) and a rate of return of about 10 percent. The project would be marginally attractive financially.

After examining the environmental effects and economic consequences of the proposed project and the no-action alternative, I conclude that the proposed project, with the environmental measures required in this license, would give the public the greatest benefits from the waterway for the following reasons: (1) the environmental and cultural effects of the proposed project with the mitigation measures would be

<sup>1/</sup> Filed May 11, 1991; Revision filed September 26, 1991.

<sup>2/</sup> See section G, pp. 12 - 14, of EA (dated July 22, 1992).

<sup>1/ .</sup> National Park Service, Western Region, letter dated July 31, 1992. See also section G(5) of the EA.

<sup>4/</sup> Staff's personal communication, Ron Corbyn, Archwologist, National Park Service, Western Region, July 31, 1992.

fuels, thereby conserving nonrenewable energy resources and reducing atmospheric pollution and global warming.

#### 2. Comprehensive Plans

Section 10(a)(2) of the Act requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project. Under Section 10(a)(2), federal and state agencies filed 25 plans that address various resources in Idaho. Of these, staff identified 5 plans relevant to this project. 1/ No conflicts ware found.

Based on a review of agency and public comments filed in this proceeding and on our independent analysis, the Mile 28 Project is best adapted to a comprehensive plan for the Milner-Gooding Canal.

## L. CONSISTENCY OF FISH AND WILDLIFE RECONMENDATIONS WITH THE FEDERAL POWER ACT AND APPLICABLE LAW

Under the provisions of the Federal Power Act (Act), as amended by the Electric Consumers Protection Act of 1986, each hydroelectric license issued by the Commission shall include conditions based on recommendations provided by federal and state fish and wildlife agencies for the protection, mitigation, and enhancement of such resources affected by the project.

Section 10(j) of the Act states that whenever the Commission believes that any fish and wildlife agency recommendation is inconsistent with the purposes and the requirements of the Act or other applicable law, the Commission and the agency shall attempt to resolve any such inconsistency, given due weight to the recommendations, expertise, and statutory responsibilities of such agency.

In this EA, we address the concerns of the federal and state fish and wildlife agencies and make recommendations that are consistent with those filed by the federal and state fish and wildlife agencies.

#### M. CONCLUBION

1. X Finding of No Significant Impact. Approval of the recommended alternative [H(3)] would not constitute a major federal action significantly affecting the quality of the human environment; therefore, an environmental impact statement (EIS) will not be prepared.

Intent to Prepare an EIS. Approval of the recommended alternative  $\{H(3)\}$  would constitute a major federal action significantly affecting the quality of the human environment; therefore, an EIS will be prepared.

#### N. LITERATURE CITED

- Bureau of Reclamation. 1990. Letter from John W. Keys III. Regional Director, Pacific Northwest Region, Bureau of Reclamation, Boise, Idaho to John J. Straubhar, Consulting Engineer, Contractors Power Group. Narch 5, 1990.
- Contractors Power Group, Inc. 1991. Application for License for minor water power project 5 megawatts or less, Mile 28 Hydroelectric Project, FERC No. 10552. Twin Falls, Idaho. Hay 13, 1991; Revised September 26, 1991.
- . 1992. Response to November 26, 1991 request for additional information, Hile 28 Hydroelectric Project, FERC No. 10552. Twin Falls, Idaho. March 24, 1992.
- Electric Power Research Institute. 1987. Turbine related fish mortality: Review and evaluation of studies. Final Report EPRI AP-5480, November 1987.
- Federal Energy Regulatory Commission. 1990. Final Supplemental Environmental Impact Statement: Milner, Twin Falls, Auger Falls, and Star Falls Projects, Idaho. Washington, D.C., July 1990.
- Green, T. 1991. Letter from Dr. Thomas Green, Deputy State Historic Preservation Officer, Idaho State Historical Society, Boise, Idaho. October 23, 1991.
- . 1992. Letter from Dr. Thomas Green, Deputy State Historic Preservation Officer, Idaho State Historical Society, Boise, Idaho. February 18, 1992.
- Pepin-Donat, M. 1992. Letter from Margaret Pepin-Donat, Chief, Division of National Register Programs, National Park Service, San Francisco, California. April 14, 1992.

<sup>2/</sup> Columbia River Basin fish and wildlife program, 1987, Northwest Power Planning Council: Northwest conservation and electric power plan, 1986, Northwest Power Planning Council: Idaho state water plan and policies, 1986, Idaho State Water Resources Board: Idaho fisheries management plan, 1986, Idaho Department of Fish and Game: and Idaho state comprehensive outdoor recreation plan, 1983, Idaho Department of Parks and Recreation.

