STATUS REVIEW OF WILDLIFE MITIGATION
COLUMBIA BASIN HYDROELECTRIC PROJECTS

COLUMBIA RIVER MAINSTEM FACILITIES

Prepared by

Jack Howerton
Diana Hwang
Martha Jordan
Elaine Rybak
David Sill
Ronald Starkey
Gretchen Van Lom
Patrick Wright

of

U. S. FISH AND WILDLIFE SERVICE
WASHINGTON DEPARTMENT OF GAME

for

BONNEVILLE POWER ADMINISTRATION

Agreement No. CE-AI79-84BP12149(USFWS)
Agreement No. DE-AI79-84BP12914(WDG

in compliance with

COLUMBIA RIVER BASIN FISH AND WILDLIFE PROGRAM
NORTHWEST POWER PLANNING COUNCIL

FINAL REPORT

November 1984

TABLE OF CONTENTS

Preface

Format of Facility Reports

Facility Report	Section
Bonneville Lock and Dam Project	A
The Dalles Lock and Dam Project	B
John Day Lock and Dam Project	C
McNary Lock and Dam Project	D
Priest Rapids and Wanapum Dam Project	E
Rock Island Dam and Reservoir Project	F
Rocky Reach Dam and Reservoir Project	G
Wells Dam and Reservoir Project	H
Chief Joseph Dam and Reservoir Project	I
Grand Coulee Dam Project	J
Banks Lake Project	K
Lower Snake River Project	L

PREFACE

The Pacific Northwest Electric Power Planning and Conservation Act of 1980 (94 Stat. 2697) provided, in part, a new opportunity to examine and correct fish and wildlife problems associated with hydropower development in the region. In late 1982 the Power Planning Council, created in accordance with the Act, published a Fish and Wildlife Program containing measures to implement these mandated tasks. Bonneville Power Administration is actively implementing many of the Program measures.

This report was prepared for BPA in fulfillment of section 1004(b)(1) of the Program - to review the status of past, present, and proposed future wildlife planning and mitigation programs at existing hydroelectric projects in the Columbia River Basin. The project evaluations will form the basis for determining any needed remedial measures or additional project analysis.

Each hydropower facility report follows a standard format as described in the outline which follows this section. In some cases information or documents do not exist and sections may be omitted (such as for Appendix D - Mitigation Instruments).

FORMAT OF FACILITY REPORTS

- Project Name
- Project Operator
- Project Description
  - Location and Size
  - Authorized Purposes
  - Brief History of Construction and Operation
  - Other Pertinent Data
    - Water level fluctuation and timing
    - Land ownership
    - Indian rights
- Wildlife Species and Habitat Assesments
    - Pre-construction
    - Post-construction
- Wildlife Mitigation History
    - Mitigation requested or proposed
    - Mitigation agreements, requirements, or mandates
      - FPC/FERC requirements
      - FWCA proceedings
      - MOU's or other Agreements
    - Mitigation Implemented
- Current Wildlife Mitigation, Enhancement, and Protection
- Proposed Wildlife Mitigation, Enhancement, and Protection
    - Current studies and planning
    - Measures proposed
- References Cited
- Appendices
    - Study Team
    - Consultation/Coordination
      - Project Contact(s)
      - Summary
    - Comments
      - State agencies
      - Federal agencies
      - Tribes
      - Facility Operators
    - Mitigation Instruments

Status Report on Wildlife Mitigation

BONNEVILLE LOCK AND DAM PROJECT

Prepared by

U.S. Fish and Wildlife Service

for

Bonneville Power Administration

in response to the

Fish and Wildlife Program
Northwest Power Planning Council

1984

I. PROJECT NAME

Bonneville Lock and Dam

II. PROJECT OPERATOR

U.S. Army Corps of Engineers, Portland District (USACE)

III. PROJECT DESCRIPTION

(a) Location and Size

The Bonneville Lock and Dam is located on the Columbia River 42 miles east of Portland, Oregon, about 146 miles above the mouth of the river. The project provides for a dam, power plant, and navigation lock. The powerhouse extending across Bradford Slough to the Oregon shore accommodates 10 units, consisting of two units of 43,200 kilowatts each and eight units of 54,000 kilowatts each, totalling 518,400 kilowatts. The pool created by the dam covers 20,400 surface acres and provides a navigable channel with a depth of 15 feet and over between Bonneville and The Dalles Dams, a distance of 47 river miles (McKern, 1976; USACE, 1981).

(b) Authorized Purposes

The authorized purposes of the Bonneville Lock and Dam Project are generation of hydroelectric power and improvement of inland navigation on the Columbia River.

(c) Brief History

This project was authorized September 30, 1933 by the Federal Emergency Administration of Public Works and adopted by the River and Harbor Act of August 30, 1935 (Senate committee print, 73rd Congress, 2nd session) (USACE, 1935). On August 30, 1937, 2 years later, the 75th Congress authorized the completion, maintenance, and operation of the project under the direction of the Secretary of War and under the supervision of the Chief of Engineers. The Bonneville Project Act includes authorization for construction of additional power facilities as requested by the Bonneville Power Administration.

The first phase of construction of the Bonneville Lock and Dam Project was started in October 1933 and was completed in February 1943. The pool was filled in January 1938. The navigation lock and first two power units were placed in operation during 1938. The powerhouse with complete installation of 10 units was in operation in December 1943. Modification of powerhouse control

equipment started in March 1957 and was completed in September 1958 (Larson, 1984; USACE, 1967).

In response to flow regulations and peakings from upstream hydroelectric projects operating under conditions of Canadian storage and Pacific Northwest-Southwest Intertie, two modifications were undertaken at the Bonneville project. The modifications for a peaking project were undertaken to minimize adverse environmental effects under rapidly changing flow conditions from upstream dams. Construction of modification for peaking work commenced in September 1970 and was completed in 1978. The second modification initiated in the early 1970's provided for increased power installation by building a second powerhouse located on the Washington shore adjacent to the end of the existing spillway. Under authority of the Bonneville Project Act (August 20, 1937), a letter from Bonneville Power Administration to North Pacific Division dated January 21, 1965 requested construction of a second powerhouse. The new powerhouse contains eight units of 66,500 kilowatts each and two fish turbine generator units of 13,100 kilowatts each for a capacity of 558,200 kilowatts, bringing the total Bonneville capacity to 1,076.6 megawatts (USACE, 1981). Capability for full operation was attained in late 1982.

(d) Other Pertinent Data

(1) Water Level Fluctuation and Timing

The operating rules at Bonneville as shown in Table 1 became effective upon completion of project modifications for upstream peaking in December 1974 and will remain in effect following completion of Bonneville Second Powerhouse (USACE, 1974).

Exceptions to the flows presented in Table 1 are allowed to meet the varying operational requirements. To obtain a degree of flexibility to meet unusual operating requirements, the daily summer season fluctuation range may be increased to 6 feet. The maximum rate of change will still be 1.5 feet per hour. Application of this special rule will be limited to a total of 10 days in the summer season. In the interest of optimum control and management to provide increased power production in the event of very extreme winter weather conditions, the daily winter season fluctuation range may be increased to a maximum of 10 feet. The maximum rate of change will still be 3.0 feet per hour. Application of this special rule will be limited to a total of 18 days in the winter season. Normal operating rules will apply for river flows up to 376,000 cfs. During flood situations with forecast higher flows, the pool will be held below El. 75.5 (at

Table 1. Operating Rules for Flow Regulation at Bonneville Lock and Dam Project (USACE, 1974).

Pool Regulation

Maximum Pool[1]	El. 77.0 (At the dam)
Minimum Pool	El. 70.0 (At the dam)
Normal Operating Range[2]	El. 71.5 to 76.5 (At the dam)
Maximum Daily Fluctuation	4.0 feet (At Cascade Locks)

Normal Tailwater Regulation

SUMMER SEASON (April 1 to October 1)

Daily Fluctuation	Less than 4.0 feet (At the dam)
Maximum Rate of Change	1.5 feet per hour (At the dam) (Average of 3/10 inch per minute)
Minimum Flow[3]	80,000 cfs instantaneous 100,000 cfs daily average

WINTER SEASON (October 1 to April 1)

Daily Fluctuation	Less than 7.0 feet (At the dam)
Maximum Rate of Change	3.0 feet per hour (At the dam) (Average of 6/10 inch per minute)
Minimum Flow[3]	80,000 cfs instantaneous 100,000 cfs daily average

1/ Maximum pool El. 77.0 measured at the dam will not be exceeded except in the case of extreme flood.

2/ Normal Operating Range will be exceeded no more than 5 percent of days in a year.

3/ When the average weekly flow is less than 125,000 cfs, the minimum daily flow will not be less than 80 percent of the weekly average. Also, the minimum instantaneous flow will not be less than 70,000 cfs under these low flow conditions.

the dam) up to flows of 1,170,000 cfs. For flood discharges in excess of 1,170,000 cfs the spillway gates will be wide open and the pool will rise as flows continue to increase. (USACE, 1974)

(2) Land Ownership

The U.S. Army Corps of Engineers controls relatively little land around the Bonneville Pool in comparison to later Columbia River projects. As of 1976, the U.S. Army Corps of Engineers administered 9,569 acres of project land (McKern, 1976). Most of the shoreline areas around Bonneville Pool remain in private ownership; however, the U.S. Army Corps of Engineers purchased flowage easements for Bonneville Lock and Dam.

(3) Indian Rights

Deer, waterfowl, upland game birds, and rabbits were used for ceremonial, subsistence and other cultural purposes by Indian tribes of the area. Furbearers were harvested for economic gain.

Indian concerns noted in past reports relate to the loss of fisheries and not wildlife. While past reports acknowledge attempts to mitigate for the loss of Indian fishing sites, it appears that wildlife losses to Indian tribes were never identified and hence never mitigated in the original Federal-Tribal negotiations. No formal agreements have been found between the United States and the Indians to mitigate for any wildlife habitat losses and associated wildlife population levels resulting from the construction of Bonneville Lock and Dam.

An inquiry was made to the Yakima Indian Nation, the Confederated Tribes of Warm Springs and Umatilla Indian Reservations, and the Nez Pierce Tribe to identify any mandates, agreements, and concerns specifically related to the Bonneville Lock and Dam Project. The Yakima, Warm Springs, and Umatilla Indians responded citing the 1855 treaties which protected their right to hunt, as well as fish off reservation. The Confederated Tribes of the Umatilla Indian Reservation exercise this right subject only to restrictions imposed by the Tribal Fish and Wildlife Committee. Both the Yakima Nation and Umatilla Confederated Tribes have maintained that they have an inherent legal interest in the conservation and maintenance of optimum population levels of all wildlife resources in the mid-Columbia region. While no formal agreements have been found between the United States and the Indians to mitigate for wildlife habitat or wildlife population losses, the Tribes indicate that the omission of wildlife mitigation considerations from Federal-Tribal negotiations was inadvertant and representative of a prior lack of awareness of wildlife needs by all parties (APPENDIX C).

IV WILDLIFE SPECIES AND HABITAT ASSESSMENTS

(a) Pre-construction

No studies or assessments of wildlife or their habitats prior to the construction of the Bonneville Lock and Dam have been found. A few historical descriptions of the project area and general forms of wildlife present in the area are available in the journals of Lewis and Clark. Gabrielson and Jewett (1940) noted bird species in the project area. However, these descriptions were largely qualitative. No quantitative information appears to be available that reflects pre-construction wildlife population levels of the Bonneville Lock and Dam area.

The U.S. Army Corps of Engineers, Portland District has a set of 1930 aerial photographs from Oneonta to Miller Island. These photos represent the only continuous coverage available of the Bonneville Lock and Dam area to The Dalles Lock and Dam prior to any hydropower development on the Columbia River.

Peregrine falcons were not recorded as breeding in the project area by Gabrielson and Jewett (1940); however, Nelson (1969) indicated that historically, peregrine falcons were commonly found along the Columbia River from the coast to about The Dalles.

Gabrielson and Jewett (1940) noted that bald eagles occurred fairly regularly along the Columbia River. Scattered pairs of osprey were also noted along the Columbia River by Gabrielson and Jewett (1940).

(b) Post-construction

Construction of Bonneville Lock and Dam occurred in two major phases. The first phase included the initial construction of the dam and filling of the pool in the 1930's. The second major phase of construction included those activities related to the construction of the Second Powerhouse in the 1970's.

(1) Initial construction phase

The area of impact of the Bonneville Lock and Dam Project includes the area inundated by the dam and reservoir and the area immediately downstream from the dam which is affected by controlled releases from the dam. The Columbia River below Bonneville Dam is also influenced by tidal effects.

Impacts of the initial construction of the lock and dam included the inundation of flood plain, adjacent wetlands and riparian

areas. Fluctuating water levels have influenced the composition, recruitment, and succession of vegetation along bottomland and shoreline areas. Oak trees which are valuable to wildlife as a source of food and cover are not regenerating in the Sauvie Island area (and possibly in other areas) as a result of changing water levels caused by the dam (Newton, 1984). Prolonged higher water in the spring have raised the water table, precluding the establishment of young oak trees (Newton, 1984). Since no studies were specifically conducted to assess the impacts of the initial construction and operation of the lock and dam, the quantity and quality of habitats impacted have not been fully assessed.

Similarly, impacts to wildlife species were not quantitatively documented. Wildlife agencies have suspected that goose nesting and rearing areas were lost as a result of inundating the reservoir area. Wildlife agencies have also expressed concern over the destruction of goose and duck ground nests which can result from fluctuating water levels. Oregon Department of Fish and Wildlife personnel have observed broods of goslings caught in currents, swept against the dam, pulled under water and killed. It is estimated that at least 50 goslings per year are lost in this manner (Newton, 1984). The effects of project construction and operation on wildlife species can be speculated based upon what is known to have occurred on other mainstem Columbia River projects. However, verification and estimation of the magnitude of impacts cannot be made without further investigations beyond the scope of this study.

A number of wildlife studies and habitat assessments were conducted in later years. Effects on fish and wildlife habitat and production, related to the proposed modification for peaking, were discussed in "Bonneville Environmental Impact Study" (Stanford Research Institute, 1971). It was predicted in that study that the fluctuation of Lake Bonneville at higher elevations would have an adverse effect on anadromous fish runs, warmwater fish spawning grounds, and waterfowl nesting areas. Wetland areas were described by the Stanford Research Institute's study (1971).

In December 1975 the U.S. Army Corps of Engineers contracted with Washington Department of Game to determine the impacts of the Bonneville Second Powerhouse Project on selected fish and wildlife resources, and to develop a plan to lessen and/or replace projected losses (WDG, 1977). Washington Department of Game began field studies after some construction activities had already begun. Washington Department of Game determined the composition and quantity of plant communities to be impacted, conducted field studies to document wildlife impacts, and

determined baseline populations on lands best suited for wildlife compensation. These studies were conducted primarily in the area bounded by the Columbia River on the south, Bridge of the Gods on the east, Prindle on the west, and extended north from the Columbia River approximately 0.6 miles.

A summary of habitat types and fish and wildlife resources of the project area prior to construction of the Second Powerhouse was presented in the U.S. Fish and Wildlife Service's 1982 report entitled "Fish and Wildlife Impacts and Mitigation Recommendations, Bonneville Second Powerhouse, Skamania County, Washington." Another description of resources can be found in the publication North Bonneville Town Relocation EIS Supplement (USACE, 1976a). In other studies, Tabor (1976) and Tabor, et al. (1981) evaluated effects of power peaking, delineated broad vegetation types and land forms, provided descriptions of vegetation communities, inventoried major wildlife groups, and provided a preliminary assessment of the effects of peaking on wildlife and wildlife habitat.

The above studies provide a good information base on pre-Second Powerhouse and post-Second Powerhouse wildlife resources. For other sources of information on resources of the Columbia River, a bibliography entitled "Selected Administrative Reports and Publications Representative of Conservation Policy, Plans and Programs influencing the Management of the Wildlife Resource within the Columbia River Basin" and another entitled "Partial List of Reports, Publications and Studies Describing State and Federal Policy and Program, and the Abundance and Distribution of Wildlife and habitat within the Columbia River Basin" are available from the U.S. Army Corps of Engineers, Portland District.

The following summary was compiled from descriptions of the Bonneville Lock and Dam project area after initial construction and prior to construction of the Second Powerhouse.

Considerable industrial development exists on shorelands of the project. This development has occurred on privately owned lands, some of which has been constructed on lands presently encumbered by flowage easements acquired by the Government for use in connection with Bonneville Project. Lumber and wood products account for the major industry. Agricultural crops also contribute significantly to the economy of the Gorge. Residential areas dot the shoreline at several locations but are primarily concentrated within established communities (USACE, 1974).

Flood plain associated wildlife habitat is extremely limited in the Bonneville Lock and Dam project area. The steep cliffs of the Columbia Gorge, inundation by the Bonneville Pool, and rail-

road and highway rights-of-way limit riparian development along the pool. Much of the shoreline is composed of either rock cliffs, rock riprap, sand and gravel, or is in human use. Less than 1 percent of 114.2 miles of shoreline is marsh (Tabor, 1976).

The Washington Department of Game (1977) noted 155 species of birds and 29 species of mammals (excluding bats) in the study area that extended from Prindle to the Bridge of the Gods on the Washington side. Tabor (1976) noted 104 species of birds below Bonneville Pool and 94 species above the dam. Estimates of total numbers of birds per habitat type were given by Tabor (1976). Tabor (1976) identified 16 species of small mammals below the dam and 14 species above the dam. In addition, he observed 3 species of bats below the dam and 10 species of bats above the dam.

Bonneville Pool lies within one of the principal migratory waterfowl lanes of the Pacific flyway. Waterfowl use the open water of the impoundment as a resting area, and some nesting occurs along the shores and on island habitat. Major areas of waterfowl concentration during the fall and winter downstream from Bonneville Pool include Baker Bay (RM 3 to 7), Lewis and Clark NWR (RM 19 to 35), Columbia White-tailed Deer NWR (RM 34 to 38), Deer Island (RM 77 to 82), Ridgefield NWR (RM 88 to 93), Sauvie Island WMA (RM 87 to 99), Smith and Bybee Lakes (RM 103 to 106), Government Island (RM 113 to 117), Steigerwald Lake area (RM 124 to 128), and Franz and Arthur Lakes area (RM 137 to 140) (Tabor, 1976; Newton, 1984). The Tanner Creek fish bypass (RM 145), also known as Mitchell Ditch, provides a stopover for migrating ducks and geese (USACE, 1974).

Tabor (1976) observed winter waterfowl use of Bonneville Pool to be low. The maximum number of waterfowl observed in the Bonneville Pool during Tabor's winter inventory was 495 in January 1975. Of this figure, 250 were coots which utilized Government Cove. Small flocks of wintering geese have been observed along the Washington and Oregon shorelines. Tabor (1976) attributed low waterfowl use in the Bonneville Pool area to a negligible amount of cropland (3 percent) and virtually no marshland (0.1 percent) to provide a food source.

Oregon Department of Fish and Wildlife surveys indicated higher numbers of waterfowl in the Bonneville Pool than reported by Tabor. Oregon Department of Fish and Wildlife personnel have observed 1,500 birds in the Bonneville Pool with numbers up to 2,000 to 3,000 birds at peak migration times in recent years (Torland, 1984). The most common species include coot, Canada geese, mallard, and American wigeon. The reservoir is open to

waterfowl hunting; however, since upland feeding areas for waterfowl are nearly nonexistent, little waterfowl hunting actually occurs (USACE, 1974).

Duck nesting habitat appears to be very marginal in the Bonneville Pool area. Tabor (1976) attributed the low duck nesting activity to the lack of adequate shoreline habitat which for the most part is either rock cliffs, rock riprap, sand, gravel, or in human use.

Ball, et al. (1981) estimated the average population of breeding Canada geese in Bonneville Pool to be 94 pairs and below Bonneville Dam to be 50 pairs. Bonneville Pool had an average of at least 1.6 pairs per mile. Census figures below Bonneville Dam were still incomplete, but showed at least 1 pair per 3 river miles (Ball, et al., 1981). Areas of significant goose use were noted at Franz and Arthur Lakes (RM 137 to 140), Hamilton Island (RM 144), Pierce Ranch (RM 142 to 143), Hamilton Slough (143), Viento Island (RM 160), Wells Island (RM 167), and Memaloose Island (RM 179) (Torland, 1984; USACE, 1976; WDG, 1977).

During a 1975 brood survey flight, Tabor (1976) found 29 goose broods below Bonneville Dam. Tabor noted six broods on Dibblee Island (RM 62 to 64), 6 broods near the eastern end of Government Island (RM 116), 8 broods near Arthur Lake (RM 138 to 139), and 6 broods on Pierce Island (RM 142). Tabor noted 23 goose broods in Government Cove (RM 153) representing 97 goslings and 47 adult geese in 1975 and 21 broods representing 99 goslings and 44 adult geese in 1974. Brood survey data is available from Oregon Department of Fish and Wildlife for 1983 and 1984 (Torland, 1984).

During a nest and brood survey in 1975, Tabor (1976) found 59 goose nests on islands in Bonneville Pool; 49 of these nests were considered successful. Thirty-six goose nests were found on islands between Bonneville Dam (RM 146) and RM 156. Tabor (1976) noted nine nests on Viento Island (RM 160) and six nests on Well's Island (RM 167). Oregon Department of Fish and Wildlife found at least 20 nests on Wells Island in 1984 (Torland, 1984). The Bonneville area was noted as having some of the more varied types of nesting habitat utilized by Canada geese ranging from areas void of vegetation to some areas that were grown to dense alder and Douglas fir (Tabor, 1976). Bonneville Pool has relatively few suitable nesting islands (Ball, et al., 1981). The lack of islands in the Bonneville Pool area is considered a major drawback to goose nesting (Torland, 1984). McKern (1976) stated only 9.5 miles of island shoreland are available within Bonneville Pool. A small breeding population of the Great Basin

Canada geese nest on Bradford Island (RM 146) (USACE, 1974). Resident Canada geese have been noted to nest on Pierce Ranch (RM 142 to 143) and on Hamilton (RM 144), Pierce (RM 142) and Ives Islands (RM 143) (USACE, 1976a). During the years 1981 through 1984, the U.S. Army Corps of Engineers has noted 52, 58, 77, and 95 Canada goose nests respectively on islands in the Bonneville Pool area between the dam and Wind River (Dorsey, 1984; Zarneckee, 1984).

Between 24 and 40 geese were observed throughout the winter on Memaloose Island (RM 179) (Tabor, 1976). Small flocks of 20 to 40 geese occurred infrequently along the Washington and Oregon shorelines between RM 167 and RM 169. Ducks use the western end of Wells Island (RM 167) at low water levels. (Tabor, 1976)

Ruffed grouse, ring-necked pheasant, California quail, turkey, mourning dove, band-tailed pigeon, and snipe are known to occur in suitable habitat adjacent to the Bonneville Pool (Tabor, 1976).

Beaver, river otter, mink, muskrat, and nutria were found downstream from Bonneville Dam (Tabor, 1976). Furbearer densities were relatively higher below Bonneville Pool than any other segment of the Columbia River below McNary Dam (Tabor, 1976). Tabor noted otter to be most abundant between RM 125 and RM 133. Beaver use was most intense in sloughs, ponds, and other areas protected from tidal action. Beaver harvest below Bonneville Pool was 465 animals in 1973-74 and 464 in 1974-75 trapping seasons (Tabor, 1976).

Beaver, river otter, mink, and muskrat were found to occur in Bonneville Pool (Tabor, 1976). Tabor (1976) noted 23 colonies of beaver (70 to 100 individuals) primarily in protected areas within Bonneville Pool in fall 1974. Mink sign was more abundant in Bonneville Pool than in other segments of the Columbia River below McNary Dam.

Black-tailed deer and cougar were the only species of big game mammals recorded in the Bonneville Pool area by Tabor (1976). Black bear also use the area (Torland, 1984). Deer use was noted to be relatively low, but occurred at embayments, south of I-84N on the Oregon shore and north of Highway 830 on the Washington shore (Tabor, 1976). Eight mountain goats were transplanted to the Tanner Butte area above the Bonneville Pool between 1969 and 1971 (OSGC, 1972). Success of the transplants is doubtful.

Opossum, porcupine, raccoon, coyote, bobcat, striped skunk, and spotted skunk occur in the Bonneville Pool area. Tabor (1976)

found no evidence to indicate the presence of red fox, gray fox, or badger in the Bonneville Pool area. However, red fox have been seen in the pool area by Oregon Department of Fish and Wildlife personnel (Torland, 1984).

The northern bald eagle is listed as a Federal and State threatened species. The osprey is on the Blue List which lists species whose populations the National Audubon Society have noted are declining. Ospreys are rare to uncommon along pooled sections of the Columbia River (Tabor, 1976). Ospreys are becoming more common and all nests have not been located (Torland, 1984). Northern bald eagle and osprey nest within the Bonneville Pool area. Osprey and eagle roost in large cottonwood trees along sloughs and Hamilton Creek and feed on fish (USACE, 1976). Hamilton Slough (RM 143) also provides valuable feeding habitat for eagle and osprey (USFWS, 1982). Osprey nests have been noted on a navigation aid and at Memaloose Park (RM 177 to 179) (D. Lenhart, 1984; Tabor, 1976). Osprey nests have also been reported in Hood River County and Wasco County. However, the nest reported for Hood River County was destroyed in the winter of 1973 (Tabor, 1976).

The peregrine falcon is listed as a Federal and State endangered species in Oregon and Washington. Nelson (1969) indicated that historically this subspecies was commonly found along the Columbia River from the coast upstream to about The Dalles, but had declined drastically in numbers as recently as 1964. It is reported that peregrines have nested on Beacon Rock (USACE, 1976).

Columbia cress (a federal candidate plant species) and two sensitive Artemisia plant species have been noted on Hamilton Island, Pierce Ranch, Pierce Island, and Ives Island. The plants' occurrence on Pierce and Ives Islands has precluded the consideration of these islands as potential sites for goose habitat mitigation by the U.S. Army Corps of Engineers and resource agencies.

Great blue heron rookeries are noted on Pierce Island and Wells Island (Tabor, 1976; J. Torland, 1984).

(2) Second Powerhouse Construction Phase

The Second Powerhouse Project necessitated the relocation of the town of North Bonneville in Skamania County, Washington and the excavation and deposition of about 18 million cubic yards of soil and rock. The following is a summary of Second Powerhouse impacts on wildlife resources.

The Columbia River bottomland, where the new town of North Bonneville and the transportation routes were relocated, was an area of abundant wildlife populations and composed of a diverse mosaic of riparian, pasture, shrub, deciduous and coniferous forest and wetland communities (WDG, 1977). Only a small area of upland habitat was impacted by the town relocation. The majority of town development and spoils deposition affected pastureland and riparian areas which are relatively scarce in the area. A 1976 Environmental Impact Statement on the relocation of North Bonneville states that approximately 800 acres was estimated to be the total area of wildlife habitat to be affected by town relocation and spoil disposal (USACE, 1976a). The Washington Department of Game (1977) estimated that 998 acres of fish and wildlife habitat were impacted by the Second Powerhouse project and town relocation, resulting in a loss of 8,798,036 animal-unit-years for the life of the project.

Impacts predicted from site preparation for the town of North Bonneville included 20 acres of riverbank vegetation, including black cottonwood, willow, red alder, birch, and some aquatic plants at Garrison Rapids. Site preparation for the new town also resulted in the clearing of approximately 140 acres of vegetation (including black cottonwood, Garry oak, Douglas fir, cottonwood-bigleaf maple communities, and grass and shrub communities on the Lewis and Clark Ranch and Pierce Ranch. A shift in faunal composition to more urban adapted types was expected (USACE, 1976a).

Impacts of the Second Powerhouse included the alteration of vegetation at spoil disposal areas. Hamilton Island and Bradford Island were primarily affected by fill activity. Several estimates of acreage affected by spoil disposal are available. A 1971 Environmental Impact Statement on the Second Powerhouse states that "400 to 600 acres having scattered tree growth of varying size, a residence with outbuildings, wetlands, farmland, and river shoreland" were affected by spoil disposal (USACE, 1971). A 1976 report states that "approximately 300 to 400 acres of land, primarily on Hamilton Island and east of the new town center, would be stripped of vegetation and covered with second powerhouse excavation materials" with an estimated "additional 60 to 80 acres of old field grasses and shrubs, interspersed with scattered deciduous woods" to be disturbed by construction in the new town center area (USACE, 1976a).

Construction of the Second Powerhouse also impacted portions of Bradford Island. The island was reduced in size by excavation for the tailrace of the Second Powerhouse; and the western tip of the island was utilized for disposal of some excavated material. The western portion of the island is presently rock and gravel

with some Scotch broom. While industrial development has claimed much of the habitat on Bradford Island, the western half of the island does provide for some small mammals and birds. The eastern tip (approximately 15 acres) is relatively undisturbed. This tract of land provides suitable habitat for a number of resident and nonresident wildlife species. The lowland marsh is a young ecosystem providing resting and nesting areas for waterfowl and shore birds. Bradford Island is used as a resting and nesting area by Canada geese (USACE, 1974; Ellifrit, 1980; Zarneckee, 1980).

Development at proposed "optimum town" lands would result in the loss of additional wildlife habitat at Hamilton Island. "Optimum town" concerns North Bonneville's request that the U.S. Army Corps of Engineers transfer additional project lands to the town for eventual expansion and/or economic development. An accurate up-to-date acreage figure for wildlife habitat mitigation needs if "optimum town" plans are implemented is not available. The U.S. Army Corps of Enginners and the town of North Bonneville have been in litigation over this issue which remains unresolved as of May 1984.

V WILDLIFE MITIGATION HISTORY

(a) Mitigation Requested or Proposed

(1) Initial Construction Phase

Initial project construction of the Bonneville Lock and Dam Project predated the Fish and Wildlife Coordination Act. Impact assessments and mitigation recommendations were not written for the initial construction phase of Bonneville Lock and Dam, and consultation and coordination with wildlife agencies during this initial phase were nonexistent.

(2) Second Powerhouse Construction Phase

In December of 1975, the U.S. Army Corps of Engineers contracted with Washington Department of Game to evaluate the impacts of the Bonneville Second Powerhouse Project. The project included both the new powerhouse and the relocation of the town of North Bonneville. Washington Department of Game submitted a final report on October 31, 1977 and suggested a number of compensation land alternatives. The report proposed a plan for total compensation of Second Powerhouse Project impacts and recommended that: 1) compensation land be located in Columbia River bottomlands below Bonneville Dam; 2) numerous habitat improvement measures be implemented which included stabilization of water levels, cattle

restrictions, carp control, and plantings for wildlife; 3) off-project lands be acquired; and, 4) funds to implement mitigation plans targeted at waterfowl enhancement, especially Canada geese, be provided. The Washington Department of Game identified the Steigerwald Lake area as a possible compensation area in a supplement to its 1977 report. The Steigerwald Lake area is located between Columbia River mile 124 and 128, near the town of Washougal. It is a diked flood plain area of approximately 1,398 acres, bounded by the Columbia River and Washington's State Route 14. The Washington Department of Game provided the U.S. Army Corps of Engineers with three possible wildlife compensation plans in a second supplement to its 1977 report. As evidenced by the recommendation of habitat improvements at the Steigerwald Lake area in each of the three plans, the Washington Department of Game believed the Steigerwald Lake area should be included in any compensation plan for the Second Powerhouse Project.

In May of 1980, the U.S. Army Corps of Engineers rejected Washington Department of Game's compensation proposal based upon cost. A revised mitigation plan was developed based upon maximizing wildlife production on project lands identified by the U.S. Army Corps of Engineers as available for wildlife. In a letter dated October 15, 1980, Washington Department of Game presented a revised proposal for compensating fish and wildlife losses caused by construction of the Bonneville Second Powerhouse Project (WDG, 1977; USFWS, 1982). The revised proposal recommended: 1) the refilling of Bass Lake; 2) the revegetation of Hamilton Island; 3) the development of 100 acres of goose brooding and feeding areas (at Pierce and Ives Islands); and, 4) the acquisition and development of 133 acres at the Pierce Ranch, and 743 acres at and to the west of the Franz and Arthur Lakes area (WDG, 1980).

At the U.S. Army Corps of Engineers' request, the U.S. Fish and Wildlife Service initiated an effort in December 1980 to develop coordinated mitigation recommendations for Second Powerhouse project impacts on wildlife and resident fish. A Habitat Evaluation Team of interagency biologists was formed early in 1981. A preliminary draft of wildlife mitigation requirements for the Hamilton Island disposal area was submitted by the team on December 3, 1981. The purpose of this draft was to provide habitat development input that would be compatible with the overall landscaping objectives of its Second Powerhouse Design Memorandum No. 22. A draft of this report, titled "Fish and Wildlife Mitigation Plan, Bonneville Second Powerhouse, Skamania County, Washington" was submitted to the U.S. Army Corps of Engineers on May 14, 1982. The final report was produced in August of 1982 (FWS, 1982).

In developing the 1982 report, U.S. Fish and Wildlife Service and other evaluation team members (Washington Department of Game and the U.S. Army Corps of Engineers) sought to identify mitigation actions which would make maximum use of project lands to minimize the need and expense of land acquisition. Project lands identified as having significant mitigation potential were Hamilton Island and Bass Lake. The Franz and Arthur Lakes area was judged to have the highest potential mitigation value of the off-project lands investigated. The identified site is approximately 385 acres in size.

The 1982 report outlined detailed conceptual mitigation plans for Franz and Arthur Lakes, Bass Lake, and Hamilton Island. Because these actions were still not sufficient to fully offset the impacts of the Second Powerhouse Project, the creation of additional wildlife habitat from material excavated from the proposed Navigation Lock Project was also recommended. It was anticipated that this material could be used to expand Pierce and/or Ives Islands to create additional wildlife habitat. These mitigation plans included numerous habitat improvement measures, including stabilization of water levels using dikes, levees, and other water control structures; wildlife habitat plantings; fencing; creation of ponds and marsh habitats; and placement of nesting structures. Collectively, the recommendations centered on increasing vegetational diversity, enhancing waterfowl nesting habitat, rehabilitating approximately 70 percent of the wading bird and aquatic furbearer habitat lost and improving a warmwater fishery for public use.

In a letter dated March 20, 1984, the U.S. Fish and Wildlife Service requested an update from the U.S. Army Corps of Engineers regarding the status of the previously recommended mitigation measures. The letter documented the fact that habitat development on Pierce and Ives Islands with spoil material from the proposed Navigation Lock Project had been rejected because a candidate plant species being considered for listing as an endangered species and two sensitive plant species are located on the islands. This part of the mitigation plan was also rejected because of the desire to maintain the islands in a natural state. In addition, it appeared that landscaping plans being developed for Hamilton Island would not allow for the full development of the wildlife mitigation potential of the island. Because it would not be possible to offset the impacts of the Second Powerhouse Project as recommended in the 1982 report, the U.S. Fish and Wildlife Service suggested that consideration again be given to the acquisition and development of the Steigerwald Lake wetland area to meet the mitigation needs for the Second Powerhouse Project.

In a separate letter report dated June 7, 1984, the U.S. Fish and Wildlife Service again recommended that as much of the wildlife mitigation need as possible be met on Hamilton Island. The island was identified in the 1982 U.S. Fish and Wildlife Service report as having the potential to meet over half of this need, provided that "optimum town" plans for the town of North Bonneville do not significantly reduce the amount of lands left for mitigation purposes. The letter identified at least two possible means of fully compensating for the Second Powerhouse Project: 1) full development of Hamilton Island and acquisition and development of 682 acres of land in the Steigerwald Lake area (the Trust for Public Lands has recently negotiated an option to purchase this property for wildlife mitigation); or, 2) partial development of Hamilton Island, and acquisition and development of both the Franz and Arthur Lakes area and the Steigerwald Lake property. Full development of Hamilton Island and the Franz and Arthur Lakes area would only partially compensate for Second Powerhouse impacts. The June 7, 1984 letter also concluded that because limited mitigation opportunities are available in the project area, all available mitigation options would need to be pursued if hydropower impacts on wildlife from both the original and second powerhouses are to be mitigated in the Bonneville project area.

(b) Mitigation Mandates, Requirements, or Agreements

(1) FPC/FERC Requirements

As a federal project, the Federal Power Commission does not have the responsibility for issuing permits, licenses and license exemption grants under the Federal Water Power Act for Bonneville Lock and Dam.

(2) Fish and Wildlife Coordination Act Proceedings

(i) Initial Construction Phase

No mitigation mandates, requirements, nor agreements have been found which relate to impacts associated with the initial construction of the Bonneville Lock and Dam Project in the 1930's. Authorization for the Bonneville Lock and Dam Project predates the Fish and Wildlife Coordination Act. Impact and mitigation reports were not written for the initial construction of Bonneville Lock and Dam, and consultation and coordination with wildlife agencies during this initial phase were non-existent.

(ii) Second Powerhouse construction phase

The Fish and Wildlife Coordination Act (FWCA) of 1934, as amended, requires all hydroelectric project developers to consult

with the U.S. Fish and Wildlife Service and state conservation agencies prior to project development "with a view to preventing loss of and damage to wildlife resources." Federal development projects were required to contain adequate provision for conservation, maintenance, and management of wildlife resources consistent with primary project purposes. This Act was named the Fish and Wildlife Coordination Act of August 12, 1958, at which time an amendment was added stating that "wildlife conservation shall receive equal consideration and be coordinated with other features of water-resource development programs." Land acquisition, project modifications, and/or project operation modifications were to be based on impact and mitigation reports by wildlife agencies, and costs for these measures were to be made an integral part of project costs.

The provisions of the FWCA have not been implemented in all phases of the Bonneville Lock and Dam Project. The U.S. Army Corps of Engineers has traditionally maintained that the Bonneville Lock and Dam Project is not subject to compliance with the FWCA. They have also maintained that a Fish and Wildlife Coordination Act report was not needed for the Bonneville Second Powerhouse Project because the Second Powerhouse was included under the original authorization for Bonneville Dam. However, coordination between the U.S. Army Corps of Engineers, Washington Department of Game, and U.S. Fish and Wildlife Service has been documented since 1975, the result of which were two reports addressing wildlife resources and impacts associated with construction of the Second Powerhouse. The two documents were Washington Department of Game's 1977 report and U.S. Fish and Wildlife Service's 1982 report. These reports are discussed in IV. WILDLIFE SPECIES AND HABITAT ASSESSMENTS.

In a letter dated July 15, 1983, to the U.S. Fish and Wildlife Service and the Washington Department of Game, the U.S. Army Corps of Engineers agreed to implement some mitigation measures on project lands, in particular at Bass Lake and on Hamilton Island. However, detailed revegetation plans were still being worked on as of June 1984. Coordination between agencies concerning Second Powerhouse impacts is still occurring; however, U.S. Army Corps of Engineers implementation of wildlife habitat plantings on Hamilton Island to the extent recommended by wildlife agencies appears unlikely.

(3) MOUs or Other Agreements

No Memorandums of Understanding have been found related to the Bonneville Lock and Dam project (Howerton, 1984; Lenhart, 1984; Stegmeier, 1984; Webster, 1984; Van Lom, 1984). An "interim-use

license" granted by U.S. Army Corps of Engineers allows Oregon Department of Fish and Wildlife to develop and manage 1,324 acres at Crates Point (RM 188) "for fish and wildlife conservation" for 25 years beginning October 1980 (APPENDIX D).

(c) Mitigation Implemented

No mitigation has been implemented to date to offset losses to wildlife populations and their habitats as a result of the initial construction and operation of Bonneville Lock and Dam.

Very little mitigation has been implemented to date to offset losses to wildlife populations and their habitats as a result of construction of the Second Powerhouse. Oregon Department of Fish and Wildlife is managing 132 acres at Crates Point for multiple use including fishing, upland game and waterfowl hunting, waterfowl nesting, and native trails. Habitat management includes a burning program and shrub and willow plantings. While wildlife conservation activities are occurring as a result of the Second powerhouse, Oregon Department of Fish and Wildlife has supplied the monies and funds for the development and maintenance of fish and wildlife habitat and programs. The U.S. Army Corps of Engineers began some revegetation measures for Canada geese on Bradford and Hamilton Islands in 1983, but final landscaping and mitigation plans have not been completed. Bass Lake was refilled in 1983. Mitigation of wildlife resources associated with the Second Powerhouse on off-project lands have not been pursued because efforts have been hampered by the inability of the U.S. Army Corps of Engineers to acquire off-project lands, the small amount of available project lands, and funding. The current involvement with wildlife mitigation for the Bonneville Lock and Dam Project is limited to the small amount of project land available for such purposes (USACE, 1974).

VI CURRENT STUDIES AND PLANNING

Bonneville Second Powerhouse - The U.S. Army Corps of Engineers is responsible for the ground cover that has been established on Hamilton Island, and they have been actively developing sites for public use, such as a boat ramp, access road, and planting of ornamentals. Also, they intend to revegetate parts of Bradford Island as part of a mitigation plan for Second Powerhouse impacts. However, landscaping plans for the major portion of Hamilton Island and Bradford Island have not been finalized. In addition, the U.S. Army Corps of Engineers is developing plans to restore Bass Lake. Whether or not these mitigation plans will resemble those developed and recommended by the wildlife agencies is not known. Mitigation planning involving Franz and Arthur Lakes and the Steigerwald Lakes area is unlikely to proceed

unless one of the government agencies is able to purchase the needed mitigation lands (Dzimbal, 1984; Ellifrit, 1984; Garst, 1984; Howerton, 1984; Melland, 1984; Zarnecky, 1984).

Bonneville Navigation Lock - The U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and Oregon Department of Fish and Wildlife have been involved in coordination on the proposed Bonneville Navigation Lock Project. The U.S. Fish and Wildlife Service provided a Fish and Wildlife Coordination Act Report, dated January 7, 1977, on the effects of the as yet unauthorized construction activities associated with Bonneville Navigation Lock. The report contains a general discussion of wildlife resources, partial wildlife lists, and a set of mitigation recommendations. Current planning centers on finding adequate and suitable areas for the disposition of 4.5 million cubic yards of excess materials, identifying impacts at proposed disposal areas, and developing a mitigation plan for project impacts. In mid-1983 plans for the creation of additional wildlife habitat on Pierce and Ives Islands with disposal material from the Navigation Lock Project were dropped with the discovery of several rare plants on Pierce and Ives Islands.

Columbia Basin Waterfowl Redistribution Plan - This is a cooperative effort involving U.S. Fish and Wildlife Service, Oregon Department of Fish and Wildlife, and Washington Department of Game. It involves an attempt to redistribute wintering waterfowl which are concentrating in the Umatilla Basin area and move some of them to the North Columbia Basin and southeast Idaho.

VII REFERENCES CITED

Ball, I.J. et al. 1981. Ecology and Management of the Western Canada Goose in Washington. Washington Department of Game. Biological Bulletin No. 17. 67p.

Dorsey, Geoff. 1984. Personal Communication. Portland District, U.S. Army Corps of Engineers, Portland, Oregon.

Dzimbal, Ken. 1984. Personal Communication. Portland District, U.S. Army Corps of Engineers, Portland, Oregon.

Ellifrit, Nancy. 1984. Personal Communication. Ecological Services, U.S. Fish and Wildlife Service, Portland, Oregon.

Gabrielson, I.N. and S.G. Jewett. 1940. Birds of Oregon. Oregon State College. Corvallis, Oregon. 650p.

Garst, Ronald. 1984. Personal Communication. Ecological Services, U.S. Fish and Wildlife Service, Portland, Oregon.

Hansen, H.A. and W.H. Oliver. 1951. The Status of Resident Canada Geese in South-Central Washington, Spring 1950. The Murrelett.

Howerton, Jack. 1984. Personal Communication. Washington Department of Game, Olympia, Washington.

Larson, Kim. 1984. Personal Communication. Portland District, U.S. Army Corps of Engineers, Portland, Oregon.

Lenhart, Dave. 1984. Personal Communication. U.S. Fish and Wildlife Service, Portland, Oregon.

McKern, J.L. 1976. Inventory of Riparian Habitats and Associated Wildlife Along the Columbia and Snake Rivers. Summary Report. Volume I. U.S. Army Corps of Engineers, North Pacific Division. 100p.

Melland, Jack. 1984. Personal Communication. Oregon Department of Fish and Wildlife, LaGrande, Oregon.

Nelson, M.W. 1969. The Status of the Peregrine Falcon in the Northwest. pp 61-72. In Joseph P. Hickey (Ed.), Peregrine Falcon Populations: their Biology and Decline. Univ. of Wisconsin Press, Madison, Wis.

Newton, Frank. 1984. Personal Communication. Oregon Department of Fish and Wildlife, Portland, Oregon.

Oregon State Game Commission. 1972. Annual Report. Game Division. Portland, Oregon. 180p.

Stanford Research Institute. 1971. Bonneville Environmental Impact Study.SRI Project URU-8984. Menlo Park, CA. 194p. Contract Report prepared for U.S. Army Corps of Engineers District, Portland.

Stegmeier, Merritt. 1984. Personal Communication. Portland District, U.S. Army Corps of Engineers, Portland, Oregon.

Tabor, J.E. 1976. Inventory of Riparian Habitats and Associated Wildlife Along the Columbia and Snake Rivers. Volumes IIA and B. U.S. Army Corps of Engineers, North Pacific Division. 861p.

Tabor, J.E. et al. 1981. Study of Impacts of Project Modifications and River Regulation on Riparian Habitats and Associated Wildlife Along the Columbia River. U.S. Army Corps of Engineers, North Pacific Division.

Torland, Jim. 1984. Personal Communication. Oregon Department of Fish and Wildlife, The Dalles, Oregon.

U.S. Army Corps of Engineers, Portland District. 1935. F.Y. 1935 Annual Report of the Chief of Engineers on Civil Works Activities. Extract Report.

U.S. Army Corps of Engineers, Portland District. 1967. F.Y. 1967 Annual Report of the Chief of Engineers on Civil Works Activities. Extract Report.

U.S. Army Corps of Engineers, Portland District. 1971. Second Powerhouse Bonneville Lock and Dam, Columbia River, Oregon and Washington. Final Environmental Statement. Portland, Oregon.

U.S. Army Corps of Engineers, Portland District. 1974. Bonneville Master Plan. Design Memorandum No. 1B. Columbia River Basin Oregon-Washington Bonneville Lock and Dam.

U.S. Army Corps of Engineers, Portland District. 1976a. North Bonneville, Washington Town Relocation. Final EIS Supplement #1. Second Powerhouse Bonneville Lock and Dam, Columbia River, Oregon and Washington.

U.S. Army Corps of Engineers, Portland District. 1976b. Improvements to Navigation at Bonneville Lock and Dam. Draft Environmental Statement.Portland, Oregon.

U.S. Army Corps of Engineers, Portland District. 1981. F.Y. 1981 Annual Report of the Chief of Engineers on Civil Works Activities. Extract Report. 55p.

U.S. Fish and Wildlife Service. 1982. Fish and Wildlife Impacts and Mitigation Recommendations, Bonneville Second Powerhouse, Skamania County, Washington. 35p.

Van Lom, Gretchen. 1984. Personal Communication. Washington Department of Game, Yakima, Washington.

Washington Department of Game. 1977. Mitigation and Compensation of Game Fish and Wildlife Impacted by Bonneville Second Powerhouse Construction and Related Relocations. Phase II Final Report, Supplements I and II. 76p.

Washington Department of Game. 1980. Proposal for Wildlife Mitigation, Bonneville Second Powerhouse Project, Olympia, Washington. 9p.

Webster, Dick. 1984. Personal Communication. Portland District, U.S Army Corps of Engineers, Portland, Oregon.

Zarneckee, Carolyn. 1984. Personal Communication. Portland District, U.S. Army Corps of Engineers, Portland, Oregon.

APPENDIX A: STUDY TEAM

U.S. Fish and Wildlife Service

Patrick Wright
Diana Bwang

Washington Department of Game
Jack Howerton
Don Kraege

Oregon Department of Fish and Wildlife
Dan Carleson
Karen Bedrossian

APPENDIX B: CONSULTATION/COORDINATION

Project Contacts

Confederated Tribes

Howard G. Arnett	Warm Springs Tribe
William P. Bradley	Yakima Indian Nation
Jerry Lauer	Bureau of Indian Affairs
Terry Luther	Warm Springs Natural Resources Dept.
Bob Strom	Nez Pierce Tribe

Oregon Department of Fish and Wildlife
- Karen Bedrossian
- Dan Carleson
- Gene Herb
- Jack Melland
- Frank Newton
- Jim Torland

U.S. Army Corps of Engineers
- Geoff Dorsey
- Dick Duncan
- Ken Dzimbal
- Gail Gardner
- Kim Larson
- Merritt Stegmeier
- Dick Webster
- Bob Willis
- Carolyn Zarneckee

U.S. Fish and Wildlife Service
- Nancy Ellifrit
- Ron Garst
- Dick Giger
- Dave Lenhart
- E. Charles Meslow
- Dave Sill
- Carey Smith

Washington Department of Game
- Gretchen Van Lom
- Jack Howerton
- Don Kraege
- David Mudd
- Claude Stoddard

Summary

1984

2/16 Ken Dzimbal, USACE, telephone discussion of Corps contacts and information sources

2/16 Merritt Stegmeier, USACE, telephone discussion of Corps MOU's

2/16 Carolyn Zarneckee, USACE, telephone discussion of current Corps activities benefitting wildlife

2/27 Gail Gardner, USACE, telephone discussion of dam operations

2/29 Dick Webster, USACE, telephone discussion on the existence of any Crops agreements or MOU's pertinent to the Bonneville Lock and Dam Project

3/5 Ken Dzimbal, USACE, telephone conversation on status of Canada Goose Brood Study

3/8 Ken Dzimbal, USACE, telephone discussion of current status of mitigation planning on ongoing Corps projects

3/9 Ken Dzimbal, USACE, telephone discussion of mitigation plans involving Bradford Island

3/16 Kim Larson, USACE, telephone inquiry for date of Bonneville Pool filling

3/19 Carolyn Zarneckee, USACE, telephone inquiry for status of Corps mitigation efforts

7/16 Carolyn Zarneckee, USACE, interagency meeting on Bonneville Navigation Lock Canada Goose Brood Mitigation

7/16 Geoff Dorsey, USACE, interagency meeting on Bonneville Navigation Lock Canada Goose Brood Mitigation

7/17 Carolyn Zarneckee, USACE, telephone discussion of Corps wildlife management programs

7/24 Kim Larson, USACE, telephone inquiry concerning Second Powerhouse completion

7/24 Geoff Dorsey, USACE, telephone discussion of additional goose data

7/24 Dick Duncan, USACE, telephone inquiry concerning USACE response to WDG

7/24 Bob Willis, USACE, telephone inquiry concerning USACE response to WDG

APPENDIX C

Comments

VICTOR ATIYEH
GOVERNOR

Department of Fish and Wildlife
506 S.W. MILL STREET, P.O. BOX 3503, PORTLAND, OREGON 97208

29 August, 1984

Mr. John R. Palensky, Director
Division of Fish and Wildlife
Bonneville Power Administration
P.O. Box 3621
Portland, OR 97208

Attention Mr. James Meyer:

The Oregon Department of Fish and Wildlife has high expectations of the Northwest Power Planning Act to provide for wildlife and wildlife habitat mitigation to offset impacts resulting from hydroelectric development.

As the Bonneville Dam Wildlife Mitigation Status Report and our attached comments on that report indicate, comprehensive evaluation of wildlife resource impacts and mitigation for wildlife habitat losses were not accomplished. Knowledge of wildlife resources and legal mandates have changed since the Bonneville Project was constructed. In addition to the requirements of the Northwest Power Planning Act for protection, mitigation and enhancement of wildlife resources, the Department of Fish and Wildlife has a policy to request mitigation for losses of animal populations and habitat. The main stem Columbia River hydroelectric projects have high priority due to the high value of wildlife resources involved.

In recognition of our increased responsibilities to address a broad range of concerns, I strongly urge the participating agencies to move forward in implementing the Wildlife Program of the Northwest Power Planning Council. In particular, we must proceed with a mitigation plan based on a comprehensive assessment of wildlife impacts at the Bonneville Project. The Department is prepared to participate in this endeavor and recommends a habitat based evaluation using: 1) the expertise of biologists from appropriate agencies; 2) existing data where possible; and 3) cost effective methods.

The first step toward accomplishing the goals of the Power Council's Fish and Wildlife Program has been the mitigation status report. We must now take the succeeding steps leading to full compensation for wildlife and wildlife habitat impacts at the Bonneville Project.

Sincerely,

John R. Donaldson, PhD
Director

kb/hk
Encl.

OCT 19 1984

Oregon Department of Fish and Wildlife
Comments on
Wildlife Mitigation Status Report
Bonneville Dam and Reservoir
29 August, 1984

These comments respond to a request from James R. Meyer, Bonneville Power Administration, dated 17 August 1984 to review the Mitigation Status Report for Bonneville Dam and Reservoir.

Oregon Revised Statute 496.012, Wildlife Policy, says in part: "It is the policy of the State of Oregon that wildlife shall be managed to provide the optimum recreational and aesthetic benefits for present and future generations of the citizens of this state. In furtherance of this policy, the goals of wildlife management are:

(1) To maintain all species of wildlife at optimum levels and prevent the serious depletion of any indigenous species.

(2) To develop and manage the lands and waters of this state in a manner that will enhance the production and public enjoyment of wildlife."

In accordance with ORS 496.012, the Department has a policy to request mitigation when losses to animal populations and habitat result from project construction and operation. These policies are consistent with the Power Act and Wildlife Program purpose "to protect, mitigate, and enhance fish and wildlife to the extent affected by the development and operation of any hydroelectric project of the Columbia River and its tributaries...." This goal has yet to be achieved at the Bonneville Project.

The Bonneville Wildlife Mitigation Status Report demonstrates assessment of the impacts to wildlife resulting from the construction and operation of the project was not comprehensive. This is evident by the lack of information available regarding the types and amounts of habitat altered and the lack of quantitative estimates of species affected by the project. The significance of the inundated habitat to wildlife has not been fully explored. Even though impact assessment has not been adequate, it is obvious that substantial impacts occurred to wildlife as a result of the Bonneville Project, considering acreage of habitat inundated. The status report indicates that mitigation measures implemented have not been adequate to offset impacts to wildlife resulting from the project.

In order to "protect, mitigate, and enhance" wildlife resources affected by the development and operation of the hydroelectric generating facilities at the Bonneville Project, it is necessary to determine what impacts occurred. Upon the approval of and funding by the Council and Bonneville Power Administration, the Department is prepared to participate in an assessment of impacts to wildlife resources resulting from the Bonneville Project and preparation of a loss statement. The Department is also ready to participate in developing mitigation plans. We believe that a workable loss statement and

mitigation plan can be developed based on existing information, and the expertise of biologists from the appropriate agencies who are familiar with the project area and appropriate wildlife habitat and species. Extensive, detailed studies will only delay implementation of mitigation measures.

The level of understanding of our wildlife resources has greatly improved since the time of construction of the Bonneville Project. We have broader concerns and are more aware of wildlife/habitat relationships. The Northwest Power Planning Act and the Power Council's Fish and Wildlife program have provided the opportunity to correct past misunderstanding and shortsightedness regarding wildlife resources affected by the development and operation of hydroelectric power in the Columbia River Basin. The Oregon Department of Fish and Wildlife wants to see that opportunity realized to the fullest degree possible in a timely, efficient, and cost-effective manner.

SEP 1984

United States Department of the Interior

FISH AND WILDLIFE SERVICE
LLOYD 500 BUILDING, SUITE 1692
500 N.E. MULTNOMAH STREET
PORTLAND, OREGON 97232

September 18, 1984

Mr. John Palensky, Director
Division of Fish and Wildlife
Bonneville Power Administration
Attention: James Meyer
P. O. Box 3621
Portland, Oregon 97208

Dear Mr. Palensky:

As requested in Mr. Meyer's letter of August 17, 1984, we have reviewed the Wildlife Mitigation Status Report for the Bonneville Lock and Dam Project (the Project). The following comments are being provided for inclusion in the final report.

General Comments

Based on the report's content, it is evident that the construction and operation of the Project has resulted in substantial adverse impacts to wildlife resources which have been neither adequately identified nor mitigated. Therefore, the Service recommends that the Bonneville Power Administration provide funds to: 1) conduct a comprehensive evaluation of the impacts of the Project on wildlife resources; and 2) based on the findings of that evaluation, develop a mitigation and enhancement plan which would fully compensate the adverse wildlife impacts attributable to the Project.

The Service has the necessary expertise and would like to participate as the lead agency in both the impact evaluation and mitigation plan development tasks. We are developing a proposal to conduct an impact evaluation and will submit it to you in the near future.

Specific Comments

A comprehensive evaluation of the Project's impact on wildlife resources should be conducted by a team of qualified biologists composed of representatives from appropriate state and federal resource and development agencies. These include the Oregon Department of Fish and Wildlife, Washington Department of Game, Army Corps of Engineers, and Fish and Wildlife

Service. The evaluation should include an analysis of any actions which have been implemented to mitigate the Project's adverse impacts on wildlife. We suggest the evaluation be habitat based and supported by population data when available. We believe that such an evaluation could be accomplished with a minimum of new data collection by: 1) analyzing the existing data referenced in the status report such as pre- and post-construction photography; and 2) consultation with professional wildlife biologists familiar with the area's wildlife resources as they existed prior to project construction. The evaluation's results should be presented in an impact assessment report.

Utilizing the results from the aforementioned impact statement, we believe that the same team of biologists, with assistance from their agencys' respective habitat specialists, should develop a mitigation plan. The plan, if implemented, would be designed to compensate the adverse wildlife impacts identified.

In addition, we would like to mention that legislation has been passed by the 98th Congress, 2nd Session, and signed into law by President Reagan that will provide funds to the Army Corps of Engineers to acquire property in the Steigerwald Lake Wetland Area for fish and wildlife mitigation purposes associated with the Bonneville Lock and Dam Second Powerhouse Project. This legislation is very significant in view of the following:

1. Opportunities for both onsite and offsite mitigation for the Bonneville Projects are extremely limited.

2. The few remaining areas with mitigation potential are in danger of being lost to residential, commercial, and industrial development interests.

3. If all of the remaining areas suitable for mitigation could be acquired, it is doubtful that the adverse wildlife impacts of both the original Bonneville Project and the Second Powerhouse could be adequately compensated.

In view of the above, we believe the wildlife resource agencies, the Army Corps of Engineers, the Power Planning Council, and the Bonneville Power Administration should work together to pursue all options to acquire those areas suitable for mitigation as rapidly as possible. We have already been working with the Corps regarding efforts to maximize mitigation opportunities on Project lands. Failure to expeditiously pursue all available onsite and offsite mitigation opportunities would greatly reduce the existing potential to restore the wildlife resources of one of the most unique natural areas in the Pacific Northwest.

The Franz and Arthur Lakes area is one of the best remaining mitigation areas. In fact, some of the major land owners in this area have proposed

(in the form of an Amendment to the Power Council) that the area be acquired for wildlife mitigation. We believe that acquisition of this area should be pursued without waiting for the impact evaluation to be completed, with the understanding that the action would be credited as mitigation for the Bonneville projects. We will be contacting you in the near future regarding a proposal to acquire property in the Franz and Arthur Lakes area.

In conclusion, we believe no single agency or user group is responsible for the adverse wildlife impacts which have resulted from the development and operation of the Bonneville Lock and Dam Project. The proposals outlined in this letter would be considered "standard operating procedures" for evaluating the impacts of new water development proposals under present state and federal laws, regulations, and policies. Unfortunately, these legal mandates which today provide for the protection of our wildlife resources were not as strong when the Bonneville Project was being developed. However, both the Northwest Power Planning and Conservation Act and the Council's Fish and Wildlife program recognize this and together have given us an opportunity to evaluate and replace lost wildlife resources. The Service is eager to move toward that end.

Sincerely yours,

James W. Teeter
Acting Assistant Regional Director
Habitat Resources

GENERAL COUNCIL
and
BOARD of TRUSTEES

CONFEDERATED TRIBES
of the
Umatilla Indian Reservation

P O Box 638
PENDLETON, OREGON 97801
Area Code (503) Phone 276-3165

August 25, 1983

Mr. Russell D. Peterson
U.S. Fish and Wildlife Service
Division of Ecological Services
Portland Field Office
727 N.E. 24th Avenue
Portland, Oregon 97232

Dear Mr. Peterson:

In reference to your letter of August 10, 1983, regarding perspective of the Confederated Tribes on the history of wildlife studies and mitigation measures accomplished at the Bonneville Lock and Dam, the Dalles Lock and Dam, John Day Lock and Dam, and McNary Lock and Dam, comments were not submitted on this subject at the time of project authorization. It appears that our concerns on construction of these hydrolelectric projects were limited to impacts on anadromous fisheries. We do not have documentation on file which outlines the impacts on wildlife and mitigation measures adopted.

We would appreciate the opportunity to review drafts of the status reports on wildlife mitigation at the hydroelectric projects prior to completion of the final report. We will provide comments regarding wildlife concerns at that time. Copies of the reports should be sent to Jerry L. Lauer, Bureau of Indian Affairs, Umatilla Indian Agency, P.O. Box 520, Pendleton, Oregon 97801. Mr. Lauer acts as staff wildlife biologist for the Confederated Tribes.

Sincerely,

CONFEDERATED TRIBES OF THE
UMATILLA INDIAN RESERVATION

AUG 2 8 1983

Elwood H. Patawa, Chairman
Board of Trustees

SH
DS
PW

JOHNSON, MARCEAU, KARNOPP & PETERSEN
ATTORNEYS
835 N.W. BOND STREET • BEND, OREGON 97701-2799 • TELEPHONE (503) 382-3011

LYMAN C. JOHNSON
RONALD L. MARCEAU
DENNIS C. KARNOPP
JAMES E. PETERSEN
ROBERT L. NASH
JAMES D. NOTEBOOM
MARTIN E. HANSEN
HOWARD G. ARNETT
STEVEN D. STADUM

September 6, 1983

Russell D. Peterson
Field Supervisor
U.S. Fish & Wildlife Service
Division of Ecological Services
Portland Field Office
727 N.E. 24th Avenue
Portland, OR 97232

Re: Wildlife Mitigation and Columbia River Hydroelectric Projects

Dear Mr. Peterson:

I represent the Warm Springs Tribe and am writing in response to your letter of August 10th to Terry Luther of the tribe's Natural Resources Department. Your letter requests information concerning wildlife mitigation studies and measures undertaken in connection with the four CoE mid-Columbia hydro projects.

We have reviewed our files and discussed the matter with tribal leaders. It appears that wildlife mitigation was omitted from the negotiations between the federal government and the Columbia River Indian tribes leading to the construction of the four projects that are the subject of your reports. The omission of the wildlife mitigation from the federal-tribal discussions was almost certainly inadvertent. The tribe's treaty-protected right to hunt, as well as fish, off-reservation gives the tribe a legal interest in the preservation of all wildlife resources in the mid-Columbia region. Diminished populations of such species as ducks, geese, otter, beaver, muskrats, deer, etc. resulting from the construction of the mid-Columbia hydro projects must be restored to fulfill the tribe's treaty right.

To our knowledge, no studies have been undertaken to determine whether populations of wildlife species utilized by tribal members in the area inundated by the hydro projects have been diminished. The tribe is anxious to assist the Fish & Wildlife Service in its efforts to determine the amount o

RECEIVED
SEP 8 19

wildlife loss and the mitigation efforts required to restore the resource.

Sincerely,

HOWARD G. ARNETT

HGA/clm

cc: Warm Springs Fish & Wildlife Committee
Terry Luther, Natural Resources Department

D BY THE
JUNE 9 1855
CENTENNIAL JUNE 9 1955

CONFEDERATED TRIBES AND BANDS
Yakima Indian Nation
WILDLIFE RESOURCE MANAGEMENT PROGRAM
POST OFFICE BOX 151
TOPPENISH, WASHINGTON 98948

GENERAL COUNCIL
TRIBAL COUNCIL

1(509) 865-5121
Ext. 666 or 668

November 22, 1983

Richard D. Giger
Fish and Wildlife Service
Lloyd 500 Building, Suite 1692
500 N.E. Multnomah Street
Portland, OR 97232

RE: Yakima Indian Nation concerns relative to wildlife mitigation and the Corps of Engineers mid-Columbia hydro projects.

Dear Sir:

The Yakima Indian Nation welcomes the opportunity to comment on wildlife mitigation relative to Indian concerns in connection with the four Corps of Engineers mid-Columbia hydro projects (Bonneville, The Dalles, John Day, and McNary Dams). You are correct in your findings that wildlife mitigation was omitted from the negotiations between the federal government and the Columbia River Indian tribes prior to the construction of the hydro projects covered in your report. The omission of wildlife mitigation from the federal-tribal discussions was certainly inadvertant, but easily explained. The Bureau of Indian Affairs has historically not been directly involved in wildlife management either in an advocacy role, or in a functional on-reservation wildlife management program. Scientific wildlife management on-reservation is a relatively new phenomena and stems primarily from concerned tribes active involvement in the previous five years. Given these facts, it is not surprising that tribal wildlife concerns were not represented in the original negotiations. The Yakima Indian Nation's Treaty protected right to hunt, as well as fish, off reservation, gives the tribe a legal interest in the conservation and maintenance of all wildlife resources in the mid-Columbia and Columbia Basin regions.

The increased competance of on-reservation tribal wildlife management in the last few years fortunately coincides with your studies relative to wildlife mitigation on these main stem hydro-electric projects. Hopefully, these unmitigated losses can now be identified and properly addressed through the mitigation process. The Yakima Indian Nation has suffered serious loss of wildlife populations and wildlife habitat as a result of the aforementioned hydro-electric projects. I shall briefly outline our major concerns below in rough order of priority.

1. Loss of Water-Fowl Fly-way

The Yakima River basin has been an historically important fly-way for water-fowl species. The Yakima Indian people made extensive use of water-fowl as a food source and as a source for ceremonial artifacts and clothing. In more recent historical times, the heavy water-fowl concentration as a result of this fly-way provided an important source of income through the tribe's public hunting and fishing license program.

Within the last 20 years, this important water-fowl resource has been diminished almost to the point of total elimination. This loss appears to be due not to a fewer number of water-fowl, but to a redistribution of existing populations and fly-ways influenced by the habitat conditions created by the construction of the hydro projects. This condition seems particularly affected by the John Day and McNary pool areas. Water-fowl concentrations behind these pools have become so great as to actually cause agricultural damage and disease related problems. This fact has been well documented in recent years by a cooperative study team consisting of biologists from Oregon, Washington, and the U.S. Fish and Wildlife Service. This study resulted in recently published corrective master plan entitled Columbia Basin Water-Fowl Redistribution. The Yakima Indian Nations concerns for the loss of the water-fowl fly-way through the Yakima drainage as result of the creation of the mid-Columbia pools are enhanced and supported by this document. This loss has lead to severely reduced income to the tribe and a reduced seasonal food source for tribal members.

2. Direct Loss of Water-Fowl Nesting and Brooding Habitats

Nesting water-fowl populations along the Columbia River main stem were historically utilized by Yakima Indian people as a source of food, ceremonial artifacts, and clothing (collection of down). Inundation of mid-river gravel bars and islands has long been recognized as the primary reason for the decline of these main stem water-fowl populations. This loss has never been properly mitigated with respect to the Yakima Indian Nation.

3. Direct Loss of Deer Habitat

Riparian growth on both inundated islands and shorelines along the historical course of the Columbian River Provided habitat for black-tail deer and Columbian white-tail deer. The Columbia River breaks provided important wintering

3. Direct Loss of Deer Habitat (Cont.)

ranges for migratory mule deer. These deer populations associated with the Columbia main stem provided an important source of subsistance food for tribal members. Construction of the hydro-electric projects and resultant inundation has destroyed the habitats for most of these deer populations. Associated development has lessened the use of the Columbia River brakes as winter range habitat. This loss was never mitigated in the original tribal-federal negotiations.

4. Loss of Native Upland Game Bird Habitat

The predominant native upland game birds in this area were sharp tailed grouse and the sage grouse. The impact of the hydro projects and any associated loss of habitat for these species has never been properly investigated. Both of these species are nearly extirpated from the mid-Columbia area and both species provided an important source of food for tribal members. The relationship of the decline of these species with the construction of the hydro projects has never been properly evaluated and hence has never been subject to mitigation procedures.

These four points represents specific concerns the Yakima Indian Nation relative to wildlife losses following the construction of the aforementioned hydro projects. These losses were never identified and hence never mitigated in the original federal-tribal negotiations. I feel this represents a very good starting point in any future mitigative efforts and hope that you will consider these concerns within the context of your report. Please do not hesitate to contact me for any further elaboration or discussion concerning these wildlife losses.

Sincerely,

William P. Bradley

William P. Bradley, Ph.D.
Director, Wildlife Resource Management
Yakima Indian Nation

cc: Northwest Power Planning Countil
Portland, Oregon

Corps of Engineers
Portland, Oregon

APPENDIX D

Mitigation Instruments

DEPARTMENT OF THE ARMY

LICENSE

FOR FISH AND WILDLIFE PURPOSES

BONNEVILLE LOCK AND DAM (LAKE BONNEVILLE) OREGON

No. DACW57-3-80-85

THE SECRETARY OF THE ARMY, under authority of the Fish and Wildlife Coordination Act, as amended (48 Stat. 401; 16 U.S.C. 661 et seq) and the Act of Congress approved 22 December 1944, as amended (76 Stat. 1195; 16 U.S.C. 460d), hereby grants to the Oregon Department of Fish and Wildlife, thereafter referred to as the licensee, an interim-use license for a period of Twenty-Five (25) years commencing on 1 October 1980 and ending on 30 September 2005, to use and occupy approximately 132.4 acres of land and water areas under the jurisdiction of the Department of the Army within the Bonneville Lock and Dam (Lake Bonneville) Project, Oregon, as shown in red on Exhibit "A", dated 19 September 1980, attached hereto and made a part hereof, for Fish and Wildlife conservation, development and management purposes.

THIS LICENSE is granted subject to the following conditions:

1. That the licensee, in the exercise of the privileges hereby granted, shall conform to such rules and regulations as may be prescribed by the Secretary of the Army to govern the public use of the said project area, and with the provisions of Section 4 of the Act of Congress approved 22 December 1944, as amended (76 Stat. 1195; 16 U.S.C. 460d).

2. That the licensee may construct upon said land such buildings, improvements, facilities, accommodations, fences, signs and other structures as may be necessary for the purposes of this license, and may plant seeds, shrubs and trees, provided that all such structures shall be constructed and the landscaping accomplished in accordance with plans approved by the District Engineer, U.S. Army Corps of Engineers, in charge of the administration of the property.

3. That the licensee shall administer and maintain the said property, for the purposes of this license, in accordance with the master plan for the said project area and with an annual management program to be mutually agreed upon between the licensee and the said District Engineer, which may be amended from time to time as may be necessary. Such annual management program shall include but is not limited to the following:

a. Plans for management and development activities to be undertaken by the licensee or jointly by the Corps of Engineers and the licensee.

b. Budget of the licensee for carrying out the management and development activities.

c. Personnel to be used in the management of the area.

d. Plans for supervising, patrolling and policing the licensed areas, including the water areas.

4. That the licensee shall protect the property from fire, vandalism and soil erosion, and may make and enforce such rules and regulations as are necessary, and within its legal authority, in exercising the privileges granted in this license, provided that such rules and regulations are not inconsistent with those prescribed by the Secretary of the Army to govern the public use of the area.

5. (a.) That the licensee, in exercising its governmental or proprietary functions, may plant or harvest crops, either directly, by service contract, by sharecrop agreements with local farmers, or by agricultural agreements to provide food and/or habitat for wildlife and for the development and conservation of fish and wildlife, forests, and other natural resources. Where feasible, contracts and agreements with third parties shall be by competitive bid procedures. (b.) The proceeds derived from the sale of crops, and timber required to be cleared, may be used in furtherance of the above uses at this project in accordance with the approved management plan. The balance of the proceeds not so used shall be paid to the United State of America at the expiration of each five-year period. The first five-year period is to begin on the date of the execution of this license by the Government. Payment of direct expenses are authorized for planning and development of optimum wildlife habitat including planting of wildlife food plots, necessary timber clearing, erosion control or habitat improvements such as shelter, restocking of fish and wildlife, and protection of endangered species. Payment of licensee's employees who are directly engaged in such activities at the project is also authorized. However, proceeds will not be used for the payment of general administrative expenses. (c.) Proceeds derived from the sale of fishing and hunting licenses are not subject to this condition. (d.) Any lands not being managed by the licensee for wildlife habitat will be made available for lease by the District Engineer for agricultural or grazing purposes under conditions which would not be incompatible with the licensee's use of the licensed property. (e.) The licensee will establish and maintain adequate records and accounts and render annual statements of receipts and expenditures in furtherance of its management program, and as otherwise may be reasonable required by the said District Engineer. The District Engineer shall have the right to perform audits of the licensee's records and accounts.

6. That the licensee may take, trap, remove, stock or otherwise control all forms of fish and wildlife within the said area, and may place therein such additional forms of fish and wildlife as it may desire from time to time, and shall have the right to close the area, or any parts thereof from time to time, to fishing, hunting or trapping, provided that the closing of any area to such use for fishing, hunting or trapping shall be consistent with the state laws for the protection of fish and wildlife; also, the licensee shall enforce the fish and game laws and such orders and regulations as may be issued by the Division of Game and Fish, and/or its Director, which laws, orders and regulations are consistent with its state-wide program.

7. That the water areas of the project shall be open to public use generally, without charge, for boating, swimming, bathing, fishing and other recreational purposes, and that ready access to and exit from such water areas along the shores of the project shall be maintained for general public use, when such use is determined by the Secretary of the Army not to be contrary to the public interest. However, no use of any area shall be permitted which is inconsistent with the state laws for the protection of fish and game.

8. That this license is subject to all existing and future easements, leases, licenses and permits heretofore granted, or to be hereafter granted, by the United States concerning said lands; provided, however, that upon appropriate notification by the licensee to said District Engineer, the United States, insofar as may be consistent with other uses and purposes of the project, will not enter into any new easements, leases, licenses or permits, or renewals thereof, which will, in the opinion of the District Engineer, adversely affect the current operations of the licensee under the provisions of the license, or which will conflict with the definitely scheduled program of the licensee for the expansion of its activities under the provisions of this license.

9. That the licensee furnishes as a part of this contract an assurance (Exhibit "B") that he will comply with Title VI of the Civil Rights Act of 1964 (78 Stat. 241) and Department of Defense Directive 5500.11 issued pursuant thereto and published in Part 300 of Title 32, Code of Federal Regulations.

10. That no cuts or fills along the shore line shall be made by the licensee without prior approval of the said District Engineer.

11. That, within the limits of their respective legal powers, the parties to this license shall protect the project against pollution of its water. The licensee shall comply promptly with any regulations, conditions or instructions affecting the activity hereby authorized if and when issued by the Environmental Protection Agency and/or a state water pollution control agency having jurisdiction to abate or prevent water pollution. Such

regulations, conditions, or instructions in effect or prescribed by the Environmental Protection Agency or state agency are hereby made a condition of this license.

12. That access being furnished by the Government to the licensed area is limited to waterborne traffic. At such time as land access is acquired by the United States, this license shall be amended to include such access.

13. That the right is hereby expressly reserved to the United States, its officers, agents and employees, to enter upon the said land and water areas, at any time and for any purpose necessary or convenient in connection with river and harbor and flood control work, and to remove therefrom timber or other material, required or necessary for such work; to flood said premises when necessary, and/or to make any other use of said land as may be necessary in connection with public navigation and flood control, and the licensee shall have no claim for damages of any character on account thereof against the United States or any agent, officer or employee thereof.

14. That any property of the United States damaged or destroyed by the licensee incident to the exercise of the privileges herein granted shall be promptly repaired or replaced by the licensee to the satisfaction of the said District Engineer.

15. That the United States shall not be responsible for damages to property or injuries to persons which may arise from, or be incident to, the exercise of the privileges herein granted, or for damages to the property of the licensee, or for damages to the property or injuries to the person of the licensee's officers, agents, servants or employees, or others who may be on said premises at their invitation or the invitation of any one of them, arising from or incident to the flooding of said premises by the Government or flooding from any other cause, or arising from or incident to any other Governmental activities on the said premises, and the licensee shall hold the United States harmless from any and all such claims, except as licensee is prevented therefrom by Article XI, Section 7 of the Oregon Constitution.

16. That the area contained herein was acquired for recreational purposes and the Government reserves the right to terminate the interim-use provided for in this license one (1) year from the date of written notification, in the event a viable intensive recreational development program may develop during the term hereof.

17. That this license may be relinquished by the licensee at any time by giving to the Secretary of the Army, through the said District Engineer, at least thirty (30) days notice in writing.

18. That this license may be revoked by the Secretary of the Army in the event the license violates any of the terms and conditions of this license and continues and persists therein for a period of thirty (30) days after notice thereof, in writing, by the said District Engineer.

19. That on or before the date of expiration of this license or its relinquishment by the licensee, the licensee shall vacate the said Government premises, remove all property of the licensee therefrom, and restore the premises to a condition satisfactory to the said District Engineer. If, however, this license is revoked or terminated, the licensee shall vacate the premises, remove said property therefrom, and restore the premises as aforesaid within such time as the Secretary of the Army may designate. In either event, if the licensee shall fail or neglect to remove said property and so restore the premises, then said property shall become the property of the United States, without compensation therefor, and no claim for damages against the United States, or its officers or agents, shall be created by or made on account thereof.

IN WITNESS WHEREOF I have hereunto set my hand this 4th day of November, 1980, by direction of the Assistant Secretary of the Army (IL & FM).

D. H. NELLEN
Chief, Real Estate Division

The above instrument, together with the provisions and conditions thereof, is hereby accepted this 14th day of November 1980.

OREGON DEPARTMENT OF FISH AND WILDLIFE

By _____
Director

ASSURANCE OF COMPLIANCE WITH THE DEPARTMENT OF DEFENSE DIRECTIVE UNDER TITLE VI OF THE CIVIL RIGHTS ACT OF 1964

Department of Fish and Wildlife (hereinafter called "Applicant-Recipient")
(Name of Applicant-Recipient)

HEREBY AGREES THAT it will comply with title VI of the Civil Rights Act of 1964 (P.L. 88-352) and all requirements imposed by or pursuant to the Directive of the Department of Defense (32 CFR Part 300, issued as Department of Defense Directive 5500.11, December 28, 1964) issued pursuant to that title, to the end that, in accordance with title VI of that Act and the Directive, no person in the United States shall, on the ground of race, color, or sex national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Applicant-Recipient receives Federal financial assistance from Department of the Army (Component of the Department) and HEREBY GIVES ASSURANCE THAT it will immediately take any measures necessary to effectuate this agreement.

If any real property or structure thereon is provided or improved with the aid of Federal financial assistance extended to the Applicant-Recipient by this Department of the Army (Component of the Department) assurance shall obligate the Applicant-Recipient, or in the case of any transfer of such property, any transferee, for the period during which the real property or structure is used for a purpose for which the Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits. If any personal property is so provided, this assurance shall obligate the Applicant-Recipient for the period during which it retains ownership or possession of the property. In all other cases, this assurance shall obligate the Applicant-Recipient for the period during which the Federal financial assistance is extended to it by Department of the Army (Component of the Department).

THIS ASSURANCE is given in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts, property, discounts or other Federal financial assistance extended after the date hereof to the Applicant-Recipient by the Department, including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date. The Applicant-Recipient recognizes and agrees that such Federal financial assistance will be extended in reliance on the representations and agreements made in this assurance, and that the United States shall have the right to seek judicial enforcement of this assurance. This assurance is binding on the Applicant-Recipient, its successors, transferees, and assignees, and the person or persons whose signatures appear below are authorized to sign this assurance on behalf of the Applicant-Recipient.

Dated Nov. 14, 1980

Department of Fish and Wildlife
(Applicant-Recipient)

By [signature]
(President, Chairman of Board, or comparable authorized official)

(Applicant-Recipient's Mailing Address)

Status Report on Wildlife Mitigation

THE DALLES LOCK AND DAM PROJECT

Prepared by

U.S. Fish and Wildlife Service

for

Bonneville Power Administration

in response to the

Fish and Wildlife Program
Northwest Power Planning Council

1984

I. PROJECT NAME

The Dalles Lock and Dam

II. PROJECT OPERATOR

U. S. Army Corps of Engineers, Portland District (USACE)

III. PROJECT DESCRIPTION

(a) Location and Size

The Dalles Lock and Dam is located at river mile (RM) 192.5 on the Columbia River approximately 3 miles east of The Dalles, Oregon. The Dalles Reservoir, also known as Lake Celilo, is 23 miles long with a shoreline length of approximately 55 miles. At a full pool level of 160.0 feet msl, the reservoir surface area is approximately 9,400 acres (USACE, 1964 and 1972).1/

The Dalles Lock and Dam consists of a navigation lock, a concrete spillway, a powerhouse, a rock-fill embankment, fish passage facilities, lock approaches, project administration buildings, levees, and drainage facilities. The powerhouse contains 22 main power units which are capable of generating 78.0 MW of continuous output and 89.7 MW of short-term output.

(b) Authorized Purposes

The authorized purposes of The Dalles Dam are generation of hydroelectric power, improvement of inland navigation on the Columbia River, irrigation, and flood control.

(c) Brief History

The Dalles Dam construction was authorized by the River and Harbor and Flood Control Act of May 17, 1950, Public Law 81-516, 2nd Session (USACE, 1972, 1975a, and 1975b).2/ Construction began in February 1952 and was completed in 1960 with 14 main power units.

1/ There are references in several documents to 11,200 surface acres in Lake Celilo at full pool. An explanation for this discrepancy has not been stated in any report. It is possible that the larger figure reflects the size of Lake Celilo prior to construction of John Day Dam in the 1960's and that the smaller figure reflects the lake's size after construction of John Day Dam.

2/ Documents prior to 1972 refer to project authorization under the River and Harbor and Flood Control Act of May 17, 1950; House Document 531, 81st Congress, 2nd session.

The reservoir was filled to the normal operating stage of 160 msl in July 1957. The first of the power units began producing energy in September 1957. By October 1960, all 14 units were producing power. Eight additional units were requested by the Bonneville Power Administration in August 1964. Construction of these units began in 1967 and was completed in 1973.

(d) Other Pertinent Data

(1) Water Level Fluctuation and Timing

The Dalles Dam Project is operated as a run-of-river hydroelectric plant because of its limited water storage capabilities. Except at the upstream end near John Day Dam, pool operation occurs between elevation 155 and 160 feet msl. Changes in powerhouse discharge at John Day Dam and The Dalles Dam may cause fluctuations of the river immediately downstream of the dams that are as much as 5 feet per hour. Maximum daily fluctuations of 3 to 4.5 feet are expected to occur during the low flow period from September through March (inclusive). Lesser fluctuations of 2 to 3 feet are expected to occur during the summer months. Hourly changes are normally less than 1 foot, but may increase to as high as 1.5 feet for occasional short periods during weekdays.

(2) Land Ownership

Project land above normal pool includes approximately 3,442 acres of which approximately 1,932 acres are fee owned and 1,510 acres are under flowage easements (USACE, 1972).[3/] Those acreages include areas upstream to the administrative boundary between The Dalles and John Day Projects, and lands within railroad and highway rights-of-way.

(3) Indian Rights

Deer, waterfowl, upland game birds, and rabbits were used for ceremonial, subsistence and other cultural purposes by Indian tribes of the area. Furbearers were harvested for economic gain.

3/ Project acreage estimates vary greatly between reports. No accurate figures presently exist. Developing accurate acreage figures would be a time-consuming project involving a search and tracing of all past real estate transactions within the project area, and would require efforts beyond the scope of this study.

Indian concerns noted in past reports relate to the loss of fisheries and not wildlife. While past reports acknowledge attempts to mitigate for the loss of Indian fishing sites, it appears that wildlife losses to Indian tribes were never identified and hence never mitigated in the original Federal-Tribal negotiations. No formal agreements have been found between the United States and the Indians to mitigate for any wildlife habitat losses and associated wildlife population levels resulting from the construction of The Dalles Lock and Dam.

An inquiry was made to the Yakima Indian Nation, the Confederated Tribes of Warm Springs and Umatilla Indian Reservations, and the Nez Pierce Tribe to identify any mandates, agreements, and concerns specifically related to the The Dalles Lock and Dam Project. The Yakima, Warm Springs, and Umatilla Indians responded citing the 1855 treaties which protected their right to hunt, as well as fish off reservation. The Confederated Tribes of the Umatilla Indian Reservation exercise this right subject only to restrictions imposed by the Tribal Fish and Wildlife Committee. Both the Yakima Nation and Umatilla Confederated Tribes have maintained that they have an inherent legal interest in the conservation and maintenance of optimum population levels of all wildlife resources in the mid-Columbia region. While no formal agreements have been found between the United States and the Indians to mitigate for wildlife habitat or wildlife population losses, the Tribes indicate that the omission of wildlife mitigation considerations from Federal-Tribal negotiations was inadvertant and representative of a prior lack of awareness of wildlife needs by all parties (APPENDIX C).

IV. WILDLIFE SPECIES AND HABITAT ASSESSMENTS

(a) Pre-construction

Little information is available on vegetational composition prior to project construction. The U.S. Fish and Wildlife Service noted in their 1953 report that principal plant species in areas to be inundated were downy chess, filaree, and rabbitbrush. Leading crops on tillable lands to be affected were alfalfa, grapes, cherries, asparagus, and irrigated pasture. Lands were described as generally of low carrying capacity consisting largely of sand, scab rock, annual grasses and weeds. Riparian vegetation was limited in the project area (Lenhart, 1983). Riparian vegetation was slightly more developed below the area of Celilo Falls where the flood plain was broader and the gradient was more gradual (Ebert, 1983).

An important waterfowl flyway follows the stretch of the Columbia River that was affected by The Dalles Dam. Miller Island

(located on the Washington side of the Columbia River between RM 203 and 206), several other sandy islands, and extensive flat gravel bars in this stretch of river were heavily used for nesting and/or resting by waterfowl. Principal nesting species were Canada geese and mallard ducks. During migration, the bulk of the migrant birds were greater, lesser, and cackling Canada geese, mallard, pintail, and American wigeon. Some quantitative waterfowl use data from before and during the early construction phases of the project was available through the Oregon Department of Fish and Wildlife. They have conducted weekly flyway counts during the migration period along the Columbia River from The Dalles Dam to the mouth of the John Day River since 1952. Peak numbers and dates of goose and duck use obtained from these surveys have been summarized and are available from the Oregon Department of Fish and Wildlife.

Although scarce in numbers, ring-necked pheasants, California quail, chukar, and mourning doves were noted to be found throughout the project area. Small populations of black-tailed deer, mule deer, beaver, muskrat, mink, raccoon, and badger are also noted as inhabiting shore areas of the impoundment site. No elk use has been noted for the area (USFWS, 1953; Lenhart, 1983; Ebert, 1983).

No references have been found related to the presence or absence of colonial birds and State and Federal threatened and endangered species in the project area prior to construction of The Dalles Dam.

A pre-construction evaluation of project impacts included an estimate of 5,937 acres of land to be inundated. These lands consisted of 5,039 acres of nontillable grazing and "waste" lands, 329 acres of tillable land, 326 acres of Federal reservation, 234 acres of Indian lands, and 9 acres of industrial property (USFWS, 1953).

Impact assessments made prior to project construction identified the anticipated loss of considerable areas through inundation of sand and gravel bars, shoreline areas, and islands of value to waterfowl. Miller Island was anticipated to become the only important resting and nesting habitat, particularly for Canada geese. The U.S. Fish and Wildlife Service (1953) expected duck use to continue unchanged along the new shoreline and shore habitat; however, Oregon State Game Commission (1957), presently known as Oregon Department of Fish and Wildlife, questioned whether or not new shorelines would satisfactorily substitute for loss of extensive bars.

While some losses were anticipated, aquatic furbearers were expected to be able to utilize new shoreline and shore habitats

created by the reservoir (USACE, 1951). Impacts to deer, upland game birds, and aquatic furbearers were expected to be minor (USACE, 1951; USFWS, 1953).

(b) Post-construction

The Dalles Dam raised the water surface at the damsite approximately 88 feet and inundated several rapids, shallow water areas, extensive gravel bars, and several small sandy islands.

The Dalles Dam produced a shoreline with a moderately steep slope with depths of 15 feet or more close to shore. The Dalles Dam necessitated the relocation of highway and railroad corridors along the Oregon and Washington shores. The shoreline adjacent to highway and/or railroad was either rock riprap, rock, or gravel. As a result of the dam, highway, and railroad construction, riparian vegetation within the project area was severely limited to occasional small stands of cottonwood, willow, locust, and poplar. As much as 75 percent of the shoreline is unvegetated within the project area with only 10 percent of the immediate shoreline having some type of grass and the other 15 percent dominated by woody plant species (Tabor, 1976). Any losses in riparian vegetation from project construction would have had an adverse impact on a wide variety of aquatic and terrestrial mammals, bats, small mammals, songbirds, and amphibians.

Inundation of gravel bars and sandy islands reduced the available area for nesting and resting by waterfowl. Rufus Bar, located along the Oregon shore between RM 210 and 212, became the major waterfowl resting area in Lake Celilo. Virtually no duck or goose nesting occurred at Rufus Bar until the John Day Dam stabilized water levels and prevented inundation during high Columbia River stages in April to mid-June (Ebert. 1962). Miller Island was used for resting by Canada geese; however, project construction, subsequent agricultural development, cattle grazing, and management practices by the private owner on Miller Island have resulted in fewer geese using the area. Very seldom were more than 1,000 to 2,000 birds found on Miller Island (Ebert, 1962).

Virtually no aquatic, emergent vegetation for waterfowl consumption exists within Lake Celilo (Tabor, 1976). Waterfowl primarily utilize the reservoir for resting and move to adjacent grain lands to feed (USACE, 1958).

In a 1974 and 1975 survey of waterfowl production in The Dalles area, adequate duck and goose nesting and brooding habitat appeared limited. No nesting was observed on Miller Island in

this survey, presumably due to the presence of coyotes. Waterfowl production in The Dalles Dam project area is the lowest of the impounded segments of the Columbia River. Embayments appear to contain suitable duck nesting habitat, but utilization appears very low, if at all. No utilization of these areas was found in a 1974 and 1975 survey. Disturbance from highway traffic and the railroad, water level fluctuations, and predators are some possible reasons for the apparent lack of use (Tabor, 1976).

The chukar is the most abundant and widespread upland game bird observed in The Dalles Dam project area. Chukar density appears highest on the Washington shore between RM 206 and 208. Ring-necked pheasant and California quail occur in low to moderate numbers and appear to be most numerous in riparian habitats of the Oregon shore between RM 204 and 213 and on the Washington shore between RM 208 and 215. Other game birds noted for the project area include mourning dove, snipe, and probably gray partridge (Tabor, 1976).

Colonial nesting species noted to utilize the small rocky islands and areas near Miller Island (RM 203 to 206) and Little Memaloose Island (RM 195) include glaucous-winged gull, California gull, and ring-billed gull. Approximately 1,000 nesting gulls were found within the project area in the spring and summer of 1974 and 1975 (Tabor, 1976). Inventories in 1982 and 1983 on the small rocky islands east of Miller Island (RM 206) have shown up to 2,000 adult gulls and 1,000 young. Approximately 95 percent of these were California gulls and 5 percent were ring-billed gulls. Great blue heron nests have been noted on Browns (RM 197 to 198) and Miller Islands in 1978 (Tabor, 1981). Forester's and Caspian tern nests have been noted on Rufus Bar (RM 210 to 212) in 1977 and 1978 (Tabor, 1981).

Avifauna associated with cliffs within the project area include red-tailed hawk, prairie falcon, American kestrel, rock dove, rock wren, canyon wren, chukar, starling, cliff swallow, and white-throated swifts. Based upon a May 1974 raptor nesting census, cliff nesting raptors did not occur in large numbers (Tabor, 1976).

Beaver, otter, mink, and muskrat were found to utilize ponds, sloughs, and embayments such as near the mouth of the Deschutes River (McKern, 1976; Tabor, 1976).

Black-tailed deer, mule deer, and intergrades of these two subspecies are found throughout the project area. Primary impact of project construction and subsequent highway and railroad relocations appear to be limiting access by deer to the water and shoreline areas (Ebert, 1983; Lenhart, 1983; Torland, 1983).

This observation is supported in a 1974 and 1975 study that noted most frequent deer use along steep, grassy slopes of the canyon walls and little use of riparian vegetation (Tabor, 1976). The density of deer was also noted to be very low in The Dalles Dam project area compared to other pooled sections along the Columbia River (Tabor, 1976).

No evidence of the presence of opossum, elk, cougar, or black bear was observed within the project area in 1974 and 1975 (Tabor, 1976). Opossum have expanded to occupy the area within the past 5 years.

The northern bald eagle is listed as a Federal and State threatened species. Bald eagles may be seen in the project area as migrants and common winter residents. Observations for this species are common within the project site.

The peregrine falcon is listed as a Federal and State endangered species. No sightings of this species within the project area were recorded by Tabor (1976). Nelson (1969) indicated that historically this subspecies was commonly found along the Columbia River from the coast to about The Dalles, but had declined drastically in numbers as recently as 1964.

For other sources of information on resources of the Columbia River, a bibliography entitled "Selected Administrative Reports and Publications Representative of Conservation Policy, Plans and Programs Influencing the Management of the Wildlife Resource Within the Columbia River Basin" and another entitled "Partial List of Reports, Publications and Studies Describing State and Federal Policy and Program, and the Abundance and Distribution of Wildlife and Habitat Within the Columbia River Basin" are available from the U.S. Army Corps of Engineers, Portland District.

(c) Operational

Operational impacts are related to the magnitude, duration, and frequency of water releases or water fluctuations. Possible impacts to wildlife resources include the erosion of islands valuable as mule deer fawning areas and waterfowl habitat and the formation of land bridges to islands during low water periods which increases access by predators. High water can inundate brooding areas, riparian habitats, shoreline, and shallow water areas. Birds, upland game, aquatic and terrestrial furbearers and other wildlife species dependent upon shoreline vegetation, shoreline insect populations, and riparian habitat may suffer food shortages. Fluctuating water levels can have adverse impacts on aquatic furbearers, waterfowl, colonial nesting gulls and terns, amphibians, and the reestablishment of riparian and

aquatic habitats. Furbearer populations would be particularly susceptible to drastic water fluctuations in March and April when young are produced. The critical period for waterfowl nesting occurs from March 1 to May 15. It is unlikely that either amphibians or riparian and aquatic vegetation would be able to adapt to rapidly changing water conditions resulting from power peaking operations (Tabor, 1976; Tabor, et al., 1981).

V. MITIGATION HISTORY

(a) Mitigation Requested or Proposed

The U.S. Fish and Wildlife Service, the Washington Department of Game and the Oregon State Game Commission negotiated with the Corps of Engineers from 1953 to 1960 to reserve some project lands for wildlife conservation and management. Mitigation recommendations concentrated on providing waterfowl use areas. Measures recommended included reserving all Corps land from The Dalles Dam to the John Day Dam for wildlife purposes, reserving specific areas to be set aside that were anticipated or observed to have significant wildlife use, and creating suitable waterfowl nesting, brooding, and resting areas. Specific areas identified to be set aside for wildlife use included Miller Island, Browns Island, Rufus Bar, Grant area (RM 210 to 211), and the mouth of the Deschutes River (RM 205). As early as 1953, the U.S. Fish and Wildlife Service recommended that Miller Island be acquired in fee by the Corps and then transferred to the Washington Department of Game for management of nesting and migratory waterfowl.

(b) Mitigation Agreements or Requirements

(1) FPC/FERC Requirements

As a Federal project, the Federal Power Commission does not have the responsibility for issuing permits, licenses, and license exemption grants under the Federal Water Power Act for The Dalles Lock and Dam.

(2) FWCA Proceedings

The Fish and Wildlife Coordination Act (FWCA) of 1934, as amended, requires all hydroelectric project developers to consult with the U.S. Fish and Wildlife Service and state conservation agencies prior to project development "with a view to preventing loss of and damage to wildlife resources." Federal development projects were required to contain adequate provision for conservation, maintenance, and management of wildlife resources consistent with primary project purposes. This Act was named the

Fish and Wildlife Coordination Act of August 12, 1958, at which time an amendment was added stating that "wildlife conservation shall receive equal consideration and be coordinated with other features of water-resource development programs." Land acquisition, project modifications, and/or project operations modification were to be based on impact and mitigation reports by wildlife agencies, and costs for these measures were to be made an integral part of project costs.

In accordance with the Coordination Act, the U.S. Fish and Wildlife Service made a pre-construction evaluation of project impacts and documented the impacts in a June 1953 report entitled "A Detailed Report on Fish and Wildlife Resources in Relation to the Plan for The Dalles Dam, Columbia River, Oregon-Washington." On November 29, 1956, the Washington Department of Game provided to the Corps a brief statement on pre-impoundment and anticipated post-impoundment fish and wildlife conditions. On April 24, 1957, the Oregon State Game Commission provided to the U.S. Army Corps of Engineers a statement concerning fish and wildlife in relation to The Dalles Dam and Reservoir. A Master Plan for reservoir management and public use development was developed for The Dalles Project in 1958. Subsequent revisions of the Master Plan appeared in 1964, 1972, and 1975. In accordance with the National Environmental Policy Act, a final environmental statement on the construction, operation, and management along the Columbia River from Umatilla to The Dalles was published in April 1975.

(3) MOUs or Other Agreements

In 1960, the Secretaries of the Army and Interior, and Directors of the Oregon State Game Commission and Washington Department of Game developed an agreement for use of lands for fish and wildlife conservation, management, and public use. The agreement was called "General Plan for Use of Project Land and Water Areas for Wildlife Conservation and Management--The Dalles Dam, Columbia River." The General Plan was published in the U.S. Army Corps of Engineers' 1964 Master Plan for The Dalles Dam. Several areas were delineated to be made available to the Oregon State Game Commission and Washington Department of Game. The General Plan was republished in the U.S. Army Corps of Engineers' 1972 Master Plan for The Dalles Dam; however, areas originally designated for fish and wildlife purposes underwent several boundary modifications with each update of the Master Plan for The Dalles Dam.

(c) Mitigation Implemented

Numerous pieces of correspondence dating as far back as 1953 between government wildlife agencies and the Corps confirm that

government wildlife agencies expressed interest throughout early project planning and construction phases of the project in obtaining mitigation for wildlife habitat losses. Considering the constraints and restrictions placed upon the U.S. Army Corps of Engineers by Congress on the use of project lands, the use of project monies, and the acquisition of lands, government wildlife agencies realized early in project planning and construction that wildlife habitat losses would far exceed the limited opportunities for wildlife mitigation. Despite these limitations, government wildlife agencies continued to attempt negotiations with the U.S. Army Corps of Engineers to obtain partial compensation for wildlife losses.

Interagency coordination culminated in 1960 with the development of the General Plan. Several areas were to be set aside for recreation, fish and wildlife as designated in the General Plan. Recreation facilities were initially provided in 1960 at Celilo and Maryhill Parks and in 1962 at Horsethief Lake Park. Minimal facilities were provided at Avery and a visitor center and picnic area at the dam in 1963. By 1964, none of the areas identified specifically for fish and wildlife in the 1960 General Plan had been transferred or leased to interested fish and wildlife agencies for fish and wildlife purposes. Areas originally designated for fish and wildlife purposes underwent several boundary modifications with each update of The Dalles Dam Master Plan. A total of eight areas currently have recreational developments; however, little development or management has been implemented directly related to wildlife mitigation. Additional recreation development proposed in the 1976 Master Plan for the Rufus area, Miller Island, and Browns Island threatens to degrade the quality of remaining wildlife areas.

Approximately 22.5 acres in the vicinity of Rufus Bar was transferred in fee title from the Corps to the Oregon Department of Fish and Wildlife in the late 1970's for wildlife management. The Oregon Department of Fish and Wildlife has initiated some habitat improvement for waterfowl and upland game on this small parcel of land. Management practices include protection of land from cattle grazing, providing a pond and providing winter forage for waterfowl and pheasant (Scherzinger, 1983; Torland, 1983).

The Oregon Department of Fish and Wildlife has a current agreement with the Corps until year 2004 to manage approximately 232.88 acres in the Rufus Bar area. The area is managed as a refuge or sanctuary with protection provided by the Oregon Department of Fish and Wildlife. No active habitat improvements have been made to the area (Scherzinger, 1983; Torland, 1983).

Progress toward the acquisition of Miller Island ceased sometime during the Eisenhower administration when a change in the U.S.

Army Corps of Engineers' land acquisition policy prevented the use of project monies to purchase lands for fish and wildlife purposes. Under the acquisition policy in effect at that time, management of lands for fish and wildlife mitigation could only be obtained through easements. Presently over 95 percent of Miller Island is privately owned and managed for cattle grazing. Waterfowl use on the island is below its potential due to management practices of the private landowner and the presence of predators.

VI. CURRENT STUDIES AND PLANNING

Columbia Basin Waterfowl Redistribution Plan - This is a cooperative effort involving the U.S. Fish and Wildlife Service, the Oregon Department of Fish and Wildlife, and the Washington Department of Game to try to distribute a perceived overpopulation of wintering waterfowl in the Umatilla Basin area to North Columbia Basin and Southeast Idaho.

The Dalles Lock and Dam Project - There are no plans currently being negotiated to further mitigate wildlife losses attributable to the project. No studies were ever conducted to document wildlife losses resulting from the project. To accurately determine the mitigation needs, an objective comparison of the pre- and post-impoundment habitat conditions by use of pre- and post-impoundment aerial photography and existing habitat inventories would be needed.

VII. REFERENCES CITED

Ball, I.M. et al. 1981. Ecology and Management of the Western Canada Goose in Washington. Washington Department of Game. Biological Bulletin No. 17. 67 pp.

Ebert, P.W. 1962. Personal communication. Oregon State Game Commission.

Ebert, P.W. 1983. Personal communication. Oregon Department of Fish and Wildlife, Portland, Oregon.

Lenhart, D.J. 1983. Personal communication. U.S. Fish and Wildlife Service, Portland, Oregon.

McKern, J.L. 1976. Inventory of Riparian Habitats and Associated Wildlife Along the Columbia and Snake Rivers. Summary Report. Volume I. U.S. Army Corps of Engineers, North Pacific Division. 100 pp.

Nelson, M.W. 1969. The status of the Peregrine Falcon in the Northwest. pp 61-72. In Joseph P. Hickey (Ed.), Peregrine Falcon Populations, Their Biology and Decline. Univ. of Wisconsin Press, Madison.

Oregon State Game Commission. 1957. Letter dated August 30, 1957 to District Engineer, U.S. Army Corps of Engineers from P.W. Schneider, Director, Oregon State Game Commission. The Dalles Dam and Reservoir project files, U.S. Fish and Wildlife Service, Portland, Oregon.

Scherzinger, D. 1983. Personal communication. Oregon Department of Fish and Wildlife, Portland, Oregon.

Tabor, J.E. 1976. Inventory of Riparian Habitats and Associated Wildlife Along the Columbia and Snake Rivers. Volumes IIA and B. U.S. Army Corps of Engineers, North Pacific Division. 861 pp.

Tabor, J.E. et al. 1981. Study of Impacts of Project Modifications and River Regulation on Riparian Habitats and Associated Wildlife Along the Columbia River. U.S. Army Corps of Engineers, North Pacific Division.

Torland, J. 1983. Personal communication. Oregon Department of Fish and Wildlife.

U.S. Army Corps of Engineers, Portland District. 1951. Letter report on The Dalles Dam, Columbia River, Oregon-Washington. Portland, Oregon. Paging various.

U.S. Army Corps of Engineers, Portland District. 1958. The Master Plan, Reservoir Management and Public Use Development, The Dalles Project, Columbia River, Washington and Oregon. Portland, Oregon. 69 pp.

U.S. Army Corps of Engineers, Portland District. 1964. The Master Plan for Reservoir Management and Public Use Development, The Dalles Project, Columbia River, Oregon and Washington. Design Memorandum No. 20B. Portland, Oregon. Paging various.

U.S. Army Corps of Engineers, Portland District. 1972. The Dalles Lock and Dam (Lake Celilo), Columbia River, Oregon and Washington. Master Plan. Design Memorandum No. 20B. Portland, Oregon. 43 pp.

U.S. Army Corps of Engineers, Portland District. 1975a. Construction, Operation and Management, Columbia River, Umatilla to The Dalles, Oregon and Washington. Final Environmental Impact Statement. Portland, Oregon. Paging various.

U.S. Army Corps of Engineers, Portland District. 1975b. The Dalles Lock and Dam Master Plan, Columbia River Basin, Oregon-Washington. Design Memorandum 20B. Portland, Oregon. Paging various.

U.S. Fish and Wildlife Service. 1953. A Detailed Report on Fish and Wildlife Resources in Relation to the Plan for The Dalles Dam, Columbia River, Oregon-Washington. The Dalles Dam and Reservoir project files, U.S. Fish and Wildlife Service, Portland, Oregon.

Washington Department of Game. 1956. Letter dated November 29, 1956 to Colonel Jackson Graham, District Engineer. U.S. Army Corps of Engineers from John A. Briggs, Director of Game, Washington Department of Game. The Dalles Dam and Reservoir project files, U.S. Fish and Wildlife Service, Portland, Oregon.

APPENDIX A: STUDY TEAM

U.S. Fish and Wildlife Service

Patrick Wright
Diana Hwang

Washington Department of Game
Jack Howerton
Don Kraege

Oregon Department of Fish and Wildlife
Dan Carleson
Karen Bedrossian

APPENDIX B: CONSULTATION/COORDINATION

Project Contacts

Confederated Tribes

William P. Bradley	Yakima Indian Nation
Jerry Lauer	Bureau of Indian Affairs
Terry Luther	Warm Springs Natural Resources
John Marsh	Columbia River Inter-Tribal Fish Comm.
Bob Strom	Nez Pierce Tribe

Oregon Department of Fish and Wildlife
- Karen Bedrossian
- Dan Carleson
- Paul Ebert
- Jack Melland
- Dick Scherzinger
- Jim Torland

U.S. Army Corps of Engineers
- Bernard Bishop
- Byron Blankenship
- Geoff Dorsey
- Ken Dzimbal
- Mike Passmore
- Carolyn Zarneckee

U.S. Fish and Wildlife Service
- John T. Annear
- Jim Bartonek
- George Constantino
- Dick Giger
- Dave Lenhart
- Daniel C. O'Neal
- Carey Smith

Washington Department of Game
- Jack Howerton
- Don Kraege
- Gretchen Van Lom

APPENDIX C

Comments

VICTOR ATIYEH
GOVERNOR

Department of Fish and Wildlife
506 S.W. MILL STREET, P.O. BOX 3503, PORTLAND, OREGON 97208

29 August, 1984

Mr. John R. Palensky, Director
Division of Fish and Wildlife
Bonneville Power Administration
P.O. Box 3621
Portland, OR 97208

Attention Mr. James Meyer:

The Oregon Department of Fish and Wildlife has high expectations of the Northwest Power Planning Act to provide for wildlife and wildlife habitat mitigation to offset impacts resulting from hydroelectric development.

As The Dalles Dam Wildlife Mitigation Status Report and our attached comments on that report indicate, comprehensive evaluation of wildlife resource impacts and mitigation for wildlife habitat losses were not accomplished. Knowledge of wildlife resources and legal mandates have changed since The Dalles Project was constructed. In addition to the requirements of the Northwest Power Planning Act for protection, mitigation and enhancement of wildlife resources, the Department of Fish and Wildlife has a policy to request mitigation for losses of animal populations and habitat. The main stem Columbia River hydroelectric projects have high priority due to the high value of wildlife resources involved.

In recognition of our increased responsibilities to address a broad range of concerns, I strongly urge the participating agencies to move forward in implementing the Wildlife Program of the Northwest Power Planning Council. In particular, we must proceed with a mitigation plan based on a comprehensive assessment of wildlife impacts at The Dalles Project. The Department is prepared to participate in this endeavor and recommends a habitat based evaluation using: 1) the expertise of biologists from appropriate agencies; 2) existing data where possible; and 3) cost effective methods.

The first step toward accomplishing the goals of the Power Council's Fish and Wildlife Program has been the mitigation status report. We must now take the succeeding steps leading to full compensation for wildlife and wildlife habitat impacts at The Dalles Project.

Sincerely,

for John R. Donaldson, PhD
Director

kb/hk
Encl.

OCT 19 1984

Oregon Department of Fish and Wildlife
Comments on
Wildlife Mitigation Status Report
The Dalles Dam and Reservoir
29 August, 1984

These comments respond to a request from James R. Meyer, Bonneville Power Administration, dated 21 August 1984 to review the Mitigation Status Report for The Dalles Dam and Reservoir.

Oregon Revised Statute 496.012, Wildlife Policy, says in part: "It is the policy of the State of Oregon that wildlife shall be managed to provide the optimum recreational and aesthetic benefits for present and future generations of the citizens of this state. In furtherance of this policy, the goals of wildlife management are:

(1) To maintain all species of wildlife at optimum levels and prevent the serious depletion of any indigenous species.

(2) To develop and manage the lands and waters of this state in a manner that will enhance the production and public enjoyment of wildlife."

In accordance with ORS 496.012, the Department has a policy to request mitigation when losses to animal populations and habitat result from project construction and operation. These policies are consistent with the Power Act and Wildlife Program purpose "to protect, mitigate, and enhance fish and wildlife to the extent affected by the development and operation of any hydroelectric project of the Columbia River and its tributaries...." This goal has yet to be achieved at The Dalles Project.

The Dalles Wildlife Mitigation Status Report demonstrates assessment of the impacts to wildlife resulting from the construction and operation of the project was not comprehensive. This is evident by the lack of information available regarding the types and amounts of habitat altered and the lack of quantitative estimates of species affected by the project. The significance of the inundated habitat to wildlife has not been fully explored. Even though impact assessment has not been adequate, it is obvious that substantial impacts occurred to wildlife as a result of The Dalles Project, considering acreage of habitat inundated. The status report indicates that mitigation measures implemented have not been adequate to offset impacts to wildlife resulting from the project.

In order to "protect, mitigate, and enhance" wildlife resources affected by the development and operation of the hydroelectric generating facilities at The Dalles Project, it is necessary to determine what impacts occurred. Upon the approval of and funding by the Council and Bonneville Power Administration, the Department is prepared to participate in an assessment of impacts to wildlife resources resulting from The Dalles Project and preparation of a loss statement. The Department is also ready to participate in developing mitigation plans. We believe that a workable loss statement and

mitigation plan can be developed based on existing information, and the expertise of biologists from the appropriate agencies who are familiar with the project area and appropriate wildlife habitat and species. Extensive, detailed studies will only delay implementation of mitigation measures.

The level of understanding of our wildlife resources has greatly improved since the time of construction of The Dalles Project. We have broader concerns and are more aware of wildlife/habitat relationships. The Northwest Power Planning Act and the Power Council's Fish and Wildlife program have provided the opportunity to correct past misunderstanding and shortsightedness regarding wildlife resources affected by the development and operation of hydroelectric power in the Columbia River Basin. The Oregon Department of Fish and Wildlife wants to see that opportunity realized to the fullest degree possible in a timely, efficient, and cost-effective manner.

SEP 28 1984

United States Department of the Interior

FISH AND WILDLIFE SERVICE
LLOYD 500 BUILDING, SUITE 1692
500 N.E. MULTNOMAH STREET
PORTLAND, OREGON 97232

September 18, 1984

Mr. John Palensky, Director
Division of Fish and Wildlife
Bonneville Power Administration
Attention: James Meyer
P. O. Box 3621
Portland, Oregon 97208

Dear Mr. Palensky:

As requested in Mr. Meyer's letter of August 21, 1984, we have reviewed the Wildlife Mitigation Status Report for The Dalles Project (the Project). The following comments are being provided for inclusion in the final report.

General Comments

Based on the report's content, it is evident that the construction and operation of the Project has resulted in substantial adverse impacts to wildlife resources which have been neither adequately identified nor mitigated. Therefore, the Service recommends that the Bonneville Power Administration provide funds to: 1) conduct a comprehensive evaluation of the impacts of the Project on wildlife resources; and 2) based on the findings of that evaluation, develop a mitigation and enhancement plan which would fully compensate the adverse wildlife impacts attributable to the Project.

The Service has the necessary expertise and would like to participate as the lead agency in both the impact evaluation and mitigation plan development tasks. We are developing a proposal to conduct an impact evaluation and will submit it to you in the near future.

Specific Comments

A comprehensive evaluation of the Project's impact on wildlife resources should be conducted by a team of qualified biologists composed of representatives from appropriate state and federal resource and development agencies. These include the Oregon Department of Fish and Wildlife, Washington Department of Game, Army Corps of Engineers, and Fish and Wildlife Service.

The evaluation should include an analysis of any actions which have been implemented to mitigate the Project's adverse impacts on wildlife. We suggest the evaluation be habitat based and supported by population data when available. We believe that such an evaluation could be accomplished with a minimum of new data collection by: 1) analyzing the existing data referenced in the status report such as pre- and post-construction photography; and 2) consultation with professional wildlife biologists familiar with the area's wildlife resources as they existed prior to project construction. The evaluation's results should be presented in an impact assessment report.

Utilizing the results from the aforementioned impact statement, we believe that the same team of biologists, with assistance from their agencys' respective habitat specialists, should develop a mitigation plan. The plan, if implemented, would be designed to fully compensate the adverse wildlife impacts identified.

In conclusion, we believe no single agency or user group is responsible for the adverse wildlife impacts which have resulted from the development and operation of The Dalles Project. The proposals outlined in this letter would be considered "standard operating procedures" for evaluating the impacts of new water development proposals under present state and federal laws, regulations, and policies. Unfortunately, these legal mandates which today provide for the protection of our wildlife resources were not as strong when The Dalles Project was being developed. However, both the Northwest Power Planning and Conservation Act and the Council's Fish and Wildlife program recognize this and together have given us an opportunity to evaluate and replace lost wildlife resources. The Service is eager to move toward that end.

Sincerely yours,

James W. Teeter
Acting Assistant Regional Director
Habitat Resources

SEP 19 1984

United States Department of Agriculture | Forest Service | Mt. Hood NF | 2955 NW Division St. Gresham, OR 97030

Reply To: 2610 Cooperative Relations

Date: September 14, 1984

Subject: Formal Review of Project Report - The Dalles Dam

To: Mr. John Palensky
Division of Fish & Wildlife, BPA
ATTN: Mr. James Meyer
P. O. Box 3621
Portland, OR 97208

The project report on the "Wildlife Mitigation Status Review" for The Dalles Dam was reviewed by District and Forest Biologists. The report appeared to adequately reflect known wildlife information for the project area.

Thank you for the opportunity to review and comment on this "Wildlife Mitigation Status Review".

DEAN P. LONGRIE
Biologist

601:4970E13

FS-6200-28(7-82)

OCT 03 1984

United States Department of Agriculture
Forest Service
Umatilla National Forest
2517 SW Hailey Ave.
Pendleton, OR 97801

Reply to: 2610 Cooperative Relations

Date: September 19, 1984

Subject: Formal Review of Project Reports - "Wildlife Mitigation Status Review"

To: Regional Forester

Your memorandum of September 6, 1984, requested our review of the "Wildlife Mitigation Status Review" reports for the Dalles and McNary Dam projects with regard to potential impacts to our programs. Because of the very limited review time, we have only been able to provide a cursory review.

It would appear that the mitigation of both fish and wildlife have been adequately addressed and would have little, if any, impact to our management programs on the Forest.

JOHN E. LOWE
Forest Supervisor

RECEIVED
SEP 20 1984
FISH AND WILDLIFE

Action	INFO	F&WL	
		BLACK, JR	
		CANUTT	
		HAUGEN	
		HINBERNICK	
		MORAN	
		PEDERSEN	
		PHILLIPS	
		MARKHAM	
		MARIER	
		FILES	

cc: BPA

GENERAL COUNCIL
and
BOARD of TRUSTEES

CONFEDERATED TRIBES
of the
Umatilla Indian Reservation

P.O. Box 638
PENDLETON, OREGON 97801
Area Code (503) Phone 276-3165

August 25, 1983

Mr. Russell D. Peterson
U.S. Fish and Wildlife Service
Division of Ecological Services
Portland Field Office
727 N.E. 24th Avenue
Portland,Oregon 97232

Dear Mr. Peterson:

In reference to your letter of August 10, 1983, regarding perspective of the Confederated Tribes on the history of wildlife studies and mitigation measures accomplished at the Bonneville Lock and Dam, the Dalles Lock and Dam, John Day Lock and Dam, and McNary Lock and Dam, comments were not submitted on this subject at the time of project authorization. It appears that our concerns on construction of these hydrolelectric projects were limited to impacts on anadromous fisheries. We do not have documentation on file which outlines the impacts on wildlife and mitigation measures adopted.

We would appreciate the opportunity to review drafts of the status reports on wildlife mitigation at the hydroelectric projects prior to completion of the final report. We will provide comments regarding wildlife concerns at that time. Copies of the reports should be sent to Jerry L. Lauer, Bureau of Indian Affairs, Umatilla Indian Agency, P.O. Box 520, Pendleton, Oregon 97801. Mr. Lauer acts as staff wildlife biologist for the Confederated Tribes.

Sincerely,

CONFEDERATED TRIBES OF THE
UMATILLA INDIAN RESERVATION

RECEIVED

AUG 2 8 1983

Elwood H. Patawa, Chairman
Board of Trustees

SH
DS
PW

JOHNSON, MARCEAU, KARNOPP & PETERSEN
ATTORNEYS
835 N.W. BOND STREET • BEND, OREGON 97701-2799 • TELEPHONE (503) 382-3011

LYMAN C. JOHNSON
RONALD L. MARCEAU
DENNIS C. KARNOPP
JAMES E. PETERSEN
ROBERT L. NASH
JAMES D. NOTEBOOM
MARVIN E. HANSEN
HOWARD G. ARNETT
STEVEN D. STADLER

September 6, 1983

Russell D. Peterson
Field Supervisor
U.S. Fish & Wildlife Service
Division of Ecological Services
Portland Field Office
727 N.E. 24th Avenue
Portland, OR 97232

Re: Wildlife Mitigation and Columbia River Hydroelectric Projects

Dear Mr. Peterson:

I represent the Warm Springs Tribe and am writing in response to your letter of August 10th to Terry Luther of the tribe's Natural Resources Department. Your letter requests information concerning wildlife mitigation studies and measures undertaken in connection with the four CoE mid-Columbia hydro projects.

We have reviewed our files and discussed the matter with tribal leaders. It appears that wildlife mitigation was omitted from the negotiations between the federal government and the Columbia River Indian tribes leading to the construction of the four projects that are the subject of your reports. The omission of the wildlife mitigation from the federal-tribal discussions was almost certainly inadvertent. The tribe's treaty-protected right to hunt, as well as fish, off-reservation gives the tribe a legal interest in the preservation of all wildlife resources in the mid-Columbia region. Diminished populations of such species as ducks, geese, otter, beaver, muskrats, deer, etc. resulting from the construction of the mid-Columbia hydro projects must be restored to fulfill the tribe's treaty right.

To our knowledge, no studies have been undertaken to determine whether populations of wildlife species utilized by tribal members in the area inundated by the hydro projects have been diminished. The tribe is anxious to assist the Fish & Wildlife Service in its efforts to determine the amount o

RECEIVED
SEP 9 1983

wildlife loss and the mitigation efforts required to restore the resource.

Sincerely,

HOWARD G. ARNETT

HGA/clm

cc: Warm Springs Fish & Wildlife Committee
Terry Luther, Natural Resources Department

D BY THE
JUNE 9, 1855
ENTENNIAL JUNE 9, 1855

CONFEDERATED TRIBES AND BANDS
Yakima Indian Nation
WILDLIFE RESOURCE MANAGEMENT PROGRAM
POST OFFICE BOX 151
TOPPENISH, WASHINGTON 98948

GENERAL COUNCIL
TRIBAL COUNCIL

1(509) 865-5121
Ext. 666 or 668

November 22, 1983

Richard D. Giger
Fish and Wildlife Service
Lloyd 500 Building, Suite 1692
500 N.E. Multnomah Street
Portland, OR 97232

RE: Yakima Indian Nation concerns relative to wildlife mitigation and the Corps of Engineers mid-Columbia hydro projects.

Dear Sir:

The Yakima Indian Nation welcomes the opportunity to comment on wildlife mitigation relative to Indian concerns in connection with the four Corps of Engineers mid-Columbia hydro projects (Bonneville, The Dalles, John Day, and McNary Dams). You are correct in your findings that wildlife mitigation was omitted from the negotiations between the federal government and the Columbia River Indian tribes prior to the construction of the hydro projects covered in your report. The omission of wildlife mitigation from the federal-tribal discussions was certainly inadvertant, but easily explained. The Bureau of Indian Affairs has historically not been directly involved in wildlife management either in an advocacy role, or in a functional on-reservation wildlife management program. Scientific wildlife management on-reservation is a relatively new phenomena and stems primarily from concerned tribes active involvement in the previous five years. Given these facts, it is not surprising that tribal wildlife concerns were not represented in the original negotiations. The Yakima Indian Nation's Treaty protected right to hunt, as well as fish, off reservation, gives the tribe a legal interest in the conservation and maintenance of all wildlife resources in the mid-Columbia and Columbia Basin regions.

The increased competance of on-reservation tribal wildlife management in the last few years fortunately coincides with your studies relative to wildlife mitigation on these main stem hydro-electric projects. Hopefully, these unmitigated losses can now be identified and properly addressed through the mitigation process. The Yakima Indian Nation has suffered serious loss of wildlife populations and wildlife habitat as a result of the aforementioned hydro-electric projects. I shall briefly outline our major concerns below in rough order of priority.

1. Loss of Water-Fowl Fly-way

The Yakima River basin has been an historically important fly-way for water-fowl species. The Yakima Indian people made extensive use of water-fowl as a food source and as a source for ceremonial artifacts and clothing. In more recent historical times, the heavy water-fowl concentration as a result of this fly-way provided an important source of income through the tribe's public hunting and fishing license program.

Within the last 20 years, this important water-fowl resource has been diminished almost to the point of total elimination. This loss appears to be due not to a fewer number of water-fowl, but to a redistribution of existing populations and fly-ways influenced by the habitat conditions created by the construction of the hydro projects. This condition seems particularly affected by the John Day and McNary pool areas. Water-fowl concentrations behind these pools have become so great as to actually cause agricultural damage and disease related problems. This fact has been well documented in recent years by a cooperative study team consisting of biologists from Oregon, Washington, and the U.S. Fish and Wildlife Service. This study resulted in recently published corrective master plan entitled Columbia Basin Water-Fowl Redistribution. The Yakima Indian Nations concerns for the loss of the water-fowl fly-way through the Yakima drainage as result of the creation of the mid-Columbia pools are enhanced and supported by this document. This loss has lead to severely reduced income to the tribe and a reduced seasonal food source for tribal members.

2. Direct Loss of Water-Fowl Nesting and Brooding Habitats

Nesting water-fowl populations along the Columbia River main stem were historically utilized by Yakima Indian people as a source of food, ceremonial artifacts, and clothing (collection of down). Inundation of mid-river gravel bars and islands has long been recognized as the primary reason for the decline of these main stem water-fowl populations. This loss has never been properly mitigated with respect to the Yakima Indian Nation.

3. Direct Loss of Deer Habitat

Riparian growth on both inundated islands and shorelines along the historical course of the Columbian River Provided habitat for black-tail deer and Columbian white-tail deer. The Columbia River breaks provided important wintering

3. Direct Loss of Deer Habitat (Cont.)

ranges for migratory mule deer. These deer populations associated with the Columbia main stem provided an important source of subsistance food for tribal members. Construction of the hydro-electric projects and resultant inundation has destroyed the habitats for most of these deer populations. Associated development has lessened the use of the Columbia River brakes as winter range habitat. This loss was never mitigated in the original tribal-federal negotiations.

4. Loss of Native Upland Game Bird Habitat

The predominant native upland game birds in this area were sharp tailed grouse and the sage grouse. The impact of the hydro projects and any associated loss of habitat for these species has never been properly investigated. Both of these species are nearly extirpated from the mid-Columbia area and both species provided an important source of food for tribal members. The relationship of the decline of these species with the construction of the hydro projects has never been properly evaluated and hence has never been subject to mitigation procedures.

These four points represents specific concerns the Yakima Indian Nation relative to wildlife losses following the construction of the aforementioned hydro projects. These losses were never identified and hence never mitigated in the original federal-tribal negotiations. I feel this represents a very good starting point in any future mitigative efforts and hope that you will consider these concerns within the context of your report. Please do not hesitate to contact me for any further elaboration or discussion concerning these wildlife losses.

Sincerely,

William P. Bradley

William P. Bradley, Ph.D.
Director, Wildlife Resource Management
Yakima Indian Nation

cc: Northwest Power Planning Countil
Portland, Oregon

Corps of Engineers
Portland, Oregon

JOHNSON, MARCEAU, KARNOPP & PETERSEN
ATTORNEYS
835 N.W. BOND STREET • BEND, OREGON 97701-2789 • TELEPHONE (503) 382-3011

LYMAN C. JOHNSON
RONALD L. MARCEAU
DENNIS C. KARNOPP
JAMES E. PETERSEN
ROBERT L. NASH
JAMES D. NOTEBOOM
MARTIN E. HANSEN
HOWARD G. ARNETT
STEVEN D. STADUM

NOV 27 1983

November 21, 1983

U.S. EXPRESS MAIL

Richard D. Giger
United States Fish & Wildlife
Service
Lloyd 500 Building, Suite 1692
500 N.E. Multnomah Street
Portland, Oregon 97232

Re: Comments of the Warm Springs Tribe on the Draft Report on the Status of Wildlife Mitigation at The Dalles Dam.

Dear Mr. Giger:

This letter constitutes the comments of the Warm Springs tribe on the draft report on the status of wildlife mitigation at The Dalles hydroelectric project prepared by the U.S. Fish & Wildlife Service in connection with the Northwest Power Planning Council's Fish & Wildlife Program. The only reference in the draft report to Indian interests and the loss of wildlife caused by The Dalles Dam project is a paragraph repeated three times in the report (p. 5, p. 24, p. 28) to the effect that the Indians were concerned only with the loss of fisheries and not wildlife. This paragraph is both misleading and incorrect.

Although no federal legislation or formal agreements exist requiring wildlife mitigation for the benefit of Indian people, it is unfair to imply from this fact that the Indian people had no concern over the loss of wildlife resources in the area inundated by the Dam. This area, particularly around Celilo Falls, had one of the largest concentrations of Indian population in the Columbia basin. These people lived on more than just fish. Recent discussions with the Warm Springs Tribal Cultural and Heritage Committee have verified that deer, water fowl, upland game birds and rabbits were used for ceremonial, subsistence and other cultural purposes by Warm Springs tribal members living in this area. Additionally, Warm Springs Indians living in this area harvested furbearers for economic gain.

The lack of a formal agreement requiring wildlife mitigation for the benefit of Indian people is attributable to several factors other than the lack of Indian interest in the subject.

First, it is unlikely that at the time the Dam was built in the early 1950s the federal government ever considered the possibility that it had an obligation to the Indian people to mitigate wildlife losses caused by the Dam. At this same time, the Indian people were not as sophisticated as they are today with respect to enforcement of their off-reservation treaty rights under the 1855 treaties and were probably not advised that they had a claim against the government for the loss of wildlife resulting from the Dam's construction. Second, it is important to note that the formal agreements between the United States and the Indians involving fisheries impacts of The Dalles Dam relate only to the loss of fishing sites and not to mitigation for damage to the salmon resource itself. Since no agreements were made providing for mitigation of fish losses, which was obviously a concern of the Indian people, it is not surprising that no agreements were made providing for wildlife mitigation, which was also of concern to the Indians.

Thank you for considering these comments. I trust that the discussion of Indian concerns in the final report will reflect our comments.

Sincerely,

HOWARD G. ARNETT

HGA/clm
cc: Warm Springs Fish & Wildlife Committee
Terry Luther, Warm Springs Natural Resources Department
Jan Chrisman, Northwest Power Planning Council
U.S. Corps of Engineers, Portland District
Tim Weaver
Catherine Wilson
Robert C. Strom

1/1/2

GENERAL COUNCIL
and
BOARD of TRUSTEES

CONFEDERATED TRIBES
of the
Umatilla Indian Reservation

P.O. Box 638
PENDLETON, OREGON 97801
Area Code (503) Phone 276-3165

November 22, 1983

U.S. Fish and Wildlife Service
ATTENTION: Richard Giger
Lloyd 500 Building, Suite 1692
500 N.E. Multnomah Street
Portland, Oregon 97232

Dear Sir:

In the Treaty of June 9, 1855, 12 Stat. 945, with the United States, the Confederated Tribes reserved the right to fish at usual and accustomed stations and hunt on unclaimed lands off the Umatilla Indian Reservation. Members of the Confederated Tribes exercise this right subject only to restrictions imposed by the Tribal Fish and Wildlife Committee.

The Confederated Tribes have an inherent legal interest in the maintenance of optimum population levels of all wildlife resources in the mid-Columbia region. Loss of wildlife habitat and associated wildlife population levels resulting from the construction of the mid-Columbia hydroelectric projects must be fully documented and mitigation plans developed and implemented to fulfill the Tribes treaty right.

The Confederated Tribes support the conclusions and recommendations of the draft report on the status of wildlife mitigation at The Dalles hydroelectric project prepared by a team of state and federal wildlife specialists. It is readily apparent that a comprehensive quantitative and qualitative assessment of impacts on wildlife was never conducted; therefore, an adequate wildlife mitigation plan was never developed and implemented.

The Northwest Power Planning Council's Fish and Wildlife Program would seem to offer the mechanism to address the inadequacy in wildlife mitigation actions for The Dalles hydroelectric project. The approach in any effort to rectify the situation would involve three phases: (1) quantitively and qualitatively assess the loss of wildlife habitat and associated wildlife species, (2) develop and implement wildlife mitigation plans and (3) evaluate effectiveness of adopted wildlife mitigation plans.

The Confederated Tribes stand willing to assist state and federal wildlife management agencies in the devlelopment and implementation of

wildlife mitigation measures for The Dalles hydroelectric project as appropriate.

Sincerely,

CONFEDERATED TRIBES OF THE
UMATILLA INDIAN RESERVATION

Randall L. Hill
for Elwood H. Patawa, Chairman
Board of Trustees

EHP/q

cc: Curt Marshall
Northwest Power Planning Council
700 S.W. Taylor Street - Suite 200
Portland, Oregon 97205

Carol Zarnekee
Corps of Engineers
P.O. Box 2870
Portland, Oregon 97202

Jerry Lauer
Bureau of Indian Affairs

APPENDIX D

Mitigation Instruments

GENERAL PLAN
FOR USE OF PROJECT LAND AND WATER AREAS FOR WILDLIFE CONSERVATION AND MANAGEMENT--THE DALLES DAM, COLUMBIA RIVER, WASHINGTON AND OREGON

WHEREAS certain lands in the States of Washington and Oregon have been acquired by the Department of the Army for The Dalles Dam project, under authority of Public Law 516, 81st Congress, 2nd Session, approved May 17, 1950 and

WHEREAS the Fish and Wildlife Coordination Act (48 Stat. 401 as amended; 16 U.S.C. 661 et seq.) provides in Section 3 thereof that ". . . whenever the waters of any stream or other body of water are impounded, diverted, the channel deepened, or the stream or other body of water otherwise controlled or modified for any purpose whatever, including navigation and drainage, by any department or agency of the United States, adequate provision, consistent with the primary purposes of such impoundment, diversion, or other control, shall be made for the use thereof, together with any areas of land, water or interests therein, acquired or administered by a Federal agency in connection therewith, for the conservation, maintenance, and management of wildlife resources thereof, and its habitat thereon, including the development and improvement of such wildlife resources pursuant to the provisions of Section 2 of this Act.

"(b) The use of such waters, land, or interests therein for wildlife conservation purposes shall be in accordance with general plans approved jointly (1) by the head of the particular department

or agency exercising primary administration in each instance, (2) by the Secretary of the Interior, and (3) by the head of the agency exercising the administration of the wildlife resources of the particular State wherein the waters and areas lie. Such waters and other interests shall be made available, without cost for administration, by such State agency, if the management of the properties relate to the conservation of wildlife other than migratory birds, or by the Secretary of the Interior, for administration in such manner as he may deem advisable, where the particular properties have value in carrying out the national migratory bird management program:"

and

WHEREAS the Secretary of the Interior finds that said lands and waters of The Dalles project area are not of particular value in carrying out the national migratory bird management program, and

WHEREAS the State of Washington Department of Game finds that certain land and water areas of the Dalles project area, situated in Klickitat County, have considerable value in the conservation and management of fish and wildlife resources in the State of Washington, and

WHEREAS the Oregon State Game Commission finds that certain lands and waters of The Dalles project area situated in Wasco and Sherman counties have considerable value in conservation and management of fish and wildlife resources in the State of Oregon.

NOW, THEREFORE, it is agreed by the Secretary of the Army, the Secretary of the Interior, and the Director of the State of Washington Department of Game and Director of the Oregon State Game Commission, as follows:

The areas delimited in Exhibit A as 'Proposed Fish and Wildlife Management Areas' be made available by the Secretary of the Army to the Oregon State Game Commission or Washington Department of Game in accordance with subsequent instruments to be issued by the Secretary of the Army, covering the necessary details of Agreement.

Date AUG 16 1960 Asst. Secretary of the Army

Date SEP 7 1960 Secretary of the Interior

Date 4/28/60 Director, Oregon State Game Commission

Date April 11, 1960 Director, Washington Department of Game

DEPARTMENT OF THE ARMY
LICENSE
FOR FISH AND WILDLIFE PURPOSES
ON THE RUFUS ISLANDS
THE DALLES LOCK AND DAM (LAKE CELILO) PROJECT
OREGON

No. DACW57-3-79-124

THE SECRETARY OF THE ARMY, under authority of the Fish and Wildlife Coordination Act, as amended (48 Stat. 401; 16 U.S.C. 661 et seq) and the Act of Congress approved 22 December 1944, as amended (76 Stat. 1195; 16 U.S.C. 460d), hereby grants to the Oregon ~~State Game Commission~~ Dept. of Fish & Wildlife, thereafter referred to as the licensee, a license for a period of Twenty-Five (25) years commencing on 1 January 1979 and ending on 31 December 2004, to use and occupy approximately 232.88 acres of land and water areas under the jurisdiction of the Department of the Army in The Dalles Lock and Dam (Lake Celilo) Project, Oregon, as shown in red on Exhibits "A", "B" and "C", dated 27 October 1978, attached hereto and made a part hereof, for Fish and Wildlife conservation, development and management purposes.

THIS LICENSE is granted subject to the following conditions:

1. That the licensee, in the exercise of the privileges hereby granted, shall conform to such rules and regulations as may be prescribed by the Secretary of the Army to govern the public use of the said project area, and with the provisions of Section 4 of the Act of Congress approved 22 December 1944, as amended (76 Stat. 1195; 16 U.S.C. 460d).

2. That the licensee may construct upon said land such buildings, improvements, facilities, accommodations, fences, signs and other structures as may be necessary for the purposes of this license, and may plant seeds, shrubs and trees, provided that all such structures shall be constructed and the landscaping accomplished in accordance with plans approved by the District Engineer, U.S. Army Corps of Engineers, in charge of the administration of the property.

3. That the licensee shall administer and maintain the said property, for the purposes of this license, in accordance with the master plan for the said project area and with an annual management program to be mutually agreed upon between the licensee and the said District Engineer, which may be amended from time to time as may be necessary. Such annual management program shall include but is not limited to the following:

MAY 2 1 1984 cy to TD 19 apr

a. Plans for management and development activities to be undertaken by the licensee or jointly by the Corps of Engineers and the licensee.

b. Budget of the licensee for carrying out the management and development activities.

c. Personnel to be used in the management of the area.

d. Plans for supervising, patrolling and policing the licensed areas, including the water areas.

4. That the licensee shall protect the property from fire, vandalism and soil erosion, and may make and enforce such rules and regulations as are necessary, and within its legal authority, in exercising the privileges granted in this license, provided that such rules and regulations are not inconsistent with those prescribed by the Secretary of the Army to govern the public use of the area.

5. That the licensee, in exercising its governmental or proprietary functions, may plant and harvest crops, either directly or by service contract or under sharecrop agreements with local farmers, to provide: (a) food for wildlife and (b) necessary compensation to farmers under any sharecrop agreement. Recognizing that a poor crop season may result in a lack of food for wildlife in a given future year, the licensee will be allowed to provide a reasonable surplus which will be held in reserve against a future poor crop season or may be disposed of by the State and the proceeds from the sale held in reserve against a future poor crop season. In any event, the lands will not be used by the State for the production of crops or any other purpose solely to produce revenue to defray costs of management of the wildlife area. Lands within the licensed area, available for lease for agricultural or grazing purposes, will be leased by the District Engineer. Monies collected by the State and not used to provide food for wildlife in a poor crop season shall be paid to the District Engineer at five-year intervals. The licensee will establish and maintain adequate records and accounts and render periodic statements of receipts and expenditures in furtherance of its wildlife feeding program, as may be required by said District Engineer. The District Engineer shall have the right to perform audits of the licensee's records and accounts.

6. That the licensee may take, trap, remove, stock or otherwise control all forms of fish and wildlife within the said area, and may place therein such additional forms of fish and wildlife as it may desire from time to time, and shall have the right to close the area, or any parts thereof from time to time, to fishing, hunting or trapping, pro-

vided that the closing of any area to such use for fishing, hunting or trapping shall be consistent with the state laws for the protection of fish and wildlife; also, the licensee shall enforce the fish and game laws and such orders and regulations as may be issued by the Division of Game and Fish, and/or its Director, which laws, orders and regulations are consistent with its state-wide program.

7. That the water areas of the project shall be open to public use generally, without charge, for boating, swimming, bathing, fishing and other recreational purposes, and that ready access to and exit from such water areas along the shores of the project shall be maintained for general public use, when such use is determined by the Secretary of the Army not to be contrary to the public interest. However, no use of any area shall be permitted which is inconsistent with the state laws for the protection of fish and game.

8. That this license is subject to all existing and future easements, leases, licenses and permits heretofore granted, or to be hereafter granted, by the United States concerning said lands; provided, however, that upon appropriate notification by the licensee to said District Engineer, the United States, insofar as may be consistent with other uses and purposes of the project, will not enter into any new easements, leases, licenses or permits, or renewals thereof, which will, in the opinion of the District Engineer, adversely affect the current operations of the licensee under the provisions of the license, or which will conflict with the definitely scheduled program of the licensee for the expansion of its activities under the provisions of this license.

9. That the licensee furnishes as a part of this contract an assurance (Exhibit "D") that he will comply with Title VI of the Civil Rights Act of 1964 (78 Stat. 241) and Department of Defense Directive 5500.11 issued pursuant thereto and published in Part 300 of Title 32, Code of Federal Regulations.

10. That no cuts or fills along the shore line shall be made by the licensee without prior approval of the said District Engineer.

11. That, within the limits of their respective legal powers, the parties to this license shall protect the project against pollution of its water. The licensee shall comply promptly with any regulations, conditions or instructions affecting the activity hereby authorized if and when issued by the Environmental Protection Agency and/or a state water pollution control agency having jurisdiction to abate or prevent water pollution. Such regulations, conditions, or instructions in effect or prescribed by the Environmental Protection Agency or state agency are hereby made a condition of this license.

12. That ingress to and egress from the project area shall be afforded the licensee over existing access roads, such interior roads as may be constructed, and at such additional places over Government-owned land as may be approved by said District Engineer. The licensee shall provide appropriate markings at its own expense.

13. That the right is hereby expressly reserved to the United States, its officers, agents and employees, to enter upon the said land and water areas, at any time and for any purpose necessary or convenient in connection with river and harbor and flood control work, and to remove therefrom timber or other material, required or necessary for such work; to flood said premises when necessary, and/or to make any other use of said land as may be necessary in connection with public navigation and flood control, and the licensee shall have no claim for damages of any character on account thereof against the United States or any agent, officer or employee thereof.

14. That any property of the United States damaged or destroyed by the licensee incident to the exercise of the privileges herein granted shall be promptly repaired or replaced by the licensee to the satisfaction of the said District Engineer.

15. That the United States shall not be responsible for damages to property or injuries to persons which may arise from, or be incident to, the exercise of the privileges herein granted, or for damages to the property of the licensee, or for damages to the property or injuries to the person of the licensee's officers, agents, servants or employees, or others who may be on said premises at their invitation or the invitation of any one of them, arising from or incident to the flooding of said premises by the Government or flooding from any other cause, or arising from or incident to any other Governmental activities on the said premises, and the licensee shall hold the United States harmless from any and all such claims, except as licensee is prevented therefrom by Article XI, Section 7 of the Oregon Constitution.

16. That this license may be relinquished by the licensee at any time by giving to the Secretary of the Army, through the said District Engineer, at least thirty (30) days notice in writing.

17. That this license may be revoked by the Secretary of the Army in the event the licensee violates any of the terms and conditions of this license and continues and persists therein for a period of thirty (30) days after notice thereof, in writing, by the said District Engineer.

18. That on or before the date of expiration of this license or its relinquishment by the licensee, the licensee shall vacate the said Government premises, remove all property of the licensee therefrom, and restore the premises to a condition satisfactory to the said District Engineer. If, however, this license is revoked, the licensee shall vacate the premises, remove said property therefrom, and restore the premises as aforesaid within such time as the Secretary of the Army may designate. In either event, if the

licensee shall fail or neglect to remove said property and so restore the premises, then said property shall become the property of the United States, without compensation therefor, and no claim for damages against the United States, or its officers or agents, shall be created by or made on account thereof.

IN WITNESS WHEREOF I have hereunto set my hand this 27th day of February, 1979, by direction of the Assistant Secretary of the Army.

Gordon M. Hobbs
Assistant for Real Property
OASA(IL&FM)

The above instrument, together with the provisions and conditions thereof, is hereby accepted this 30th day of March 1979.

OREGON ~~STATE GAME COMMISSION~~ DEPT. OF FISH + WILDLIFE

By _____
Director

ASSURANCE OF COMPLIANCE WITH THE DEPARTMENT OF DEFENSE DIRECTIVE UNDER TITLE VI OF THE CIVIL RIGHTS ACT OF 1964

State of Oregon ~~Game Commission~~ Dept. of Fish & Wildlife (hereinafter called "Applicant-Recipient")
(Name of Applicant-Recipient)

HEREBY AGREES THAT it will comply with title VI of the Civil Rights Act of 1964 (P.L. 88-352) and all requirements imposed by or pursuant to the Directive of the Department of Defense (32 CFR Part 300, issued as Department of Defense Directive 5500.11, December 28, 1964) issued pursuant to that title, to the end that, in accordance with title VI of that Act and the Directive, no person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Applicant-Recipient receives Federal financial assistance from Department of the Army (Component of the Department) and HEREBY GIVES ASSURANCE THAT it will immediately take any measures necessary to effectuate this agreement.

If any real property or structure thereon is provided or improved with the aid of Federal financial assistance extended to the Applicant-Recipient by this Department of the Army (Component of the Department), assurance shall obligate the Applicant-Recipient, or in the case of any transfer of such property, any transferee, for the period during which the real property or structure is used for a purpose for which the Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits. If any personal property is so provided, this assurance shall obligate the Applicant-Recipient for the period during which it retains ownership or possession of the property. In all other cases, this assurance shall obligate the Applicant-Recipient for the period during which the Federal financial assistance is extended to it by Department of the Army (Component of the Department).

THIS ASSURANCE is given in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts, property, discounts or other Federal financial assistance extended after the date hereof to the Applicant-Recipient by the Department, including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date. The Applicant-Recipient recognizes and agrees that such Federal financial assistance will be extended in reliance on the representations and agreements made in this assurance, and that the United States shall have the right to seek judicial enforcement of this assurance. This assurance is binding on the Applicant-Recipient, its successors, transferees, and assignees, and the person or persons whose signatures appear below are authorized to sign this assurance on behalf of the Applicant-Recipient.

Dated March 30, 1979

State of Oregon Dept of Fish & Wildlife ~~Game Commission~~
(Applicant-Recipient)

By [signature]
(President, Chairman of Board, or comparable authorized official)

P.O. Box 3503
Portland, Oregon 97208
(Applicant-Recipient's Mailing Address)

EXHIBIT D

Status Report on Wildlife Mitigation

JOHN DAY LOCK AND DAM PROJECT

Prepared by

U.S. Fish and Wildlife Service

for

Bonneville Power Administration

in response to the

Fish and Wildlife Program
Northwest Power Planning Council

1984

I. PROJECT NAME

John Day Lock and Dam

II. PROJECT OPERATOR

U. S. Army Corps of Engineers, Portland District (USACE)

III. PROJECT DESCRIPTION

(a) Location and Size

John Day Lock and Dam is located at mile 215.6 on the Columbia River approximately 2 miles downstream from the confluence of the John Day and Columbia Rivers, approximately 25 miles east of The Dalles, Oregon. John Day Reservoir, also known as Lake Umatilla, extends approximately 77 miles to McNary Dam at mile 292. The reservoir has a shoreline length of approximately 240 miles and is less than 2 miles wide throughout most of its length. With normal pool elevation at 265 feet msl, the reservoir has a water surface area of approximately 52,000 feet msl, the reservoir has a water surface area of approximately 52,000 acres and contains approximately 2,365,000 acre-feet of water.

Principal features of John Day Dam consist of an embankment section, a navigation lock, a concrete spillway, and a powerhouse. The powerhouse was initially constructed containing 16 main power units, but contains space for four additional main units planned for installation in the late 1980's. The existing main power units are capable of generating 135 MW of continuous output and 155.3 MW of short-term output.

(b) Authorized Purposes

The authorized primary purposes of the John Day Project are generation of hydroelectric power, improvement of inland navigation on the Columbia River, and flood control. Secondary functions of the project include irrigation, recreation, and fish and wildlife habitat (USACE, 1975a).

(c) Brief History

The construction of the John Day Project was authorized by the River and Harbor and Flood Control Act of May 17, 1950, Public Law 81-516, 81st Congress, Second Session. Construction of John Day Dam began in December 1958 and was completed in July 1968. Limited use of the navigation lock and fish ladders started in 1963. Power production from 12 initial generating units began in 1968 with the filling of the John Day pool. Additional units were completed in November 1971 (USACE, 1976).

(d) Other Pertinent Data

(1) Water Level Fluctuation and Timing

John Day Dam is basically a navigation and run-of-the-river project although it has approximately 500,000 acre-feet of flood storage capacity. Long-term operation of Lake Umatilla generally occurs over an 11-foot range from elevation 257 to 268. The level is maintained between elevations 265 and 268 from June through October. The water level may be dropped to as low as elevation 257 for a short time to provide additional flood control storage space. THis would occur only before the crest of the spring freshet in May or June. The level may also be dropped to as low as elevation 257 for a short time to provide extra generation during a critical power situation which might occur during the winter. Daily fluctuation of Lake Umatilla resulting from peak operation will not exceed 3 feet, at a rate of about 0.2 feet per hour. However, releases of water from McNary Dam may cause the upstream end of the reservoir just below the McNary powerhouse to fluctuate as much as 4 or 5 feet in an hour.

(2) Land Ownership

Project lands are administered by the U.S. Army Corps of Engineers. McKern (1976) indicates that approximately 47,360 acres of project lands are associated with the John Day Lock and Dam Project. The controlled development of shoreline lands within the project has resulted in three primary land uses, in addition to operation and management of the John Day Lock, Dam and Reservoir: 1) recreation and public access; 2) port and industry; and, 3) fish and wildlife areas. At present, approximately 3,720 acres of project lands are in public use and access, and 15,864 acres in out-grants, easements and ports. Most of them are managed as fish and wildlife areas (USACE, 1976). Approximately 30,940 acres of land and water are managed for fish and wildlife conservation (V. WILDLIFE MITIGATION HISTORY, (c) Mitigation Implemented).

(3) Indian Rights

Deer, waterfowl, upland game birds, and rabbits were used for ceremonial, subsistence, and other cultural purposes by Indian tribes of the area. Furbearers were harvested for economic gain.

Indian concerns noted in past reports relate to the loss of fisheries and not wildlife. While past reports acknowledge attempts to mitigate for the loss of Indian fishing sites, it appears that wildlife losses to Indian tribes were never identified and hence never mitigated in the original Federal-Tribal

negotiations. No formal agreements have been found between the United States and the Indians to mitigate for any wildlife habitat losses and associated wildlife population levels resulting from the construction of John Day Lock and Dam.

An inquiry was made to the Yakima Indian Nation, the Confederated Tribes of Warm Springs and Umatilla Indian Reservations, and the Nez Pierce Tribe to identify any mandates, agreements, and concerns specifically related to the John Day Dam Project. The Yakima, Warm Springs, and Umatilla Indians responded citing the 1855 treaties which protected their right to hunt, as well as fish off reservation. The Confederated Tribes of the Umatilla Indian Reservation exercise this right subject only to restrictions imposed by the Tribal Fish and Wildlife Committee. Both the Yakima Nation and Umatilla Confederated Tribes have maintained that they have an inherent legal interest in the conservation and maintenance of optimum population levels of all wildlife resources in the mid-Columbia region. While no formal agreements have been found between the United States and the Indians to mitigate for wildlife habitat or wildlife population losses, the Tribes indicate that the omission of wildlife mitigation considerations from Federal-Tribal negotiations was inadvertant and representative of a prior lack of awareness of willdife needs by all parties (APPENDIX C).

IV. WILDLIFE SPECIES AND HABITAT ASSESSMENTS

(a) Pre-construction

Project lands have a wide variation in topography. Most of the project area bounding the Columbia River and its tributaries is abruptly rising upland terraces or plateaus generally unsuitable for cultivation. The Columbia River flood plain and irrigated uplands are vegetated mainly with sagebrush, rabbitbrush, and miscellaneous forbs and grasses. Patches of willow, alder, and cottonwood occur in the bottoms.

The Columbia River is an important migration route for waterfowl of the Pacific Flyway. Fall aerial counts conducted by Dave Lenhart in 1956 and 1957 indicate peak migrant populations of 23,000 geese and over 42,000 ducks in the project area (USDI, 1958). Pre-inundation observations of maximum winter populations indicated an excess of 90,000 ducks and 32,000 Canada geese (USDI, 1961a).

The John Day project area was an important Canada goose production area. The majority of the goose production occurred on the numerous islands which existed in the river prior to filling of the reservoir. In 1950, Hansen and Oliver (1951)

noted 24 islands of importance to geese dispersed uniformly from McNary Dam to Celilo Falls. Of 26 islands regularly censused since 1950 within the reservoir site, approximately 200 active goose nests, 270 adult pairs and 200 unclassified geese were observed (USDI, 1961b). Ball, et al. (1981) reported goose nest counts on Lake Umatilla to be relatively stable at approximately 200 nests per year from 1958 to dam completion in 1968. Goose production within the project site was estimated to be approximately 800 birds per year (USDI, 1961b). In a March 19, 1968 letter from the Oregon State Game Commission to the U.S. Army Corps of Engineers, Walla Walla District, goose production in the John Day project area was estimated to be 1,000 to 1,200 birds per year.

Nesting ducks occurring within Lake Umatilla include mallard, gadwall, pintail, and blue-winged teal. Mallard is the most abundant species. Some ducks nest on river islands although nesting principally occurs in sloughs and seep areas adjacent to the river. Blalock Island was noted to be an important brooding area for waterfowl produced in the Paterson area (Lenhart, 1983). Annual duck production prior to reservoir filling was estimated to be 900 ducks (USDI, 1961b).

The U.S. Fish and Wildlife Service's 1963 report noted the presence of a good interspersion of brush and croplands in the project area for upland birds. The fall population estimate for California quail was approximately 600 birds. Chukar, mourning dove, and gray partridge were also noted in the project area (USDI, 1961b).

Beaver, muskrat, skunk, weasel, mink, badger, raccoon, and mule deer were noted in the project area. Estimated average annual harvests within the project area were apprximately 100 beavers, 35 muskrat, 40 mink, and 29 deer (USDI, 1961b).

No references have been found related to the presence or absence of colonial birds or State and Federal threatened and endangered species in the project area prior to construction of the John Day Lock and Dam. The Endangered Species Act did not come into effect until 1973, after project construction.

Impact assessments made prior to project construction anticipated the considerable loss of waterfowl nesting and brooding areas through inundation of islands, flats, shorelines, and riparian habitat. Pre-construction estimates anticipated the inundation of approximately 40,000 acres of which 7,000 acres were agriculture, 30,000 were grasslands, and 3,000 acres were residential and railroad right-of-way. The inundation of extensive areas of

grassland were expected to have a significant impact on ground dwelling birds, particularly ring-necked pheasants and California quail.

(b) Post-construction

The John Day Lock and Dam raised the water level approximately 100 feet at the damsite. Shallow water areas became increasingly available toward the vicinity of McNary Dam. The first 34 miles of Lake Umatilla above the dam consists of either steep rock cliffs; rock riprap; or mud, sand, and rock beach. Of the 324 miles of island and mainland shoreline available in Lake Umatilla, 83 percent is unvegetated rock, sand, or gravel (Tabor, 1976). Inundation has eliminated nearly all islands in the section of river between the John Day Dam and RM 250. Remaining islands within this segment do not support vegetation. Extensive areas of Blalock Island were inundated, leaving only a few small islands corresponding to higher ground. Approximately 770 acres of Whitcomb Flats became cut off from the mainland as a result of pool filling, thereby creating Whitcomb Island. Inundation formed backwater areas in tributaries of the Columbia River and in some cases accelerated the deposition of silts and sediment from upland sources.

The operation of John Day and McNary Dams influences water elevations in Lake Umatilla. The frequency and duration of water level changes have influenced vegetational succession on islands and along shorelines. Dam construction and operation have limited water level variation to a range narrower than that occurring prior to project construction. Also, the frequency of water fluctuations within this range is probably greater than that experienced prior to project construction, particularly in the area immediately below each dam. Winds, wave action, and the inability of plants to colonize shoreline areas undergoing frequent water level changes have contributed to accelerated rates of erosion at islands. The reduction of flooding above normal pool levels has encouraged a more rapid succession to trees above normal pool elevation (Lenhart, 1983; McKern, 1976; USDI, 1983b).

Lake Umatilla is a significant area for wintering waterfowl. Umatilla National Wildlife Refuge (NWR) encompasses most of the potential wintering habitat for waterfowl in Lake Umatilla (Tabor, 1976). Tabor (1976) noted 153,000 wintering waterfowl in February 1975 and as many as 23 species. Dramatic increases in winter waterfowl populations have been noted at Umatilla NWR in the last few years (Constantino, 1983). In the winter of 1982 to 1983, winter populations approaching 500,000 ducks and 150,000 geese were recorded. This level of use far exceeds Umatilla

NWR's management goals for wintering populations of 250,000 ducks and 80,000 geese (O'Neil, 1983). On Umatilla NWR, waterfowl concentrations were noted at Long Walk Islands (RM 274), Long Walk Slough (RM 274 to 277), McCormack Slough (RM 273 to 276), Paterson Slough (RM 279 to 281), and Whitcomb Island (RM 266 to 268) (Tabor, 1976). Mallards were observed concentrated along the Oregon shore at the western end of Umatilla NWR (RM 260 to 266) (Tabor, 1976). Concentrations of 30,000 ducks and 10,000 to 20,000 geese have been noted on islands near Threemile Canyon (RM 255) (Melland, 1983).

Lake Umatilla is one of the major waterfowl production ares for the Columbia River. Although the first 34 miles of the lake are void of waterfowl nesting habitat, the remaining 42 miles incorporate nesting islands, large sloughs, and marshes (Tabor, 1976).

The majority of resident Canada geese nest on islands with low ground cover. McCreadie Islands (RM 254 to 255), Threemile Island (RM 255), and islands on Umatilla NWR (RM 273 to 276) provide most of the goose nesting habitat available in Lake Umatilla (Tabor, 1976; Lenhart, 1983; Melland, 1983). Some nesting is noted on cliffs, artificial structures, trees, and mainland (Ball, et al., 1981). From a low of 100 nests on Umatilla NWR in 1969, goose nesting gradually increased and remained relatively stable at approximately 180 nests from 1973 to 1977. In 1978, pesticides in geese and eggs had a significant toll on nesting efforts at the refuge. Restrictions in the use of heptaclor have contributed to the recovery of goose nesting on the refuge as evidenced by the count of 170 goose nests in 1983 (Lenhart, 1983). Umatilla NWR is currently producing an average of 500 geese per year (Constantino, 1983). In 1982, 645 geese were produced (Annear, 1983).

Goose broods were observed by Tabor (1976) in 1975 at Paterson Slough (RM 279 to 281), McCormack Slough (RM 275), Whitcomb Island (RM 265 to 269), Long Walk Slough (RM 274 to 277), and Willow Creek Wildlife Area (WA) (RM 253). Approximately 15 to 20 acres of significant goose brooding habitat exists at Willow Creek WA and has been noted to support as many as 15 broods or 60 goslings (Melland, 1983). In 1983, the U.S. Fish and Wildlife Service began a 1-year study on Canada goose brood movements. The study includes the identification of high, moderate, and low use goose brooding areas within the John Day Dam project area (USDI, 1983).

Waterfowl production, other than Canada geese, is concentrated at Umatilla NWR and adjacent management areas. Refuge personnel estimated the annual production of 14 species of ducks to be approximately 2,000 to 2,500 birds (Tabor, 1976; Annear, 1983).

McCormack Slough, Paterson Slough, and Irrigon Wildlife Management Area (WMA) (RM 282 to 288) provide most of the duck nesting habitat. Some mallard and wigeon nesting occurs on islands of the refuge. In 1981, 17 duck nests were found on goose nesting islands of Umatilla NWR (Lenhart, 1983). The islands and sloughs in Lake Umatilla also provide brooding areas for waterfowl, including mallard, wigeon, blue-winged teal, cinnamon teal, gadwall, pintail, shoveler, and wood duck (Tabor, 1976; Melland, 1983). Common merganser broods were seen in the John Day River area of Lake Umatilla (RM 218) during 1974 and 1975 (Tabor, 1976).

Ring-necked pheasant, California quail, chukar, mourning dove, and snipe were observed in the project area. Pheasant and quail were found throughout the project area, but were most abundant upstream from RM 264 (Tabor, 1976). Umatilla NWR staff estimated peak fall populations to be approximately 600 quail and 1,800 pheasant (Annear, 1983). Chukar were observed only downstream from RM 263 on the Washington shore and from RM 245 on the Oregon shore (Tabor, 1976). Mourning dove are not numerous (USACE, 1976).

Colonial nesting species observed in the project area include double-crested cormorant, great blue heron, black-crowned night heron, California gull, ring-billed gull, Forster's tern, Caspian tern, and bank swallow. Threemile Island (RM 255) is a significant colonial nesting area. Tabor (1976) recorded the occurrence of 800 pairs of California gulls, 500 pairs of ring-billed gulls, 100 pairs of Forster's terns, and 169 nests of Caspian terns on the island in 1974 and 1975. Other significant colonial bird use areas include Threemile Island, Umatilla NWR, and Telegraph Island. Channel markers have been utilized by nesting great blue herons (Melland, 1984).

The John Day Dam project area is utilized by a fairly diverse group of raptors. At least 15 species are known to occur within the project area. Russian olive was utilized by as many as eight raptor species for roosting and nesting (Tabor, 1976). Several species such as American kestrel, golden eagle, and prairie falcon utilize cliffs within the project area (Tabor, 1976; USACE, 1976).

No suitable riparian habitat for beaver, otter, mink, and muskrat is available from RM 216 to 263. Most of the suitable habitat within the project area is located along tributaries and backwater areas above RM 263. Aquatic furbearers are primarily associated with tributary streams including John Day River (RM 218), Rock Creek (RM 228.5), Willow Creek (RM 252.5), and Alder Creek (RM 258) (Tabor, 1976). Aquatic furbearers have been found

along the mainstem Columbia River when adequate riparian habitat is available, such as at Irrigon WA and Port of Morrow lands at Boardman (Melland, 1984).

Tabor (1976) used scent stations to obtain quantitative data on the abundance of mammals along the Columbia River. Coyote appeared to be the most abundant species within the project area. Raccoon, striped skunk, and porcupine were noted as abundant. Opossum, bobcat, badger, and spotted skunk densities appeared to be low within the project area (Tabor, 1976).

The mule deer is the only species of big game observed to utilize the project area. However densities of this species were considered to be low within the project area (USACE, 1976). Deer utilize the brushy canyons and adjacent ridges (USACE, 1976). Umatilla NWR staff estimate approximately 80 deer utilize the refuge and nearby areas (Annear, 1983). Islands within the project area were used by deer as "fawning" areas (Tabor, 1976).

The northern bald eagle is listed as a Federal and State threatened species. Bald eagles and golden eagles are regularly observed during late summer in the vicinity of Umatilla NWR (Annear, 1983). No nesting activity by either species has been observed at the refuge. As many as 97 eagles have been seen on the refuge during the winter. Approximately 75 percent of the eagles observed are bald eagles; the remaining 25 percent are golden eagles (Annear, 1984).

The peregrine falcon is listed as a Federal and State endangered species. No sightings of this species within the project area have been recorded.

For other sources of information on resources of the Columbia River, a bibliography entitled "Selected Administrative Reports and Publications Representative of Conservation Policy, Plans and Programs Influencing the Management of the Wildlife Resource within the Columbia River Basin" and another entitled "Partial List of Reports, Publications and Studies Describing State and Federal Policy and Program, and the Abundance and Distribution of Wildlife and Habitat Within the Columbia River Basin" are available from the U.S. Army Corps of Engineers, Portland District.

(c) Operational

Operational impacts are related to the magnitude, duration, and frequency of water releases or water fluctuations. Possible impacts to wildlife resources include the erosion of islands valuable as mule deer fawning areas and waterfowl habitat, and the formation of land bridges to islands during low water periods

which increases access by predators. Areas identified as experiencing these impacts include Threemile Island, Blalock Islands, and Paterson Slough. High water can inundate brooding areas, riparian habitats, shoreline, and shallow water areas. The critical period for waterfowl nesting occurs from March 1 to May 15. Birds, upland game, aquatic and terrestrial furbearers and other wildlife species dependent upon shoreline vegetation, shoreline insect populations, and riparian habitat may suffer food shortages. Fluctuating water levels can have adverse impacts on aquatic furbearers, waterfowl, colonial nesting gulls and terns, amphibians, and the reestablishment of riparian and aquatic habitats. Furbearer populations would be particularly susceptible to drastic water fluctuations in March and April when young are produced. It is unlikely that either amphibians or riparian and aquatic vegetation would be able to adapt to rapidly changing water conditions resulting from power peaking operations (Tabor, 1976; Tabor et al., 1981).

V. WILDLIFE MITIGATION HISTORY

(a) Mitigation Requested or Proposed

Negotiation for consideration of wildlife values began in 1958. The Oregon State Game Commission, the Washington Game Department, the U.S. Fish and Wildlife Service, and the U.S. Army Corps of Engineers participated in developing a plan which would mitigate wildlife losses. A wildlife habitat replacement and development area was recommended by the U.S. Fish and Wildlife Service with the endorsements of State wildlife agencies to the Corps of Engineers in a report released in 1958 (USDI, 1958). The area proposed extended from Crow Butte upstream to a point above the Paterson Ferry and included within its boundaries a valuable combination of water, marsh, and uplands (USDI, 1958).

In recognition of industrial and port needs, the waterfowl management area boundaries were altered extensively in 1961 to provide shoreline access points and backup lands on both sides of the river. During public hearings held in August of 1962, there was general agreement on the 1961 proposal, which provided generously for industry. The 1961 proposal contained recommendations of the U.S. Fish and Wildlife Service for the Corps: 1) to acquire approximately 6,265 acres of private lands and withdraw from public ownership approximately 3,970 acres for the proposed John Day Waterfowl Management Area (Umatilla NWR); 2) to provide funds for initial development of the John Day Waterfowl Management Area; 3) to make all islands within Lake Umatilla available for fish and wildlife purposes; 4) to provide public fishing and hunting access at specific areas; and, 5) to develop a reservoir

zoning plan that insures areas are available for fishing, hunting, and other wildlife purposes without conflicting use by general recreation (USDI, 1961a).

In 1965 a further adjustment was made classifying parts of Crow Butte and Blalock Island for recreation. Final changes in the boundaries of the proposed waterfowl management area were made as a result of meetings held in Washington, D.C. with Congressman Ullman and representatives of the Port of Morrow. In May 1965, the proposal was presented to Congress for approval.

(b) Mitigation Agreements or Requirements

(1) FPC/FERC Requirements

As a Federal project, the Federal Power Commission does not have the responsibility for issuing permits, licenses, and license exemption grants under the Federal Water Power Act for John Day Dam.

(2) Fish and Wildlife Coordination Act Proceedings

The Fish and Wildlife Coordination Act (FWCA) of 1934, as amended, requires all hydroelectric project developers to consult with the U.S. Fish and Wildlife Service and state conservation agencies prior to project development "with a view to preventing loss of and damage to wildlife resources." Federal development projects were required to contain adequate provision for conservation, maintenance, and management of wildlife resources consistent with primary project purposes. This Act was named the Fish and Wildlife Coordination Act of August 12, 1958, at which time an amendment was added stating that "wildlife conservation shall receive equal consideration and be coordinated with other features of water-resource development programs." Land acquisition, project modifications, and/or project operations modification were to be based on impact and mitigation reports by wildlife agencies, and costs for these measures were to be made an integral part of project costs.

(3) MOUs and Other Agreements

A General Plan was developed to delineate project areas which were to be made available for wildlife management purposes. Areas found to have their greatest conservation value in furthering the national migratory bird management program were to be made available by cooperative agreement to the U.S. Fish and Wildlife Service. Those lands found to have their greatest conservation value in the conservation and management of fish and wildlife resources in the State of Oregon were to be made

available to the Oregon Department of Fish and Wildlife, formerly known as the Oregon State Game Commission. The General Plan was signed in 1968 by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, the Oregon State Game Commission, and the Washington Department of Game.

On July 3, 1969, a cooperative agreement between the U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service was signed. The cooperative agreement outlined the rights and privileges of each agency in managing Umatilla NWR.

On June 7, 1972, the U.S. Army Corps of Engineers and Oregon Department of Fish and Wildlife signed a cooperative agreement allowing Oregon Department of Fish and Wildlife to manage approximately 646 acres of Corps owned lands in Gilliam County, Oregon. The original 25-year lease agreement specified 404 acres of land and 242 acres of backwater along Willow Creek (RM 253), a tributary of the Columbia River, to be managed for fish and wildlife resources, thereby establishing the Willow Creek WA.

In 1973, a cooperative agreement was signed by the U.S. Army Corps of Engineers and the Oregon Department of Fish and Wildlife. The 25-year lease agreement allows the Oregon Department of Fish and Wildlife to manage approximately 549 acres in Morrow County, Oregon for fish and wildlife, thereby establishing Irrigon WA. Irrigon WA was extended in 1978 when a second 25-year lease agreement was signed allowing the Oregon Department of Fish and Wildlife to manage an additional 435 acres of land in Umatilla County, Oregon.

(c) Mitigation Implemented

Subsequent to the signing of the General Plan, several cooperative agreements were developed as described in the previous section. These agreements established the units managed for wildlife presently known as Umatilla NWR (29,310 acres of land and water), Irrigon WA (984 acres), and the Willow Creek WA (646 acres).

Authorization to acquire additional lands for waterfowl management by the U.S. Fish and Wildlife Service was approved October 27, 1965 in Section 204 of the Flood Control Act of 1965 (P.L. 89-298). The Corps began acquiring lands related to eventual management by the U.S. Fish and Wildlife Service in 1966. The U.S. Fish and Wildlife Service presently manages approximately 29,370 acres of land and water primarily for wintering waterfowl and breeding grounds for the Great Basin Canada goose (Umatilla NWR). The refuge provides 800 acres of wetland habitat, 9,440

acres of rivers and streams, 1,398 acres of farmed land, 72 acres of dense nesting cover, 75 acres of noncommercial forest, 11,055 acres of desert, and 49 acres of administrative lands. The management goals of the refuge call for wintering populations of 250,000 ducks and 80,000 Canada geese and for the production of 7,000 ducks and 700 Canada geese. The operation and maintenance of the refuge have been funded by the U.S. Fish and Wildlife Service.

The Willow Creek WA is managed by the Oregon Department of Fish and Wildlife. Management practices include planting cereal crops, planting shrubs for upland birds, regulating hunting, limiting vehicle access, maintaining goose brooding and nesting areas, management of resting areas for wintering waterfowl, and protection of nesting colonial birds. Aside from some plantings supplied by the Corps, development and maintenance of the wildlife area is funded by the State of Oregon.

The Irrigon WA is also managed by the Oregon Department of Fish and Wildlife. Management practices include the prohibition of grazing, farming and vehicle access; the regulation of water levels in impounded areas; and the management of food, cover, and resting habitat for wintering waterfowl. The area receives use by nesting ducks and shorebirds and wintering waterfowl; however, use by nesting or brooding geese is very low. The Corps has supplied some plantings and fencing material, but major costs of development and maintenance of the wildlife area is provided by the State of Oregon.

VI. CURRENT STUDIES AND PLANNING

The U.S. Army Corps of Engineers is working on plans to develop and manage approximately 12,000 to 15,000 acres of project lands for fish and wildlife. Eventual plans will include habitat enhancement for wildlife. The area is located along the John Day River (RM 218) and extends from its confluence with the Columbia River upstream approximately 4 miles to Albert Philippi Park. The Corps is fencing the area to control access and grazing within its boundaries. The work is being funded through the John Day operations and maintenance funds.

John Day Lock and Dam Project - There are no plans currently being negotiated to further mitigate wildlife losses attributable to the project. No studies were ever conducted to document wildlife losses resulting from the project. To accurately determine mitigation adequacy, an objective comparison of pre- and post-impoundment habitat conditions by use of pre- and post-impoundment aerial photography and existing habitat inventories would be needed.

John Day Lock and Dam Master Plan - Numerous recreation areas have been developed along the Oregon and Washington shorelines and islands within Lake Umatilla. These open areas provide some additional resting, feeding, and cover habitat for wintering waterfowl. However, the value of these areas to waterfowl are generally limited by factors such as proximity of these areas to other feeding grounds.

Columbia Basin Waterfowl Redistribution Plan - This is a cooperative effort involving the U.S. Fish and Wildlife Service, the Oregon Department of Fish and Wildlife, and the Washington Department of Game to try to distribute a perceived overpopulation of wintering waterfowl in the Umatilla Basin area to the North Columbia Basin and Southeast Idaho.

Canada Goose Brooding Habitat Study - A cooperative 1-year study by the U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service on Canada goose brooding habitats between Crow Butte Island and Richland, Washington on the Columbia River was completed in 1983. These data are being analyzed and may influence future waterfowl management decisions in the John Day project area.

VII. REFERENCES CITED

Annear, J.T. 1983. Personal communication. U.S. Fish and Wildlife Service, Umatilla National Wildlife Refuge.

Ball, I.J., et al. 1981. Ecology and Management of the Western Canada Goose in Washington. Washington Department of Game. Biological Bulletin No. 17. 67 p.

Constantino, G. 1983. Personal communication. U.S. Fish and Wildlife Service, Umatilla National Wildlife Refuge.

Hansen, H.A. and W.H. Oliver. 1951. The Status of Resident Canada Geese in South-Central Washington, Spring 1950.

Lenhart, D.J. 1983. Personal communication. U.S. Fish and Wildlife Service.

McKern, J.L. 1976. Inventory of Riparian Habitats and Associated Wildlife Along the Columbia and Snake Rivers. Summary Report. Volume I. U.S. Army Corps of Engineers, North Pacific Division. 100 p.

Melland, J. 1983 and 1984. Personal communication. Oregon Department of Fish and Wildlife.

O'Neil, D.C. 1983. Personal communication. U.S. Fish and Wildlife, Umatilla National Wildlife Refuge.

Tabor, J.E., et al. 1981. Study of Impacts of Project Modifications and River Regulation on Riparian Habitats and Associated Wildlife Along the Columbia River. U.S. Army Corps of Engineers, North Pacific Division.

Tabor, J.E. 1976. Inventory of Riparian Habitats and Associated Wildlife Along the Columbia and Snake Rivers. Volumes IIA and B. U.S. Army Corps of Engineers, North Pacific Division. 861 p.

U.S. Army Corps of Engineers, Walla Walla District. 1958. John Day Lock and Dam, Columbia River, Oregon and Washington. General Design Memorandum No. 3. Volume 2.

U.S. Army Corps of Engineers, Walla Walla District. 1963. Project Modification for Acquisition of Additional Lands for Waterfowl Management John Day Lock and Dam, Columbia River, Washington and Oregon. Walla Walla, Washington.

U.S. Army Corps of Engineers, Portland District. 1975a. Construction, Operation, and Management, Columbia River, Umatilla to The Dalles, Oregon and Washington. Final Environmental Impact Statement. Portland, Oregon. Paging Various.

U.S. Army Corps of Engineers, Portland District. 1975b. John Day Lock and Dam Master Plan, Lake Umatilla, Columbia River, Oregon and Washington. Design Memorandum No. 25B. Portland, Oregon. Paging Various.

U.S. Army Corps of Engineers, Portland District. 1976. John Day Lock and Dam Master Plan, Lake Umatilla, Columbia River, Oregon and Washington. Design Memorandum No. 25B. Portland, Oregon. Paging Various.

U.S. Department of the Interior, Fish and Wildlife Service. 1961a. A Detailed Report on Fish and Wildlife Resources Affected by John Day Lock and Dam Project. Columbia River, Washington and Oregon. Portland, Oregon. 27 p.

U.S. Department of the Interior. Fish and Wildlife Service. 1961b. Justification for Acquisition of Lands Proposed John Day Waterfowl Management Area, John Day Lock and Dam Project, Columbia River, Oregon and Washington. Portland, Oregon. 18 p.

U.S. Department of the Interior, Fish and Wildlife Service. 1983a. Canada Goose Brood Habitats on Wallula and Umatilla Lakes. Draft Report. Portland, Oregon. 31 p.

U.S. Department of the Interior, Fish and Wildlife Service. 1983b. Impacts of the McNary Second Powerhouse Project on Fish and Wildlife Resources. Portland, Oregon. 67 p.

APPENDIX A: STUDY TEAM

U.S. Fish and Wildlife Service

Patrick Wright
Diana Hwang

Washington Department of Game
Jack Howerton
Don Kraege

Oregon Department of Fish and Wildlife
Dan Carleson
Karen Bedrossian

APPENDIX B: CONSULTATION/COORDINATION

Project Contacts

Confederated Tribes

William P. Bradley	Yakima Indian Nation
Jerry Lauer	Bureau of Indian Affairs
Terry Luther	Warm Springs Natural Resources Dept.
John Marsh	Columbia River Inter-Tribal Fish Commission
Bob Strom	Nez Pierce Tribe

Oregon Department of Fish and Wildlife
- Karen Bedrossian
- Dan Carleson
- Paul Ebert
- Jack Melland
- Dick Scherzinger
- Jim Torland

U.S. Army Corps of Engineers
- Bernard Bishop
- Byron Blankenship
- Geoff Dorsey
- Ken Dzimbal
- Kim Larson
- Mike Passmore
- Carolyn Zarneckee

U.S. Fish and Wildlife Service
- John T. Annear
- Jim Bartonek
- George Constantino
- Nancy Ellifrit
- Dick Giger
- Dave Lenhart
- Daniel C. O'Neal
- Dave Sill
- Carey Smith

Washington Department of Game
- Don Kraege
- Jack Howerton
- David Mudd
- Gretchen Van Lom

APPENDIX C

Comments

VICTOR ATIYEH
GOVERNOR

Department of Fish and Wildlife
506 S.W. MILL STREET, P.O. BOX 3503, PORTLAND, OREGON 97208

29 August, 1984

Mr. John R. Palensky, Director
Division of Fish and Wildlife
Bonneville Power Administration
P.O. Box 3621
Portland, OR 97208

Attention Mr. James Meyer:

The Oregon Department of Fish and Wildlife has high expectations of the Northwest Power Planning Act to provide for wildlife and wildlife habitat mitigation to offset impacts resulting from hydroelectric development.

As the John Day Dam Wildlife Mitigation Status Report and our attached comments on that report indicate, comprehensive evaluation of wildlife resource impacts and mitigation for wildlife habitat losses were not accomplished. Knowledge of wildlife resources and legal mandates have changed since the John Day Project was constructed. In addition to the requirements of the Northwest Power Planning Act for protection, mitigation and enhancement of wildlife resources, the Department of Fish and Wildlife has a policy to request mitigation for losses of animal populations and habitat. The main stem Columbia River hydroelectric projects have high priority due to the high value of wildlife resources involved.

In recognition of our increased responsibilities to address a broad range of concerns, I strongly urge the participating agencies to move forward in implementing the Wildlife Program of the Northwest Power Planning Council. In particular, we must proceed with a mitigation plan based on a comprehensive assessment of wildlife impacts at the John Day Project. The Department is prepared to participate in this endeavor and recommends a habitat based evaluation using: 1) the expertise of biologists from appropriate agencies; 2) existing data where possible; and 3) cost effective methods.

The first step toward accomplishing the goals of the Power Council's Fish and Wildlife Program has been the mitigation status report. We must now take the succeeding steps leading to full compensation for wildlife and wildlife habitat impacts at the John Day Project.

Sincerely,

for John R. Donaldson, PhD
Director

kb/hk
Encl.

OCT 1 5 1984

Oregon Department of Fish and Wildlife
Comments on
Wildlife Mitigation Status Report
John Day Dam and Reservoir
29 August, 1984

These comments respond to a request from James R. Meyer, Bonneville Power Administration, dated 17 August 1984 to review the Mitigation Status Report for John Day Dam and Reservoir.

Oregon Revised Statute 496.012, Wildlife Policy, says in part: "It is the policy of the State of Oregon that wildlife shall be managed to provide the optimum recreational and aesthetic benefits for present and future generations of the citizens of this state. In furtherance of this policy, the goals of wildlife management are:

(1) To maintain all species of wildlife at optimum levels and prevent the serious depletion of any indigenous species.

(2) To develop and manage the lands and waters of this state in a manner that will enhance the production and public enjoyment of wildlife."

In accordance with ORS 496.012, the Department has a policy to request mitigation when losses to animal populations and habitat result from project construction and operation. These policies are consistent with the Power Act and Wildlife Program purpose "to protect, mitigate, and enhance fish and wildlife to the extent affected by the development and operation of any hydroelectric project of the Columbia River and its tributaries...." This goal has yet to be achieved at the John Day Project.

The John Day Wildlife Mitigation Status Report demonstrates assessment of the impacts to wildlife resulting from the construction and operation of the project was not comprehensive. This is evident by the lack of information available regarding the types and amounts of habitat altered and the lack of quantitative estimates of species affected by the project. The significance of the inundated habitat to wildlife has not been fully explored. Even though impact assessment has not been adequate, it is obvious that substantial impacts occurred to wildlife as a result of the John Day Project, considering acreage of habitat inundated. The status report indicates that mitigation measures implemented have not been adequate to offset impacts to wildlife resulting from the project.

In order to "protect, mitigate, and enhance" wildlife resources affected by the development and operation of the hydroelectric generating facilities at the John Day Project, it is necessary to determine what impacts occurred. Upon the approval of and funding by the Council and Bonneville Power Administration, the Department is prepared to participate in an assessment of impacts to wildlife resources resulting from the John Day Project and preparation of a loss statement. The Department is also ready to participate in developing mitigation plans. We believe that a workable loss statement and

mitigation plan can be developed based on existing information, and the expertise of biologists from the appropriate agencies who are familiar with the project area and appropriate wildlife habitat and species. Extensive, detailed studies will only delay implementation of mitigation measures.

The level of understanding of our wildlife resources has greatly improved since the time of construction of the John Day Project. We have broader concerns and are more aware of wildlife/habitat relationships. The Northwest Power Planning Act and the Power Council's Fish and Wildlife program have provided the opportunity to correct past misunderstanding and shortsightedness regarding wildlife resources affected by the development and operation of hydroelectric power in the Columbia River Basin. The Oregon Department of Fish and Wildlife wants to see that opportunity realized to the fullest degree possible in a timely, efficient, and cost-effective manner.

SEP 1984

United States Department of the Interior

FISH AND WILDLIFE SERVICE
LLOYD 500 BUILDING, SUITE 1692
500 N.E. MULTNOMAH STREET
PORTLAND, OREGON 97232

September 18, 1984

Mr. John Palensky, Director
Division of Fish and Wildlife
Bonneville Power Administration
Attention: James Meyer
P. O. Box 3621
Portland, Oregon 97208

Dear Mr. Palensky:

As requested in Mr. Meyer's letter of August 17, 1984, we have reviewed the Wildlife Mitigation Status Report for the John Day Lock and Dam Project (the Project). The following comments are being provided for inclusion in the final report.

General Comments

Based on the report's content, it is evident that the construction and operation of the Project has resulted in substantial adverse impacts to wildlife resources which have been neither adequately identified nor mitigated. Therefore, the Service recommends that the Bonneville Power Administration provide funds to: 1) conduct a comprehensive evaluation of the impacts of the Project on wildlife resources; and 2) based on the findings of that evaluation, develop a mitigation and enhancement plan which would fully compensate the adverse wildlife impacts attributable to the Project.

The Service has the necessary expertise and would like to participate as the lead agency in both the impact evaluation and mitigation plan development tasks. We are developing a proposal to conduct an impact evaluation and will submit it to you in the near future.

In addition, we believe the Bonneville Power Administration should consider providing funds as soon as possible for rock riprap to protect a group of islands at river mile 275, known as the Sand Dune Islands. These islands have been extensively utilized by migratory waterfowl and shorebirds. They are rapidly eroding and need immediate bank protection to maintain their wildlife values. Accordingly, we believe funds should be provided to protect them prior to completion of a loss estimate and corresponding mitigation plan for the John Day Project. The protection efforts would be credited as mitigation. We are developing this proposal and expect to contact you in the near future.

Specific Comments

A comprehensive evaluation of the Project's impact on wildlife resources should be conducted by a team of qualified biologists composed of representatives from appropriate state and federal resource and development agencies. These include the Oregon Department of Fish and Wildlife, Washington Department of Game, Army Corps of Engineers, and Fish and Wildlife Service. The evaluation should include an analysis of any actions which have been implemented to mitigate the Project's adverse impacts on wildlife. We suggest the evaluation be habitat based and supported by population data when available. We believe that such an evaluation could be accomplished with a minimum of new data collection by: 1) analyzing the existing data referenced in the status report such as pre- and post-construction photography; and 2) consultation with professional wildlife biologists familiar with the area's wildlife resources as they existed prior to project construction. The evaluation's results should be presented in an impact assessment report.

Utilizing the results from the aforementioned impact statement, we believe that the same team of biologists, with assistance from their agencys' respective habitat specialists, should develop a mitigation plan. The plan, if implemented, would be designed to fully compensate the adverse wildlife impacts identified.

In conclusion, we believe no single agency or user group is responsible for the adverse wildlife impacts which have resulted from the development and operation of the John Day Project. The proposals outlined in this letter would be considered "standard operating procedures" for evaluating the impacts of new water development proposals under present state and federal laws, regulations, and policies. Unfortunately, these legal mandates which today provide for the protection of our wildlife resources were not as strong when the John Day Project was being developed. However, both the Northwest Power Planning and Conservation Act and the Council's Fish and Wildlife program recognize this and together have given us an opportunity to evaluate and replace lost wildlife resources. The Service is eager to move toward that end.

Sincerely yours,

James W. Teeter
Acting Assistant Regional Director
Habitat Resources

GENERAL COUNCIL
and
BOARD of TRUSTEES

CONFEDERATED TRIBES
of the
Umatilla Indian Reservation

P.O. Box 638
PENDLETON, OREGON 97801
Area Code (503) Phone 276-3165

August 25, 1983

Mr. Russell D. Peterson
U.S. Fish and Wildlife Service
Division of Ecological Services
Portland Field Office
727 N.E. 24th Avenue
Portland,Oregon 97232

Dear Mr. Peterson:

In reference to your letter of August 10, 1983, regarding perspective of the Confederated Tribes on the history of wildlife studies and mitigation measures accomplished at the Bonneville Lock and Dam, the Dalles Lock and Dam, John Day Lock and Dam, and McNary Lock and Dam, comments were not submitted on this subject at the time of project authorization. It appears that our concerns on construction of these hydrolelectric projects were limited to impacts on anadromous fisheries. We do not have documentation on file which outlines the impacts on wildlife and mitigation measures adopted.

We would appreciate the opportunity to review drafts of the status reports on wildlife mitigation at the hydroelectric projects prior to completion of the final report. We will provide comments regarding wildlife concerns at that time. Copies of the reports should be sent to Jerry L. Lauer, Bureau of Indian Affairs, Umatilla Indian Agency, P.O. Box 520, Pendleton, Oregon 97801. Mr. Lauer acts as staff wildlife biologist for the Confederated Tribes.

Sincerely,

CONFEDERATED TRIBES OF THE
UMATILLA INDIAN RESERVATION

RECEIVED

AUG 2 8 1983

Elwood H. Patawa, Chairman
Board of Trustees

SH
DS
PW

JOHNSON, MARCEAU, KARNOPP & PETERSEN
ATTORNEYS
835 N.W. BOND STREET • BEND, OREGON 97701-2700 • TELEPHONE (503) 382-3011

LYMAN C. JOHNSON
RONALD L. MARCEAU
DENNIS C. KARNOPP
JAMES E. PETERSEN
ROBERT L. NASH
JAMES D. NOTEBOOM
MARTIN E. HANSEN
HOWARD G. ARNETT
STEVEN D. STABLER

September 6, 1983

Russell D. Peterson
Field Supervisor
U.S. Fish & Wildlife Service
Division of Ecological Services
Portland Field Office
727 N.E. 24th Avenue
Portland, OR 97232

Re: Wildlife Mitigation and Columbia River Hydroelectric Projects

Dear Mr. Peterson:

I represent the Warm Springs Tribe and am writing in response to your letter of August 10th to Terry Luther of the tribe's Natural Resources Department. Your letter requests information concerning wildlife mitigation studies and measures undertaken in connection with the four CoE mid-Columbia hydro projects.

We have reviewed our files and discussed the matter with tribal leaders. It appears that wildlife mitigation was omitted from the negotiations between the federal government and the Columbia River Indian tribes leading to the construction of the four projects that are the subject of your reports. The omission of the wildlife mitigation from the federal-tribal discussions was almost certainly inadvertent. The tribe's treaty-protected right to hunt, as well as fish, off-reservation gives the tribe a legal interest in the preservation of all wildlife resources in the mid-Columbia region. Diminished populations of such species as ducks, geese, otter, beaver, muskrats, deer, etc. resulting from the construction of the mid-Columbia hydro projects must be restored to fulfill the tribe's treaty right.

To our knowledge, no studies have been undertaken to determine whether populations of wildlife species utilized by tribal members in the area inundated by the hydro projects have been diminished. The tribe is anxious to assist the Fish & Wildlife Service in its efforts to determine the amount o

RECEIVED
SEP 9 1983

wildlife loss and the mitigation efforts required to restore the resource.

Sincerely,

HOWARD G. ARNETT

HGA/clm

cc: Warm Springs Fish & Wildlife Committee
Terry Luther, Natural Resources Department

D BY THE
JUNE 9, 1855
NTENNIAL JUNE 9, 1955

CONFEDERATED TRIBES AND BANDS
Yakima Indian Nation
WILDLIFE RESOURCE MANAGEMENT PROGRAM
POST OFFICE BOX 151
TOPPENISH, WASHINGTON 98948

GENERAL COUNCIL
TRIBAL COUNCIL

1(509) 865-5121
Ext. 666 or 668

November 22, 1983

Richard D. Giger
Fish and Wildlife Service
Lloyd 500 Building, Suite 1692
500 N.E. Multnomah Street
Portland, OR 97232

RE: Yakima Indian Nation concerns relative to wildlife mitigation and the Corps of Engineers mid-Columbia hydro projects.

Dear Sir:

The Yakima Indian Nation welcomes the opportunity to comment on wildlife mitigation relative to Indian concerns in connection with the four Corps of Engineers mid-Columbia hydro projects (Bonneville, The Dalles, John Day, and McNary Dams). You are correct in your findings that wildlife mitigation was omitted from the negotiations between the federal government and the Columbia River Indian tribes prior to the construction of the hydro projects covered in your report. The omission of wildlife mitigation from the federal-tribal discussions was certainly inadvertant, but easily explained. The Bureau of Indian Affairs has historically not been directly involved in wildlife management either in an advocacy role, or in a functional on-reservation wildlife management program. Scientific wildlife management on-reservation is a relatively new phenomena and stems primarily from concerned tribes active involvement in the previous five years. Given these facts, it is not surprising that tribal wildlife concerns were not represented in the original negotiations. The Yakima Indian Nation's Treaty protected right to hunt, as well as fish, off reservation, gives the tribe a legal interest in the conservation and maintenance of all wildlife resources in the mid-Columbia and Columbia Basin regions.

The increased competance of on-reservation tribal wildlife management in the last few years fortunately coincides with your studies relative to wildlife mitigation on these main stem hydro-electric projects. Hopefully, these unmitigated losses can now be identified and properly addressed through the mitigation process. The Yakima Indian Nation has suffered serious loss of wildlife populations and wildlife habitat as a result of the aforementioned hydro-electric projects. I shall briefly outline our major concerns below in rough order of priority.

1. Loss of Water-Fowl Fly-way

The Yakima River basin has been an historically important fly-way for water-fowl species. The Yakima Indian people made extensive use of water-fowl as a food source and as a source for ceremonial artifacts and clothing. In more recent historical times, the heavy water-fowl concentration as a result of this fly-way provided an important source of income through the tribe's public hunting and fishing license program.

Within the last 20 years, this important water-fowl resource has been diminished almost to the point of total elimination. This loss appears to be due not to a fewer number of water-fowl, but to a redistribution of existing populations and fly-ways influenced by the habitat conditions created by the construction of the hydro projects. This condition seems particularly affected by the John Day and McNary pool areas. Water-fowl concentrations behind these pools have become so great as to actually cause agricultural damage and disease related problems. This fact has been well documented in recent years by a cooperative study team consisting of biologists from Oregon, Washington, and the U.S. Fish and Wildlife Service. This study resulted in recently published corrective master plan entitled Columbia Basin Water-Fowl Redistribution. The Yakima Indian Nations concerns for the loss of the water-fowl fly-way through the Yakima drainage as result of the creation of the mid-Columbia pools are enhanced and supported by this document. This loss has lead to severely reduced income to the tribe and a reduced seasonal food source for tribal members.

2. Direct Loss of Water-Fowl Nesting and Brooding Habitats

Nesting water-fowl populations along the Columbia River main stem were historically utilized by Yakima Indian people as a source of food, ceremonial artifacts, and clothing (collection of down). Inundation of mid-river gravel bars and islands has long been recognized as the primary reason for the decline of these main stem water-fowl populations. This loss has never been properly mitigated with respect to the Yakima Indian Nation.

3. Direct Loss of Deer Habitat

Riparian growth on both inundated islands and shorelines along the historical course of the Columbian River Provided habitat for black-tail deer and Columbian white-tail deer. The Columbia River breaks provided important wintering

3. Direct Loss of Deer Habitat (Cont.)

ranges for migratory mule deer. These deer populations associated with the Columbia main stem provided an important source of subsistance food for tribal members. Construction of the hydro-electric projects and resultant inundation has destroyed the habitats for most of these deer populations. Associated development has lessened the use of the Columbia River brakes as winter range habitat. This loss was never mitigated in the original tribal-federal negotiations.

4. Loss of Native Upland Game Bird Habitat

The predominant native upland game birds in this area were sharp tailed grouse and the sage grouse. The impact of the hydro projects and any associated loss of habitat for these species has never been properly investigated. Both of these species are nearly extirpated from the mid-Columbia area and both species provided an important source of food for tribal members. The relationship of the decline of these species with the construction of the hydro projects has never been properly evaluated and hence has never been subject to mitigation procedures.

These four points represents specific concerns the Yakima Indian Nation relative to wildlife losses following the construction of the aforementioned hydro projects. These losses were never identified and hence never mitigated in the original federal-tribal negotiations. I feel this represents a very good starting point in any future mitigative efforts and hope that you will consider these concerns within the context of your report. Please do not hesitate to contact me for any further elaboration or discussion concerning these wildlife losses.

Sincerely,

William P. Bradley

William P. Bradley, Ph.D.
Director, Wildlife Resource Management
Yakima Indian Nation

cc: Northwest Power Planning Countil
Portland, Oregon

Corps of Engineers
Portland, Oregon

APPENDIX D

Mitigation Instruments

APPENDIX D: MITIGATION INSTRUMENTS

General Plan for the Use of Lands, John Day Lock and Dam Project, for Wildlife Conservation and Management.

Department of the Army License for Fish and Wildlife Purposes on the Willow Creek Arm, John Day Lock and Dam Project (Lake Umatilla), Oregon. No. DACW57-3-72-29.

Department of the Army License for Fish and Wildlife Purposes on the Irrigon Site, John Day Lock and Dam Project (Lake Umatilla), Oregon. No. DACW68-3-72-40.

Department of the Army Supplemental Agreement No. 1 to Department of the Army License No. DACW68-3-72-40 for Fish and Wildlife Purposes on the Irrigon Site, John Day Lock and Dam (Lake Umatilla), Oregon.

Department of the Army Supplemental Agreement No. 2 to Department of the Army License No. DACW68-3-72-40 for Fish and Wildlife Purposes on the Irrigon Site, John Day Lock and Dam (Lake Umatilla), Oregon.

GENERAL PLAN
for the
Use of Lands
JOHN DAY LOCK AND DAM PROJECT
for
WILDLIFE CONSERVATION AND MANAGEMENT

WHEREAS the United States has acquired title to certain lands of the John Day Lock and Dam Project, Oregon and Washington, pursuant to the Flood Control Act of 1950 in accordance with recommendations published in House Document 531, 81st Congress, 2nd Session, and the River and Harbor Act of 1965 in accordance with recommendations published in Senate Document No. 28, 89th Congress, 1st Session, and

WHEREAS the Corps of Engineers of the United States Department of the Army is charged with the responsibility of operating and maintaining said Project, and

WHEREAS the Act of August 12, 1958 (72 Stat. 563; 16 U.S.C. 661 et seq.), directs in part in Section 3 thereof that whenever the waters of any stream or other body of water are impounded, diverted, the channel deepened or otherwise controlled or modified for any purpose whatever, including navigation and drainage, by any department or agency of the United States, adequate provisions consistent with the primary purposes of such impoundments, diversions or other control shall be made for the use thereof, together with any areas of land, or interest therein, acquired or administered in connection therewith, for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon, and

MAY 7 1984

WHEREAS said Section 3 of said Act of August 12, 1958, further provides in part that such water and other interests shall be made available to the Secretary of the Interior if they have particular value in carrying out the national migratory bird management program, and

WHEREAS other lands and waters outside the boundary of the waterfowl management area designated in Exhibit "A" not of value to the migratory bird program may be of value for other forms of fish and wildlife which are managed by the State wherein such interests lie, and

WHEREAS Section 4 of the Act of August 12, 1958, provides in part that such areas as are made available for wildlife conservation and management in carrying out the national migratory bird management program shall be administered directly or under cooperative agreement with Federal, State, and public or private agencies, and

WHEREAS the Secretary of the Interior finds that certain lands and water areas of the John Day Lock and Dam Project, Oregon and Washington, have particular value in the national migratory bird management program, and that certain Federal lands should be reserved to the Government for such program, and

WHEREAS the Secretary of the Interior and the Game Commission of the State of Oregon find that certain land and water areas of the John Day Lock and Dam project located in the State of Oregon are not of particular value in the national migratory bird management program, but do have considerable value in conservation and management of fish and wildlife resources of the State of Oregon,

NOW, THEREFORE, THE SECRETARY OF THE ARMY, THE SECRETARY OF THE INTERIOR, and the STATE OF WASHINGTON DEPARTMENT OF FISHERIES AND DEPARTMENT OF GAME and the STATE OF OREGON GAME COMMISSION AND FISH COMMISSION, DO HEREBY APPROVE as a GENERAL PLAN and agree that:

1. Those lands acquired specifically for wildlife uses in accordance with the River and Harbor Act of 1965 be transferred to the Bureau of Sport Fisheries and Wildlife of the U. S. Fish and Wildlife Service for management. These lands are shown in solid color on Exhibit "A."

2. Those lands and water areas acquired for primary purposes of the project and found to have their greatest conservation value in furthering the national migratory bird management program will be made available by cooperative agreement to the Bureau of Sport Fisheries and Wildlife of the U. S. Fish and Wildlife Service for administration and management. The limits of these areas will be essentially as shown cross-hatched in color on Exhibit "A."

3. Those lands and water areas located in the State of Oregon acquired for primary purposes of the project and found to have their greatest conservation value in the conservation and management of the fish and wildlife resources of the State of Oregon will be made available under license agreement to the Game Commission of the State of Oregon for management and administration. The limits of these areas will be essentially as shown hatched in color on Exhibit "A."

4. It may become desirable in the future to modify this plan or the cooperative agreement and/or licenses provided for herein to include additional project lands not herein described or to exclude lands no

longer necessary or used for the conservation of wildlife, fish, and game. It is understood and agreed that such modification will be accomplished by mutual determination and agreement of District Engineer, Corps of Engineers; Regional Director, Bureau of Sport Fisheries and Wildlife; and the representatives of the particular state in which said additional or excluded areas may be located.

5. This General Plan Agreement shall become effective upon the date of its execution by all parties hereto; however, the subject land shall not be used and/or occupied pursuant to this General Plan Agreement until the transfer of administration, license, or cooperative agreement referred to above has been granted by the Secretary of the Army.

IN WITNESS WHEREOF, the parties hereto have executed this General Plan Agreement as of the date and year indicated.

UNITED STATES OF AMERICA

DATE: 25 MAR 1968 By Howard E. McGaffey
Acting Secretary of the Army

DATE: May 2, 1968 By [illegible]
Secretary of the Interior

STATE OF OREGON

Date: 12-1-67 By [illegible]
Director, Oregon Fish Commission

DATE: 12-1-67 By [illegible]
Director, Oregon Game Commission

STATE OF WASHINGTON

Date: 11-6-67 By [illegible]
Director, Washington Department of Game

Date: 9/18/67 By [illegible]
Director, Washington Department of Fisheries

DEPARTMENT OF THE ARMY
LICENSE
FOR FISH AND WILDLIFE PURPOSES
ON THE WILLOW CREEK ARM
JOHN DAY LOCK AND DAM PROJECT
(LAKE UMATILLA)
OREGON

No. DACW57-3-72-29
Willow Ck Wildlife Mgt Plan
John Day

THE SECRETARY OF THE ARMY, under authority of the Fish and Wildlife Coordination Act, as amended (48 Stat. 401; 16 U.S.C. 661 et seq) and the Act of Congress approved 22 December 1944, as amended (76 Stat. 1195; 16 U.S.C. 460d), hereby grants to the Oregon State Game Commission, thereafter referred to as the licensee, a license for a period of Twenty-Five (25) years commencing on 1 August 1971 and ending on 31 July 1996, to use and occupy approximately 646 acres of land and water areas under the jurisdiction of the Department of the Army in the John Day Lock and Dam Project (Lake Umatilla), Oregon, as shown in red and blue respectively on Exhibit "A" dated 7 June 1971, attached hereto and made a part hereof, for Fish and Wildlife conservation, development and management purposes.

THIS LICENSE is granted subject to the following conditions:

1. That the licensee, in the exercise of the privileges hereby granted, shall conform to such rules and regulations as may be prescribed by the Secretary of the Army to govern the public use of the said project area, and with the provisions of Section 4 of the Act of Congress approved 22 December 1944, as amended (76 Stat. 1195; 16 U.S.C. 460d).

2. That the licensee may construct upon said land such buildings, improvements, facilities, accommodations, fences, signs and other structures as may be necessary for the purposes of this license, and may plant seeds, shrubs and trees, provided that all such structures shall be constructed and the landscaping accomplished in accordance with plans approved by the District Engineer, U. S. Army Corps of Engineers, in charge of the administration of the property.

3. That the licensee shall administer and maintain the said property, for the purposes of this license, in accordance with the master plan for the said project area and with an annual management program to be mutually agreed upon between the licensee and the said District Engineer, which may be amended from time to time as may be necessary. Such annual management program shall include, but is not limited to, the following:

a. Plans for management and development activities to be undertaken by the licensee or jointly by the Corps of Engineers and the licensee.

b. Budget of the licensee for carrying out the management and development activities.

c. Personnel to be used in the management of the area.

d. Plans for supervising, patrolling and policing the licensed areas, including the water areas.

4. That the licensee shall protect the property from fire, vandalism and soil erosion, and may make and enforce such rules and regulations as are necessary, and within its legal authority, in exercising the privileges granted in this license, provided that such rules and regulations are not inconsistent with those prescribed by the Secretary of the Army to govern the public use of the area.

5. That the licensee, in exercising its governmental or proprietary functions, may plant and harvest crops, either directly or by service contract or under sharecrop agreements with local farmers, to provide: (a) food for wildlife and (b) necessary compensation to farmers under any sharecrop agreement. Recognizing that a poor crop season may result in a lack of food for wildlife in a given future year, the licensee will be allowed to provide a reasonable surplus which will be held in reserve against a future poor crop season or may be disposed of by the State and the proceeds from the sale held in reserve against a future poor crop season. In any event, the lands will not be used by the State for the production of crops or any other purpose solely to produce revenue to defray costs of management of the wildlife area. Lands within the licensed area, available for lease for agricultural or grazing purposes, will be leased by the District Engineer. Monies collected by the State and not used to provide food for wildlife in a poor crop season shall be paid to the District Engineer at five-year intervals. The licensee will establish and maintain adequate records and accounts and render periodic statements of receipts and expenditures in furtherance of its wildlife feeding program, as may be required by said District Engineer. The District Engineer shall have the right to perform audits of the licensee's records and accounts.

6. That the licensee may take, trap, remove, stock or otherwise control all forms of fish and wildlife within the said area, and may place therein such additional forms of fish and wildlife as it may desire from time to time, and shall have the right to close the area, or any parts thereof from time to time, to fishing, hunting or trapping, pro-

vided that the closing of any area to such use for fishing, hunting or trapping shall be consistent with the state laws for the protection of fish and wildlife; also, the licensee shall enforce the fish and game laws and such orders and regulations as may be issued by the Division of Game and Fish, and/or its Director, which laws, orders and regulations are consistent with its state-wide program.

7. That the water areas of the project shall be open to public use generally, without charge, for boating, swimming, bathing, fishing and other recreational purposes, and that ready access to and exit from such water areas along the shores of the project shall be maintained for general public use, when such use is determined by the Secretary of the Army not to be contrary to the public interest. However, no use of any area shall be permitted which is inconsistent with the state laws for the protection of fish and game.

8. That this license is subject to all existing and future easements, leases, licenses and permits heretofore granted, or to be hereafter granted, by the United States concerning said lands; provided, however, that upon appropriate notification by the licensee to said District Engineer, the United States, insofar as may be consistent with other uses and purposes of the project, will not enter into any new easements, leases, licenses or permits, or renewals thereof, which will, in the opinion of the District Engineer, adversely affect the current operations of the licensee under the provisions of the license, or which will conflict with the definitely scheduled program of the licensee for the expansion of its activities under the provisions of this license.

9. That the licensee furnishes as a part of this contract an assurance (Exhibit B) that he will comply with Title VI of the Civil Rights Act of 1964 (78 Stat. 241) and Department of Defense Directive 5500.11 issued pursuant thereto and published in Part 300 of Title 32, Code of Federal Regulations.

10. That no cuts or fills along the shore line shall be made by the licensee without prior approval of the said District Engineer.

11. That, within the limits of their respective legal powers, the parties to this license shall protect the project against pollution of its water. The licensee shall comply promptly with any regulations, conditions or instructions affecting the activity hereby authroized if and when issued by the Environmental Protection Agency and/or a state water pollution control agency having jurisdiction to abate or prevent water pollution. Such regulations, conditions, or instructions in effect or prescribed by the Environmental Protection Agency or state agency are hereby made a condition of this license.

12. That ingress to and egress from the project area shall be afforded the licensee over existing access roads, such interior roads as may be constructed, and at such additional places over Government-owned land as may be approved by said District Engineer. The licensee shall provide appropriate markings at its own expense.

13. That the right is hereby expressly reserved to the United States, its officers, agents and employees, to enter upon the said land and water areas, at any time and for any purpose necessary or convenient in connection with river and harbor and flood control work, and to remove therefrom timber or other material, required or necessary for such work; to flood said premises when necessary, and/or to make any other use of said land as may be necessary in connection with public navigation and flood control, and the licensee shall have no claim for damages of any character on account thereof against the United States or any agent, officer or employee thereof.

14. That any property of the United States damaged or destroyed by the licensee incident to the exercise of the privileges herein granted shall be promptly repaired or replaced by the licensee to the satisfaction of the said District Engineer.

15. That the United States shall not be responsible for damages to property or injuries to persons which may arise from, or be incident to, the exercise of the privileges herein granted, or for damages to the property of the licensee, or for damages to the property or injuries to the person of the licensee's officers, agents, servants or employees, or others who may be on said premises at their invitation or the invitation of any one of them, arising from or incident to the flooding of said premises by the Government or flooding from any other cause, or arising from or incident to any other governmental activities on the said premises, and the licensee shall hold the United States harmless from any and all such claims, except as licensee is prevented therefrom by Article XI, Section 7 of the Oregon Constitution.

16. That this license may be relinquished by the licensee at any time by giving to the Secretary of the Army, through the said District Engineer, at least thirty (30) days notice in writing.

17. That this license may be revoked by the Secretary of the Army in the event the licensee violates any of the terms and conditions of this license and continues and persists therein for a period of thirty (30) days after notice thereof, in writing, by the said District Engineer.

18. That on or before the date of expiration of this license or its relinquishment by the licensee, the licensee shall vacate the said Government premises, remove all property of the licensee therefrom, and restore the premises to a condition satisfactory to the said District Engineer. If, however, this license is revoked, the licensee shall vacate the premises, remove said property therefrom, and restore the premises as aforesaid within such time as the Secretary of the Army may designate.

In either event, if the licensee shall fail or neglect to remove said property and so retore the premises, than said property shall become the property of the United States, without compensation therefor, and no claim for damages against the United States, or its officers or agents, shall be created by or made on account thereof.

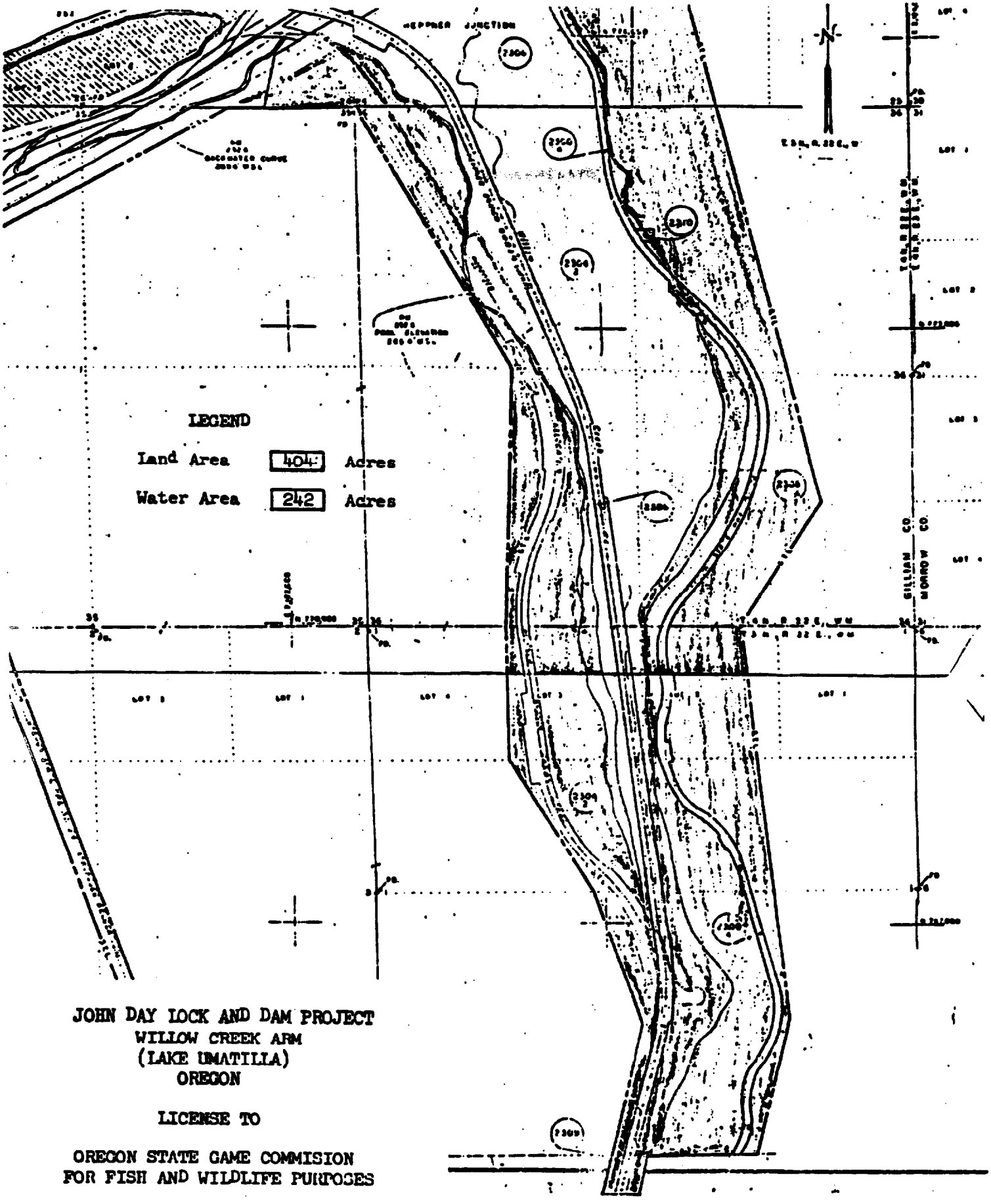
IN WITNESS WHEREOF I have hereunto set my hand this 17 day of December, 1971, by direction of the Assistant Secretary of the Army.

SHERRY B. MYERS
Assistant for Real Property
OASA (I&L)

The above instrument, together with the provisions and conditions thereof, is hereby accepted this 7th day of January, 1972.

OREGON STATE GAME COMMISSION

By
Director



JOHN DAY LOCK AND DAM PROJECT
WILLOW CREEK ARM
(LAKE UMATILLA)
OREGON

LICENSE TO

OREGON STATE GAME COMMISION
FOR FISH AND WILDLIFE PURPOSES

1" = 1200' 7 June 1971

EXHIBIT A

APPENDIX II

ASSURANCE OF COMPLIANCE WITH THE DEPARTMENT OF DEFENSE DIRECTIVE UNDER TITLE VI OF THE CIVIL RIGHTS ACT OF 1964

Oregon State Game Commission (hereinafter called "Applicant-Recipient")
(Name of Applicant-Recipient)

HEREBY AGREES THAT it will comply with title VI of the Civil Rights Act of 1964 (P.L. 88-352) and all requirements imposed by or pursuant to the Directive of the Department of Defense (32 CFR Part 300, issued as Department of Defense Directive 5500.11, December 28, 1964) issued pursuant to that title, to the end that, in accordance with title VI of that Act and the Directive, no person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Applicant-Recipient receives Federal financial assistance from Department of the Army (Component of the Department) and HEREBY GIVES ASSURANCE THAT it will immediately take any measures necessary to effectuate this agreement.

If any real property or structure thereon is provided or improved with the aid of Federal financial assistance extended to the Applicant-Recipient by this Department of the Army (Component of the Department) assurance shall obligate the Applicant-Recipient, or in the case of any transfer of such property, any transferee, for the period during which the real property or structure is used for a purpose for which the Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits. If any personal property is so provided, this assurance shall obligate the Applicant-Recipient for the period during which it retains ownership or possession of the property. In all other cases, this assurance shall obligate the Applicant-Recipient for the period during which the Federal financial assistance is extended to it by Department of the Army (Component of the Department).

THIS ASSURANCE is given in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts, property, discounts or other Federal financial assistance extended after the date hereof to the Applicant-Recipient by the Department, including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date. The Applicant-Recipient recognizes and agrees that such Federal financial assistance will be extended in reliance on the representations and agreements made in this assurance, and that the United States shall have the right to seek judicial enforcement of this assurance. This assurance is binding on the Applicant-Recipient, its successors, transferees, and assignees, and the person or persons whose signatures appear below are authorized to sign this assurance on behalf of the Applicant-Recipient.

Dated 7/14/71

Oregon State Game Commission
(Applicant-Recipient)

By [signature]
(President, Chairman of Board, or comparable authorized official)

P.O. Box 3503
Portland, Oregon 97208
(Applicant-Recipient's Mailing Address)

635
EXHIBIT B

DEPARTMENT OF THE ARMY
LICENSE
FOR FISH AND WILDLIFE PURPOSES
ON THE IRRIGON SITE
JOHN DAY LOCK AND DAM PROJECT
(LAKE UMATILLA)
OREGON

No. DACW68-3-72-40

THE SECRETARY OF THE ARMY, under authority of the Fish and Wildlife Coordination Act, as amended (48 Stat. 401, 16 U.S.C. 661 et seq) and the Act of Congress approved 22 December 1944, as amended (76 Stat. 1195; 16 U.S.C. 460d), hereby grants to the Oregon State Game Commission, thereafter referred to as the licensee, a license for a period of twenty-five (25) years commencing on date of execution, to use and occupy approximately 505 acres of land and water areas under the jurisdiction of the Department of the Army in the John Day Lock and Dam Project (Lake Umatilla), Oregon, as outlined in red on Exhibit "A", attached hereto and made a part hereof, for Fish and Wildlife conservation, development and management purposes.

THIS LICENSE is granted subject to the following conditions:

1. That the licensee, in the exercise of the privileges hereby granted, shall conform to such rules and regulations as may be prescribed by the Secretary of the Army to govern the public use of the said project area, and with the provisions of Section 4 of the Act of Congress approved 22 December 1944, as amended (76 Stat. 1195; 16 U.S.C. 460d).

2. That the licensee may construct upon said land such buildings, improvements, facilities, accommodations, fences, signs and other structures as may be necessary for the purposes of this license, and may plant seeds, shrubs and trees, provided that all such structures shall be constructed and the landscaping accomplished in accordance with plans approved by the District Engineer, U. S. Army Corps of Engineers, in charge of the administration of the property.

3. That the licensee shall administer and maintain the said property, for the purposes of this license, in accordance with the master plan for the said project area and with an annual management program to be mutually agreed upon between the licensee and the said District Engineer, which may be amended from time to time as may be necessary. Such annual management program shall include, but is not limited to, the following:

a. Plans for management and development activities to be undertaken by the licensee or jointly by the Corps of Engineers and the licensee.

b. Budget of the licensee for carrying out the management and development activities.

c. Personnel to be used in the management of the area.

d. Plans for supervising, patrolling and policing the licensed areas, including the water areas.

4. That the licensee shall protect the property from fire, vandalism and soil erosion, and may make and enforce such rules and regulations as are necessary, and within its legal authority, in exercising the privileges granted in this license, provided that such rules and regulations are not inconsistent with those prescribed by the Secretary of the Army to govern the public use of the area.

5. That the licensee, in exercising its governmental or proprietary functions, may plant and harvest crops, either directly or by service contract or under sharecrop agreements with local farmers, to provide: (a) food for wildlife and (b) necessary compensation to farmers under any sharecrop agreement. Recognizing that a poor crop season may result in a lack of food for wildlife in a given future year, the licensee will be allowed to provide a reasonable surplus which will be held in reserve against a future poor crop season or may be disposed of by the State and the proceeds from the sale held in reserve against a future poor crop season. In any event, the lands will not be used by the State for the production of crops or any other purpose solely to produce revenue to defray costs of management of the wildlife area. Lands within the licensed area, available for lease for agricultural or grazing purposes, will be leased by the District Engineer. Monies collected by the State and not used to provide food for wildlife in a poor crop season shall be paid to the District Engineer at five-year intervals. The licensee will establish and maintain adequate records and accounts and render periodic statements of receipts and expenditures in furtherance of its wildlife feeding program, as may be required by said District Engineer. The District Engineer shall have the right to perform audits of the licensee's records and accounts.

6. That the licensee may take, trap, remove, stock or otherwise control all forms of fish and wildlife within the said area, and may place therein such additional forms of fish and wildlife as it may desire from time to time, and shall have the right to close the area, or any parts thereof from time to time, to fishing, hunting or trapping, provided that the closing of any area to such use for fishing, hunting or trapping shall be consistent with the state laws for the protection of fish and wildlife; also, the licensee shall enforce the fish and game laws and such orders and regulations as may be issued by the Division of Game and Fish, and/or its Director, which laws, orders and regulations are consistent with its state-wide program.

7. That the water areas of the project shall be open to public use generally, without charge, for boating, swimming, bathing, fishing and

other recreational purposes, and that ready access to and exit from such water areas along the shores of the project shall be maintained for general public use, when such use is determined by the Secretary of the Army not to be contrary to the public interest. However, no use of any area shall be permitted which is inconsistent with the state laws for the protection of fish and game.

8. That this license is subject to all existing and future easements, leases, licenses and permits heretofore granted, or to be hereafter granted, by the United States concerning said lands; provided, however, that upon appropriate notification by the licensee to said District Engineer, the United States, insofar as may be consistent with other uses and purposes of the project, will not enter into any new easements, leases, licenses or permits, or renewals thereof, which will, in the opinion of the District Engineer, adversely affect the current operations of the licensee under the provisions of the license, or which will conflict with the definitely scheduled program of the licensee for the expansion of its activities under the provisions of this license.

9. That the licensee shall not discriminate against any person or persons because of race, creed, color or national origin in the conduct of its operations hereunder.

10. That no cuts or fills along the shore line shall be made by the licensee without the prior approval of the said District Engineer.

11. That, within the limits of their respective legal powers, the parties to the license shall protect the project against pollution of its water. The licensee shall comply promptly with any regulations, conditions or instructions affecting the activity hereby authorized if and when issued by the Environmental Protection Agency and/or a state water pollution control agency having jurisdiction to abate or prevent water pollution. Such regulations, conditions, or instructions in effect or prescribed by the Environmental Protection Agency or state agency are hereby made a condition of this license.

12. That ingress to and egress from the project area shall be afforded the licensee over existing access roads, such interior roads as may be constructed, and at such additional places over Government-owned land as may be approved by said District Engineer. The licensee shall provide appropriate markings at its own expense.

13. That the right is hereby expressly reserved to the United States, its officers, agents and employees, to enter upon the said land and water areas, at any time and for any purpose necessary or convenient in connection with river and harbor and flood control work, and to remove therefrom timber, or other material, required or necessary for such work; to flood said premises when necessary, and/or to make any other use of said land

as may be necessary in connection with public navigation and flood control, and the licensee shall have no claim for damages of any character on account thereof against the United States or any agent, officer or employee thereof.

14. That any property of the United States damaged or destroyed by the licensee incident to the exercise of the privileges herein granted shall be promptly repaired or replaced by the licensee to the satisfaction of the said District Engineer.

15. That the United States shall not be responsible for damages to property or injuries to persons which may arise from, or be incident to, the exercise of the privileges herein granted, or for damages to the property of the licensee, or for damages to the property or injuries to the person of the licensee's officers, agents, servants or employees, or others who may be on said premises at their invitation or the invitation of any one of them, arising from or incident to the flooding of said premises by the Government or flooding from any other cause, or arising from or incident to any other governmental activities on the said premises, and the licensee shall hold the United States harmless from any and all such claims, except as licensee is prevented therefrom by Article XI, Section 7 of the Oregon constitution.

16. That this license may be relinquished by the licensee at any time by giving to the Secretary of the Army, through the said District Engineer, at lease thirty (30) days' notice in writing.

17. That this license may be revoked by the Secretary of the Army in the event the licensee violates any of the terms and conditions of this license and continues and persists therein for a period of thirty (30) days after notice thereof, in writing, by the said District Engineer.

18. That on or before the date of expiration of this license or its relinquishment by the licensee, the licensee shall vacate the said Government premises, remove all property of the licensee therefrom, and restore the premises to a condition satisfactory to the said District Engineer. If, however, this license is revoked, the licensee shall vacate the premises, remove said property therefrom, and restore the premises as aforesaid within such time as the Secretary of the Army may designate. In either event, if the licensee shall fail or neglect to remove said property and so restore the premises, then said property shall become the property of the United States, without compensation therefor, and no claim for damages against the United States, or its officers or agents, shall be created by or made on account thereof.

19. The licensee shall assume responsibility for any mosquito abatement and/or control program that may be required for the premises.

IN WITNESS WHEREOF I have hereunto set my hand this 4 day of November, 1971, by direction of the Assistant Secretary of the Army.

Sherry B. Myers

SHERRY B. MYERS
Assistant for Real Property
OASA(I&L)

The above instrument, together with the provisions and conditions thereof, is hereby accepted this 24th day of November 1971.

OREGON STATE GAME COMMISSION

By John W. McKean

John W. McKean, Director

STATE OF OREGON)
) ss
County of Multnomah)

On this date of November 24, 1971, personally appeared the above named JOHN W. McKEAN, known to me to be the Director of the Oregon State Game Commission, who executed the foregoing instrument and acknowledged the said instrument to be free and voluntary act of the State of Oregon acting by and through its Game Commission.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal.

Clifton Lemone

Notary Public for Oregon
My Commission Expires: 3/28/72

STATE OF VIRGINIA)
) SS
COUNTY OF ARLINGTON)

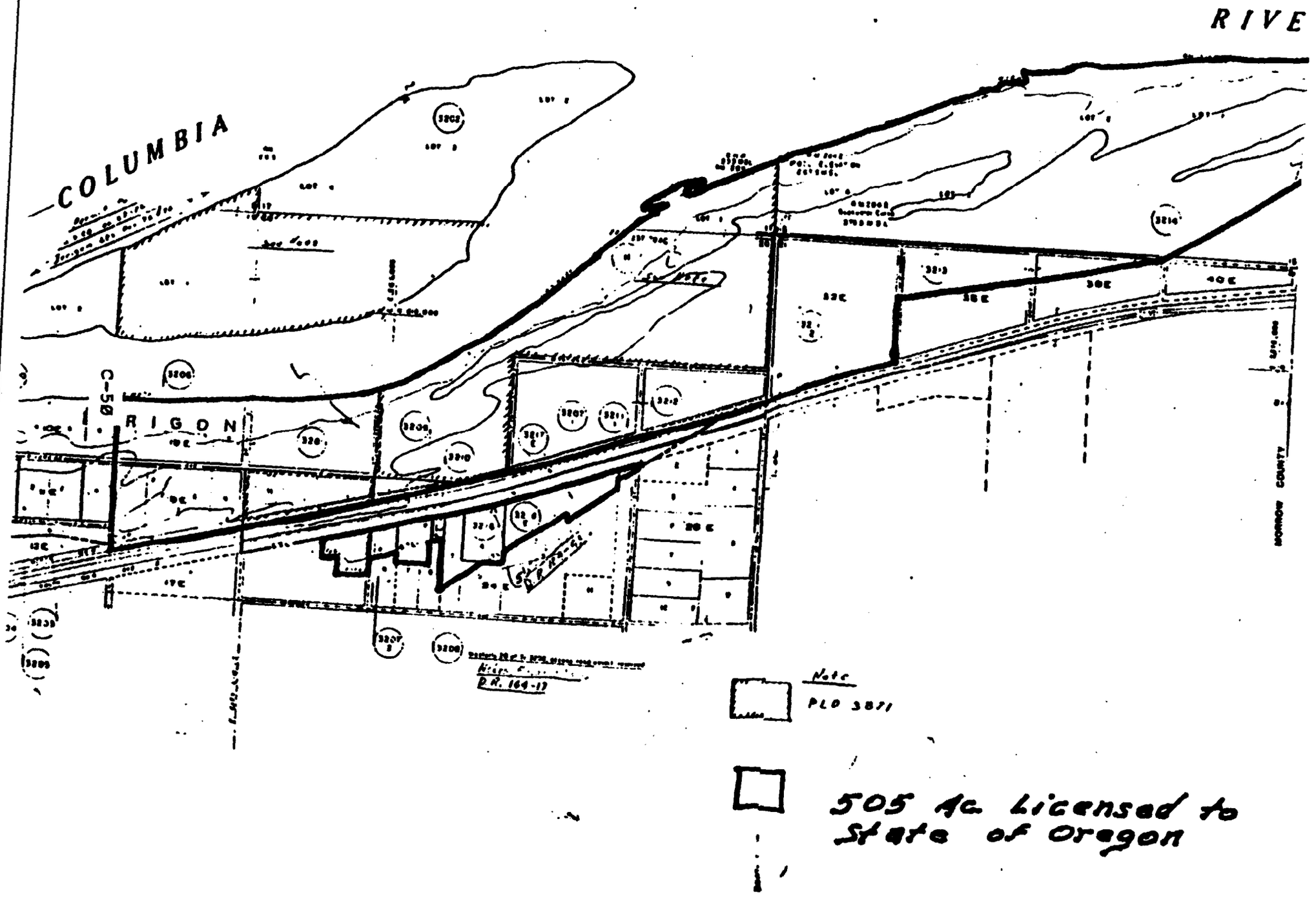
NOVEMBER 5 A.D. 19 71

Personally appeared Sherry B. Myers who, being duly sworn, did say that he is the identical person who subscribed his name to the foregoing instrument in the capacity stated by direction of the Assistant Secretary of the Army as the act and deed of the United States.

Before me:

Curtis Mooney Jr.
Notary Public
Arlington County, Virginia

My Commission expires:
18 JUL 1975


RIVE
COLUMBIA
C-50
RIGON
MORROW COUNTY
Note
PLO 3871
505 Ac Licensed to State of Oregon

DEPARTMENT OF THE ARMY

SUPPLEMENTAL AGREEMENT NO. 1

TO

DEPARTMENT OF THE ARMY LICENSE NO. DACW68-3-72-40

FOR FISH AND WILDLIFE PURPOSES ON THE IRRIGON SITE

JOHN DAY LOCK AND DAM (LAKE UMATILLA), OREGON

THIS SUPPLEMENTAL AGREEMENT made and entered into by and between the United States of America, hereinafter called the "Government", and the State of Oregon, acting by and through its State Game Commission (now Fish and Wildlife Department), hereinafter called the "Licensee", WITNESSETH THAT:

WHEREAS, on the 4th day of November 1971, the parties hereto entered into a License for a period ending 3 November 1996 covering use of approximately 505.0 acres, more or less, of land and water areas within the John Day Lock and Dam (Lake Umatilla), Oregon Project as outlined in red on Exhibit "A", attached hereto and made a part hereof, for Fish and Wildlife conservation, development, and management purposes; and

WHEREAS, it is found advantageous and in the best interests of the Government and the Licensee to modify said License for the following reason:

To incorporate an additional 434.7 acres, more or less, of land and water into the overall License area for the remainder of the License.

NOW THEREFORE, the said License is hereby modified in the following particulars, but in no others:

a. Lines 7 through 11 of the Granting Clause, page 1, are deleted and the following is inserted in lieu thereof:

"mately 939.7 acres, more or less, of land and water areas under the jurisdiction of the Department of the Army in the John Day Lock and Dam Project (Lake Umatilla), Oregon, as outlined in red and yellow on Exhibits "A" and "B", respectively, attached hereto and made a part hereof, for Fish and Wildlife conservation, development, and management purposes."

Incl 1

b. Line 11 of Condi modified to read:

"activities under th ons of this License without prior coordination with the Lic

c. Condition 20 is its entirety:

"20. That the Secre he Army may cause any portion of this area determined to be avai port and/or industrial purposes to be deleted by giving the at least one hundred and eighty (180) days' notice in writing."

IN WITNESS WHEREOF I have set my hand this 26th day of

August, irection of the Assistant Secretary of the Army (I & L)."

Gordon M. Hobbs
Assistant for Real Property
OASA (I&L)

THE ABOVE INSTRUMENT, toge the provisions and conditions thereof, is hereby accepted this ___ day of March, 1976.

DEPARTMENT OF FISH AND WILDLIFE

Director

DEPARTMENT OF THE ARMY

SUPPLEMENTAL AGREEMENT NO. 2

TO

DEPARTMENT OF THE ARMY LICENSE NO. DACW68-3-72-40

FOR FISH AND WILDLIFE PURPOSES ON THE IRRIGON SITE

JOHN DAY LOCK AND DAM (LAKE UMATILLA), OREGON

THIS SUPPLEMENTAL AGREEMENT made and entered into by and between the United States of America, hereinafter called the "Government", and the State of Oregon, acting by and through its State Game Commission (now Fish and Wildlife Department), hereinafter called the "Licensee", WITNESSETH THAT:

WHEREAS, on the 4th day of November 1971, the parties hereto entered into a License for a period ending 3 November 1996 covering use of approximately 505.0 acres, more or less, of land and water areas within the John Day Lock and Dam (Lake Umatilla), Oregon Project as outlined in red on Exhibit "C-1", attached hereto and made a part hereof, for Fish and Wildlife conservation, development, and management purposes; and

WHEREAS, on the 26th day of August 1977, the parties hereto executed Supplemental Agreement No. 1 adding approximately 434.7 acres, more or less, of land and water areas into the overall license area for the remainder of the License as outlined in red on Exhibit "C-1 and C-2" attached; and

WHEREAS, it is found advantageous and in the best interests of the Government and the Licensee to modify said License for the following reason:

To incorporate an additional 43.71 acres, more or less, of land and water into the overall License area for the remainder of the License.

NOW THEREFORE, the said License is hereby modified in the following particulars, but in no others:

1. Lines 7 through 11 of the Granting Clause, page 1, are deleted and the following is inserted in lieu thereof:

"mately 983.41 acres, more or less, of land and water areas under the jurisdiction of the Department of the Army in the John Day Lock and Dam Project (Lake Umatilla), Oregon, as outlined in red on Exhibit "C-1" and "C-2" attached hereto and made a part hereof, for Fish and Wildlife conservation, development, and management purposes."

2. All remaining terms and conditions of said License remain unchanged.

IN WITNESS WHEREOF I have hereunto set my hand this 30th day of October, 1981.

D. H. NELLEN
Chief, Real Estate Division
U.S. Army Engineer District, Portland

THE ABOVE INSTRUMENT, together with the provisions and conditions thereof, is hereby accepted this 6th day of November, 1981.

DEPARTMENT OF FISH AND WILDLIFE

By _____
Director

Status Report on Wildlife Mitigation

McNARY LOCK AND DAM PROJECT

Prepared by

U.S. Fish and Wildlife Service

for

Bonneville Power Administration

in response to the

Fish and Wildlife Program
Northwest Power Planning Council

1984

D-1

I. PROJECT NAME

McNary Lock and Dam, Lake Wallula, Oregon and Washington

II. PROJECT OPERATOR

U. S. Army Corps of Engineers (USACE), Portland District

III. PROJECT DESCRIPTION

(a) Location and Size

McNary Dam and Lock is located on the mainstem Columbia River at river mile (RM) 292 in the counties of Umatilla, Oregon and Benton, Washington 2.5 miles east of the town of Umatilla, Oregon. The dam is a concrete gravity structure 7,365 feet long and 220 feet high. At normal pool the reservoir is approximately 38,800 surface acres and backs water 64 miles up the mainstem Columbia and 10 miles up the Snake River to Ice Harbor Dam forming Lake Wallula (Dugger, 1983).

(b) Authorized Purposes

The authorizing document states the authorized purposes of the project are navigation, power development and irrigation.

(c) Brief History

McNary Dam is authorized by Public Law No. 14, 79th Congress, First Session, approved March 2, 1945. Construction began in 1947 and the reservoir filled in 1953 to form Lake Wallula. Full power generation began in 1957.

(d) Other Pertinent Data

(1) Water Level Fluctuation and Timing

The method of operation is "run of the river" primarily for power production with some controlled spills for downstream anadromous fish passage. Pool level fluctuation under normal operations varies 5 feet annually between 335 and 340 msl. (Leonard, 1983).

(2) Land Ownership

The U.S. Army Corps of Engineers controls land use on 9,285 acres above normal pool elevation (340 msl) and regulates water controlled by the dam (Baim, 1983). Land uses include project operations, recreation and fish and wildlife (USACE, 1976).

(3) Indian Rights

Deer, waterfowl, upland game birds, and rabbits were used for ceremonial, subsistence, and other cultural purposes by Indian tribes of the area. Furbearers were harvested for economic gain.

Indian concerns noted in past reports relate to the loss of fisheries and not wildlife. While past reports acknowledge attempts to mitigate for the loss of Indian fishing sites, it appears that wildlife losses to Indian tribes were never identified and hence never mitigated in the orginal Federal-Tribal negotiations. No formal agreements have been found between the United States and the Indians to mitigate for any wildlife habitat losses and associated wildlife population levels resulting from the construction of McNary Lock and Dam.

An inquiry was made to the Yakima Indian Nation, the Confederated Tribes of Warm Springs and Umatilla Indian Reservations, and the Nez Pierce Tribe to identify any mandates, agreements, and concerns specifically related to the McNary Lock and Dam Project. The Yakima, Warm Springs, and Umatilla Indians responded citing the 1855 treaties which protected their right to hunt, as well as fish off reservation. The Confederated Tribes of the Umatilla Indian Reservation exercise this right subject only to restrictions imposed by the Tribal Fish and Wildlife Committee. Both the Yakima Nation and Umatilla Confederated Tribes have maintained that they have an inherent legal interest in the conservation and maintenance of optimum population levels of all wildlife resources in the mid-Columbia region. While no formal agreements have been found between the United States and the Indians to mitigate for wildlife habitat or wildlife population losses, the Tribes indicate that the omission of wildlife mitigation considerations from Federal-Tribal negotiations was inadvertant and representative of a prior lack of awareness of wildlife needs by all parties (APPENDIX C).

IV. WILDLIFE SPECIES AND HABITAT ASSESSMENTS

(a) Pre-construction Period

(1) Available Information

The development and management of recreation facilities by the U.S. Army Corps of Engineers or by other governmental agencies, local groups, or individuals under agreement with the Chief of Engineers at Department of Army constructed reservoirs is authorized under Section 4 of the Flood Control Act approved December 22, 1944 (P.L. 78-534), as amended by Section 4 of the Flood Control Act approved September 3, 1954 (P.L. 83-780), and by Section 207 of the Flood Control Act of 1962 (P.L. 87-874).

The early version of the Fish and Wildlife Coordination Act (FWCA) was passed March 10, 1934 (48 Stat. 401). The first legislative mandate was passed in an amendment on August 14, 1946, which required all hydroelectric project developers to consult with the U.S. Fish and Wildlife Service and state conservation agencies prior to project development "with a view to preventing loss of and damage to wildlife resources." This Act was named FWCA on August 12, 1958, at which time an amendment was added stating that "wildlife conservation shall receive equal consideration and be coordinated with other features of water-resource development programs." Land acquisition, project modification, and/or modification of project operations were to be based on impact and mitigation reports by the U.S. Fish and Wildlife Service and state agencies, and costs for these measures were to be made an integral part of project costs.

The U.S. Fish and Wildlife Service report on the project (1952) primarily addressed the potential of the reservoir for fish and wildlife developments and recommended certain lands be developed for waterfowl with incidental benefits to other wildlife. The report did however discuss in general terms the value of the reservoir area for waterfowl and specifically identified 15 islands with a minimum of 174 nesting pairs of geese that would be lost.

Other information includes aerial photos (Table 1) and the U.S. Fish and Wildlife Service's National Wetland Inventory maps. The wetland maps are overlays on U.S. Geologic Survey 1:24,000 scale quads. They are available from the U.S. Fish and Wildlife Service Regional Office in Portland.

(2) Conditions

There was no comprehensive evaluation of wildlife populations or habitat prior to project construction.

In 1950, Hansen and Oliver (1951) surveyed Canada goose activity on 23 Columbia River islands prior to formation of Lake Wallula. These researchers reported 47 nests on islands to be lost to inundation, and observed 174 nesting pairs prior to construction of McNary Dam (Washington Department of Game survey records). Primary nesting habitats identified on inundated islands were willow; driftwood, debris, or bare ground; or Russian thistle. Other nesting habitats consisted of lupine, wheat bunchgrass, and giant ryegrass. The remainder of nests were located among various grass, sedge, cactus, shrub, and tree species. This study also identified great blue heron and ring-billed gull rookeries on some of the islands to be lost to inundation.

Table 1. Availability of CE Aerial Photography of the McNary Dam and Reservoir Area[1]/

Year	Number of Flights	Color or Black & White (BW)	Scale
1952 (Pre-Project)	4	BW	1:6,000
1953	1	BW	1:6,000
1959	1	BW	Part 1:9,600 and Part 1:20,000
1970	2	BW	1:20,000
1973	1	BW	1:24,000
1976	1	BW	1:24,000
1977	2	Color	1:12,000
1978	1	BW	1:12,000
1981	1	BW	1:12,000
1983	1	Color	1:12,000

1/ There also were on the average about three flights per year from 1950 through 1983 providing partial coverage of the reservoir area. Numerous ground photos, both slides and prints from 1952 to the present, are available from the CE Walla Walla District photo lab.

Other than the Hansen and Oliver survey, there have been no known studies conducted to inventory pre-impoundment wildlife or habitat. However, it is likely that conditions were similar to those which currently exist on the Hanford Reach and adjacent backwater areas.

(b) Post-construction Conditions

(1) Available Information

Wildlife and habitat present around Lake Wallula have been surveyed several times since completion of McNary Dam. Waterfowl is the most common and abundant wildlife group in the project area. The most recent survey (1983) found peak wintering populations of 203,000 ducks (mostly mallards) and 21,500 geese (Annear, 1983). During migration many species use the refuges and suitable habitats along the reservoir for resting and feeding.

Several species of ducks nest on islands, backwater sloughs, and along the shoreline of Lake Wallula. The mallard is the most abundant species. Other common nesters include gadwall, pintail, shoveler, and blue-winged teal. Annual duck production is approximately 1,100 (Annear, 1983).

Canada geese are common nesters and their population has increased slightly since construction of McNary Dam. In the 5 years following pool filling, the average number of Canada goose pairs for McNary Pool was 120 (Washington Department of Game survey records, unpublished). The goose population began gradually increasing in 1958 and has averaged about 150 nesting pairs since 1960.

In addition to waterfowl, riparian habitats around Lake Wallula support mule deer, white-tailed deer, and several species of upland game and furbearers (USACE, 1976c). Nongame species such as the golden eagle, bald eagle (endangered species), prairie falcon, burrowing owl, osprey, and numerous other birds, small mammals, amphibians and reptiles are also present. Significant nongame wildlife habitat is noted in the area of Hatrock State Park where a prairie falcon nest site and barn owl nesting colony is located. Approximately 10 to 20 successful barn owl nests within a 1 mile area of rimrock and cliffs form the largest owl nesting habitat area known in northeast Oregon (Melland, 1984).

The U.S. Army Corps of Engineers (1976c) mapped vegetation types present around the McNary pool, and showed willow associations as the most prevalent plant communities on Lake Wallula shorelines and islands. The study also showed that approximately 25 percent of riparian areas have been modified by road fill, industrial development, project facilities, recreational developments, business areas, and rock riprap.

For other sources of information on resources of the Columbia River, a bibliography entitled "Selected Administrative Reports and Publications Representative of Conservation Policy, Plans and Programs influencing the Management of the Wildlife Resource within the Columbia River Basin" and another entitled "Partial List of Reports, Publications and Studies Describing State and Federal Policy and Program, and the Abundance and Distribution of Wildlife and Habitat Within the Columbia River Basin" are available from the U.S. Army Corps of Engineers, Portland District.

(2) Losses

Wildlife losses attributable to the construction and operation of McNary Dam have not been adequately identified and/or assessed. The one possible exception is the study of losses of Canada goose nesting habitat (discussed above). Considerable wildlife habitat was destroyed by the dam and related facilities/structures, and inundation by reservoir waters. Other losses can be attributed to the approximately 25 percent of the reservoir shoreline that is not available to wildlife because of other uses (road fill, etc. Project operation creates fluctuating water levels that

have resulted in the inundation of waterfowl and shorebird nests and often create land bridges providing predator access to nesting islands. In addition, established riparian communities which support a variety of wildlife are continuously being eroded by wave action in the reservoir (USDI, 1979).

(3) Benefits

Benefits to wildlife from the project have not been adequately identified and/or assessed.

V. WILDLIFE MITIGATION HISTORY

(a) Mitigation Requested or Proposed

No wildlife impact assessment was done prior to or during construction and no mitigation was recommended. However in 1952, 1 year prior to reservoir filling, the U.S. Fish and Wildlife Service; Washington Department of Game; and Oregon State Game Commission, now Oregon Department of Fish and Wildlife, prepared a joint report discussing the place of fish and wildlife resources in recreational planning for McNary Reservoir and recommended that certain Government-owned lands within the impoundment area be set aside for fish and wildlife development (USDI, et al., 1952). These lands are further discussed under the Mitigation Agreements or Requirements section of this report.

In 1975 and 1976, the Oregon Department of Fish and Wildlife attempted to negotiate with the U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service for the management of lands in the Juniper Canyon area. Oregon Department of Fish and Wildlife sought the lands which were comprised of Bureau of Land Management lands, U.S. Army Corps of Engineers lands, and private lands for mitigation of the wildlife habitat inundated by McNary Dam. The attempt was unsuccessful (Scherzinger, 1984; Wilt, 1984).

(b) Mitigation Agreements or Requirements

(1) FPC/FERC Requirements

As a Federal project, the Federal Power Commission is not responsible for issuing permits, licenses, and license exempting grants under the Federal Water Power Act for McNary Lock and Dam.

(2) Fish and Wildlife Coordination Act Proceedings

The Fish and Wildlife Coordination Act (FWCA) of 1934, as amended, requires all hydroelectric project developers to consult

with the U.S. Fish and Wildlife Service and state conservation agencies prior to project development "with a view to preventing loss of and damage to wildlife resources." Federal development projects were required to contain adequate provision for conservation, maintenance, and management of wildlife resources consistent with primary project purposes. This Act was named the Fish and Wildlife Coordination Act of August 12, 1958, at which time an amendement was added stating that "wildlife conservation shall receive equal consideration and be coordinated with other features of water-resource development programs." Land acquisition, project modifications, and/or project operations modification were to be based on impact and mitigation reports by wildlife agencies, and costs for these measures were to be made an integral part of project costs.

During project construction, the U.S. Fish and Wildlife Service, Washington Department of Game, and Oregon State Game Commission jointly produced a report on Fish and Wildlife Development Plans recommended for McNary Reservoir. Principal areas recommended for management and development were: 1) the Columbia River between the Walla Walla and Snake Rivers; 2) the impounded portion of the Yakima River above Richland; 3) Burbank Slough; 4) the impounded section of Snake River; 5) the upper portion of the impounded section of the Walla Walla River; and, 6) certain islands within the reservoir (USDI, et al., 1952).

These areas were later expanded and increased in number (to 11) and currently include a total of 12,909 acres (Table 2). In addition, the U.S. Fish and Wildlife Service purchased 331 acres and received 5 acres as a gift. Neither of these areas are considered to be mitigation.

(3) MOU's and Other Agreements

In 1952, the U.S. Army Corps of Engineers licensed 8,913 acres of land south of Burbank, Washington and near the mouth of the Walla Walla River to Washington Department of Game as partial compensation for habitat losses resulting from McNary Dam. Of the total area, Washington Department of Game manages 7,578 acres as the McNary Habitat Management Area (HMA). Washington Department of Game has funded all development, operation, and maintenance costs associated with the HMA since 1952. The City of Richland controls the remaining 1,121 acres.

The U.S. Fish and Wildlife Service under cooperative agreement with the U.S. Army Corps of Engineers manages 3,029 acres in the vicinity of Burbank Slough as part of the McNary National Wildlife Refuge (NWR). The NWR was expanded in 1980 when the U.S. Bureau of Reclamation transferred 234 acres in fee title to

Table 2. Areas Managed (12,909 acres) for Wildlife in Conjunction With the McNary Project

Management Agency/Area Name	Acres	Comments
U.S. Fish and Wildlife Service		
1. McNary National Wildlife Refuge (includes Strawberry and Hanford Islands)	234	BR turned over to FWS in fee title
2. McNary National Wildlife Refuge (includes Strawberry and Hanford Islands)	30	Under lease from WDG to FWS
3. McNary National Wildlife Refuge (includes Strawberry and Hanford Islands)	3,029	Under Cooperative Agreement between CE & FWS
Washington Department of Game		
1. McNary Habitat Management Area	5,619	Under license from CE
2. Walla Walla River Wildlife Habitat Management	1,959	Under license from CE
3. Burbank Heights Wildlife Habitat Mangement Unit	275	Wildlife Mgmt.
Corps of Engineers		
1. McNary Wildlife Nature Area	318	Wildlife Park--No hunting
2. Horse Heaven	246	Wildlife Mgmt.
3. Island Refuge	9	Wildlife Mgmt.
4. Mouth of Walla Walla River Habitat Management Unit	69	Wildlife Mgmt.
City of Richland, Washington		
1. Yakima River Wildlife Nature Area City of Richland lease	1,121	Wildlife park under lease to City of Richland--Idle land--no wildlife management or hunting.

the U.S. Fish and Wildlife Service. In addition, the State of Washington leases 30 acres to the U.S. Fish and Wildlife Service. These two areas are located along the northern boundary of the refuge. The U.S. Fish and Wildlife Service funds all the development, operations and management on these lands (Coe, 1983).

(c) Mitigation Implemented

In 1952 the Washington Department of Game began managing, at its own expense, 8,913 acres in the McNary HMA. Since 1952 the acreage has varied slightly. Recently 1,121 acres at the mouth of the Yakima River were turned over to the City of Richland. The City of Richland has left the land idle and does not allow hunting.

In 1955, the U.S. Fish and Wildlife Service began managing, at its own expense, the McNary NWR consisting of 2,849 acres. By 1974 the number of acres increased to 3,629. This includes 331 acres purchased by the U.S. Fish and Wildlife Service and 5 acres received as a gift. Neither of these additions are mitigation for project-caused losses (Coe, 1983).

The loss of nesting and rearing areas formerly used by waterfowl has been partially compensated by production at the McNary HMA, McNary NWR, and other areas currently used by waterfowl.

Habitat developments at the McNary HMA and the McNary NWR have been instrumental in increasing waterfowl production in the area. Temporary (under license, cooperative agreement or lease) management rights for these areas have been given to Washington Department of Game and U.S. Fish and Wildlife Service (except for 234 acres in fee title), but no funding for development, operation, and maintenance of fish and wildlife areas has ever been allocated from project funds. Considering the above factors, mitigation for habitat losses which can be directly attributed to the McNary Project include management rights at the McNary HMA and McNary NWR, baseline (undeveloped) habitat conditions at the two refuges, plus any subsequent habitat improvements by the U.S. Army Corps of Engineers.

VI. CURRENT STUDIES AND PLANNING

McNary Lock and Dam Project - There are no plans to further mitigate wildlife losses attributable to the original McNary Project. To accurately determine mitigation needs, an objective comparison of pre- and post-impoundment habitat conditions is needed. This study should include using pre- and post-impoundment aerial photography (Table 1) to map habitat types,

surveying adjacent habitats to estimate quality of inundated habitat, and evaluating post-impoundment habitat conditions surrounding Lake Wallula. Comparing pre- and post-project habitat conditions should be accomplished using a habitat-based evaluation procedure to estimate habitat gains and losses. Tabor's 1976 report and other inventories can be used to supplement post-impoundment habitat information, while Hanford Reach inventories may be used to supplement pre-impoundment information.

Canada Goose Brooding Habitat Study - A cooperative 1-year study by the Walla Walla District Corps of Engineers and U.S. Fish and Wildlife Service on Canada goose brooding habitats between Crow Butte Island and Richland, Washington on the Columbia River was completed in 1983. These data are being analyzed and may influence future waterfowl management decisions in the McNary project area.

Columbia Basin Waterfowl Redistribution Plan - As a result of increased food availability and other habitat conditions in the Umatilla Basin Area, excessive numbers of wintering waterfowl are present. The U.S. Fish and Wildlife Service, Oregon Department of Fish and Wildlife, and Washington Department of Game are involved in a cooperative effort to relocate excess wintering waterfowl to the north Columbia Basin and Southwest Idaho (The Columbia River Waterfowl Redistribution Plan, 1983).

Corps of Engineers Wildlife Management Programs - The U.S. Army Corps of Engineers has initiated and funded programs for resident wildlife and waterfowl at several habitat management units on project lands. Management practices vary in intensity from location to location and may include mowing, fencing, crop and wildlife habitat plantings, erosion control measures, stocking and development of public use facilities such as nature trails. Habitat management units are located at Yakima Delta Wildlife Management Area (300 to 400 acres), McNary Natural Wildlife Area (500 acres), Horse Heaven (246 acres), Cold Springs Junction and Recreation Area Habitat Management Unit (250 acres), Juniper Canyon Habitat Management Unit (acreage uncalculated), and mouth of the Walla Walla River (70 to 100 acres) (Sunday, 1984).

VII. REFERENCES CITED

Annear, J. 1983. Personal Communication. U.S. Fish and Wildlife Service, Umatilla National Wildlife Refuge, Umatilla, Oregon.

Baim, A. 1983. Personal Communication. U.S. Army Corps of Engineers, Walla Walla District, Real Estate Division, Walla Walla, Washington.

Ball, I.J., Bowhay, Ellis L. and Yocom, Charles F. 1981. Ecology and Management of the Western Canada Goose in Washington. 67 pp.

Coe, L. 1983. Personal Communication. U.S. Fish and Wildlife Service, Division of Realty, Portland, Oregon.

Dugger, D. 1983. Personal Communication. U.S. Army Corps of Engineers, Walla Walla District, Public Affairs, Walla Walla, Washington.

Hansen, H.A. and Oliver, W.H. 1950. The Status of Resident Canada Geese in South-Central Washington, Spring, 1950. Murrelet 32:1

Leonard, B. 1983. Personal Communication. U.S. Army Corps of Engineers, Walla Walla District, Operations Division, Walla Walla, Washington.

Melland, J. 1984. Personal Communication. Oregon Department of Fish and Wildlife, LaGrande, Oregon.

Scherzinger, D. 1984. Personal Communication. Oregon Department of Fish and Wildlife, Portland, Oregon.

Sunday, D. 1984. Personal Communication. U.S. Army Corps of Engineers, Operations Division, McNary Dam, McNary, Washington.

Tabor, J.E. 1976. Inventory of Riparian Habitats and Associated Wildlife Along the Columbia and Snake Rivers. Volumes IIA and B. U.S. Army Corps of Engineers, North Pacific Division. 861 p.

U.S. Army Corps of Engineers, Portland District, Portland, Oregon. 1946. Definite Project Report on McNary Dam, Columbia River, Oregon-Washington. 86 pp. and maps, charts, tables.

U.S. Army Corps of Engineers, Walla Walla District, Walla Walla, Washington. 1976a. Final Environmental Impact Statement, McNary Project. Paging various.

U.S. Army Corps of Engineers, Walla Walla District, Walla Walla, Washington. 1976b. Final Environmental Impact Statement, McNary Second Powerhouse. Paging various.

U.S. Army Corps of Engineers, North Pacific Division, Portland, Oregon. 1976c. Inventory of Riparian Habitats and Associated Wildlife Along Columbia and Snake Rivers. Paging various.

U.S. Department of the Interior, Fish and Wildlife Service, State of Washington Department of Game and Oregon State Game Commission. 1952. A Report on the Fish and Wildlife Development Plans Recommended for McNary Reservoir, Columbia River, Washington and Oregon. 14 pp and map.

U.S. Department of the Interior, Fish and Wildlife Service. 1979. McNary Second Powerhouse Project. Fish and Wildlife Coordination Act Report. 39 pp.

Wilt, D. 1984. Personal Communication. Oregon Department of Fish and Wildlife, Portland, Oregon.

APPENDIX A: STUDY TEAM

U.S. Fish and Wildlife Service

Patrick Wright
David M. Sill

Washington Department of Game
Jack Howerton
Don Kraege

Oregon Department of Fish and Wildlife
Dan Carleson
Karen Bedrossian

APPENDIX B: COSULTATION/COORDINATION

Confederated Tribes

William P. Bradley	Yakima Indian Nation
Roger Fiander	Yakima Indian Nation
Gary James	Umatilla Indian Tribe
Jerry Lauer	Bureau of Indian Affairs
Terry Luther	Warm Springs Natural Resources
John Marsh	Columbia River Inter-Tribal Fish Comm.
Bob Strom	Nez Pierce Tribe

Oregon Department of Fish and Wildlife
- Karen Bedrossian
- Dan Carleson
- Paul Ebert
- Jack Melland
- Dick Scherzinger
- Jim Torland
- Don Wilt

U.S. Army Corps of Engineers
- Allen Baim, Real Estate Div., Walla Walla
- Doug Duggar, Public Affairs, Walla Walla
- Bert Leonard, Operations Division, Walla Walla
- Mike Passmore, Wildlife Division, Walla Walla
- Darrel Sunday, Operations Division, McNary Dam

U.S. Fish and Wildlife Service
- John T. Annear, Umatilla NWR
- Larry Coe, Realty Division, Portland
- Dick Giger, Habitat Resources, Portland
- Dave Lenhart, Biological Services, Portland

Washington Department of Game
- Jack Howerton
- Don Kraege
- Gretchen Van Lom

APPENDIX C

Comments

VICTOR ATIYEH
GOVERNOR

Department of Fish and Wildlife
506 S.W. MILL STREET, P.O. BOX 3503, PORTLAND, OREGON 97208

29 August, 1984

Mr. John R. Palensky, Director
Division of Fish and Wildlife
Bonneville Power Administration
P.O. Box 3621
Portland, OR 97208

Attention Mr. James Meyer:

The Oregon Department of Fish and Wildlife has high expectations of the Northwest Power Planning Act to provide for wildlife and wildlife habitat mitigation to offset impacts resulting from hydroelectric development.

As the McNary Dam Wildlife Mitigation Status Report and our attached comments on that report indicate, comprehensive evaluation of wildlife resource impacts and mitigation for wildlife habitat losses were not accomplished. Knowledge of wildlife resources and legal mandates have changed since the McNary Project was constructed. In addition to the requirements of the Northwest Power Planning Act for protection, mitigation and enhancement of wildlife resources, the Department of Fish and Wildlife has a policy to request mitigation for losses of animal populations and habitat. The main stem Columbia River hydroelectric projects have high priority due to the high value of wildlife resources involved.

In recognition of our increased responsibilities to address a broad range of concerns, I strongly urge the participating agencies to move forward in implementing the Wildlife Program of the Northwest Power Planning Council. In particular, we must proceed with a mitigation plan based on a comprehensive assessment of wildlife impacts at the McNary Project. The Department is prepared to participate in this endeavor and recommends a habitat based evaluation using: 1) the expertise of biologists from appropriate agencies; 2) existing data where possible; and 3) cost effective methods.

The first step toward accomplishing the goals of the Power Council's Fish and Wildlife Program has been the mitigation status report. We must now take the succeeding steps leading to full compensation for wildlife and wildlife habitat impacts at the McNary Project.

Sincerely,

for John R. Donaldson, PhD
Director

kb/hk
Encl.

Oregon Department of Fish and Wildlife
Comments on
Wildlife Mitigation Status Report
McNary Dam and Reservoir
29 August, 1984

These comments respond to a request from James R. Meyer, Bonneville Power Administration, dated 21 August 1984 to review the Mitigation Status Report for McNary Dam and Reservoir.

Oregon Revised Statute 496.012, Wildlife Policy, says in part: "It is the policy of the State of Oregon that wildlife shall be managed to provide the optimum recreational and aesthetic benefits for present and future generations of the citizens of this state. In furtherance of this policy, the goals of wildlife management are:

(1) To maintain all species of wildlife at optimum levels and prevent the serious depletion of any indigenous species.

(2) To develop and manage the lands and waters of this state in a manner that will enhance the production and public enjoyment of wildlife."

In accordance with ORS 496.012, the Department has a policy to request mitigation when losses to animal populations and habitat result from project construction and operation. These policies are consistent with the Power Act and Wildlife Program purpose "to protect, mitigate, and enhance fish and wildlife to the extent affected by the development and operation of any hydroelectric project of the Columbia River and its tributaries...." This goal has yet to be achieved at the McNary Project.

The McNary Wildlife Mitigation Status Report demonstrates assessment of the impacts to wildlife resulting from the construction and operation of the project was not comprehensive. This is evident by the lack of information available regarding the types and amounts of habitat altered and the lack of quantitative estimates of species affected by the project. The significance of the inundated habitat to wildlife has not been fully explored. Even though impact assessment has not been adequate, it is obvious that substantial impacts occurred to wildlife as a result of the McNary Project, considering acreage of habitat inundated. The status report indicates that mitigation measures implemented have not been adequate to offset impacts to wildlife resulting from the project.

In order to "protect, mitigate, and enhance" wildlife resources affected by the development and operation of the hydroelectric generating facilities at the McNary Project, it is necessary to determine what impacts occurred. Upon the approval of and funding by the Council and Bonneville Power Administration, the Department is prepared to participate in an assessment of impacts to wildlife resources resulting from the McNary Project and preparation of a loss statement. The Department is also ready to participate in developing mitigation plans. We believe that a workable loss statement and

mitigation plan can be developed based on existing information, and the expertise of biologists from the appropriate agencies who are familiar with the project area and appropriate wildlife habitat and species. Extensive, detailed studies will only delay implementation of mitigation measures.

The level of understanding of our wildlife resources has greatly improved since the time of construction of the McNary Project. We have broader concerns and are more aware of wildlife/habitat relationships. The Northwest Power Planning Act and the Power Council's Fish and Wildlife program have provided the opportunity to correct past misunderstanding and shortsightedness regarding wildlife resources affected by the development and operation of hydroelectric power in the Columbia River Basin. The Oregon Department of Fish and Wildlife wants to see that opportunity realized to the fullest degree possible in a timely, efficient, and cost-effective manner.

SEP 1 0 1984

United States Department of the Interior

FISH AND WILDLIFE SERVICE
LLOYD 500 BUILDING, SUITE 1692
500 N.E. MULTNOMAH STREET
PORTLAND, OREGON 97232

September 18, 1984

Mr. John Palensky, Director
Division of Fish and Wildlife
Bonneville Power Administration
Attention: James Meyer
P. O. Box 3621
Portland, Oregon 97208

Dear Mr. Palensky:

As requested in Mr. Meyer's letter of August 21, 1984, we have reviewed the Wildlife Mitigation Status Report for the McNary Project (the Project). The following comments are being provided for inclusion in the final report.

General Comments

Based on the report's content, it is evident that the construction and operation of the Project has resulted in substantial adverse impacts to wildlife resources which have been neither adequately identified nor mitigated. Therefore, the Service recommends that the Bonneville Power Administration provide funds to: 1) conduct a comprehensive evaluation of the impacts of the Project on wildlife resources; and 2) based on the findings of that evaluation, develop a mitigation and enhancement plan which would fully compensate the adverse wildlife impacts attributable to the Project.

The Service has the necessary expertise and would like to participate as the lead agency in both the impact evaluation and mitigation plan development tasks. We are developing a proposal to conduct an impact evaluation and will submit it to you in the near future.

Specific Comments

A comprehensive evaluation of the Project's impact on wildlife resources should be conducted by a team of qualified biologists composed of representatives from appropriate state and federal resource and development agencies. These include the Oregon Department of Fish and Wildlife, Washington Department of Game, Army Corps of Engineers, and Fish and Wildlife Service.

The evaluation should include an analysis of any actions which have been implemented to mitigate the Project's adverse impacts on wildlife. We suggest the evaluation be habitat based and supported by population data when available. We believe that such an evaluation could be accomplished with a minimum of new data collection by: 1) analyzing the existing data referenced in the status report such as pre- and post-construction photography; and 2) consultation with professional wildlife biologists familiar with the area's wildlife resources as they existed prior to project construction. The evaluation's results should be presented in an impact assessment report.

Utilizing the results from the aforementioned impact statement, we believe that the same team of biologists, with assistance from their agencys' respective habitat specialists, should develop a mitigation plan. The plan, if implemented, would be designed to fully compensate the adverse wildlife impacts identified.

In conclusion, we believe no single agency or user group is responsible for the adverse wildlife impacts which have resulted from the development and operation of the McNary Project. The proposals outlined in this letter would be considered "standard operating procedures" for evaluating the impacts of new water development proposals under present state and federal laws, regulations, and policies. Unfortunately, these legal mandates which today provide for the protection of our wildlife resources were not as strong when the McNary Project was being developed. However, both the Northwest Power Planning and Conservation Act and the Council's Fish and Wildlife program recognize this and together have given us an opportunity to evaluate and replace lost wildlife resources. The Service is eager to move toward that end.

Sincerely yours,

James W. Teeter
Acting Assistant Regional Director
Habitat Resources

OCT 03 1984

United States Department of Agriculture
Forest Service
Umatilla National Forest
2517 SW Hailey Ave.
Pendleton, OR 97801

Reply to: 2610 Cooperative Relations

Date: September 19, 1984

Subject: Formal Review of Project Reports - "Wildlife Mitigation Status Review"

To: Regional Forester

Your memorandum of September 6, 1984, requested our review of the "Wildlife Mitigation Status Review" reports for the Dalles and McNary Dam projects with regard to potential impacts to our programs. Because of the very limited review time, we have only been able to provide a cursory review.

It would appear that the mitigation of both fish and wildlife have been adequately addressed and would have little, if any, impact to our management programs on the Forest.

JOHN E. LOWE
Forest Supervisor

RECEIVED
SEP 20 1984
FISH AND WILDLIFE

Action	INFO	FWL	
		BLACK, JR	
		CANUTT	
		HALGEN	
		HRABETNICA	
		MORAN	
		PEDERSEN	
		PHILLIPS	
		MARKHAM	
		MARIER	
		FILES	

cc: BPA

D1

GENERAL COUNC
and
BOARD of TRUSTE

CONFEDERATED TRIBES
of the
Umatilla Indian Reservation

P.O. Box 638
PENDLETON, OREGON 97801
Area Code (503) Phone 276-3165

August 25, 1983

Mr. Russell D. Peterson
U.S. Fish and Wildlife Service
Division of Ecological Services
Portland Field Office
727 N.E. 24th Avenue
Portland,Oregon 97232

Dear Mr. Peterson:

In reference to your letter of August 10, 1983, regarding perspective of the Confederated Tribes on the history of wildlife studies and mitigation measures accomplished at the Bonneville Lock and Dam, the Dalles Lock and Dam, John Day Lock and Dam, and McNary Lock and Dam, comments were not submitted on this subject at the time of project authorization. It appears that our concerns on construction of these hydrolelectric projects were limited to impacts on anadromous fisheries. We do not have documentation on file which outlines the impacts on wildlife and mitigation measures adopted.

We would appreciate the opportunity to review drafts of the status reports on wildlife mitigation at the hydroelectric projects prior to completion of the final report. We will provide comments regarding wildlife concerns at that time. Copies of the reports should be sent to Jerry L. Lauer, Bureau of Indian Affairs, Umatilla Indian Agency, P.O. Box 520, Pendleton, Oregon 97801. Mr. Lauer acts as staff wildlife biologist for the Confederated Tribes.

Sincerely,

CONFEDERATED TRIBES OF THE
UMATILLA INDIAN RESERVATION

RECEIVED

AUG 2 8 1983

Elwood H. Patawa, Chairman
Board of Trustees

SH
DS
FW

JOHNSON, MARCEAU, KARNOPP & PETERSEN
ATTORNEYS
835 N.W. BOND STREET • BEND, OREGON 97701-2769 • TELEPHONE (503) 382-3011

LYMAN C. JOHNSON
RONALD L. MARCEAU
DENNIS C. KARNOPP
JAMES E. PETERSEN
ROBERT L. NASH
JAMES D. NOTEBOOM
MARTIN E. HANSEN
HOWARD G. ARNETT
STEVEN D. STADLER

September 6, 1983

Russell D. Peterson
Field Supervisor
U.S. Fish & Wildlife Service
Division of Ecological Services
Portland Field Office
727 N.E. 24th Avenue
Portland, OR 97232

Re: Wildlife Mitigation and Columbia River Hydroelectric Projects

Dear Mr. Peterson:

I represent the Warm Springs Tribe and am writing in response to your letter of August 10th to Terry Luther of the tribe's Natural Resources Department. Your letter requests information concerning wildlife mitigation studies and measures undertaken in connection with the four CoE mid-Columbia hydro projects.

We have reviewed our files and discussed the matter with tribal leaders. It appears that wildlife mitigation was omitted from the negotiations between the federal government and the Columbia River Indian tribes leading to the construction of the four projects that are the subject of your reports. The omission of the wildlife mitigation from the federal-tribal discussions was almost certainly inadvertent. The tribe's treaty-protected right to hunt, as well as fish, off-reservation gives the tribe a legal interest in the preservation of all wildlife resources in the mid-Columbia region. Diminished populations of such species as ducks, geese, otter, beaver, muskrats, deer, etc. resulting from the construction of the mid-Columbia hydro projects must be restored to fulfill the tribe's treaty right.

To our knowledge, no studies have been undertaken to determine whether populations of wildlife species utilized by tribal members in the area inundated by the hydro projects have been diminished. The tribe is anxious to assist the Fish & Wildlife Service in its efforts to determine the amount o

RECEIVED
SEP 8 1983

wildlife loss and the mitigation efforts required to restore the resource.

Sincerely,

HOWARD G. ARNETT

HGA/clm

cc: Warm Springs Fish & Wildlife Committee
Terry Luther, Natural Resources Department

D BY THE
JUNE 9, 1855
CENTENNIAL JUNE 9, 1955

CONFEDERATED TRIBES AND BANDS
Yakima Indian Nation
WILDLIFE RESOURCE MANAGEMENT PROGRAM
POST OFFICE BOX 151
TOPPENISH, WASHINGTON 98948

GENERAL COUNCIL
TRIBAL COUNCIL

1(509) 865-5121
Ext. 666 or 668

November 22, 1983

Richard D. Giger
Fish and Wildlife Service
Lloyd 500 Building, Suite 1692
500 N.E. Multnomah Street
Portland, OR 97232

RE: Yakima Indian Nation concerns relative to wildlife mitigation and the Corps of Engineers mid-Columbia hydro projects.

Dear Sir:

The Yakima Indian Nation welcomes the opportunity to comment on wildlife mitigation relative to Indian concerns in connection with the four Corps of Engineers mid-Columbia hydro projects (Bonneville, The Dalles, John Day, and McNary Dams). You are correct in your findings that wildlife mitigation was omitted from the negotiations between the federal government and the Columbia River Indian tribes prior to the construction of the hydro projects covered in your report. The omission of wildlife mitigation from the federal-tribal discussions was certainly inadvertant, but easily explained. The Bureau of Indian Affairs has historically not been directly involved in wildlife management either in an advocacy role, or in a functional on-reservation wildlife management program. Scientific wildlife management on-reservation is a relatively new phenomena and stems primarily from concerned tribes active involvement in the previous five years. Given these facts, it is not surprising that tribal wildlife concerns were not represented in the original negotiations. The Yakima Indian Nation's Treaty protected right to hunt, as well as fish, off reservation, gives the tribe a legal interest in the conservation and maintenance of all wildlife resources in the mid-Columbia and Columbia Basin regions.

The increased competance of on-reservation tribal wildlife management in the last few years fortunately coincides with your studies relative to wildlife mitigation on these main stem hydro-electric projects. Hopefully, these unmitigated losses can now be identified and properly addressed through the mitigation process. The Yakima Indian Nation has suffered serious loss of wildlife populations and wildlife habitat as a result of the aforementioned hydro-electric projects. I shall briefly outline our major concerns below in rough order of priority.

1. Loss of Water-Fowl Fly-way

The Yakima River basin has been an historically important fly-way for water-fowl species. The Yakima Indian people made extensive use of water-fowl as a food source and as a source for ceremonial artifacts and clothing. In more recent historical times, the heavy water-fowl concentration as a result of this fly-way provided an important source of income through the tribe's public hunting and fishing license program.

Within the last 20 years, this important water-fowl resource has been diminished almost to the point of total elimination. This loss appears to be due not to a fewer number of water-fowl, but to a redistribution of existing populations and fly-ways influenced by the habitat conditions created by the construction of the hydro projects. This condition seems particularly affected by the John Day and McNary pool areas. Water-fowl concentrations behind these pools have become so great as to actually cause agricultural damage and disease related problems. This fact has been well documented in recent years by a cooperative study team consisting of biologists from Oregon, Washington, and the U.S. Fish and Wildlife Service. This study resulted in recently published corrective master plan entitled Columbia Basin Water-Fowl Redistribution. The Yakima Indian Nations concerns for the loss of the water-fowl fly-way through the Yakima drainage as result of the creation of the mid-Columbia pools are enhanced and supported by this document. This loss has lead to severely reduced income to the tribe and a reduced seasonal food source for tribal members.

2. Direct Loss of Water-Fowl Nesting and Brooding Habitats

Nesting water-fowl populations along the Columbia River main stem were historically utilized by Yakima Indian people as a source of food, ceremonial artifacts, and clothing (collection of down). Inundation of mid-river gravel bars and islands has long been recognized as the primary reason for the decline of these main stem water-fowl populations. This loss has never been properly mitigated with respect to the Yakima Indian Nation.

3. Direct Loss of Deer Habitat

Riparian growth on both inundated islands and shorelines along the historical course of the Columbian River Provided habitat for black-tail deer and Columbian white-tail deer. The Columbia River breaks provided important wintering

3. Direct Loss of Deer Habitat (Cont.)

ranges for migratory mule deer. These deer populations associated with the Columbia main stem provided an important source of subsistance food for tribal members. Construction of the hydro-electric projects and resultant inundation has destroyed the habitats for most of these deer populations. Associated development has lessened the use of the Columbia River brakes as winter range habitat. This loss was never mitigated in the original tribal-federal negotiations.

4. Loss of Native Upland Game Bird Habitat

The predominant native upland game birds in this area were sharp tailed grouse and the sage grouse. The impact of the hydro projects and any associated loss of habitat for these species has never been properly investigated. Both of these species are nearly extirpated from the mid-Columbia area and both species provided an important source of food for tribal members. The relationship of the decline of these species with the construction of the hydro projects has never been properly evaluated and hence has never been subject to mitigation procedures.

These four points represents specific concerns the Yakima Indian Nation relative to wildlife losses following the construction of the aforementioned hydro projects. These losses were never identified and hence never mitigated in the original federal-tribal negotiations. I feel this represents a very good starting point in any future mitigative efforts and hope that you will consider these concerns within the context of your report. Please do not hesitate to contact me for any further elaboration or discussion concerning these wildlife losses.

Sincerely,

William P. Bradley

William P. Bradley, Ph.D.
Director, Wildlife Resource Management
Yakima Indian Nation

cc: Northwest Power Planning Countil
Portland, Oregon

Corps of Engineers
Portland, Oregon

Status Report on Wildlife Mitigation

PRIEST RAPIDS AND WANAPUM DAM PROJECT

Prepared by

Washington Department of Game

and

U.S. Fish and Wildlife Service

for

Bonneville Power Administration

in response to the

Fish and Wildlife Program
Northwest Power Planning Council

1984

I. PROJECT NAME

Priest Rapids and Wanapum Dam Project (FERC Project No. 2114)

II. PROJECT OPERATOR

Grant County Public Utility District (PUD) No. 2

III. PROJECT DESCRIPTION

A. Location and Size

The project consists of two dams and associated powerplants located just north of the Hanford Atomic Energy Reservation (AER) on the Columbia River in south central Washington. Priest Rapids Dam is located at River Mile (RM) 397, and Wanapum Dam is located at RM 415. Each powerplant contains ten generating units with a total rated capacity 788,500 kw at Priest Rapids and 381,250 at Wanapum.

Priest Rapids Reservoir extends upstream 18 miles to Wanapum Dam and occupies a surface area of about 8,320 acres. Wanapum Reservoir extends upstream 38 miles to Rock Island Dam (RM 453.4) and occupies a surface are of about 14,760 acres.

B. Authorized Purposes

The project is multipurpose with provisions for power generation, flood control storage, and navigation locks should the demand for upstream boat commerce develop in the future. Some secondary benefit for recreation is acknowledged.

C. Brief History of Construction and Operation

The original project was authorized for construction under terms and conditions of the Federal Water Power Act (FPA) of 1920 (41 Stat. 1063, 16 U.S.C. 791-823) and licensing authority of the Federal Power Commission (FPC) (now FERC) on November 5, 1955. Subsequently, a series of orders (ten amendments) were issued by FPC modifying the original license.

In the original planning and construction, provisions were made to add six additional generating units to each facility at a later date. In the late 1970's the PUD applied to the FERC to amend License No. 2114 to allow for the addition of four units at each facility in response to expansion of upstream projects. After conducting pre-draft consultations and further studies, this effort was suspended. Expansion plans at the two facilities remain unknown at this time.

D. Other Pertinent Data

1. Water level fluctuation and timing

The project was originally constructed to provide baseload power generation. However, with expansion of the hydroelectric network on the mainstem Columbia, the project is and will be managed for peak load operation. Hydraulic capacity of Priest Rapids is 187,000 cfs and Wanapum 178,000 cfs with an annual average flow of about 120,000 cfs. The normal operating range of Priest Rapids Reservoir is between 481.5-488 feet above sea level (f.a.s.l.) with a maximum storage capacity of 44,600 acre-feet. At Wanapum, the normal operating range is between 560-571.5 f.a.s.l. with a storage capacity of 160,200 acre-feet.

2. Land Ownership

Sixty percent of the lands adjoining the project are under public ownership or control. The remaining 40 percent are privately held. Public lands include six wildlife recreation areas, managed by the Washington Department of Game (WDG), which provide fishing and hunting opportunities, swimming and boating access, and two State parks (Gingko and Wanapum) located just upstream from Wanapum Dam. much of the west shoreline of Priest Rapids Reservoir abuts the Yakima Firing Center, which is managed and controlled by the U.S. Department of the Army. This area is restricted and off-limits to public access.

IV. WILDLIFE SPECIES AND HABITAT ASSESSMENTS

A. Preconstruction Period

Prior to completion of the Priest Rapids Project (i.e., Priest Rapids Dam and Wanapum Dam) in 1961, studies were conducted by the U.S. Fish and Wildlife Service (FWS) and WDG to determine the impacts that the project would have on wildlife. FWS studied waterfowl and WDG studied upland game, and furbearers.

Study results determined that 5,859 acres would be inundated by Priest Rapids impoundment and 8,611 acres by Wanapum Dam. Sixty-nine percent of this acreage was classified as grazing land. Other categories were "wasteland" at 21 percent of the total acreage, irrigated/cultivated lands at 4 percent, irrigated orchards and meadows at 2 percent each, irrigable pasture at 1 percent, and dry pasture and business property at less than 1 percent each (Patterson 1959; FWS 1958).

Grazing land and "wasteland" were characterized as those burned frequently in the past and dominated by cheatgrass, with remnants of native bunch grasses in some areas. Dominant shrubs in those areas included willow,

serviceberry, big sagebrush, hopsage, and rabbit brush. Juniper was considered "common" along the river shoreline (Patterson 1959).

Patterson (1959) estimated that game bird losses from the Priest Rapids project would amount to approximately 2,000 pheasants, 1,000 California quail, 100 scaled quail, 100 Hungarian partridges, 3,000 chukar partridtges, and 600 mourning doves.

An estimated 250 mule deer would be lost (Patterson 1959). The bottomland to be flooded by the project was particularly critical to mule deer during severe winters.

Field studies indicated that mink, beaver, and river otter populations were low on the Priest Rapids project site. The muskrat population was estimated to be about 700 animals (Patterson 1959).

Estimated losses to the harvest of upland game and big game were 520 pheasants, 770 quail, 2,100 chukars, 70 Hungarian partridges, and 80 deer annually (WDG 1961).

Eighteen species of waterfowl were identified in the Priest Rapids project area (FWS 1958). In the Priest Rapids impoundment, 103 pairs of ducks (mostly mallards) and 16 pairs of coots were found nesting on the reservoir site in 1958; at least 35 nesting pairs of Canada geese used the impoundment site in 1957, along with over 200 nonbreeding geese. Several hundred ducks and geese used the Priest Rapids site during the winter.

An estimated 26 pairs of geese used the Wanapum Reservoir site prior to inundation (FWS 1958). Nesting ducks (mostly mallards and wigeons), numbered 25 to 30 pairs on the Wanapum impoundment. Thousands of ducks have been reported wintering below Crescent Bar in some years (FWS 1958). Cultivated fields in the impoundment area provided food for wintering ducks and geese.

In both impoundment areas, most goose nesting occurred on islands (FWS 1958). In addition to islands, FWS (1958) identified several key waterfowl habitat areas in the Priest Rapids project area that would be destroyed or severely impacted by the project. One was Moran Slough, a marsh heavily used by nesting ducks. Panhandle and Whale Islands were identified as important goose nesting areas. A diversion canal on the right bank of the river near the Priest rapids Dam site was used as a brooding area by ducks and geese.

B. Postconstruction Period

No formal postconstruction studies were conducted to follow up the preconstruction wildlife studies. However, State,

Federal, and PUD biologists have continued to make wildlife evaluations in the Priest Rapids project area.

Waterfowl surveys, including Canada goose nest surveys, are conducted on an annual basis. Over the past 6 years (1978-1983) an average total of 151 goose nests was found on Priest Rapids and Wanapum Reservoirs (WDG files). The total number of nests over the past 6 years ranged from 122 (1979) to 175 (1982). An average of 11 nests per year out of the total were deserted or destroyed annually. Monthly aerial waterfowl surveys conducted by the FWS for the period 1975-1978 indicated an average annual use of 5,732 ducks and 2,804 geese for Priest Rapids reservoir and 93,667 ducks and 6,409 geese for Wanapum reservoir.

Mid-winter bald eagle surveys are conducted on Priest Rapids and Wanapum projects annually by biologists from State and Federal agencies as well as Chelan, Grant, and Douglas County PUD's beginning in 1982. For the 1975-1983 period, an average of four adults and three subadults use Priest Rapids reservoir, while seven adults and four subadults use Wanapum reservoir (Fielder and Starkey 1980).

1. Operation

No major operational changes have been made in the Priest Rapids project since its construction. Grant County PUD has applied for a license amendment to the FERC to expand the Priest Rapids project, but to date the license amendment ha not been granted.

The proposed expansion involves the addition of eight power-generating units and an increase in the normal operating range of Priest Rapids Reservoir of from 5 to 10 feet (Grant County PUD 1980). The project would inundate approximately 400 acres of shoreline and islands containing riparian and shrub steppe vegetation. This habitat is used by a wide variety of wildlife species including deer, aquatic mammals, and nongame and upland birds (Grant County PUD 1980).

Other habitat disturbance or loss could occur on approximately 160 acres of land while construction is underway at Priest Rapids and Wanapum Dams (Grant County PUD 1980). Land chosen for location of permanent facilities would be lost as wildlife habitat.

Ball et al. (1981) estimated that 20% of the usable island habitat for goose nesting on Priest Rapids Pool had been lost to erosion caused by water level fluctuations since pool formation. About 10-15% of the shoreline banks downstream from Wanapum Dam experience sloughing from wind and wave action. Similar areas exist upstream between Crescent Bar and Vantage Bridge (I-90).

V. WILDLIFE MITIGATION HISTORY

A. Mitigation Requested or Proposed

Specific mitigation measures for the original construction of the Priest Rapids Project were proposed by FWS (1958) and Patterson (1959). Mitigation proposals centered around acquisition, development, and management of project and off-project lands for wildlife. The PUD was asked to allow public access on project lands for fish and wildlife recreation.

B. Mitigation Agreements or Requirements

In 1963, after extensive negotiations, the PUD and wildlife agencies signed a mitigation agreement for the Priest Rapids project. Under this agreement, the PUD transferred certain project lands to WDG, and provided up to $550,000 over 20 years for development, operation, and maintenance of habitat improvement measures on those lands. The initial payment was $150,000 paid in $50,000 installments for the first 3 years. Thereafter, the PUD would provide $20,000 a year for 20 years for operation and maintenance of the deeded land. In addition, the agreement provided that the PUD would have right-of-way easements on land transferred to WDG, and that most project lands owned by the PUD would be open to the public for fishing and hunting.

C. Mitigation Implemented

2. Postconstruction Period

As of June 1979, 23,071 acres had been set aside for wildlife as mitigation for the Priest Rapids Project. The PUD deeded 2,153 acres along the reservoir to WDG, and WDG purchased an additional 20,918 along Crab Creek with funds provided by the PUD. The area along the reservoir was designated the Priest Rapids Habitat Management Area (HMA), and the Crab Creek tract became the Crab Creek HMA. The two areas were managed separately until 1980 when they became part of the Columbia Basin HMA.

WDG has the responsibility for developing habitat on these lands with money provided annually by the PUD. Habitat improvement activities have included development of brood pastures for geese and habitat plots for upland game, fencing to control livestock grazing, and construction of water control structures (Lynch 1974). Artificial nest structures for geese were tried unsuccessfully.

VI. CURRENT STUDIES AND PLANNING

No studies or mitigation are planned at this time.

VII. REFERENCES CITED

Ball, I.J., E.L. Boutray, and C.F. Yocom. 1981. Ecology and management of the western Canada Goose in Washington. Wash. Dept. of Game Biological Bull. No. 17. 67 pp.

Fielder, P.C. and R.G. Starkey. 1980. Winter bald eagle use along the upper Columbia River in Knight, R.L., G.T. Allen, M.V. Stalmaster, and C.W. Servheen (ed.) Proc. of the Washington Bald Eagle Symposium, Seattle, WA.

Grant County Public Utility District. 1980. Draft Environmental Impact Statement and FERC Environmental Report (Exhibit W) for the expansion of Priest Rapids project.

Lynch, C.W. 1974. Crab Creek wildlife recreation area management plan. WDG, Olympia. 38 pp.

Patterson, J.R. 1959. Report on wildlife studies in the Priest Rapids and Wanapum project areas, Columbia River, Washington. WDG, Olympia. 21 pp.

U.S. Department of the Interior, Fish and Wildlife Service. 1958. Priest Rapids and Wanapum project areas, Columbia River, Washington: a report on waterfowl studies. 19 pp.

Washington Department of Game. 1961. Wildlife mitigation, Federal Power Commission License No. 2114, Priest Rapids and Wanapum development, Grant County PUD No. 2. 5 pp.

OTHER MATERIAL REVIEWED

Davidson, F.A. 1958. The effect of reservoirs on Priest Rapids and Wanapum Dams on the waterfowl populations of the Columbia River. 16 pp.

Federal Power Commission. 1955. Order issuing major license to Public Utility District No. 2 of Grant County, Washington 14 pp.

Grant county Public Utility District. 1959. The recreation reconnaissance report, preliminary copy, Priest Rapids project. 35 pp.

Grant County Public Utility District. 1958. Priest Rapids project design memorandum. Subject: reservoir clearing. 8 pp.

Grant County Public Utility District. 1979. Expansion of Priest Rapids project. Pre-draft consultation packet of information. 80 pp.

Grant County Public Utility District files, Ephrata, Washington

Moreland, R. 1955. Resident Canada geese on the Columbia River. WDG, Olympia. 7 pp.

Washington Department of Game files, Olympia and Yakima, Washington.

VII. APPENDICES

APPENDIX A - Study Team

Washington Department of Game - Gretchen Van Lom
U.S. Fish and Wildlife Service - Ron Starkey

APPENDIX B - Consultation/Coordination

July 13, 1983	-	Letter sent to Grant PUD (Al Wright) from FWS, requesting information and contact person for mitigation status review.
July 13, 1983	-	Darrell Pock represented PUD at informational meeting in Spokane.
July 15, 1983	-	Letter sent to FWS from PUD responding to July 13 FWS letter and identifying contact person.
July/Aug./Sept. 1983	-	Telephone contacts between PUD biologist Pock and Gretchen Van Lom (WDG)/Ron Starkey (FWS) to discuss status review.
September 6, 1983	-	Gretchen Van Lom (WDG) met with D. Pock and A. Wright of the PUD to discuss information needed for status review (Ephrata)
October 26, 1983	-	FWS sent draft copy of status review to PUD for review and comment.
November 1983	-	R. Starkey (FWS) contacted D. Pock (PUD) by telephone to request meeting between PUD and study team for purposes of discussing status review and PUD concerns. Request was denied by PUD.

December 2, 1983 - Comments on draft status review received from PUD.

APPENDIX C

Comments

JOHN SPELLMAN
Governor

FRANK LOCKARD
Director

STATE OF WASHINGTON
DEPARTMENT OF GAME
600 North Capitol Way GH-11 • Olympia Washington 98504 • (206) 753-5700

August 21, 1984

AUG 29 1984

John Palensky, Director
Division of Fish and Wildlife
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208

ATTN: James Meyer

Dear Mr. Palensky:

My staff has reviewed the mitigation status review report for Priest Rapids/ Wanapum Project.

This project was authorized in 1955 and completed in 1961. The project was subject to Fish and Wildlife Coordination Act which was amended during the construction of the project.

Grant County P.U.D. funded fish and wildlife agencies to conduct studies of fish and wildlife resources affected by the project. Even though studies conducted on the project were not entirely adequate by today's standards, the mitigation proposed for the project was probably adequate to mitigate damages to most species of wildlife affected by the original project.

As the mitigation status review report points out, the project was originally constructed for baseload power generation. As the Columbia River hydroelectric system developed however, a gradual change in operation from baseload production to peak power production has occurred and as more thermal plants come on line undoubtedly the system will be used more and more for peak power production. The impacts of project operation for power peaking have not been mitigated.

We have serious concerns regarding impacts of project operation on remaining island and riparian habitat in the project area. Ball et al (1981) reported that 20% of the usable island habitat for Goose nesting on Priest Rapids pool has been lost to erosion caused by water level fluctuations since pool formation. Mitigation Status Review Report also mentions the loss of 10-15% of the the shorelines downstream from Wanapum Dam as a result of wind and wave action. It is apparent these areas must be protected from further degradation and that losses from project operations should be mitigated.

This project inundated approximately 14,500 acres of wildlife habitat. Grant County P.U.D. provided more than 23,000 acres to be set aside and managed for wildlife in the vicinity of the project. In addition they provided $150,000 for development and $20,000 per year for operation and maintenance of this project over a 20 year period. It should be noted that the intended result of the settlement for operation and maintenance funding has been significantly affected by inflation. Twenty thousand dollars per year, while adequate at the time, is no longer adequate to provide for the operation and maintenance of those lands. It should also be noted that the current mitigation agreement expires within the next three years. After expiration of the agreement, operation and maintenance funding from the project operator may terminate.

To continue mitigation efforts for Priest Rapids/Wanapum Project for the life of the project, additional funding for operation and maintenance of mitigation land is needed as well as additional measures to protect habitat affected by project operation. We also agree with Fish and Wildlife Service comments that there should be additional opportunity to improve migratory bird habitat and bald eagle wintering use on both Priest Rapids and Wanapum Reservoirs. We also believe additional mitigation is warranted for project operation for power peaking. Mitigation for power peaking operations may however be better handled as part of a system wide effort.

In conclusion we do not see the need for additional studies on these projects. To sustain mitigation efforts however, adequate funding for operation and maintenance of mitigation lands is sorely needed. Protection of existing riparian and island habitats is also needed on the project. There are also opportunities on both the project lands and mitigation lands to enhance habitat for wildlife and to mitigate for the effects of project operations for power peaking.

We look forward to consultation and working with the appropriate parties to develop details of mitigation and enhancement on this project.

Very truly yours,

THE DEPARTMENT OF GAME

Frank R. Lockard
Director

FRL:pr-b

cc: Grant County P.U.D.
Marty Montgomery
Dick Giger

United States
Department of the Interior

Fish and Wildlife Service
Lloyd 500 Building, Suite 1692
500 N.E. Multnomah Street
Portland, Oregon 97232

In Reply Refer To: Your Reference

June 11, 1984 JUN 14 1984

Mr. John Palensky
Director, Division of Fish and Wildlife
Bonneville Power Administration
Department of Energy
P.O. Box 3621
Portland, Oregon 97208

Dear Mr. Palensky:

As requested we have reviewed a copy of the Status Report on Wildlife Mitigation for the Priest Rapids and Wanapum Dams and Reservoir Projects which was jointly prepared by the Habitat Resources Division of the Fish and Wildlife Service (FWS) and the Washington State Department of Game (WDG) under contract with the Bonneville Power Administration. The following represents the formal response of the FWS regarding the subject project.

General Comments

We have completed an extensive search of agency files and reference materials, and find that we have no additional information with which to make corrections or additions to the subject report. Insofar as our resource interests are concerned, we find the report to be complete and accurately written.

Specific Comments

It is clear from the report's content that original construction and operation of the project resulted in adverse impacts to wildlife resources, although impacts to species of primary interest to the FWS have been harder to document. There is some evidence which suggests that the project has benefitted certain species. While we recognize that the Grant County PUD has made good faith efforts to address wildlife impacts in general, we believe there are additional opportunities to improve migratory bird habitat and bald eagle wintering use on both Priest Rapids and Wanapum Reservoirs. Therefore, we recommend that the PUD, WDG, and FWS work together to evaluate such improvement opportunities, and develop and implement a working plan that will achieve measures desired by each agency under the framework of the Northwest Power Act (NWPA).

In addition, we strongly believe the cumulative and secondary effects of this and other Columbia Basin reservoirs should be evaluated. A principal focus of multiple project evaluation should be the broader effects of operation of projects as a "system" such as water fluctuations resulting from powerpeaking, etc. The extensive development that has occurred along the Columbia River's flood plain has also cumulatively reduced a variety of wildlife habitats and related resources. Such development and related wildlife losses would have been considerably less without construction and operation of Priest Rapids, Wanapum and other major Columbia River projects. In some instances there may have been some net benefits to certain species/resources which need to be better identified.

In conclusion, we believe no single agency or user group is responsible for the wildlife losses resulting from development and operation of the Priest Rapids and Wanapum Projects. The proposals outlined in this letter would be considered as "standard operating procedures" for evaluating new water development proposals under present State and Federal laws, rules, regulations, and policies. Unfortunately, these legal mandates which today provide for the protection of our wildlife resources were either nonexistent or in their infancy when the Grand Coulee Project was being developed. However, both the NWPA and the Power Council's Fish and Wildlife Program recognize this and together have given us an opportunity to correct our past mistakes. The Service is eager to move toward that end.

Sincerely,

J. W. Teeter

James W. Teeter
Acting Assistant Regional Director
Habitat Resources

cc: ES-Olympia/MLO
Grant County PUD
WDG

SEP 18 1984

PUBLIC UTILITY DISTRICT OF GRANT COUNTY

P.O. BOX 878 • EPHRATA, WASHINGTON 98823 • 509/754-3541

September 14, 1984

John Palensky, Director
Division of Fish and Wildlife
Bonneville Power Administration
Post Office Box 3621
Portland, OR 97208

Attention: James Meyer

Dear Mr. Palensky:

Grant County Public Utility District has reviewed the Mitigation Status Review report for Priest Rapids and Wanapum Dams and reservoir projects and the Washington State Department of Game's letter regarding their (WDG's) conclusions on these projects.

We appreciate their evaluation and their recommendations on additional O & M monies, erosion control measures and peaking impacts. This District is open to meeting with the appropriate federal and state wildlife agencies and BPA to discuss any suggestions and/or concerns the agencies may have regarding these issues.

The District has compiled a considerable reference library dealing with habitat protection and enhancement techniques and has suggestions with respect to the agencies' concerns regarding wintering bald eagle use and migratory bird habitat.

We find that the Department of Game's conclusions on the Mitigation Status Review for this District's projects accurately reflect the actual conditions achieved through the original mitigation. Future changes in operation will of course need to be addressed under a separate proceeding.

Very truly yours,

Don Zeigler
Environmental Supervisor

DZ:dl/E01
cc: Al Wright
Carl Barr

APPENDIX D

Mitigation Instruments

AGREEMENT - Game

This agreement is made and entered into on this 29th day of July, 1963, by and between,

PUBLIC UTILITY DISTRICT NO. 2 OF GRANT COUNTY, hereinafter referred to as "the District,"

and

STATE OF WASHINGTON, DEPARTMENT OF GAME, hereinafter referred to as "the Department;"

Recitals:

1. The District is a municipal corporation organized under the laws of the State of Washington and is authorized under Federal Power Commission License 2114 to construct and operate the Priest Rapids Project, consisting of the Priest Rapids and Wanapum developments on the Columbia River in the State of Washington;

2. The Department, as an agency of the State of Washington, is charged with the responsibility of conserving wildlife and waterfowl along those reaches of the Columbia River within the area affected by the Priest Rapids Project;

3. Federal Power Commission License 2114 places certain responsibilities upon the District with regard to the preservation of wildlife and waterfowl along those reaches of the Columbia River directly affected by the Priest Rapids Project;

4. The parties hereto anticipate that the construction and operation of the Priest Rapids Project and its developments may have an effect on the wildlife and waterfowl in those reaches of the river affected by that Project, particularly with regard to the inundation of nesting areas for waterfowl, inundation of upland bird habitat and some reduction of winter graze for deer and other animals; and

5. The parties desire to enter into this agreement in order to provide means of meeting the responsibilities of the District and to provide the means and facilities for mitigating the losses to waterfowl, upland birds, winter graze and loss of game habitat.

NOW, THEREFORE, IT IS AGREED AS FOLLOWS:

Section I - CONVEYANCE OF LANDS

The District agrees, within ninety (90) days after the execution of this agreement, to deliver to the Department its quit claim deeds in a statutory form conveying to the Department all the District's right, title and interest in and to those certain lands shown in red on the map attached hereto, identified as Exhibit "A" and incorporated herein by reference, and more fully described on Exhibit "B" attached hereto and incorporated herein by reference; provided, however, said deeds of conveyance shall reserve to the District that certain flowage easement and other reservations as are set forth on Exhibit "C" attached hereto and incorporated herein by reference. After the delivery and acceptance of said deeds the Department shall assume full responsibility for the lands conveyed thereby and shall use said lands only in a manner which will be consistant with the operation of the Priest Rapids Project and its developments, and which will in no way interfere with such operation. * T 1a(2199.93 A

Section II - INITIAL PAYMENT

In order to enable the Department to construct facilities, plant cover, plant feed and make such other improvements to the area and do such other things as will improve the game production and hunting yield of the area and mitigate against losses because of the reservoirs, the District agrees to make available to the Department an initial sum of One hundred fifty thousand dollars ($150,000.00). Fifty thousand dollars ($50,000.00) of said sum shall be available during the first twelve (12) month period after the execution of this agreement; Fifty thousand dollars ($50,000.00), plus any unused portion of the Fifty thousand dollars ($50,000.00) available in the first year, shall be available during the second twelve (12) month period after the execution of this agreement; and the balance of the total of One hundred fifty thousand dollars ($150,000.00) shall be available during the third twelve (12) month period after the execution of this agreement. The monies to be paid as above provided shall be paid to the Department upon the presentation of proper vouchers for expenditures made during the appropriate periods in accordance with the terms of this agreement. In the event the entire One hundred fifty thousand dollars ($150,000.00) has not been expended at the end of the thirty-six (36) month period the Department shall be entitled, nevertheless, to such funds in succeeding years upon presentment of the proper vouchers. The manner of expenditure of these funds and the budgetary requirements therefor shall be as set forth in Section V below.

Section III - LONG TERM PAYMENTS

In addition to the initial payment as provided in Section II above the District agrees to make available to the Department the sum of Twenty thousand dollars ($20,000.00) for each year beginning at the end of the third year after the execution of this agreement and continually until the end of the twenty-third (23) year after the execution of this agreement. Said monies will be made available during each year to the Department and will be paid to the Department by way of reimbursement for monies spent according to the terms of this agreement upon the presentation of the proper voucher. The manner of expenditure of these funds and the budgetary requirements therefor shall be as set forth in Section V below. $20,000 x 20 yrs. = $400,000

Section IV - DEPARTMENT'S CONVEYANCE TO THE DISTRICT

Concurrently with the delivery of the deeds from the District to the Department, in accordance with Section I hereof, the Department will deliver to the District right of way easements over those lands and in the form set forth in Exhibit "D" attached hereto and incorporated herein by reference.

Section V - RESTRICTIONS ON EXPENDITURES AND BUDGETS

It is agreed and understood that the monies being provided by the District hereunder are to be used by the Department for the mitigation of game losses because of the maintenance and operation of the Priest Rapids Project and its developments, and for the improvement of game production and hunting within the general area affected by the Project. The monies made available and to be reimbursed to the Department will be expended within that area outlined in red on Exhibit "E" attached hereto and incorporated herein by reference, which area shall be referred to hereinafter as "the Area," or shall be expended as otherwise agreed by the District and the Department. At least thirty (30) days prior to each anniversary of the execution of this agreement the Department will submit to the District its proposed budget in detail for the expenditure of the funds to be made available to it during the succeeding year (the budget for the first year of this agreement shall be prepared within a reasonable time after the execution of the agreement). The District shall have the right to approve or

disapprove said budget and the proposed expenditures as set forth therein. The approval by the District of the proposed budget will not be unreasonably withheld. In the event the parties cannot agree upon the budget or items therein then such disputed monies, at the election of either party, shall be submitted to arbitration in accordance with the provisions of Section XIII, Arbitration. It is recognized by the parties that the specific uses for the monies to be provided hereunder cannot be intelligently set forth at this time in view of the changing conditions which may be anticipated over the term of this agreement. However, it is the intent of the parties that the monies to be made available hereunder should be utilized in capital expenditures aimed to effect mitigation of game loss, improvement of game conditions and harvest and the improvement of hunting and for the necessary expenditures of operation and management required because of such capital expenditures. No expenditures will be reimbursed by the District unless those expenditures have been included in the budget for each year, or unless there has been prior specific approval of such expenditure by the District.

Section VI - REPORTS

The Department will, within sixty (60) days after each anniversary of this agreement, provide to the District a full and complete report of its activities within the area by the Department for the twelve (12) month period preceding such anniversary.

Section VII - PUBLIC USAGE

It is the intent of the parties that the public owned lands within the area shall be made available to public hunting, fishing and other recreation, and the Department agrees that insofar as lands within the area under its ownership and control it will make such lands available to the public for such uses; provided, however, that the Department may, in its discretion, restrict the use of those portions of the lands within its control reasonably necessary for nesting areas, pasture and feeding areas, and it may reasonably restrict the use of said lands within its ownership and control as may be determined to be necessary for proper game management by the State Game Commission. Representatives of the District may enter in or upon any of the lands within the area under the ownership and control of the Department at reasonable times for the purpose of inspecting the improvements and programs being undertaken thereon; provided, that such personnel shall not unnecessarily interfere with the Department's game management program.

Section VIII - STRUCTURES

The Department will not construct any water control structures nor any other type of structure within the freeboard areas of either the Priest Rapids or Wanapum development without the prior written approval of the District to the plans for such structures. After the completion of such structures the Department will maintain the same in good condition so as not to in any way interfere with the operation of either development, and if the District shall thereafter determine that any of said structures do, in fact, interfere with the operation of either of the developments the Department will forthwith remove or relocate such structures in a manner satisfactory to the District. District personnel shall have the right to enter upon any of the premises under the ownership and control of the Department for any proper purpose in conjunction with the operation and maintenance of the District's dams, reservoirs and associated structures.

Section IX - USE OF DISTRICT'S LANDS

Subject to reasonable regulation by the District for proper operation and maintenance of the developments and the Project, the District agrees that all lands owned by it in fee, bordering on the Priest Rapids or Wanapum reservoirs, shall be open to free use by the public for hunting and fishing purposes in accordance with the policy of the District as adopted from time to time; provided, that the foregoing covenant shall not apply with respect to any of the District's lands, the right of possession of which has, or shall in the future be, granted by lease, concession agreement or other conveyance to any person, firm or organization, and it is expressly understood that the agreement to allow free use by the public of the District's lands as above stated shall be and remain subordinate to the right of the District to grant exclusive possession and use to others, and shall be and remain subordinate to the rights of such grantees under the terms of any conveyance, and subordinate to the right of the District to sell or otherwise dispose of such lands free of any restriction herein. It is specifically understood and agreed, however, that the District, by making such lands available to the public, assumes no obligation with regard to the condition of said lands, and the District accepts no responsibility for loss or damage to any member of the public or any employee, officer or agent of the Department for loss or damage occurring to such person because of the condition of the District's lands involved. The District reserves the right to erect signs along the perimeter of its properties warning all persons that the use of said property is at the risk of the user, and that by entering upon the said property the user assumes all risk of injury, loss or damage. The District shall have the right to restrict access to those areas which it, from time to time, in

its sole discretion, deems advisable to close. The District owns the lands described as the South one-half (S-1/2) of Section Nine (9), Township Fourteen (14) North, Range Twenty-three (23) E.W.M. in Grant County, Washington, which land is being held for use by the Washington State Parks Department. If conveyance of said land is not made to the Parks Department within a reasonable time after execution of this agreement, the District will convey the same to the Department upon the same terms as other lands to be conveyed herein.

Section X - EFFECTS OF COVENANTS HEREIN

The Department agrees that the payments to be made by the District herein, in compliance with the District's covenants contained in this agreement, are to be accepted by the Department as full and complete performance by the District of its responsibilities to the Department with regard to all wildlife and waterfowl, including, but not limited to, ducks, geese and all species of waterfowl and all upland birds and all deer, elk, big game and fur bearing animals; and the performance in compliance herewith shall relieve the District of such responsibilities thereafter during the life and operation of the Priest Rapids and/or Wanapum developments, regardless of sooner termination of Federal Power Commission License for Project 2114; provided, however, that nothing herein is to be construed to reduce or affect the obligations of the District under that certain agreement between the District and the State of Washington, Department of Game, dated September 28, 1955 and September 30, 1955, as supplemented and amended by the agreement dated February 8, 1960.

Section XI - APPROVAL

The parties hereto agree that this agreement is subject to approval by the United States Fish and Wildlife Service as far as the migratory waterfowl are concerned.

It is further agreed that this agreement shall not be effective for any purpose until approval of this agreement has been received from the above named agency. The parties agree to cooperate in submitting this agreement for such approval and to seek the earliest approval.

The parties agree that the agreement will also be submitted to the Federal Power Commission.

Section XII - ASSIGNMENT

This contract shall inure to the benefit of, and shall be binding upon, the respective successors and assigns of the parties to the contract. No assignment or transfer of the contract shall relieve the parties hereto of any obligation incurred hereunder.

Section XIII - ARBITRATION

In the event of inability of the parties hereto to agree to any matters of fact to be determined within the term of this agreement, the matter in controversy shall be submitted to a board of arbitrators for decision, and such decision will be final and binding on the parties. If either party shall elect to submit a matter to arbitration it shall notify, in writing, the other party of such election and shall state the name of the person selected by it as one of the arbitrators. Within thirty (30) days after receipt of such notice, the other party shall provide, in writing, to the party initiating the arbitration, the name of the person selected by it as arbitrator. The two arbitrators so selected shall select a third arbitrator. If the two arbitrators shall not agree as to the third within thirty (30) days after the selection of the second arbitrator, either party may request the Chief Justice of the Supreme Court of Washington to select the third arbitrator and the arbitrator selected by the Chief Justice shall act as the third arbitrator. The arbitration shall be governed by the laws of the State of Washington, and the cost thereof, including the fees and expenses of the arbitrators, shall be borne as determined by the arbitrators.

PUBLIC UTILITY DISTRICT NO. 2
OF GRANT COUNTY

By _____ President

ATTEST:

By _____ Secretary

THE STATE OF WASHINGTON
DEPARTMENT OF GAME

By _____ (Title)

ATTEST:

By _____ (Title)

The United States Fish and Wildlife Service hereby approves this agreement and agrees that the performance by the District of all of the covenants by it to be performed in this agreement will constitute full and complete satisfaction by the District, not only to the Washington State Department of Game, but to the United States Fish and Wildlife Service with regard to any responsibility the District may have to the said United States Fish and Wildlife Service with regard to the effect of the construction, operation and maintenance of the Priest Rapids Project upon migratory waterfowl; provided, however, that nothing herein is to be construed to reduce or affect the obligations of the District under that certain agreement between the District and the United States Fish and Wildlife Service dated November 17, 1955 and November 23, 1955, as supplemented and amended by the agreement dated January 21, 1960.

UNITED STATES FISH AND
WILDLIFE SERVICE

By_____
(Title)

SUPPLEMENTAL AGREEMENT

This Supplemental Agreement is entered into this 1st day of December, 1964, by and between

PUBLIC UTILITY DISTRICT NO. 2 OF GRANT COUNTY, hereinafter referred to as "the District,"

and

THE STATE OF WASHINGTON, DEPARTMENT OF GAME, hereinafter referred to as "the Department;"

Recitals:

1. The parties hereto, on the 29th day of July, 1963, entered into an agreement relative to mitigation of losses to water fowl, upland birds, winter graze and loss of game habitat, which said agreement is hereinafter referred to as "the Agreement" and is incorporated herein by reference;

2. By the Agreement it was provided that the monies to be made available thereunder would be expended within a specified area as set forth in the Agreement; and

3. It now appears to the best interests of the parties and the public that a portion of the monies to be paid by the District to the Department be expended in areas other than those specified in the Agreement.

NOW, THEREFORE, IT IS AGREED, without in any way modifying or amending the terms of the Agreement except as herein set forth, as follows:

I

The District shall immediately make available to the Department, from the initial sum to be made available to the Department under Section II of the Agreement, the sum of $118,000.00 upon the presentation of proper vouchers for the same to the District.

II

The Department shall use the said sum in conjunction with funds of the Department to exercise the option to purchase entered into between the

Department and Joe B. Barker and Berneice Barker, dated October 22, 1964, a copy of said agreement, entitled "Lease with Option to Purchase," hereinafter referred to as "the Option Agreement," is attached hereto as Exhibit A and incorporated herein by reference; that, more particularly, the funds hereinabove to be provided by the District shall, with funds provided by the Department, be utilized to make the payment provided by Paragraph 2-A of the Option Agreement.

III

The Department covenants and agrees that it will fully perform the covenants to be performed by it in the Option Agreement and that it will promptly and with their own funds exercise the options and make the payments specified in Paragraphs 2-A, 2-B and 2-C of the Option Agreement in order that the Department may be entitled to full conveyance of the property covered by the Option Agreement in accordance therewith.

IV

The Department agrees that, concurrently with the conveyance of fee title to the Department by the Barkers under the Option Agreement of the following described real property, it will convey and grant, without cost, to the District an easement over and across all of said lands for the construction, maintenance and operation of distribution and transmission lines in the form set forth on Exhibit B attached hereto and incorporated herein by reference:

Those certain lands situate in Grant County, Washington, to-wit:

Parcel A

(1) All of fractional Section 31, Township 16 North, Range 24 East, W.M., less right of way of Chicago, Milwaukee, St. Paul and Pacific Railroad Company;

(2) The Northeast quarter (NE-1/4), less the right of way of Chicago, Milwaukee, St. Paul and Pacific Railroad Company, and the North half of the Northwest quarter (N-1/2 NW-1/4) and the North half of the Southeast quarter (N-1/2 SE-1/4), all in Section 34, Township 16 North, Range 24 East, W.M.;

(3) All of Section 35, Township 16 North, Range 24 East, W.M., less the right of way of the Chicago, Milwaukee, St. Paul and Pacific Railroad Company;

(4) The East half of the Southeast quarter (E-1/2 SE-1/4) of Section 21,

Township 16 North, Range 24 East, W.M.;

(5) The South half of the South half (S-1/2 S-1/2); the North half (N-1/2), and the North half of the Southeast quarter (N-1/2 SE-1/4) of Section 23, Township 16 North, Range 24 East, W.M., EXCEPT that part thereof included in Farm Unit 57, Irrigation Block 84, Columbia Basin Project, according to the plat thereof filed September 18, 1956, in Grant County, Washington;

(6) The West half of the Southwest quarter (W-1/2 SW-1/4) and the Northwest quarter of the Southeast quarter (NW-1/4 SE-1/4) and the Northeast quarter of the Southwest quarter (NE-1/4 SW-1/4) of Section 24, Township 16 North, Range 24 East, W.M., EXCEPTING THEREFROM that portion of the Northwest quarter of the Southeast quarter (NW-1/4 SE-1/4) of said Section 24 conveyed to the United States of America by deed dated December 28, 1955, and recorded February 2, 1956, under auditor's file No. 263499 in Grant County, Washington;

(7) All of Section 25, Township 16 North, Range 24 East, W.M.;

(8) The North half (N-1/2); the East half of the Southwest quarter (E-1/2 SW-1/4), and the Southeast quarter (SE-1/4) of Section 26, Township 16 North, Range 24 East, W.M.;

(9) All of Section 27, Township 16 North, Range 24 East, W.M.

(10) The South half of the North half (S-1/2 N-1/2, and the South half of Section 29, Township 16 North, Range 24 East, W.M.;

(11) The Northeast quarter of the Northwest quarter (NE-1/4 NW-1/4) and the Northwest quarter of the Northwest quarter (NW-1/4 NW-1/4) of Section 36, Township 16 North, Range 25 East, W.M., LESS the right of way of the Chicago, Milwaukee, St. Paul and Pacific Railroad Company; and less that portion lying South of said Railroad;

(12) That portion of the Northeast quarter (NE-1/4) of Section 35, Township 16 North, Range 25 East, W.M., lying North of the railroad right of way;

(13) The Northeast quarter (NE-1/4) and the North half of the Northwest quarter (N-1/2 NW-1/4) of Section 32, Township 16 North, Range 25 East, W.M., LESS the right of way of the Chicago, Milwaukee, St. Paul and Pacific Railroad Company;

(14) All of fractional Section 31, Township 16 North, Range 25 East, W.M.,

LESS the right of way of the Chicago, Milwaukee, St. Paul and Pacific Railroad Company;

(15) All of Section 29, Township 16 North, Range 25 East, W.M.;

(16) The Southwest quarter of the Northwest quarter (SW-1/4 NW-1/4) and the South half (S-1/2) of Section 28, Township 16 North, Range 25 East, W.M., EXCEPT the East 363 feet of the Southeast quarter of the Southeast quarter (SE-1/4 SE-1/4), and that portion of the Southeast quarter of the Southeast quarter (SE-1/4 SE-1/4) lying South of the railroad right of way, and the right of way for an irrigation ditch 30 feet wide in the South half of the Southeast quarter (S-1/2 SE-1/4), and less the right of way of the Chicago, Milwaukee, St. Paul and Pacific Railroad Company;

(17) The Northeast quarter (NE-1/4) of Section 26, Township 16 North, Range 25 East, W.M.;

(18) All of Section 25, Township 16 North, Range 25 East, W.M., less the right of way of the Chicago, Milwaukee, St. Paul and Pacific Railroad Company, and less that portion of the Southeast quarter of the Southeast quarter (SE-1/4 SE-1/4) lying South of the railroad right of way;

(19) The Southwest quarter (SW-1/4) of Section 15, Township 16 North, Range 25 East, W.M.;

(20) The Southeast quarter (SE-1/4) of Section 22, Township 16 North, Range 25 East, W.M.;

(21) The South half (S-1/2) of Section 23, Township 16 North, Range 25 East, W.M.;

(22) All of fractional Section 19, Township 16 North, Range 25 East, W.M., EXCEPTING THEREFROM that portion conveyed to the United States of America by deed dated December 28, 1955, and recorded February 2, 1956, under auditor's file No. 263499 in Grant County, Washington;

(23) All of Section 21, Township 16 North, Range 25 East, W.M.; and

(24) Farm Unit 57, Irrigation Block 84, Columbia Basin Project, according to the Final Farm Unit Plat of said Irrigation Block filed September 18, 1956, under auditor's file No. 278069 in Grant County, Washington;

(25) The North half of the South half (N-1/2 S-1/2) of Section 28, Township

16 North, Range 24 East, W. M.; and

(26) The North half of the Southwest quarter (N-1/2 SW-1/4) of Section 34, Township 16 North, Range 24 East, W. M.

V

The Department further agrees that in the event the District desires easements for the construction, maintenance and operation of distribution or transmission lines over and across any of the lands described in the Option Agreement which are leased by the Barkers and which leases are to be assigned to the Department pursuant to the terms of the Option Agreement, the Department will consent to the granting of such easement by the owner or owners of such land.

VI

It is agreed that the lands to be acquired by the Department under the terms of the Option Agreement will be subject to the provisions of Section VII of the Agreement.

VII

The Department agrees that it will construct within a reasonable time two additional boat launching facilities to permit access to the Wanapum Reservoir, the location of one of such facilities to be on the west bank of the Columbia River on the Department's property in Chelan County, Washington, and the other to be on the east bank of the Columbia River on a site to be selected by the Department.

VIII

The Department agrees, upon the acquisition of the property as covered by the option agreement, to erect in at least two prominent locations on the property signs indicating the participation of the District in providing the said lands for public use. The design and wording of the said signs will be submitted to the District for approval before erection.

IX

The Department will not consent to the assignment or transfer by the Barkers of the grazing rights reserved under the Option Agreement without first having obtained the approval of the District to such consent.

X

In all respects except as herein expressly modified the Agreement shall remain in full force and effect in all of its terms, and nothing herein shall be construed to accelerate any payments to be made under the Agreement except as specifically set forth above.

PUBLIC UTILITY DISTRICT NO. 2
OF GRANT COUNTY

ATTEST:

By _____ President

By _____ Secretary

THE STATE OF WASHINGTON
DEPARTMENT OF GAME

ATTEST:

By _____ DIRECTOR (Title)

By _____ (Title)

Status Report on Wildlife Mitigation

ROCK ISLAND PROJECT

Prepared by

Washington Department of Game

and

U.S. Fish and Wildlife Service

for

Bonneville Power Administration

in reponse to the

Fish and Wildlife Program
Northwest Power Planning Council

1984

I. PROJECT NAME

Rock Island Dam and Reservoir Project (FPC Project #943)

II. PROJECT OPERATOR

Chelan County Public Utility District (PUD)

III. PROJECT DESCRIPTION

A. Location and Size

The project consists of Rock Island Dam and two associated powerplants on the upper Columbia River near the geographic center of Washington State at River Mile (RM) 453.4. The powerplants contain 18 generating units with a combined output capacity of up to 542,000 kw depending on the forebay elevation of Wanapum Dam downstream. Rock Island Reservoir which was formed by the dam, extends 20 miles of shoreline, and occupies a surface area of 3,520 acres.

B. Authorized Purposes

The project is primarily single-purpose; i.e., power generation. Provisions have been made to accommodate navigation locks should the demand for upstream boat commerce occur in the future. The project has limited capacity for flood control due to the configuration of the river channel on this reach of the Columbia.

C. Brief History of Construction and Operation

The original project was authorized for construction under terms and conditions of the Federal Water Power Act of 1920 (41 Stat. 1063, 16 U.S.C. 792-823) and licensing authority of the Federal Power Commission (FPC) in 1930. Licensing for consturction was initially granted To Washington Electric Company and later transferred to Puget Sound Power and Light (Puget Power). Puget Power completed the original dam and powerhouse in 1933 containing four generating units (Chelan PUD 1973). Through a lease agreement with Puget Power, Chelan Public Utility District acquired the rights to undertake and complete installation of six additional generating units in 1953 (Chelan PUD 1973). In 1956, the PUD acquired the remaining interests in the project except for portions of the transmission facilities outside of Chelan County (Chelan PUD 1973). A series of amendments (No's. 1-16, inclusive) beginning in 1931 through 1968 have been added to the original license. In 1980, the original license expired requiring relicensing and amendments to include the second powerhouse, eight generating units, and a 6.1-foot pool raise.

D. Other Pertinent Data

The project was originally constructed to provide baseload power generation. However, with expansion of the hydroelectric network on the mainstem Columbia, the project is and will be managed for peak load operation. With limited flood control capability and reservoir configuration, reservoir flow is fairly rapid. Hydraulic capacity at the dam is 220,000 cfs. The reservoir's normal operating elevation varies from 610.1 to 614.1 feet above sea level (f.a.s.l.) (USGS datum), and it contains a storage capacity of 113,700 acre-feet.

The PUD has flood easements to elevation 620 f.a.s.l. on private property along the reservoir shoreline. The PUD has constructed one public recreation area on the Douglas County side of the project providing for boating, swimming, and picnicking facilities. The PUD is presently letting one recreation area out for bid, and three others are in the planning phase on the Chelan County side of Rock Island Reservoir.

IV. WILDLIFE SPECIES AND HABITAT ASSESSMENTS

A. Preconstruction

Information on wildlife and habitat in the Rock Island Project vicinity prior to construction of the dam in 1933 is scarce. Dobler et al. (1978), in a page-by-page survey of The Wenatchee World newspaper (and its predecessor, The Republic) from 1903 to 1923 uncovered few facts about preconstruction wildlife.

Pre-1923 newspaper references to wildlife in Chelan County include mention of deer, cougar, eagle, wolf, lynx, pheasant, Hungarian partridge, coyote, rabbit, mountain goat, bear, bobcat, and beaver (Dobler et al. 1978). Chelan County was reported to be one of the best hunting areas in the State in 1905.

Aerial photographs of the project area were taken prior to construction of the dam by the U.S. Army Corps of Engineers (CE) in 1930. U.S. Geological Survey topographic maps made prior to 1933 may also be useful in determining preinundation conditions.

Early black-and-white photographs of some parts of the reservoir shoreline prior to inundation exist in the Rocky Reach Dam visitor center displays and in The Wenatchee World files. Chelan PUD also has some mylar topographic maps which show topographic relief and elevation contours of the reservoir basin prior to inundation.

B. Postconstruction

No information was found on the wildlife and habitat in the Rock Island project area for the period 1933-1972. Riparian habitat surrounding Rock Island pool was inventoried in the mid-1970's (CE 1976). Wildlife inventories were initiated in 1973, as described below.

Construction began on a second powerhouse at Rock Island Dam in 1973. At that time, Chelan PUD contracted WDG to conduct studies of wildlife and vegetation in the project area. These studies were designed to inventory pre- and post-inundation wildlife and habitat, to be used as a basis for assessing wildlife impacts of the second powerhouse and subsequent 6.1-foot pool raise. The pre-flood study results were published in 1978 (Dobler et al. 1978). The post-flood study results were available in final form in January 1984 (Foster et al. 1984).

Dobler et al. (1978) estimated that 314 acres of land, including 191 acres of riparian habitat, would be inundated by the pool raise. The pre-flood study gives estimates of wildlife populations using the impact zone (within one-half mile of the reservoir) prior to inundation. Wildlife found in the inundation zone are listed below.

Upland Birds:

California qual, chukar partridge, gray partridge, and ringnecked pheasants used habitat in the impact zone.

Mourning Doves:

Mourning doves also nested in the impact zone.

Canada Geese:

Geese nested on the pool each year of the study. A substantial percentage of the goose nest sites studied were located below the raised pool level, although numbers of nests found in post-flood studies do not indicate a decrease in numbers of nests after pool raise.

Ducks and Coots:

Ducks and coots also used the pool for nesting.

Nongame Birds:

Red-winged and yellow-headed blackbirds were found to nest in sloughs off the main pool. The sloughs were also used for nesting grebes.

Furbearers:

Species found in the project area included muskrat, mink, otter, beaver, striped skunk, raccoon, bobcat, red fox, and coyote.

Post-flood impact assessments by Foster et al. (1984) bear little resemblance to the pre-flood wildlife use estimates of Dobler et al. (1978).

Foster et al. (1984) concurred that approximately 314 acres, including 191 acres of riparian vegetation, were inundated by the pool raise. Volume of riparian growth decreased by 48% (Foster et al. 1984).

The variety of terrestrial vertebrates did not change significantly after the pool raise. Upland game, nongame, small mammal, pheasant, and dove abundance changed but not significantly after the pool raise. Data indicate that post-flood populations of yellow-headed and red-winged blackbirds are higher than pre-flood populations and that post-flood aquatic furbearer populations are healthy. Coyote and bobcat numbers showed declines that were not thought to be project-related (Foster et al. 1984).

The number of Canada goose nests appear to have increased after the pool raise, and good production increased. No decrease in total waterfowl population by was indicated by the data (Foster et al. 1984). A recent goose nest survey by Fielder and Grove (1983) revealed 67 nests along Rock Island Reservoir, the highest number of nests found since intensive surveys were begun in 1975.

Foster et al. (1984) found that the number of dove hunters in the project area decreased post-flood, although the decrease was not necessarily project-related. The number of doves bagged per unit of hunter effort increased post-flood. Numbers of other types of hunters in the project area remained stable post-flood, although rate of harvest generally improved (Foster et al. 1984).

Nonconsumptive wildlife recreation decreased in the project area post-flood (Foster et al. 1984).

It is difficult to determine whether numbers of wintering bald eagles in the Rock Island area have changed. Aerial surveys conducted by the FWS and WDG since 1975 (and beginning in 1982, Chelan, Douglas, and Grant County PUD's) indicate an avearage winter use of 2.3 adult and 1.4 subadult bald eagles on Rock Island Reservoir (FWS unpubl. data).

V. WILDLIFE MITIGATION HISTORY

A. Mitigation Requested or Proposed

No mitigation has been requested or proposed for any impacts to wildlife that may have resulted from the original construction of the Rock Island Project.

The PUD and WDG have discussed a tentative mitigation plan for impacts to wildlife that resulted from the second powerhouse. Proposed recommendations include:

- 43 acres of habitat plantings at Rock Island sloughs, with initial planting and subsequent maintenance to be the responsibility of the PUD.

- Purchase and maintenance by PUD of approximately 116 acres at the mouth of the Wenatchee River for an interpretive natural area; development to include parking areas, nature trails, interpretive center, artificial wood duck and goose nest structures, game bird feeders, raptor perch poles and nest structures, and management of vegetation for optimum wildlife habitat.

- Habitat improvement on the Swakane Habitat Management Area with labor to be provided by the PUD as follows:

  (1) up to 60 man-days of labor per year for first 4 years;

  (2) up to 15 man-days of labor per year for remainder of project license after first 4 years.

  Work to be done on the HMA includes:

  (1) installation and maintenance of 1,000 feet of irrigation pipe;

  (2) planting and maintenance of trees and shrubs for upland wildlife.

- Construction erection, maintenance and monitoring of 60 wood duck nest structures along Rock Island pool by PUD.

- Construction, maintenance, and monitoring of 10 goose nest structures along Rock Island pool by PUD.

- PUD will conduct goose nest surveys for WDG along the Rock Island pool using the same schedule that WDG used during pre- and post-flood studies.

- Construction and maintenance of two upland bird feeders on Rock Island pool by PUD.

- Construction and maintenance of two raptor perch structures along Rock Island pool by PUD.

- Conduct of aerial bald eagle surveys by PUD and the fish and wildlife agencies.

B. Mitigation Agreements or Requirements

Impacts to wildlife that may have resulted from the original construction of the Rock Island Project were never documented. No wildlife mitigation was required because the project proceded the Fish and Wildlife Coordination Act.

As of March 30, 1984, no formal mitigation agreement for the second powerhouse had been reached between wildlife agencies and the PUD.

C. Mitigation Implemented

A total of bout 43 acres around the Rock Island sloughs has been planted with vegetation to provide food and cover for wildlife. Three islands have been constructed for use by nesting geese in Rock Island pool. Several experimental goose nest structures were placed on the pool in 1976 (Paul Fielder, pres. comm.). Fifty-nine wood duck nest boxes have been erected and are being maintained and monitored.

- in 1983, 20 wood duck nest boxes were erected along the reservoir (12 were used by wood ducks). In 1984, 39 more nest structures were erected for wood duck nesting, bringing the total to 59.

- the PUD conducted goose nesting surveys along the reservoir in 1983 and 1984 to provide quality information to WDG and USF&WS.

- the PUD coordinated and partially funded aerial bald eagle surveys in eastern Washington during the winters of 1982-84 to provide quality data to WDG and USF&WS.

- the PUD erected 6 perch sites along Rock Island Reservoir and 6 at the Rock Island ponds. These have been used by bald eagles, ospreys, red-tailed hawks, marsh hawks, barn owls, saw-whet owls, great-horned owls, kestrels, qulls, kingfishers, flickers, and passerine birds.

VI. CURRENT STUDIES AND PLANNING

Goose nest and bald eagle surveys continue on this project as does monitoring of wood duck nesting. It is uncertain when final mitigation agreement may be reached.

VII. REFERENCES CITED

Chelan County PUD. 1973. Detailed exhibit W for application for amendment No. 17 to license No. 943.

Dobler, F.C., T.W. Sauve, J.H. Foster, and D.R. Eldred. 1978. Pre-flood inventory, Rock Island hydroelectric project. Wash. Dept. Game, Olympia.

Foster, J.H., P.C. Fielder, and D.R. Eldred. 1983. Post-flood wildlife inventory--Rock Island Hydroelectric Project. Wash. Dept. of Game, Olympia.

Fielder, P.C. and R.A. Grove. 1983. Canada goose nesting along Rock Island and Rocky Reach Reservoirs, 1983. Unpub. data, Chelan County PUD No. 1, Wenatchee, WA.

Fielder P.C. 1984. Canada goose nesting along Rock Island and Rocky Reach reservoirs, 1984. Unpub. data, Chelan County PUD No. 1, Wenatchee, WA.

Foster, J.H., P.C. Fielder, D.R. Eldred, and R.L. Perleberq. 1984. Post-flood wildlife inventory-Rock Island hydroelectric project.

U.S. Army Corps of Engineers. 1976. Inventory of riparian habitats and associated wildlife along the Columbia and Snake Rivers.

VII. APPENDICES

APPENDIX A - Study Team

Washington Department of Game - Jack Howerton, Gretchen Van Lom

U.S. Fish and Wildlife Service - Ron Starkey

APPENDIX B - Consultation/Coordination

July 13, 1983	-	Letter sent from Giger (FWS) to Nason (PUD) requesting information and contact person.
July 13, 1984	-	Paul Fielder represented PUD at informational meeting in Spokane.
Late July 1983	-	Response received to July 13 FWS letter from PUD identifying contact person, expressing willingness to cooperate.
July 25, 1983	-	Gretchen Van Lom (WDG) met with Paul Fielder to discuss status review.
August 1983	-	Ron Starkey (FWS) met with Paul Fielder to discuss mitigation status review.
October 18, 1983	-	FWS sent informal draft copy of status review for PUD review and comment.
October 31, 1983	-	Comments recaeived from PUD (see attached)

Individuals contacted during status review:

P.C. Fielder, Chelan PUD, Wenatchee, WA
D.R. Eldred, WDG, Wenatchee, WA
T.M. Lloyd, Washington Department of Game, Ephrata, WA
G. Tillett, Washington Department of Game, Yakima, WA
C. McKay, Washington Department of Game, Wenatchee, WA
R. Nason, Chelan PUD, Wenatchee, WA

APPENDIX C

Comments

JOHN SPELLMAN
Governor

STATE OF WASHINGTON
DEPARTMENT OF GAME
600 North Capitol Way GH-11 • Olympia, Washington 98504 • (206) [illegible]

September 6, 1984

John Palensky, Director
Division of Fish & Wildlife
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208

ATTN: James Meyer

Dear Mr. Palensky:

My staff has reviewed the Mitigation Status Review Report for Rock Island Project. Our comments follow.

The reports state that information on pre-project conditions for Rock Island Project is scarce. Washington Department of Game biologists and Chelan County P.U.D. biologists have, however, recently reviewed pre-project aerial photos and agree that riparian habitat was not well developed along the shoreline in the project area.

Studies were conducted on Second Powerhouse part of this project and the attendant pool raise. These studies were funded by Chelan County P.U.D. and conducted by Washington Department of Game.

The Department and Chelan County P.U.D. arrived at a tentative agreement on wildlife mitigation on this project but the agreement was not signed because of litigation pending in the Ninth Circuit Court. Final agreement on mitigation could be delayed until the final settlement of the mid-Columbia interim proceedings on anadromous fish. Washington Department of Game and Chelan County P.U.D. are reluctant to separate fish and wildlife mitigation under the current proceedings. If the final mitigation agreement, as pertains to wildlife, is similar to that previously reached informally it would mitigate wildlife damages for both the original and Second Powerhouse projects.

We recommend therefore, that action on this project by BPA and Power Planning Council be postponed until the Department and Chelan County P.U.D. have had a chance to work out an agreement.

If an acceptable mitigation agreement is executed in the near future, no further action will be needed. If agreement, however, can not be reached we will recommend proceeding to the next step in the process under Wildlife Section of the Fish and Wildlife Program.

Very truly yours,

THE DEPARTMENT OF GAME

Larry Blunn, for:
Frank R. Lockard
Director

FRL:pr-b

cc: Chelan County P.U.D. District #1
Marty Montgomery, Wildlife Coordinator

United States
Department of the Interior

Fish and Wildlife Service
Lloyd 500 Building, Suite 1692
500 N.E. Multnomah Street
Portland, Oregon 97232

In Reply Refer To:

Your Reference

JUN 14 1984

June 11, 1984

Mr. John Palensky
Director, Division of Fish and Wildlife
Bonneville Power Administration
Department of Energy
P.O. Box 3621
Portland, Oregon 97208

Dear Mr. Palensky:

As requested we have reviewed a copy of the Status Report on Wildlife Mitigation for the Rock Island Dam and Reservoir Project, which was jointly prepared by the Habitat Resources Division of the Fish and Wildlife Service (FWS) and the Washington State Department of Game (WDG) under contract with the Bonneville Power Administration. The following represents the formal response of the FWS regarding the subject project.

General Comments

We have completed an extensive search of agency files and reference materials, and find that we have no additional information with which to make corrections or additions to the subject report. Insofar as our resource interests are concerned, we find the report to be complete and accurately written.

Specific Comments

It is clear from the report's content that original construction and operation of the project resulted in adverse impacts to wildlife resources, although impacts to species of priority interest to the FWS are harder to document. There is some evidence which suggests that the project has benefited certain species. Requirements specified by the Chelan PUD's most recent license amendments and expansion of project facilities resulted in pre/post flood studies and implementation of a wildlife plan that was endorsed by all affected wildlife agencies. The FWS has recently indicated acceptance of that plan. We do not believe there is merit in seeking further redress for wildlife species of concern to this agency in view of the PUD's good faith

efforts in recent years. However, we should point out that the WDG may not concur with our view and may wish to pursue further compensation/enhancement of resources under their purview. Should this be the case, the FWS will be supportive even though not actively involved in such efforts.

Sincerely,

James W. Teeter
Acting Assistant Regional Director
Habitat Resources

cc: ES-Olympia/Moses Lake
WDG
Chelan PUD

Colville Confederated Tribes

P.O. Box 150 · Nespelem, Washington 99155 (509) 634-4711

May 10, 1984

Mr. John Palensky, Director
Division of Fish and Wildlife
Department of Energy
Bonneville Power Administration
P. O. Box 3621
Portland, Oregon 97208

Attention: Mr. James Meyer PJS

Dear Mr. Palensky:

Our staff has reviewed the Project Report on the "Wildlife Mitigation Status Review" for the following projects: Chelan, Tumwater/Dryden, Rock Island, Priest Rapids/Wanapum, Wells and Chief Joseph Dams.

We feel, at this time, that they present the wildlife mitigation situation fairly well.

Sincerely,

Al Aubertin, Chairman
Colville Business Council

MAY 7 1984 MAY 7 1984

COMMISSIONERS
ALFRED PFLUGRATH, PRESIDENT
JEAN H. LUDWICK, VICE-PRESIDENT
JAMES R. WALL, SECRETARY
WILLIAM D. SCOTT, ASST. SECRETARY
ROBT. O. KEISER, COMMISSIONER

GERALD L. COPP, MANAGER

Public Utility District No. 1 of Chelan County

P. O. BOX 1231 • WENATCHEE, WASHINGTON 98801-0011 • (509) 663-8121

May 1, 1984

Mr. John Palansky, Director
Division of Fish and Wildlife
Bonneville Power Administration
P. O. Box 3621
Portland Oregon 97208

Attention: Mr. James Meyers

Dear Mr. Palansky:

Enclosed are our comments on the "Wildlife Mitigation Status Reviews" for the Chelan, Tumwater/Dryden, Rocky Reach and Rock Island dams.

We have no comments on the review for the Tumwater/Dryden projects.

Our comments on the Chelan, Rocky Reach, and Rock Island project reviews are somewhat detailed. As a result, comments for each of these three projects are addressed separately. With these comments, we have also provided supplemental information which, with our comments, should improve the accuracy of the status reports.

Our comments to the previous draft Rock Island Project status review (section concerning pre-flood wildlife numbers) were completely ignored in this draft. We feel our comments are an accurate critical review of that section (our wildlife biologist worked on that particular project for WDG) and we hope our comments will not be ignored a second time concerning this draft.

If you have any questions concerning our comments or need any additional information, please contact our Wildlife Biologist, Paul Fielder.

Sincerely,

Dick Nason

Dick Nason, Supervisor
Fish & Wildlife Operations

Enclosures

Rock Island Project

1. IV. A. ¶2. This paragraph should be eliminated because so much of it does not pertain to the Rock Island Project area and is thus misleading. Rock Island Reservoir forms the extreme eastern boundary of Chelan County, a county which extends to the crest of the Cascade Mountains. Paragraph 2 describes wildlife in Chelan County, not the Rock Island Project area. To even mention the occurrence of such species as mountain goats, cougar, wolf, and bear in a report about the Rock Island Project is misleading.

2. IV. B. ¶2. Postflood study results were available in final form in January, 1984 (a copy is enclosed for your information). All references to Foster et al. (1983) should be changed to Foster et al. (1984) to reflect information in the final rather than the draft report.

IV. B. ¶3. and sections on Upland Birds - Furbearers. The PUD's response to the draft Rock Island Mitigation Status Report (your Appendix C), provided detailed comments to these sections. They were all ignored and the sections of the final status report are identical to the draft. We still maintain that these sections are very poor information and will restate our responses to them. Just because numbers were used in a report (Dobler et al. 1978) does not make them accurate or biologically sound. If the numbers which the status report quotes from Dobler et al. (1978) were accurate, why did the final report (Foster et al. 1984) have to rework or ignore that data? Our original responses to the sections Upland Birds through Furbearers still represent our feelings about these sections and are listed below in the hope that they will not be ignored a second time.

Upland Birds: The figures quoted in your status report were taken for a single complete count of census plots. The data and technique were so statistically questionable that WDG decided not to include them in the post flood report (Foster et al. 1984). We suggest that wildlife numbers should not be used because of their statistical unreliability.

Mourning Doves: The figures quoted in your status report (from Dobler et al. 1978) are unrealistically high and not statistically valid. An average of 6.67 acres were surveyed for dove nesting annually. One of these acre plots (an atypically good one) supplied more than 58% of the dove nests (Dobler et al. 1978, XIV pp. 3-5). This non-random sample, and small sample size, biased dove production and population estimates. If data is analyzed to compensate for the one sample plot that supplied over 58% of the production, the study area dove population is about 20,000 birds.

Canada Geese: There were 43 nesting attempts per year (counting renesting), not necessarily 43 pairs of geese nesting. Your status report gives the impression that 68% of the goose nesting along the reservoir was lost by the reservoir use. Actually, during post flood years (1978-1983) (compared to pre-flood years) the average number of goose nests increase from 44/year to 47.7/year (1983 had a record high of 67 nests), nesting success increased from 72.2% to 82.8%, and the

average number of goslings fledged increased from 188.5 to 208.7 goslings/year (Fielder and Grove 1983). Although the WDG post flood report ignored these data, it did acknowledge that goose nesting was on an increasing trend throughout the post flood period and that the goose production increased during the post flood period. So far this year (1984), we know of 63 goose nests along the reservoir as of our last survey, 4/17/84. Your status report misleads the reader by ignoring these data. This section should include the data from the WDG post flood report and Fielder and Grove's 1983 report.

Ducks and Coots and Nongame Birds: The annual means of 19, 130, and 130 pairs of nesting ducks, coots, and grebes, respectively, within the pre-flood project area is based on supposition only (Dobler et al. 1978), and should not be included as valid data. The methodology used in determining these numbers defy the principles of modern wildlife biology as was thus not used by Foster et al. (1984). We recommend you delete these numbers.

Nongame Birds: We cannot determine where your status report found such high numbers of yellow-headed and red-winged blackbirds at the sloughs. The WDG post flood report showed that between pre and post flood periods, yellow-heads increased from 27 to 29.3 territorial males and red-wings increased 6.3 to 9 territorial males at the sloughs. Male yellow-headed blackbirds will include about 3 females in their territories. The number of yellow-head nests is about right, but there were no 81 "pairs". The number of red-winged nests is not even in the ballpark.

Furbearers: The estimated muskrat population of 860 was based on techniques so questionable that WDG did not try to replicate during post flood studies and did not refer to it in their post flood report (Foster et al. 1984). Actually, Dobler et al. (1978) used 2 different techniques to estimate population. One arrived at a population of 58, the other at 860, a significant range. The WDG post flood report compares pre and post flood trapper harvest within the project area. Pre-flood trappers averaged 22.5 muskrats and 0.4 mink/trapper/year while post trappers averaged 34.1 muskrats and 1.5 mink/trapper/year. Furbearer harvest usually reflects furbearer abundance.

3. IV. B. remaining paragraphs. All references to Foster et al. (1983) should be changed to Foster et al. (1984). See our comment (2) above.

4. IV. B. ¶2, ¶6. The number of Canada goose nests has not remained "stable" since the pool rise, but has increased significantly. The pre-flood number of goose nests averaged 44/year (Foster et al. 1984). Since the pool rise the number of goose nests along the reservoir has been 38 in 1979, 41 in 1980, 48 in 1981, 51 in 1982, 67 in 1983, and 63 as of April 17 in 1984 (Fielder and Grove 1983, Foster et al. 1984, Fielder 1984). This trend in the number of goose nests seems anything but stable.

5. VI. B. last paragraph. We have enclosed a copy of the FWS unpub. data which this paragraph refers to (Table 1). If you look at the minimum number possible for each winter you will see that the decrease in wintering bald eagles referred to in this paragraph is 0.08 eagles per winter. Based upon the transient nature of the 200-270 bald eagles wintering in eastern Washington and recent changes in waterfowl distribution in eastern Washington it

is possible that a decline of 0.08 eagles per winter along this reservoir may be statistically significant. The minimum number possible (Table 1) was higher during two of the postflood winters than any of the pre-flood winters. This is verified in Foster et al. (1984). We suggest that VI B. last paragraph, first sentence be changed to indicate no significant change in bald eagle numbers between pre and post flood years. Also, the average number of bald eagles seen along this reservoir per winter has been 2.3 adults and 1.4 subadults (Table 1), not 4 adults and 3 subadults.

6. V. A. recommendation item 2. The proposal included approximately 116 acres, not 130. Development within the interpretive natural areas would not include campsites.

7. V. A. recommendation item 3. The trees and shrubs to be planted and maintained would be provided by WDG.

8. V. A. recommendation item 4. In addition to their construction, the wood duck nesting structures would also be erected, maintained, and monitored. Thus far, 59 have been erected and are being maintained and monitored.

9. V. A. The list of recommendations omitted the aerial bald eagle surveys in eastern Washington which were coordinated by and partially funded by Chelan County P.U.D.

10. V. B. ¶2. Delete the last sentence. The PUD offered WDG a plan to settle wildlife mitigation/enhancement concerns. This plan was rejected by WDG who has decided to await the outcome of litigation now before the Ninth Circuit Court of Appeals before considering to agree to a mitigation settlement.

11. V. C. The 3 islands are about 40' x 300' in size. These islands should not be considered "small" in size since they are larger than the size recommended by Giroux (1981).

    In addition to the mitigation measures which this paragraph indicates have been implemented, several others should be added.

    - in 1983, 20 wood duck nest boxes were erected along the reservoir (12 were used by wood ducks). In 1984, 39 more nest structures were erected for wood duck nesting, bringing the total to 59.

    - the PUD conducted goose nesting surveys along the reservoir in 1983 and 1984 to provide quality information to WDG and USF&WS.

    - the PUD coordinated and partially funded aerial bald eagle surveys in eastern Washington during the winters of 1982-83 and 1983-84 to provide quality data to WDG and USF&WS (see letter from Tom Juelson, WDG - attached).

- the PUD erected 6 perch sites along Rock Island Reservoir and 6 at the Rock Island ponds. These have been used by bald eagles, ospreys, red-tailed hawks, marsh hawks, barn owls, saw-whet owls, great-horned owls, kestrels, gulls, kingfishers, flickers, and passerine birds.

12. VI. first sentence. The PUD has been conducting studies in the form of goose nesting and bald eagle surveys and monitoring wood duck nesting. Results of these studies are passed along to WDG and USF&WS.

13. VI. second sentence. The PUD will be submitting to FERC an Exhibit S (Fish and Wildlife Mitigation/Enhancement Plan) for the Rock Island Project. This Exhibit S has already been reviewed and commented on by the resource agencies. The mitigation plan has been rejected by WDG (see our comment (10) above). As such, this last sentence should be removed as it seems agreement may not be reached soon.

Literature Cited

Dobler, F. C., T. W. Sauve, J. H. Foster, and D. R. Eldred. 1978. Pre-flood inventory, Rock Island hydroelectric project. WA. Dept. Game, Olympia.

Fielder, P. C. and R. A. Grove. 1983. Canada goose nesting along Rock Island and Rocky Reach reservoirs, 1983. Unpub. data, Chelan County PUD No. 1, Wenatchee, WA.

Fielder P. C. 1984. Canada goose nesting along Rock Island and Rocky Reach reservoirs, 1984. Unpub. data, Chelan County PUD No. 1, Wenatchee, WA.

Foster, J. H., P. C. Fielder, and D. R. Eldred. 1983. Post-flood wildlife inventory--Rock Island Hydroelectric Project Working Draft. WA. Dept. Game, Olympia

Foster, J. H., P. C. Fielder, D. R. Eldred, and R. L. Perleberg. 1984. Post-flood wildlife inventory-Rock Island hydroelectric project. WA. Dept. Game, Olympia.

Giroux, J. F. 1981. Use of artificial islands by nesting waterfowl in southeastern Alberta. J. Wildl. Manage. 45:669-679.

Status Report on Wildlife Mitigation

ROCKY REACH PROJECT

Prepared by

Washington Department of Game

and

U.S. Fish and Wildlife Service

for

Bonneville Power Administration

in response to the

Fish and Wildlife Program
Northwest Power Planning Council

1984

I. PROJECT NAME

Rocky Reach Dam and Reservoir Project (FERC Project No. 2145)

II. PROJECT OPERATORS

Chelan County Public Utility District No. 1 (PUD)

III. PROJECT DESCRIPTION

A. Location and Size

The project consists of a dam and powerplant located at River Mile (RM) 473.6 on the Columbia River in north-central Washington about 7 miles upstream from the city of Wenatchee. The powerplant contains 11 generating units with a total peak output capacity of 1,273,000 kw. Lake Entiat (Rocky Reach Reservoir) extends 43 miles upstream to Wells Dam (RM 515.5) and occupies a surface area of about 10,000 acres.

B. Authorized Purposes

The project is primarily dual-purpose with provisions for power generation and flood control.

C. Brief History

The original project was authorized for construction under terms and conditions of the Federal Water Power Act (FPA) of 1920 (41 Stat. 1063, 16 U.S.C. 791-823) and licensing authority of the Federal Power Commission (FPC; now FERC) in 1956. The project was completed in 1961 with a total of seven of the originally planned 11 generating units installed. A subsequent amendment to the original license in 1971 provided for the addition of the four remaining generating units. Studies to raise the existing reservoir an additional 3 feet and to amend the existing license were initiated in 1979. However, these studies were terminated in 1981 and expansion plans for the facility remain unknown at this time.

D. Other Pertinent Data

1. Water level fluctuation and timing

The project was originally constructed to provide baseload power. However, with expansion of the hydroelectric network on the mainstem Columbia the project is and will be managed for peak load operation. Hydraulic capacity of the facility is 220,000 cfs. The normal operating range of Lake Entiat is between 703 f.a.s.l. and 707 f.a.s.l.

2. Land Ownership

The majority of the lands adjoining the project are under private ownership or control. The remainder are divided between the State, Chelan County Public Utility District, and the Federal Government. While some lands consitiute Indian allotments, tracing ownership back to Tribal members is difficult at best. Of the lands owned by the State, there is a total of four wildlife recreation areas acquired as partial mitigation for project-caused losses to wildlife. The PUD has developed another three parks which provide swimming, boating access, and recreational facilities for the public. These lands comprise about 212 acres. Five other Exhibit R sites are proposed which encompass another 437 acres. The PUD has ownership of other lands adjacent to the project which are not under any specific uses at this time. The PUD acquired flowage easements over shoreline property when the project was constructed to an elevation of 710. While most shoreline areas subject to sloughing have been protected to prevent further losses of land and vegetation, there remains some sloughing where wind and wave action are particularly severe.

3. Indian Rights

None known.

IV. WILDLIFE SPECIES AND HABITAT ASSESSMENTS

A. Preconstruction Period

Chelan PUD provided funds for Washington Department of Game (WDG) and U.S. Fish and Wildlife Service (FWS) to conduct studies of wildlife in the proposed Rocky Reach project area from 1955 to 1959. WDG studies potential project impacts to upland game, big game, and furbearers, while FWS studies covered waterfowl and mourning doves.

An estimated 4,049 acres were inundated by the project (Patterson 1961; FWS 1959). The majority of this acerage was irrigated apple or soft fruit orchards (34 percent) and grazing land (31 percent). The grazing land had an understory of cheat grass, bunch grass, and forbs with an overstory of sagebrush, bitterbrush, hawthorn, serviceberry, mock orange, buckbrush, elderberry, clematis, and birch. Scattered stands of ponderosa pine, cottonwood, juniper, dogwood, and willow were found along the river shoreline (Patterson 1961).

Patterson (1961) estimated the preimpoundment upland game population in the project area to be 500 pheasant, 1,600 California quail, 1,000 chukar partridge, and 70 Hungarian partridge. During the severe winter of 1955-1956, an estimated 2,000 mule deer used the impoundment area, demonstrating its

importance as big game winter range. Furbearer populations were estimated to be low. An estimated 30 beaver, 60 mink, and 100 muskrat used the project area (Patterson 1961).

Annual loss to the harvest because of the project was estimated at 20 deer, 130 pheasant, 1,120 quail, 700 chukar partridge, and 49 Hungarian partridge. This loss was estimated to be worth $30,106 annually (Patterson 1961).

FWS (1959) estimated that 1,200 acres of orchards, providing excellent mourning dove nesting habitat, would be inundated by the Rocky Reach reservoir. It was estimated that a breeding population of about 4,200 pairs of doves produced over 20,500 young in 1956 in these orchards (FWS 1959).

Waterfowl observed in the Rocky Reach project area were Canada geese, mallards, pintails, goldeneyes, mergansers, harlequin ducks, and scaups (FWS 1959).

FWS (1959) reported that a few pairs of ducks and geese nested in the project area. WDG biologists found eight active Canada goose nests during a survey in 1957 (WDG files, Olympia). Geese nested on islands near the mouth of the Entiat River (FWS 1959). About 60-80 geese wintered in the Ribboncliff-Orondo area (FWS 1959).

B. Post-Construction Period

Formal post-flood studies were not authorized for the Rocky Reach project. However, aerial waterfowl surveys and bald eagle censuses during the late fall and winter months have been conducted annually. During the period 1975-77, 36 monthly counts of waterfowl were made. Peak numbers of waterfowl counted on these surveys include: 7412 ducks, 2875 geese, 5 swans and 6876 coots for Lake Entiat (FWS, unpub. data). For this same period, an average of 15 mated pairs of duck were observed producing 12 broods and 60 young. Similarly, there were 33 mated pairs of geese observed producing an average of four broods and nine young.

FWS/WDG and PUD eagle survey conducted during the period from 1975 through 1982 indicated an annual average of seven adult and four subadult bald eagles (Table 1.) using the impoundment (Fielder and Starkey, 1980 unpublished data). Young (1983) suggests the numbers may be higher. FWS indicate a possible roost site near the mouth of the Entiat River; however, further work and documentation on actual overnight use is required. Chelan PUD studies durin the winter of 1983-84 found no roost site here but did locate a roost near Earthquake Point above Entiat.

Waterfowl surveys conducted on the ground immediately after construction of the project showed little impact to goose nesting success. The number of active nests fell to three

the year the project was constructed but increased to preimpoundment levels (eight) the next year (WDG files, Yakima). Impacts to other waterfowl from the project are more difficult to determine due to differences in sampling times and coverage in pre and postimpoundment surveys. A recent Canada goose nest survey revealed a total of 44 nests along Rocky Reach reservoir (Fielder & Grove 1983). Thirty three nests were found by Fielder in surveys conducted in the spring of 1984.

Postimpoundment wildlife habitat was inventoried recently (USACE 1976). Sightings of several nongame species, including a golden eagle nest, are documented in the WDG nongame data system.

C. Present conditions and Project Modifications

No major operational changes have been made in the Rocky Reach project since its construction. Several years ago, Chelan PUD proposed raising the elevation of Rocky Reach reservoir by 3 feet. Following study of the proposal, the PUD decided not to pursue the project.

Impacts from power peaking operations on hydroelectric reservoirs have been studied in detail by Tabor et al. (1980). These impacts have been discussed in earlier recommendations to the Northwest Power Planning Council.

V. WILDLIFE MITIGATION HISTORY

A. Mitigation Requested or Proposed

Patterson (1961) and FWS (1959) proposed the following mitigation for Rocky Reach: (1) funding of postflood studies; (2) acquisition and initial development of replacement habitat for deer and upland game; (3) protection and development of project lands with potential value to waterfowl; and (4) free public access, where feasible, to project lands.

B. Mitigation Agreements or Requirements

A mitigation agreement was signed by WDG and the PUD on July 5, 1963. The agreement specified that the PUD would provide $700,000 for the purchase of streambank access, public fishing and hunting areas, and deer and upland game habitat. These areas were to be managed by WDG.

C. Mitigation Implemented

WDG purchased three game ranges and three public shooting areas with mitigation funds provided by Chelan PUD. The game ranges--Chelan Butte, Swakane, and Entiat--totalled 17,502 acres and later became part of the Colockum Habitat Management Area (HMA).

The PUD funded 99 percent of the fee-title purchase of the areas. Public hunting easements were purchased on two privately owned areas--Blue Grade in Douglas County and Boyd in Chelan County. A 160-acre parcel along the reservoir in Chelan County, known locally as Gallagher Flat, was purchased by the PUD to be managed to WDG.

VI. CURRENT STUDIES AND PLANNING

Goose nest surveys, bald eagle surveys and winter waterfowl surveys have continued on this project being conducted primarily by the PUD and WDG.

VII. REFERENCES CITED

Fielder, P.C. and R.A. Grove. 1983. Canada goose nesting along Rock Island and Rocky Reach Reservoirs. Unpub. data, Chelan County PUD.

Fielder, P.C. and R.G. Starkey. 1980. Winter bald eagle use along the upper Columbia River in Knight, R.L., G.T. Allen, M.V. Stalmaster, and C.W. Servkeen (ed.) Proc. of the Wash. Bald Eagle Symp., Seattle, Wash.

Hitchcock, C.L. and A. Cronquist. 1973. Flora of the Pacific Northwest. Univ. of WA. Press, Seattle.

Patterson, J.R. 1961. A report on wildlife studies in the Rocky Reach Hydroelectric Porject area. WDG, Olympia, Wa. 15 pp.

Tabor, J., B. Thompson, C. Turner, R. Stocker, C. Detrick, and J. Howerton. 1980. Study of impacts of project modification and river regulation on riparian habitats and associated wildlife along the Columbia River. WDG, Olympia, WA. 770 pp.

U.S. Army Corps of Engineers. 1976. Inventory of riparian habitats and associated wildlife along Columbia and Snake Rivers.

U.S. Department of the Interior, Fish and Wilflife Service. 1959. A special report on waterfowl and mourning doves. Rocky Reach Hydroelectric Project, Columbia River, Washington. Portland, OR. 13 pp.

Young, L.S. 1983. Movements of bald eagles associated with autumn concentration in Glacier National Park. M.S. Thesis, University of Montana, Missoula.

APPENDICES

APPENDIX A - Study Team

Washington Department of Game - Jack Howerton, Gretchen Van Lom
U.S. Fish and Wildlife Service - Ron Starkey

APPENDIX B - Consultation/Coordination

July 13, 1983 - Letter sent from Giger (FWS) to Nason (PUD) requesting information and contact person.

July 13, 1983 - Paul Fielder represented PUD at informational meeting in Spokane.

Late July 1983- Response received to July 13 FWS letter from PUD indentifying contact person, expressing willingness to cooperate.

July 25, 1983 - Gretchen Van Lom (WDG) met with Paul Fielder to discuss status review.

August 1983 - Ron Starkey (FWS) met with Paul Fielder to discuss mitigation status review.

Individuals contacted during status review:

P.C. Fielder, Chelan County PUD, Wenatchee
D.R. Eldred, WDG, Wenatchee
Ken Tupper, WDG, Olympia
R. Nason, Chelan County PUD, Wenatchee

APPENDIX C

Comments

JOHN SPELLMAN
Governor

JUN 14 1984

STATE OF WASHINGTON
DEPARTMENT OF GAME

May 31, 1984

John Palensky, Director
Division of Fish and Wildlife
Bonneville Power Administration
Post Office Box 3621
Portland, Oregon 97208

ATTN: James Meyer

Dear Mr. Palensky:

My staff has reviewed the mitigation status review report for Rocky Reach Dam and Reservoir project.

This project was authorized in 1956 and completed in 1961. The project was under the Fish and Wildlife Coordination Act which was amended during the construction of the project.

Chelan County Public Utility District No. 1 funded the Department of Game and Fish and Wildlife Service to conduct studies of fish and wildlife resources affected by the project. Even though the studies conducted on this project were not entirely adequate, the mitigation proposed for the project was probably adequate to mitigate damages to most important species affected by the project (game species and furbearers).

In our opinion, Chelan County Public Utility District No. 1 has met their obligations under the mitigation agreement to mitigate damages caused by Rocky Reach project. The fact that we did not request operation and maintenance funds for the mitigation lands acquired was an oversite on the part of the agencies, and while provision of operation and maintenance funds for these mitigation lands would greatly increase benefits to wildlife, we do not feel that it would be appropriate to require Chelan County P.U.D. to provide these funds. It may be appropriate however, for Bonneville to provide funds for operational maintenance of these lands as offsite enhancement for other projects.

We conclude that Chelan Butte, Entiat, and Swakane and other purchases have provided significant mitigation for the impacts for Rocky Reach project. If any additional mitigation is warranted it would be for changes in operation of the project for power peaking operations which would probably be better handled as a part of a system-wide peaking and operations mitigation.

In conclusion we recommend that this project be removed from the project list and Table 7 as per 1004(b)3 of the program.

Very truly yours,

THE DEPARTMENT OF GAME

Frank R. Lockard
Director

FRL:pr-b

SEP 18 1984

JOHN SPELLMAN
Governor

FRANK R. LOCKARD
Director

STATE OF WASHINGTON

DEPARTMENT OF GAME

600 North Capitol Way GH-11 • Olympia Washington 98504 • (206) 753-5700

September 6, 1984

John Palensky, Director
Division of Fish & Wildlife
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208

ATTN: James Meyer

Dear Mr. Palensky:

When we submitted our comments on Rocky Reach Project we inadvertently erred in our statement regarding funding for operation and maintenance of mitigation land. The statement made in the last sentence of paragraph four on page one reads "it may be appropriate, however, for Bonneville to provide funds for operation and maintenance of these lands as offsite enhancement for other projects." It should be changed to read "This department believes it is appropriate however, for Bonneville to fund operation and maintenance of mitigation lands until the current FERC license expires.".

We still maintain that Chelan County P.U.D. has met its obligations under the current mitigation agreement. This does not, however, satisfy all mitigation needs. To provide funds for operation and maintenance of mitigation lands is a must. Our current budget does not allow us to subsidize power development by funding operation and maintenance of mitigation lands.

Washington State Game Department strongly recommends that BPA fund operation and maintenance for mitigation lands for this project until the expiration of the current FERC license. At that time fish and wildlife mitigation will be addressed as part of the FERC process.

Very truly yours,

THE DEPARTMENT OF GAME

Larry Lemmon, for:
Frank R. Lockard
Director

FRL:pr-b

cc: Chelan County P.U.D. District #1
Marty Montgomery, Wildlife Coordinator

United States
Department of the Interior

Fish and Wildlife Service
Lloyd 500 Building, Suite 1692
500 N.E. Multnomah Street
Portland, Oregon 97232

In Reply Refer To: Your Reference

June 11, 1984

Mr. John Palensky
Director, Division of Fish and Wildlife
Bonneville Power Administration
Department of Energy
P.O. Box 3621
Portland, Oregon 97208

Dear Mr. Palensky:

As requested we have reviewed a copy of the Status Report on Wildlife Mitigation for the Rocky Reach Dam and Reservoir Project, which was jointly prepared by the Habitat Resources Division of the Fish and Wildlife Service (FWS) and the Washington State Department of Game (WDG) under contract with the Bonneville Power Administration. The following represents the formal response of the FWS regarding the subject project.

General Comments

We have completed an extensive search of agency files and reference materials, and find that we have no additional information with which to make corrections or additions to the subject report. Insofar as our resource interests are concerned, we find the report to be complete and accurately written.

Specific Comments

It is clear from the report's content that original construction and operation of the project resulted in adverse impacts to wildlife resources, although impacts to species of primary interest to the FWS have been harder to document. There is some evidence which suggests that the project had no effect on waterfowl, for example, possibly even benefiting certain species. While we recognize that the Chelan PUD has done much to address wildlife impacts resulting from the Rocky Reach project, we believe there may be additional opportunities to enhance such species as migratory birds. Furthermore, we believe there may be opportunities to improve bald eagle use during winter months. Therefore, we recommend that the PUD, WDG, and FWS work together to evaluate enhancement/improvement opportunities and implement specific measures as set forth under the framework of the Northwest Power Act (NWPA).

In addition, we strongly believe the cumulative and secondary effects of this and other Columbia River reservoirs should be evaluated. A principal focus of multiple evaluation should be the broader effects of operation of projects as a "system", such as water fluctuations resulting from power-peaking, etc. The extensive development that has occurred along the Columbia River's flood plain has also cumulatively reduced a variety of wildlife habitats and related resources. Such development and related wildlife losses would have been considerably less without construction and operation of Rocky Reach and other major Columbia River projects. In some instances, there may have been some net benefits to certain species/resources which need to be better identified.

In conclusion, we believe no single agency or user group is responsible for the wildlife losses resulting from development and operation of the Rocky Reach Project. The proposals outlined in this letter would be considered as "standard operating procedures" for evaluating new water development proposals under present State and Federal laws, rules, regulations, and policies. Unfortunately, these legal mandates which today provide for the protection of our wildlife resources were either nonexistent or in their infancy when the Rocky Reach Project was being developed. However, both the NWPA and the Power Council's Fish and Wildlife Program recognize this and together have given us an opportunity to correct our past mistakes. The Service is eager to move toward that end.

Sincerely,

J. W. Teeter

James W. Teeter
Acting Assistant Regional Director
Habitat Resources

cc: ES-Olympia/Moses Lake
Chelan PUD
WDG

MAY 7 1984 MAY 7 1984

COMMISSIONERS
ALFRED PFLUGRATH, PRESIDENT
JEAN H. LUDWICK, VICE-PRESIDENT
JAMES R. WALL, SECRETARY
WILLIAM D. SCOTT, ASST. SECRETARY
ROBT. O. KEISER, COMMISSIONER

GERALD L. COPP, MANAGER

Public Utility District No. 1 of Chelan County

P. O. BOX 1231 • WENATCHEE, WASHINGTON 98801-0011 • (509) 663-8121

May 1, 1984

Mr. John Palansky, Director
Division of Fish and Wildlife
Bonneville Power Administration
P. O. Box 3621
Portland Oregon 97208

Attention: Mr. James Meyers

Dear Mr. Palansky:

Enclosed are our comments on the "Wildlife Mitigation Status Reviews" for the Chelan, Tumwater/Dryden, Rocky Reach and Rock Island dams.

We have no comments on the review for the Tumwater/Dryden projects.

Our comments on the Chelan, Rocky Reach, and Rock Island project reviews are somewhat detailed. As a result, comments for each of these three projects are addressed separately. With these comments, we have also provided supplemental information which, with our comments, should improve the accuracy of the status reports.

Our comments to the previous draft Rock Island Project status review (section concerning pre-flood wildlife numbers) were completely ignored in this draft. We feel our comments are an accurate critical review of that section (our wildlife biologist worked on that particular project for WDG) and we hope our comments will not be ignored a second time concerning this draft.

If you have any questions concerning our comments or need any additional information, please contact our Wildlife Biologist, Paul Fielder.

Sincerely,

Dick Nason

Dick Nason, Supervisor
Fish & Wildlife Operations

Enclosures

Rocky Reach Project

1. III. D. 2. The PUD has developed 3, not 10 parks (Lincoln Rock, Orondo, and Entiat along Rocky Reach Reservoir, totaling 212 acres. The Rocky Reach Dam visitor center (one of the Rocky Reach Exhibit R sites) is actually downstream from Rocky Reach Dam and not along that reservoir. It totals 78 acres. Five other Exhibit R sites, totaling 437 acres are proposed.

2. IV. A. ¶2. What is butterbrush? Hitchcock and Cronquist (1973) list no such plant.

3. IV. B. ¶1. The 36 monthly wataerfowl counts were during the period 1975-77. There are no data for 1978. Chelan PUD has a copy of the FWS (unpub. data) referred to, and we disagree with the high numbers presented in the status report and the methodology used in arriving at them. What the preparers of the status report did was add the number of waterfowl seen each survey for each year (i.e., Jan. + Feb. + Mar. + Apr.+....Dec). These sum totals were added together for each of the years 1975-77 and divided by 3 to arrive at a "annual use" number of birds. This method is not valid, not professional, and reflects poorly on the quality of this status report. It assumes that the same birds were not seen from month to month. Using that technique, the more times you count them the more waterfowl you would have. Waterfowl often tend to remain in an area for more than a month at a time and individuals would be counted in more than one monthly survey. To demonstrate how the above method misrepresents waterfowl data, the highest number of waterfowl seen on anyone of those 36 surveys was 7412 ducks, 2875 geese, 6876 coots, and 5 swans, about 1/3 of the numbers presented in the status report.

4. IV. B. ¶2. Bald eagle survey data from 1981 and 1982 could not be contained in a publication dated 1980 (Fielder and Starkey 1980). It may be better to reference bald eagle information as (Fielder and Starkey 1980, Fielder and Starkey, unpubl. data). Also, the bald eagle numbers referenced in this paragraph are too low (5 adult and 2 subadult). During 10 years of surveys, Rocky Reach Reservoir has averaged a minimum of 7.5 adult and 3.7 subadult bald eagles (Table 1). Young (1983) suggests that because of the transient nature of wintering bald eagles, the number that actually use Rocky Reach Reservoir is probably much higher. PUD bald eagle studies during the winter of 1983-84 found that there is no night roost near the Entiat River mouth. There is a roost in the NW 1/4 of Section 29, (about 1/4 mile from the reservoir) just above Earthquake Point above Entiat. The eagles using the upper end of the reservoir roost singularly or at the Wells Dam roost described by Fielder and Starkey (1980).

5. IV. B. end of ¶3. In addition to 1983 goose nest data (Fielder and Grove 1983), Fielder conducted goose nest surveys along Rocky Reach Reservoir in spring 1984 and found 33 Canada goose nests.

6. IV. B. ¶4. The USACE (1976) inventoried vegetation along the reservoir at least 8 years ago, not recently. Because of the great amount of orchard and residential development which has occurred along the Rocky Reach Reservoir since then, we suggest that the word "recently" be replaced by the phrase "8-9 years ago".

7. VI. The PUD has been conducting several studies which may related to wildlife mitigation along Rocky Reach Reservoir. (A) At WDG request, the PUD conducted goose nest surveys along the reservoir in 1983 and 1984. These are more intensive than the "once/season" surveys conducted by WDG. These provide a broader scope of data which can be used in evaluating reactions of nesting geese to the original project and operation as well as future project modifications. (B) Chelan PUD, as well as Douglas and Grant PUDs, funded aerial bald eagle surveys in eastern Washington during the winters of 1982-83 and 1983-84 when USFWS funding for these surveys terminated. The PUD funded surveys provide information on bald eagle abundance and distribution and perch site use along the mid-Columbia which is valuable in evaluating project impacts and providing a data base on which to evaluate future project modifications (see letter from T. Juelson, WDG attached). (C) During the winter of 1983-84, the PUD conducted weekly waterfowl surveys along Rocky Reach Reservoir (Fig. 1). These data are further broken down into the 4 segments of the pool to better establish baseline data on relative abundance and distribution of waterfowl to evaluate impacts of project operations or future modifications.

Literature Cited

Fielder, P. C. and R. A. Grove. 1983. Canada goose nesting along Rock Island and Rocky Reach reservoirs. Unpub. data, Chelan County PUD.

Fielder, P. C. and R. G. Starkey. 1980. Winter bald eagle use along the upper Columbia River. pp. 177-193 in Knight, R. L., G. T. Allen, M. V. Stalmaster, and C. W. Servheen, eds. Proc. WA. Bald Eagle Symp., Seattle, Wash.

Hitchcock, C. L. and A. Cronquist. 1973. Flora of the Pacific Northwest. Univ. of WA. Press, Seattle.

U. S. Army, Corps of Engineers. 1976. Inventory of riparian habitats and associated wildlife along Columbia and Snake Rivers in BPA, Draft Status Report on Wildlife Mitigation: Rocky Reach Project.

Young, L. S. 1983. Movements of bald eagles associated with autumn concentration in Glacier National Park. M.S. Thesis, University of Montana, Missoula.

Status Report on Wildlife Mitigation

WELLS PROJECT

Prepared by

Washington Department of Game

and

U.S. Fish and Wildlife Service

for

Bonneville Power Administration

in response to the

Fish and Wildlife Program
Northwest Power Planning Council

1984

H-1

I. PROJECT NAME

Wells Dam and Reservoir Project (FERC #2149)

II. PROJECT OPERATORS

Douglas County Public Utility District No. 1 (PUD)

III. PROJECT DESCRIPTION

A. Location and Size

The project consists of Wells dam and powerplant located on the Columbia River at River Mile (RM) 516 in north central Washington 11 miles northeast of the town of Chelan. The powerplant was originally constructed with 10 generating units with a rating capacity of 81.5 MW each. Lake Pateros (Wells Reservoir) formed by the dam extends 30 miles upstream to Chief Joseph Dam (RM 545) on the Columbia, 14 miles up the Okanogan River, and 2 miles up the Methow River. Surface area of the reservoir at full pool is 9,548 acres.

B. Authorized Purposes

Primary purpose of the project is hydroelectric power generation with secondary purposes of navigation, irrigation, reclamation, flood control, recreation, wildlife, and municipal water supply.

C. Brief History of Construction and Operation

The project was authorized by terms and conditions of the Federal Water power Act of 1920 (41 Stat. 1063, 16 U.S.C. 791-823) and licensing authority of the Federal Power Commission (now FERC) in 1962. During original construction only seven generating units were to be installed; however, the PUD later decided to complete all ten. These units were increased in output capacity from the original 70.5 MW to 81.5 MW in 1967.

In March of 1981, the PUD made application to FERC for an amended license to raise the elevation of lake Pateros by 2 feet. That amendment was approved in September 1982 and the reservoir raised accordingly. However, due to intervention by the Colville Confederated Tribes (CCT) over archeological concerns, the license was revoked and the reservoir lowered to its original level two months later. Once these issues were resolved, the amended license was restored and the reservoir raised once again in September 1983. The PUD anticipates installation of new turbine units mid- to late 1985 and a resulting increase in generating capacity. This will require further amendments to the existing FERC license.

D. Other Pertinent Data

1. Water level fluctuation and timing

The project was originally constructed to provide baseload power generation. However, this role is expected to change to peak power only as demand increases and expansion of the mainstem hydroelectric network occurs. Because of the reservoir configuration, storage capacity was limited with the original full-pool elevation of 779 f.a.s.l. providing 300,000 acre-feet. With the 2-foot pool raise to 781, storage capacity was increased to _____ acre-feet.

Normal power drawdown was between 771-779. With the increase in reservoir elevation, the drawdown will now be 771-781.

2. Land Ownership

Lands within the project boundary are owned entirely by the PUD up to an elevation 5-6 feet above full pool. These lands break down as follows:

743 acres overlying the CCT reservation
261 acres on Washburn Island
252 acres managed by WDG
877 acres non-Indian lands
50 acres managed by State parks
267 acres overlying lands owned by State parks

Lands beyond the project boundary are in private ownership in Douglas County and divided between private and CCT ownership in Okanogan County.

3. Indian Rights

As noted above, the project overlies lands of the CCT along the east shoreline between the mouth of the Okanogan River and Chief Joseph Dam. At project completion 1,004 acres of reservation lands were inundated by Lake Pateros, which were used for various purposes and included a number of important archealogical sites. The loss of these lands and their past, present, and future uses were addressed in the 1982 CCT intervention to license amendment. These issues are further discussed in the mitigation history section of this report.

IV. WILDLIFE SPECIES AND HABITAT ASSESSMENTS

A. Preconstruction Period

Article 43 of Federal Power commission (FPC) license number 2149 (Appendix 1) issued to Public Utility district No. 1 of Douglas County (PUD) required the PUD to fund a study to determine the impacts of project construction and land

inundation on wildlife. Wildlife investigations on non-Indian lands were conducted by the Washington Department of Game (WDG) during the period 1962-1966. Results of the investigations are presented in Oliver and Barnett (1966).

Dominant plant species identified in the Wells Hydroelectric Project area prior to inundation included cheatgrass, bunchgrass, big sage, bitterbrush, hawthorn, serviceberry, mock orange, buckbrush, elderberry, clematis, and birch. Scattered ponderosa pine, cottonwood, juniper, dogwood, and willow were found along the shoreline (Oliver and Barnett 1966).

Wildlife studies in the project area made use of wildlife quadrat counts, call count-audio census, sight-frequency counts, trapping and tagging, sex and age ratio data, bag checks, and harvest data to determine seasonal wildlife population densities in the project area and to calculate the recreational value of each species. Transects were set up inside the area to be inundated ("in-pool" transects) and outside of the inundation zone ("out-pool" transects).

Of the 5,542 acres that the PUD estimated would be inundated by the Wells Project, 2,620 acres were classified as range land, 1,035 acres as orchard, 1,145 acres as other agriculture, 100 acres as municipal, and 642 acres as river banks, woods, and brush (Oliver and Barnett 1966).

From quadrat counts, Oliver and Barnett (1966) determined that for all species in all seasons for which density estimates could be obtained, the in-pool density was higher than the out-pool density. Streamside vegetation is important for upland game birds and mammals year-round to provide food and hiding and thermal cover.

During the 1963 hunting season, about 200 hunters were contacted in the field in the project area and later were sent a project-use questionnaire. Seventy-six percent of the questionnaires were returned. From the questionnaire, Oliver and Barnett (1966) estimated that 1,502 mourning doves, 9,419 California quail, 1,274 pheasants, 433 chukar, 144 hungarian partridge, 1,641 ducks and geese, 164 cottontail rabbits, and 3 deer were harvested from the impoundment area during the 1963 season. The total in-bag value of this wildlife was estimated at $36,023 annually; amortized at 3.979% over the 50-year term of the project license, the total value was estimated at $905,328.73 (Oliver and Barnett 1966).

A FWS study conducted in 1964 prior to formation of Wells Reservoir, estimated that 47,486 doves depended on the orchard habitat that would be inundated by the project. Dove use of nonorchard areas was not investigated in this study (FWS 1967).

The same study estimated that 6-10 broods of Canada geese were raised annually on the project area prior to inundation. FWS (1967) estimated that 90-95% of preproject waterfowl nesting habitat would be inundated by Wells but that the formation of new shallow areas and islands in the reservoir would partially offset this loss. Aerial counts in October 1957 showed 257 geese and 2,318 ducks using the preimpoundment area upstream from Brewster (FWS 1967).

Oliver and Barnett (1966) concluded that inundation of the Wells Project area would result in the loss of 5,038 pheasants, 22,168 California quail, 3,075 chukar, 69,275 mourning doves, over 610 cottontail rabbits, and over 50 white-tailed and mule deer. Annual harvest losses were estimated at 892 pheasants, 6,593 quail, 303 chukar, 101 Hungarian partridge, 1,698 doves, 115 cottontails, and 2 deer (Oliver and Barnett 1966).

The results of the WDG preflood wildlife investigation received much criticism from the PUD. The report by Oliver and Barnett (1966) was submitted by the PUD to several biological consultants for review and comment.

Remington (1969), a PUD consultant, felt that the loss estimates presented by Oliver and Barnett (1966) were inaccurate, biased, and excessive and that conclusions of the report were not justified by the data gathered. Remington (1969) stated that more stable water levels and a possible increase in waterfowl use of the new reservoir, as well as the fact that the reservoir shoreline would be open to public use were factors that would offet some of the alleged losses.

Eicher (1968), another PUD consultant, felt that the quadrat method of censusing used by Oliver and Barnett (1966) was developed to compare populations in one area to those in another, rather than to estimate the total population of one area. He also felt that WDG damage claims for wildlife given by Oliver and Barnett (1966) were overestimated.

Overton (1971), yet another PUD biological consultant, criticized Oliver and Barnett (1966) for basing wildlife loss estimates on hunting values and ignoring the esthetic value of wildlife. Overton (1971) questioned the methodology and statistical analysis used by Oliver and Barnett (1966), in particular the pooling of transect data. Overton (1971) estimated that the Wells Project resulted in the loss of no more than 1,200 mourning doves rather than the 69,275 dove loss claimed by Oliver and Barnett (1966). His calculation of dove losses was based on the assumption that nesting habitat was not a limiting factor on dove populations in the project area (Overton 1971). Overton's initial estimates of wildlife losses in the Wells Project

area were 133 pheasants, 2,550 quail, 185 chukar, 62 Hungarian partridge, 1,200 doves, 164 rabbits, and 1 deer, with a total value of $10,370 annually (Overton 1971).

Remington (1969), Imler (1970), Eicher (1968), and Overton (1971) all criticized the use of the hunter questionnaire by Oliver and Barnett (1966), claiming that the manner in which the questionnaire was worded and distributed and the statistical methods used to extrapolate the questionnaire data resulted in harvest estimates that were biased upward.

Imler (1970) criticized the use of the quadrat method and the use of harvest figures from the severe winter of 1968-69 by Oliver and Barnett (1966) as a basis for comparison with preproject harvest figures. In his report to the PUD, Imler (1970) cited possible benefits to waterfowl of the new reservoir and recommended that they be recognized as mitigating factors.

WDG countered criticisms by the PUD and defended its methodology and study results in later testimony and documents (WDG 1972 and 1973).

B. Postconstruction Period

Post-flood surveys revealed that 4,680 acres were actually inundated by Wells Project, rather than the preflood estimate of 5,542 acres (FPC 1973b). Approximately 1,004 of those acres were on Colville Indian Reservation lands.

No formal report was prepared on the results of postflood wildlife studies that were conducted after Wells Project was in operation. The information given below is taken from the testimony of WDG witness Oliver during an FPC hearing on the Wells wildlife negotiations in August 1972 (FPC 1972) and from FPC (1973a).

After the reservoir was filled, the in-pool transects established by Oliver and Barnett (1966) were replaced by out-pool transects, and the out-pool transects were censused by WDG as before. For the period 1968-1972, wildlife densities were calculated for each transect. Pre- and postflood counts were compared to yield an estimate of the number of animals lost because of inundation. WDG claimed that losses were even greater than those predicted by preflood studies and revised its claim upward. WDG also cited a decrease in harvest of key game species and a decrease in hunting license sales in the tri-county area as impacts of the project revealed by Statewide harvest and license sales records. As with the preflood study results, post-flood loss estimates by WDG were criticized by the PUD as being excessive and incorrectly derived. Overton (1973) revised his preflood loss estimates as follows: 800 pheasants, 1,220 quail, no chukar or Hungarian partridge, and dove losses that were compensated for by waterfowl

gains. The total value of the revised wildlife loss was $10,658 (Overton 1973).

The FPC (1973a) concluded that neither the PUD nor WDG had presented any unassailable answers regarding wildlife losses on Wells pool. Further studies were rejected on the grounds that more time would be lost without replacement of game losses.

1. Present Conditions/Operations

Canada goose populations increased by 79% after the project was constructed (WDG files, Yakima). Diving ducks and coots increased from very few birds before project to 13,287 divers and 27,459 coots after project. Eicher (1968) made a 1-day survey in 1967 and another in 1968 of wintering populations of ducks in the project area. He estimated that game duck species increased 102-fold and nongame duck species 80-fold after the project (Eicher 1968).

FWS aerial waterfowl counts conducted monthly on Wells Pool for the period 1975-78 showed an average of 12 mated pairs of ducks (including coots) with an average brood size of 4 young out of a total of 6,000 ducks. The same surveys showed an average of ten mated pairs of geese with an average brood size of six young out of 426 total geese (FWS files, Moses Lake).

There are two bald eagle winter roosts on Wells Pool, one on the right bank about 1/2-mile upstream from the dam and the other on the left bank across from the mouth of the Okanogan River. Average annual bald eagle use on Wells Pool for the period 1975-1983 (averaged over a 6-month winter period) is 40 adult and 31 young eagles (Fielder and Starkey 1980). Average golden eagle use is two adults and one young.

Only one change has been made in the operation of Wells Dam since its construction. In 1982, the level of the reservoir was raised 2 feet from elevation 779.0 to elevation 781.0 feet above sea level. No structural changes were made in the dam.

In February of 1979, the PUD and WDG signed an agreement to conduct preliminary wildlife studies along Wells Reservoir to: (1) obtain information on the impacts and benefits to wildlife of the 2-foot pool raise and (2) recommend measures to compensate any impacts.

McGee (1979) identified four native plant communities within two vertical feet of the pre-raised pool: (1) shrub-steppe, (2) riparian shrub, (3) conifer, and (4) stream terrace deposit. An estimated 138.6 acres of shoreline and island were to be affected by the pool raise. Approximately 115 of those acres had been periodically flooded by spring freshets. About 75% of the 115 acres was flooded every

spring; the remainder was flooded approximately five times since project construction. Twenty-four acres had never been flooded (PUD 1981).

Wildlife dependent upon riparian and island habitat were expected to be most severely impacted (McGee 1979). About 275 pheasants would be affected by the pool raise on Washburn and Bridgeport Bar islands; 35 pheasants would be permanently lost. Two percent of the quail, chukar, and Hungarian partridge population would be affected by loss of food and cover. This amounted to approximately 371 quail, 54 chukar, and 12 Hungarian partridge (McGee 1979). An estimated 237 doves would be affected by loss of feeding and nesting habitat (McGee 1979).

Sand bar resting areas used by resident and migratory waterfowl would be inundated by the pool raise. Some goose brooding areas were also in the inundation zone. Nineteen of 39 active goose nest sites were below the new pool level (McGee 1979).

Diving ducks were expected to benefit from the pool raise. Bald eagles, owls, hawks, songbirds, small mammals, furbearers, deer, bats, amphibians, and reptiles were all expected to be impacted by loss of food and/or cover, but losses for these species were not quantified.

The reservoir raise would temporarily increase the rate of erosion along the reservoir (PUD 1981).

V. WILDLIFE MITIGATION HISTORY

Wildlife agencies and Douglas County PUD spent years negotiating wildlife mitigation for the construction of Wells Project. Many proposals were presented and rejected before a final agreement was reached in 1974. Because of the length and comlexity of the negotiations, many discrepancies exist in the mitigation documentation as to the actual proposals presented by WDG and the PUD. Most of the following information on Wells mitigation history was taken from two FPC documents: the Final Environmental Impact Statement for the Wells Project (FPC 1973b) and the Commission Staff Counsel Initial and Reply Brief (FPC 1973a).

The first WDG mitigation recommendation was presented by Oliver and Barnett (1966). The proposal had four parts: (1) acquisition of and habitat improvement on noninundated land, (2) an interim program of acquiring hunting leases on private lands and providing game farm-raised birds to compensate for hunting losses while habitat improvement measures were taking place, (3) removing brush only to normal pool level rather than high pool, and (4) periodic evaluation of project mitigation.

In a Petition for Emergency Hearing filed with the FPC by WDG in 1971, WDG revised its initial mitigation proposal. The revised proposal asked for: (1) habitat replacement adjacent to the reservoir, (2) an interim relief program consisting of the annual release of 14,500 game farm pheasants on 4,800 acres acquired in fee by the PUD and given to WDG, and (3) payment of the costs of construction, operation, and maintenance by the PUD of a facility to produce 14,500 pheasants annually for the term of the project license.

The final proposal by WDG in 1972 asked for: (1) a rearing facility capable of producing 11,660 cock pheasants annually, and 3,900 acres of optimum habitat to be used as pheasant release sites, (2) habitat improvement on off-project lands acquired by the PUD in fee and on 400-600 acres of project land, and (3) a program to study, monitor, and evaluate the success of mitigation.

The PUD's mitigation proposal was developed by Wight (1970). the plan involved: (1) leasing agreements with farmers on PUD lands which would require the practice of game management principles and allow hunting access on such lands, and (2) intensive habitat management on over 800 acres of land on the Monse Peninsula, Washburn Island, and Park Island Point. The habitat development program included food strip plantings by lessee farmers, 28 miles of clump plantings, 7-1/2 miles of river border cover plantings, and fencing to protect plantings from grazing livestock. Feeding shelters, artificial quail roosts, and floating and platform goose nests would be established throughout the project area (Wight 1970). The PUD plan involved a total of about 1,700 acres within or adjacent to the project boundary (FPC 1973a).

The FPC Staff (Staff) proposed a mitigation plan which was an attempt at compromise between the WDG and PUD proposals (FPC 1973a). Staff proposed an updated postflood census of wildlife populations as a basis upon which to measure the success of mitigation. The Staff plan recommended: (1) the release of 9,100 game farm pheasants annually on 3,033 acres acquired by easement and open for hunting, all costs to be borne by the PUD, (2) a habitat improvement program on 1,700 acres essentially the same as that proposed by Wight (1970), and (3) a periodic evaluation program to continue for the length of the license (FPC 1973a).

WDG's mitigation proposal was criticized by the PUD as an attempt to replace natural values (i.e., wild upland birds) with artificial values (i.e., game farm pheasants) (FPC 1973a). The PUD was strongly opposed to a program of raising game farm pheasnts for "under-the-gun" release.

WDG criticized the PUD mitigation proposal for not providing any interim relief for hunters while habitat development was taking place. WDG also claimed that the PUD plan of habitat development was too experimental in nature and too costly to serve as the sole means of mitigation (FPC 1973a).

In addition to WDG, the PUD also conducted negotiations with the Colville confederated Tribes (CCT) for damage to the fish and wildlife resource on Tribal lands as a result of the development of the Wells Project.

Using data provided by Oliver and Barnett (1966), the CCT computed wildlife losses on Tribal lands and asked the PUD for $379.470.66 in wildlife damages based on these computations.

The PUD felt the claim by CCT was excessive and responded with a proposal to pay to the CCT the sum of $168,000 over a period of 10 years to be used for the development of wildlife habitat and hunting improvement projects on the reservation (see Appendix D).

McGee (1979) proposed specific measures to mitigate wildlife losses expected to result from the 2-foot pool raise at the Wells Project in 1982. Briefly, these measures were:

(1) replace goose nest sites inundated or eroded by the pool raise;

(2) replace the grass strip at RM 517; plant a goose brooding pasture at RM 534;

(3) replace or preserve the cattail marsh on Washburn island;

(4) construct and install artificial raptor perch sites;

(5) replace riparian vegetation affected by the pool raise;

(6) raise the pool elevation in September or October to avoid flooding aquatic furbearer dens during the reproductive period or during severe winter weather.

Enhancement recommendations given by McGee (1979) included:

(1) construct islands for waterfowl and upland and nongame birds

(2) construct sloughs and ponds for aquatic furbearers, waterfowl, upland game, and nongame

B. Mitigation Agreements or Requirements

FPC License No. 2149, Article 41 provides as follows:

> The Licensee shall construct, maintain and operate such protective devices and shall provide such measures and facilities for mitigating losses to fish and wildlife resources as may result from project construction, alteration, or operation and shall comply with such reasonable modifications of the project structures and operation in the interest of fish and wildlife resources, provided that such modifications shall be reasonably consistent with the primary purpose of the project, as may be prescribed hereafter by the Commission upon its own motion or upon recmmendation of the Secretary of the Interior of the Washington State Departments of Fisheries and Game after notice and opportunity for hearing and upon a finding that such modifications are necessary and desirable and consistent with the provisions of the Act: provided further, That subsequent to approval of the final design drawings prior to commencement of construction no modifications of project structures in the interest of fish and wildlife resources which involve a change in the location, height or main structure of a dam, or the addition of or changes in outlets at or through a dam, or a major change in generating units, or a rearrangement or relocation of a powerhouse, or major changes in a spillway structure shall be required.

A copy of Resolution No. 3357, the wildlife mitigation agreement signed by WDG and the PUD in July 1974 is provided in Appendix D. A brief description of the main points of the agreement is given below.

The PUD agreed to pay to WDG the sum of $1,250,000.00 cash to be used for wildlife resources including the development, management, and acquisition of lands and propagation of wildlife in Douglas and Okanogan Counties within close proximity to Wells reservoir and the Columbia River and its tributaries.

The PUD also transferred title to WDG the following properties:

(1) Central Ferry Canyon - 1,569 acres

(2) Foster Creek property - 1,025 acres

(3) Indian Dan Canyon - 2,865 acres (plus lease on additional 1,400 acres)

(4) Harold B. Vaughn property - 65 acres

(5) Louise Reeve property - 14.0 acres

(6) Bridgeport Bar - 105.0 acres

(7) Asmussen property - 22.0 acres

(8) Bonar property

(9) Williams property

The PUD acquired and leased to WDG the property known as Washburn Island. WDG was given the right to manage wildlife resources on project lands surrounding the reservoir.

In January 1970 the CCT signed an agreement with the PUD whereby the PUD would pay the CCT the sum of $168,000 over a period of 10 years to be used for wildlife habitat and hunting improvement projects on the reservation (see Appendix D).

In May 1970, the PUD and CCT signed another agreement (Appendix D) whereby the PUD granted the use of a parcel of land on the Okanogan river to the CCT as a wildlife management area.

The PUD and WDG signed an agreement on July 19, 1982 (see Appendix D) regarding mitigation for the 2-foot pool raise. The agreement provided that the PUD would:

(1) protect goose nest islands from erosion and raise or berm existing islands;

(2) preserve the cattail marsh on Washburn Island;

(3) establish a waterfowl feeding area at RM 517;

(4) construct and install raptor perch poles;

(5) replace 3.9 acres of shoreline vegetation;

(6) replace inundated shorelands with 10 acres of wildlife habitat plantings.

An agreement signed between the PUD and CCT in November 1983 set forth measures to protect and mitigate wildlife habitat on Tribal lands affected by the 2-foot pool raise (Appendix D). The PUD agreed to provide for the stabilization of water levels and preservation of wildlife habitat in three sloughs at Cassimer Bar by construction and operation of dikes.

C. Mitigation Implemented

Mitigation was implemented as set forth in the July 1974 mitigation agreement between the PUD and WDG (see Appendix D). The lands transferred to WDG are known as the Wells Habitat Management Area (HMA). Monies received through the investment of the original $1,250,000 paid to WDG by the PUD are used to operate and maintain Wells HMA. Wells HMA is

operated primarily as an upland game bird and waterfowl management area, although the area supports a wide variety of other game ana nongame birds and mammals.

Mitigation for the 2-foot pool raise on non-Indian lands has been or is being implemented as per the agreement signed by the PUD and WDG in July 1982 (Appendix D).

Funds provided to the CCT by the PUD as mitigation for the original project were used for operation of the Tribe's fish and wildlife department (Steve Judd, pers. comm.). Mitigation for the 2-foot pool raise is expected to be implemented per the agreement between the PUD and CCT of November 1983 (Steve Judd, pers. comm.) (Appendix D).

VI. CURRENT STUDIES AND PLANNING

No current studies or mitigation planning are underway at this time.

VII. REFERENCES CITED

Eicher, D.J. 1968. Observations with respect to "Wildlife Studies in the Wells Hydroelectric Project Area" by Wendell H. Oliver and Dan C. Barnett, Washington State Department of Game, July 1966. Prepared for PUD No. 1 of Douglas County, E. Wenatchee, Wash., 26+ pp.

Fielder, P.C. and R.G. Starkey. 1980. Wintering bald eagles along the upper Columbia River, Washington in Knight, R.L., G.T. Allen, M.V. Stalmaster, and C.W. Servheen (ed.) Proc. of the Washington Bald Eagle Symp., Seattle, WA.

Federal Power Commission. 1972. Direct testimony of Wendell H. Oliver before the Federal Power commission. PUD No. 1 of Douglas County, WashingtonProject No. 2149. 86 pp.

Federal Power Commission. 1973a. commissin staff counsel initial and reply brief. PUD No. 1 of Douglas County, Washington, Project No. 2149. 61 pp.

Federal Power Commission. 1973b. Final environmental impact statement. Wells project No. 2149-Washington, wildlife proceedings. 58+ pp.

Imler, R.H. 1970. An analysis of wildlife values, Wells hydroelectric project, FPC license No. 2149, Columbia River, Washington. prepared for PUD No. 1 of Douglas county, Wash. 30 pp.

McGee, J.A. 1979. Assessment of impacts to wildlife from raising Wells Dam reservoir two feet. Washington Dept. of Game, Habitat Management Division, Applied Research Section. 40 pp.

Oliver, W.H. and D.C. Barnett. 1966. Wildlife studies in the Wells hydroelectric project area. Wash. Dept. of Game, Olympia. 37 pp.

Overton, W.S. Analysis of Wells hydroelectric project wildlife studies. Prepared for PUD No. 1 of Douglas County, E. Wenatchee, Wash. 23 pp.

Overton, W.S. 1973. A post-hearing reappraisal of mitigation wildlife values in the Wells project. 25 pp.

Public Utility District No. 1 of Douglas County, Washington. 1981. Wells hydroelectric project Lake Pateros elevation change, application for amendment to the license FERC project No. 2149. Exhibits A through W.

Remington, J.D. 1969. An analysis of the report "Wildlife Studies in the Wells Hydroelectric Project Area" with recommendations. Douglas County PUD No. 1, E. Wenatchee, Wash. 38 pp.

U.S. Department of the Interior, Fish and Wildlife Service. 1967. A special report on waterfowl and mourning doves, Wells hydroelectric project, FPC No. 2149, columbia River, Washington. Portland, Oregon 18 pp.

Washington State Department of Game. 1972. Opening brief of Wash. Dept. of Game. FPC Project No. 2149. Olympia, Wash., 50 pp.

Washington State Department of Game. 1973. Reply brief of Wash. Dept. of Game. FPC Project No. 2149. Olympia, Wash. 25 pp.

Wight, H.M. 1970. A wildlife management plan for the Wells hydroelectric project. Prepared for PUD No. 1 of Douglas County, E. Wenatchee, Wash. 58 pp.

VII. APPENDICES

APPENDIX A - Study Team

Washington Department of Game - Gretchen Van Lom
U.S. Fish and Wildlife Service - Ron Starkey

APPENDIX B - Consultation/Coordination

July 1983 - FWS sent letter to PUD initiating contact for mitigation status review.

July 13, 1983	-	Jim McGee and Mike Erho of Douglas PUD attended informational meeting in Spokane.
July 1983	-	PUD indicated by letter that Jim McGee would be contact for mitigation status review.
Sept.-Dec. 1983	-	Several phone contacts were made between PUD and study team for purposes of gathering information for status review.
January 23, 1984	-	Mike Erho, Jim McGee, Gretchen Van Lom (WDG), and Ron Starkey (FWS) met to discuss status review.
March 1984	-	WDG made contact by phone with Jim McGee to notify him that draft status review was completed.

APPENDIX C

Comments

IN SPEEMAN
Governor

SEP 18 1984

STATE OF WASHINGTON
DEPARTMENT OF GAME

September 6, 1984

John Palensky, Director
Division of Fish & Wildlife
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208

ATTN: James Meyer

Dear Mr. Palensky:

My staff has reviewed the Mitigation Status Review Report for Wells Project. Our comments follow.

Wells Project was authorized in 1962 and constructed soon after authorization Planning for the project included wildlife under Fish and Wildlife Coordination Act (FWCA) and Federal Power Commission (FPC) [now Federal Regulatory Energy Commission (FERC)] regulations. Douglas County P.U.D. funded the Department of Game to conduct studies to determine impacts of the project on fish and wildlife. As a result extensive pre- and post-flood wildlife and habitat studies were conducted for the project. More complete wildlife and habitat information exists on this project than for most other Colubmia River hydro-electric projects.

Following completion of the studies, extensive negotiations yielded the agreement of July 1974 for mitigation on Wells Hydroelectric Project. This agreement included; 1) provision of approximately 7,400 acres of land to Washington Department of Game in fee title and leases, for mitigation purposes and 2) provision of $1,250,000 for acquisition, development, operation and maintenance of mitigation lands. The agreement also provides for renegotiation of operation and maintenance costs for mitigation lands in the event of an extension in time, renewal, or relicense of the project.

In March of 1981, Douglas County P.U.D. applied for an amendment to their license that would provide for a two foot pool raise. The P.U.D. and Washington Department of Game signed an agreement in July of 1982 regarding mitigation for this pool raise. Measures to mitigate the pool raise impacts are being implemented now.

This agency feels impacts of original project construction, and of the pool raise have been or will be mitigated by the measures agreed to in the July 1974 and July 1982 agreements between the Public Utility District and the Department of Game. The only major concern remaining on this project is mitigation of project operation for power peaking. This is a system wide issue, however, and should be handled as such.

The department will continue to work with Douglas County P.U.D. and other appropriate agencies and tribes to insure continued cooperation on wildlife issues. We therefore recommend no further action be taken by the Council or BPA on this project and that it be eliminated from the project list as per Section 1004(b)(3) of the Program.

Very truly yours,

THE DEPARTMENT OF GAME

Larry Lennox, for:
Frank R. Lockard
Director

FRL:pr-b

cc: Mike Erho, Douglas County P.U.D.
Marty Montgomery, Wildlife Coordinator

JUN 28 1984

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Lloyd 500 Building, Suite 1692
500 N.E. Multnomah Street
Portland, Oregon 97232

June 27, 1984

Mr. John Palensky
Director, Division of Fish and Wildlife
Bonneville Power Administration
Department of Energy
P.O. Box 3621
Portland, Oregon 97208

Dear Mr. Palensky:

As requested, we have reviewed a copy of the Status Report on Wildlife Mitigation for the Wells Dam and Reservoir Project which was jointly prepared by the Habitat Resources Division of the Fish and Wildlife Service (FWS) and the Washington Department of Game (WDG) under contract with the Bonneville Power Administration. The following represents the formal response of the FWS regarding the subject project.

General Comments

We have completed an extensive search of agency files and reference materials and find that we have no additional information with which to make corrections or additions to the subject report. Insofar as our resource interests are concerned, we find the report to be complete and accurately written.

Specific Comments

It is clear from the report's content that original construction and operation of the project resulted in adverse impacts to wildlife resources, although impacts to species of priority to the FWS are harder to document. There is some evidence which suggests that the project has benefitted certain species--migratory waterfowl, for example.

Even so, requirements specified in Douglas County PUD's license amendments have resulted in consummated wildlife mitigation plans signed with the WDG and Colville Confederated Tribes. The FWS acknowledges these agreements and supports their implementation. We do not believe there is merit in seeking further redress in view of the PUD's good faith efforts in recent years, and the fact that there appears to be little additional opportunity to enhance species of primary interest to the FWS.

We should point out that the WDG may not concur with our view and may wish to pursue further compensation/enhancement of resources under their purview. Should this be the case, the FWS will be supportive even though not actively involved in such efforts.

We do strongly believe, however, that the cumulative and secondary effects of this and other Columbia River reservoirs should be evaluated. A principal focus of multiple evaluation should be the broader effects of operation of projects as a "system", such as water fluctuations resulting from power peaking, etc. The extensive development that has occurred along the Columbia River floodplain has also cumulatively reduced a variety of wildlife habitats and related resources. Such development and related wildlife losses would have been considerably less without construction and operation of Wells Dam and other major Columbia River projects. In some instances, there may have been some net benefits to certain species/resources which need to be better identified.

In conclusion, we believe that no single agency or user group is responsible for the wildlife losses resulting from development and operation of the Wells Dam Project. Unfortunately, the legal mandates which today provide for the protection of our wildlife resources were either nonexistent or in their infancy when the Wells Project was being developed. However, both the NWPA and the Council's Fish and Wildlife Program recognize this and together have given us an opportunity to correct our past mistakes. The Service is eager to move toward that end.

Sincerely,

Assistant Regional Director
Habitat Resources

cc: ES, Olympia
ES, Moses Lake
Douglas County PUD
WDG

Colville Confederated Tribes

P.O. Box 150 · Nespelem, Washington 99155 (509) 634-4711

May 10, 1984

Mr. John Palensky, Director
Division of Fish and Wildlife
Department of Energy
Bonneville Power Administration
P. O. Box 3621
Portland, Oregon 97208

Attention: Mr. James Meyer PJS

Dear Mr. Palensky:

Our staff has reviewed the Project Report on the "Wildlife Mitigation Status Review" for the following projects: Chelan, Tumwater/Dryden, Rock Island, Priest Rapids/Wanapum, Wells and Chief Joseph Dams.

We feel, at this time, that they present the wildlife mitigation situation fairly well.

Sincerely,

Al Aubertin, Chairman
Colville Business Council

APPENDIX D

Mitigation
Instruments

(10)

Final

AGREEMENT BETWEEN PUBLIC UTILITY DISTRICT NO. 1 OF DOUGLAS COUNTY AND THE CONFEDERATED TRIBES OF THE COLVILLE RESERVATION FOR FISH AND WILDLIFE MITIGATION

THIS AGREEMENT, made and entered into this 26th day of January, 1970, by and between PUBLIC UTILITY DISTRICT NO. 1 OF DOUGLAS COUNTY, WASHINGTON, a municipal corporation, hereinafter referred to as the "District", and THE CONFEDERATED TRIBES OF THE COLVILLE RESERVATION, by and through the Tribal Business Council, hereinafter referred to as the "Tribe", WITNESSETH:

That for and in consideration of the mutual covenants one to the other the parties hereto agree as follows:

(1) The District was granted License No. 2149 from the Federal Power Commission of the United States of America to construct the Wells Hydroelectric Project on the Columbia River, and by reason of which a portion of the lands within the Colville Indian Reservation have been inundated and the title to properties lying below the Wells Project Boundary within said reservation has been acquired by the District. There has been a loss to the Tribe by reason of said inundation and/or taking of fish and wildlife and by reason of which the parties have negotiated an amicable settlement.

(2) The District submitted its offer of mitigation for fish and wildlife to the Tribe, which offer of mitigation is attached hereto, marked Exhibit "A", and by reference made a part hereof. Said offer was accepted by the Tribe on the 5th day of December, 1969, by its Resolution No. 1969-461 entitled, "A Resolution Authorizing Acceptance of the Proposal of Public Utility District No. 1 of Douglas County, Washington, for Fish

BURNS, JEFFERS & JEFFERS
ATTORNEYS AT LAW
Professional Center, P. O. Box 1639
Telephone (509) 663-2144
Wenatchee, Washington 98801

and Wildlife Mitigation."

(3) Under the terms of said offer and in accordance therewith, the District agrees to pay to the Tribe for fishery mitigation the sum of $213,000.00, payable at the rate of $21,300.00, the first payment to be within twenty (20) days following the execution of this agreement and a like amount on July 1, 1970, and each year thereafter until the total amount of $213,000.00 has been paid. Funds in addition to $21,300.00 may be made available in any one year with the mutual approval of both parties, provided the total payable for fishery mitigation under this agreement does not exceed $213,000.00.

(4) Under the terms of said offer and in accordance therewith, the District agrees to pay to the Tribe for wildlife mitigation the sum of $168,000.00, payable at the rate of $16,800.00, the first payment to be within twenty (20) days following the execution of this agreement and a like amount on July 1, 1970, and each year thereafter until the total amount of $168,000.00 has been paid. Funds in addition to $16,800.00 may be made available in any one year with the mutual approval of both parties, provided the total payable for wildlife mitigation under this agreement does not exceed $168,000.00.

(5) This agreement constitutes full compensation by the District to the Tribe for any and all damage to wildlife and/or fishery upon the Colville Indian Reservation and the Columbia and Okanogan Rivers adjacent thereto as a result of the development of the Wells Hydroelectric Project.

DATED the day and year in this agreement above written.

PUBLIC UTILITY DISTRICT NO. 1
OF DOUGLAS COUNTY, WASHINGTON

By Michael Doneen
Michael Doneen, President

HUGHES, JEFFERS & JEFFERS
ATTORNEYS AT LAW
Professional Centre, P. O. Box 1600
Telephone (509) 662-2166
Wenatchee, Washington 98801

By _____
Lloyd McLean, Vice President

ATTEST:

_____
Howard Prey, Secretary

CONFEDERATED TRIBES OF THE COLVILLE RESERVATION

By _____
Narcisse Nicholson, Jr., Chairman
Colville Business Council

ATTEST:

_____
George Snider, Alternate Secretary
Colville Business Council

HUGHES, JEFFERS & JEFFERS
ATTORNEYS AT LAW
Professional Centre, P. O. Box 1000
Telephone (509) 667-3146
Wenatchee, Washington 98801

EXHIBIT "A"

COLVILLE CONFEDERATED TRIBES AND P.U.D. NO. 1 OF DOUGLAS COUNTY
FISHERY AND WILDLIFE MITIGATION

Mitigation of Colville Tribal Sockeye Snag Fishery

Introduction

In June 1969 a report was given to P.U.D. No. 1 of Douglas County by the business council of the Colville Confederated Tribes in which fish and wildlife damages totaling $606,163.51 were attributed to the Wells Hydroelectric Project. Of this total $226,692.85 represented loss of a sockeye salmon fishery at the mouth of the Okanogan River and $379,470.66 represented estimated wildlife damages.

Basis of Fishery Claim

Prior to the filling of Wells Reservoir in the summer of 1967 there existed at the confluence of the Okanogan and Columbia Rivers during the months of July and August an Indian fishery for sockeye salmon. The annual catch at this area was estimated to range from a low of 175 fish in 1963 to 5000 fish in 1947, 1948 and 1951. 1/

After the Wells Reservoir was filled the fishing area at the mouth of the Okanogan River was inundated preventing further use of the area for sockeye salmon fishing. Not only was the former fishing area inundated but the change from lotic to semi-static conditions at the former confluence of the Okanogan and Columbia Rivers resulted in a lack of sockeye salmon schooling in that area.

Background Information

In the summer of 1967 Indian fishing activity below Chief Joseph Dam was noted by Washington State Department of Fisheries personnel. A request for study funds to investigate the magnitude of this new fishery was received from the Department of Fisheries by P.U.D. No. 1 of Douglas County. Funding was subsequently arranged for surveilance of the fishery during 1968 and 1969. The results of the 1968 investigation were included in a letter from the Department of Fisheries dated 3-25-69 in which a sockeye catch of 2500 fish and a chinook catch of 100 fish were estimated from sampling data collected during July and August 1968.

Douglas County P.U.D. in compliance with Article 41 of the Federal Power Commission License No. 2149 has built and is operating or funding the operation of various fish passage and fish production facilities. These facilities were built and are operated to minimize the effect of the Wells Hydroelectric Project on the fishery resources of the Columbia River and tributaries in the Wells Project area. Fish ladders provide passage at the dam for anadromous fish species spawning upstream from Wells Dam. Notable among the several species spawning above Wells Dam are the sockeye salmon which ascend the Okanogan River to spawn above the United States and Canada border.

1/ The Effect of the Wells Project on the Indian Fishery at the Mouth of the Okanogan River. George Eicher, 1965, mimeographed report to P.U.D. No. 1 of Douglas County.

Fish production facilities are operated to augment natural production of summer chinook salmon and steelhead trout since part of the natural spawning area of these two species was inundated by the Wells Reservoir. In addition rainbow trout are reared to catchable size for release into the tributary streams above Wells Dam as replacement for a whitefish sport fishery in the area inundated by the Wells Reservoir.

Proposal for Fishery Mitigation

It is recognized that the fishery claim of the Colville Confederated Tribes represents the loss of a fishing area and not loss of fish production. As stated previously fish passage facilities at Wells Dam allow sockeye salmon as well as chinook, coho and steelhead to pass the dam and continue upstream to their spawning areas. It is also recognized that at present partial replacement, of the loss of the fish formerly caught at the mouth of the Okanogan, is being realized by the new fishery developing at the base of Chief Joseph Dam. While this fishery is dependent on the approval of the Corps of Engineers for its existence, it is possible that at some time in the future approval could be withdrawn and the fishery would no longer exist.

With these considerations in mind the District hereby submits the following proposal to the tribal council of the Colville Confederated Tribes for the mitigation of fishery losses associated with the construction of the Wells Hydroelectric Project.

Fishery Mitigation Proposal-Colville Confederated Tribes

1. P.U.D. No. 1 of Douglas County will make available to the Fish and Game Fund of the Colville Confederated Tribes, the annual sum of $21,300.00 beginning July 1, 1969 and ending June 30, 1979.

2. Said funds will be used for the development of fishing areas and/or fishing improvement projects within the boundaries of the Colville Reservation.

3. Prior to July 1 of each year the District and the Tribal Council of the Colville Confederated Tribes or their appointed representatives will meet to review the previous years program and to discuss the planned projects and expenditures for the coming year.

4. Prior to the yearly meeting a list of planned expenditures for development or improvement projects will be submitted to the District for review.

5. The District's Biologist will be available to assist the Fish and Game Committee of the Colville Confederated Tribes in planning and evaluating development and improvement projects.

6. Funds in addition to $21,300.00 may be made available in any one year with the mutual approval of both parties, providing the total payable during the 10 year period of this agreement will not exceed $213,000.00.

7. The implementation of the provisions of this agreement constitutes full compensation by the District to the Colville Confederated Tribes for their fishery losses relating to the construction of the Wells Hydroelectric Project.

Mitigation of Colville Tribal Wildlife Claim

Basis of Wildlife Claim

Article 43 of Federal Power Commission License No. 2149 provided payment to the various conservation agencies for studies of the effect of the Wells Hydroelectric Project on fish and wildlife. Included in these investigations were pre and post impoundment studies of wildlife in the project area. A report, Wildlife Studies in the Wells Hydroelectric Project Area, prepared by the Department of Game and covering the pre-impoundment phase of the wildlife studies was received by Douglas County P.U.D. in January 1967. Included in this report was a claim for damages to wildlife resources which would be affected by the Wells Project. As stated in this report the claimed damages represented only losses on non-Indian lands, however, data was given which would allow computation of Indian losses in the same manner. The information given in this report provided the basis for the claim of the Colville Confederated Tribes for $379,470.66 in wildlife damages.

Background Information

From receipt of the Game Department's report titled, Wildlife Studies in the Wells Hydroelectric Project Area, the District has felt that conclusions concerning the effects of the Wells Project on wildlife were premature. Data collected during the pre-flooding investigations would have to be compared with data collected during post-flooding investigations to provide a realistic picture of the effects of the project on wildlife. This belief is supported by wildlife experts contacted at institutions of higher learning in both Washington and Oregon. Meetings between personnel of the Department of Game and Douglas County P.U.D. on game mitigation have reached an impasse regarding the need for comparison of pre and post flooding studies to determine actual effects of the Wells Project on wildlife.

In an attempt to resolve the problem of game mitigation to the satisfaction of the Department and the District and to meet the Districts obligation toward the wildlife resources affected by the project an independent consultant was given the task of commenting on the pre-flooding report submitted by the Game Department, pointing out weaknesses in the report as well as strong points and developing a plan of wildlife mitigation which could be presented to the Game Department.

3. Prior to July 1 each year the District and the Tribal Council of the Colville Confederated Tribes or their appointed representatives will meet to review the previous year's program and discuss the planned projects and expenditures for the coming year.

4. Prior to the yearly meeting a list of planned expenditures for development and improvement projects will be submitted to the District for review.

5. The District's Biologist will be available to assist the Fish and Game Committee of the Colville Confederated Tribes in planning and evaluating development and improvement projects.

6. Funds in addition to $16,800.00 may be made available in any one year with the mutual approval of both parties, providing the total payable during the 10 year period of this agreement will not exceed $168,000.00.

7. The implementation of the provisions of this agreement constitutes full compensation by the District to the Colville Confederated Tribes for the effects of the Wells Hydroelectric Project on wildlife resources on the Colville Reservation.

The consultants report was received by the District in July 1969 and subsequently a mitigative proposal was forwarded to the Department of Game by the District. The major provisions of this proposal are as follows:

1. The Department and District would cooperate in an action program to improve game habitat and game populations in the Wells Project area. This would include re-establishment of wildlife cover and food patch plantings and installation of artificial aids to production of waterfowl.

2. Consideration should be given to the release of wild birds in areas slow in recovering from the 1968-69 winter kill.

3. Access to project lands will be assured for fishing and hunting purposes.

4. Surplus project lands showing promise for extensive development for wildlife will be made available for that purpose.

5. Post-flooding investigations will be continued in cooperation with the District as a means for determining fair and final mitigation.

Proposal for Wildlife Mitigation on Colville Reservation

It is recognized that inundation of certain reservation lands by the Wells Reservoir has resulted in changes that could affect wildlife species in the Wells Project area. In the case of waterfowl these changes could be considered advantageous. In the case of certain terrestrial forms such as upland birds the removal of shoreline cover strips would undoubtedly be detrimental especially during the time it takes for new growth to become established. In the case of deer it is debatable whether or not these changes would seriously affect the deer populations in that area.

The District feels that the claim for game losses presented by the Colville Confederated Tribes greatly exceeds the actual effects of the project on wildlife on tribal lands. Recognizing that the changes that have taken place on the tribal lands influenced by the reservoir are in some cases detrimental to wildlife populations the District proposes the following means of mitigating the effects of the Wells Project on wildlife

Wildlife Mitigation Proposal-Colville Confederated Tribes

1. P.U.D. No. 1 of Douglas County will make available to the Fish and Game Fund of the Colville Confederated Tribes the annual sum of $16,800.00 beginning July 1, 1969 and ending June 30, 1979.

2. Said funds will be used for the development of wildlife habitat and hunting improvement projects within the boundaries of the Colville Reservation.

RESOLUTION 1970-108

BE IT HEREBY RESOLVED, by the Colville Business Council, tribal governing body of the Confederated Tribes of the Colville Reservation, assembled in SPECIAL Session at the Colville Indian Agency, Nespelem, Washington, this 13th day of MARCH, 1970, that the attached Wildlife Game Refuge Management Agreement between the Confederated Tribes of the Colville Reservation, Washington, and Public Utility District No. 1 of Douglas County is hereby duly accepted and approved.

RESOLVED FURTHER, that the Officers of the Colville Business Council are herewith authorized to affix their signatures on said Agreement in behalf of the Confederated Tribes of the Colville Reservation, Washington.

The foregoing was duly enacted by the Colville Business Council by a vote of 11 FOR; 0 AGAINST, under authority contained in Article V, Section 1 (a) of the Constitution of the Confederated Tribes of the Colville Reservation, ratified by the Colville Indians on February 26, 1938, and approved by the Commissioner of Indian Affairs on April 19, 1938.

ATTEST:

Narcisse Nicholson, Jr., Chairman
Colville Business Council

1970 M.E.

AGREEMENT

THIS AGREEMENT, made and entered into this 21 day of May, 1970, by and between PUBLIC UTILITY DISTRICT NO. 1 OF DOUGLAS COUNTY, WASHINGTON, a municipal corporation, hereinafter referred to as "District", ERVIN D. WOLLEY and LORETTA M. WOLLEY, husband and wife, hereinafter referred to as "Wolley", and the CONFEDERATED TRIBES OF THE COLVILLE RESERVATION, hereinafter referred to as the "Tribe", WITNESSETH:

The District entered into a Letter of Agreement with the Tribe dated April 25, 1962, wherein it agreed to grant the reasonable use of the freeboard area on the Wells reservoir adjacent to properties which at said time were located within the Monse Irrigation District within the Colville Indian Reservation, and in which it agreed that non-Indian owners would have the same right as Indian owners within said area.

Wolley was the owner of what the District describes as Wells Tract No. 1127.0 and, in addition thereto, had leased for many years property within the Monse Irrigation District. Wolley is repurchasing from the District that portion of Wells Tract No. 1127.0 lying above the Wells Project Boundary, containing 3.0 acres and by reason of which repurchase, reasonable use of certain freeboard area below the Wells Project Boundary was granted to them.

This agreement is entered into between the parties hereto to make a final settlement regarding any rights of the parties hereto to the use of freeboard area and which is in addition to those rights granted to Wolley by deed from the District covering Wells Tract No. 1127.0.

NOW, THEREFORE, for and in consideration of the mutual

WEBER, JEFFERS & JEFFERS
ATTORNEYS AT LAW
Professional Center, P. O. Box 1000
Telephone (509) 662-2166
Wenatchee, Washington 98801

(b) To the United States of America, in trust for the Confederated Tribes of the Colville Reservation and/or its assigns the lands described in Exhibit "C" attached hereto and by reference made a part hereof, and said freeboard land use is to be allocated to Wells Tracts 1031.0, 1031.0D, 1031.0E, and 1143.0 as per Resolution No. 1969-275 of the Business Council of the Confederated Tribes of the Colville Reservation.

That the freeboard allocations set forth in the above paragraphs (a) and (b) are subject to the following reservations and restrictions:

The "reasonable use" of the freeboard land as hereinbefore described is not an exclusive right to use said premises which shall remain open to the public for the purpose of full public utilization of such lands and waters for navigational and recreational purposes including fishing and hunting in accordance with Article 7 of the Federal Power Commission License No. 2149; and Grantees shall not construct any buildings or structures thereon without first having received the written permission of the District. Reasonable use thereof shall include the right to place a pipeline into the Wells reservoir for irrigation or domestic water but shall not include the right to construct any pumphouse or structure in connection therewith below the Wells Project Boundary without permission in writing from the District. Use of said freeboard land shall be consistent and in accordance with any measures or regulations formulated and/or facilities constructed by the District for

HUNEK, JEFFERS & JEFFERS
ATTORNEYS AT LAW
Professional Center, P. O. Box 1400
Telephone (509) 663-2146
Wenatchee, Washington 98801

mitigating losses to fish and wildlife resources in accordance with Article 41, as amended, of Federal Power Commission License No. 2149.

(3) This agreement shall be binding upon the heirs and assigns of the parties hereto.

IN WITNESS WHEREOF, the parties hereto have set their hands and seals the day and year in this agreement above written.

PUBLIC UTILITY DISTRICT NO. 1
OF DOUGLAS COUNTY, WASHINGTON

By _____
Michael Doneen, President

By _____
Lloyd McLean, Vice President

ATTEST:

_____
Howard Prey, Secretary

_____
ERVIN D. WOLLEY

_____
LORETTA M. WOLLEY

CONFEDERATED TRIBES OF THE COLVILLE RESERVATION

By _____
Narcisse Nicholson, Jr., Chairman
Colville Business Council

By _____
Barney Rickard, Vice-Chairman
Colville Business Council

ATTEST:

_____
George Snider, Alternate Secretary
Colville Business Council

BURNEY, JEFFERS & JEFFERS
ATTORNEYS AT LAW
Professional Centre, P. O. Box 1400
Telephone (509) 662-7144
Wenatchee, Washington 98801

STATE OF WASHINGTON)
) ss.
COUNTY OF DOUGLAS)

On this [illegible] day of [illegible], 1970, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared MICHAEL DONEEN, LLOYD McLEAN, and HOWARD PREY, to me known to be the President, Vice President, and Secretary, respectively, of Public Utility District No. 1 of Douglas County, Washington, the corporation that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that they were authorized to execute the said instrument and that the seal affixed is the corporate seal of said corporation.

WITNESS my hand and official seal hereto affixed the day and year in this certificate above written.

Charles E. Robins
NOTARY PUBLIC in and for the State of Washington, residing at East Wenatchee

STATE OF WASHINGTON)
) ss.
COUNTY OF OKANOGAN)

On this 27th day of [illegible], 1970, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared ERVIN D. WOLLEY and LOPETTA M. WOLLEY, husband and wife, to me known to be the individuals described in and who executed the foregoing instrument, and acknowledged that they signed the same as their free and voluntary act and deed, for the uses and purposes therein mentioned.

WITNESS my hand and official seal hereto affixed the day and year in this certificate above written.

Charles E. Robins
NOTARY PUBLIC in and for the State of Washington, residing at East Wenatchee

STATE OF WASHINGTON)
) ss.
COUNTY OF OKANOGAN)

On this 27th day of MARCH, 1970, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared Barney Rickard, George Snider, and Narcisse Nicholson Jr., to me known to be the Members Colville Business Council of the Confederated Tribes of the Colville Reservation, the agency that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said agency for the uses and purposes therein mentioned, and on oath stated that they were authorized to execute the said instrument.

WITNESS my hand and official seal hereto affixed the day and year in this certificate above written.

[illegible]
NOTARY PUBLIC in and for the State of Washington, residing at Nespelem Wash

HUGHES, JEFFERS & JEFFERS
ATTORNEYS AT LAW
Professional Center, P. O. Box 1400
Telephone (509) 663-2166
Wenatchee, Washington 98801

EXHIBIT "A"

All that land lying between the normal pool elevation of 780.0 feet above mean sea level and lying Westerly of a line over and across Government Lot 6, and Southeast quarter of the Southeast quarter of Section 17, and the North half of the Northeast quarter of Section 20, all in Township 30 North, Range 25 East of the Willamette Meridian, said line being more particularly described as follows:

Beginning at a meander corner common to Section 16 and 17, said Township and Range, on the Okanogan River, from which the quarter corner common to said Sections 16 and 17 (an iron pipe) bears S 00°48'32" E, 1122.00 feet; thence S 00°48'32" E, 3765.05 feet along said line to section corner common to Sections 16, 17, 20, and 21; thence S 00°53'11" E, 1070.00 feet, more or less; thence S 69°07'00" W, 600.00 feet, more or less, to the terminal point of this description.

EXHIBIT "B"

All that land lying between the normal pool elevation of 780.0 feet above sea level and lying westerly of a line over and across Government Lots 6, 7 and 8, and the Southeast quarter of the Southeast quarter of Section 17, Township 30 North, Range 25 East of the Willamette Meridian, and the North half of the Northeast quarter and Government Lot 9, Section 20, Township 30 North, Range 25 East of the Willamette Meridian, Okanogan County, Washington, said line being more particularly described as follows:

Beginning at a point on the meander line of the Okanogan River from which the Southwest corner of the Southeast quarter of the Southeast quarter of said Section 17 (a brass cap) bears S 00°43'49" E, 2543.52 feet; thence S 00°43'49" E, 1227.29 feet; thence N 88°59'47" E, 1319.54 feet to the East boundary line of said Section 17; thence along said East boundary line S 00°48'32" E, 1321.52 feet to a section corner common to Sections 16, 17, 20, and 21 (a found iron pipe); thence S 00°53'11" E, 2100 feet, more or less, to the normal pool elevation of 780.0 feet above sea level and terminal point of this description.

[illegible], JUFFERS & JUFFERS
ATTORNEYS AT LAW
[illegible]

EXHIBIT "C"
****

Government Lots 6, 7, and 8, Section 17, Township 30 North, Range 25 East of the Willamette Meridian, Okanogan County, Washington, lying above the normal pool elevation of 780.0 feet above mean sea level.

BURKE, JEFFERS & JEFFERS
ATTORNEYS AT LAW
Professional Center, P. O. Box 3400
Telephone (509) 663-7140
Wenatchee, Washington 98801

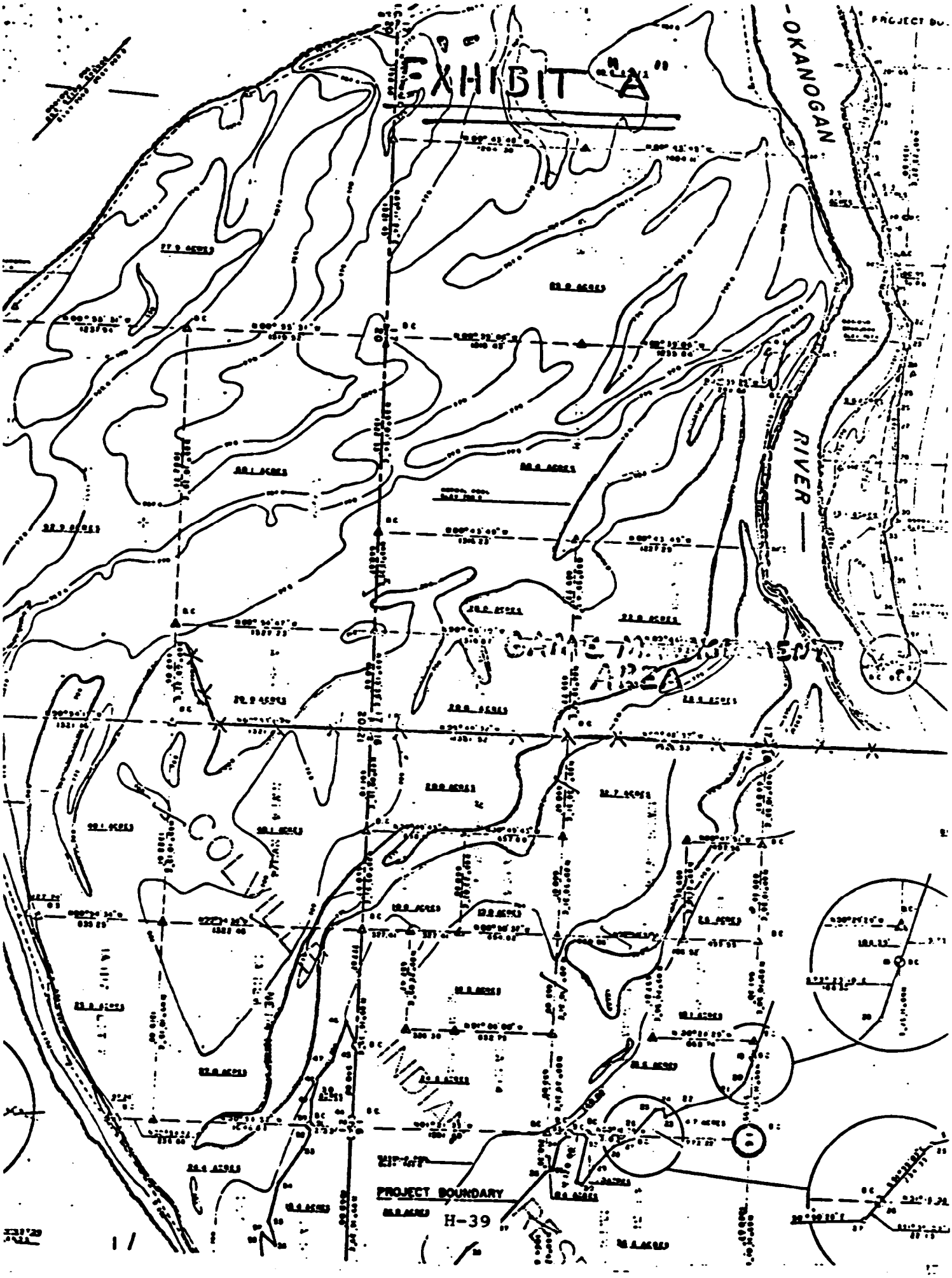


EXHIBIT "A"
OKANOGAN
RIVER
PROJECT BOUNDARY
H-39

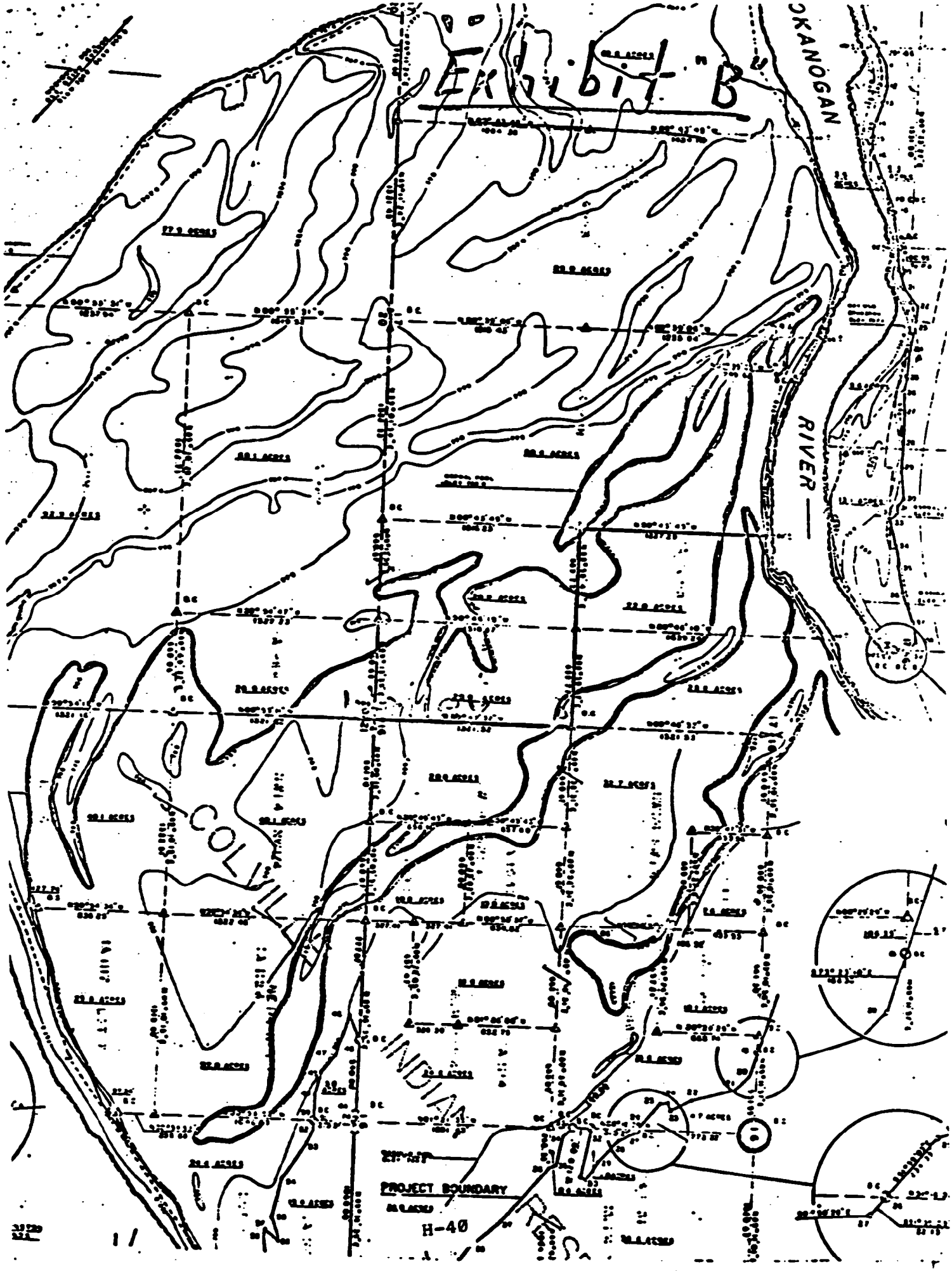


Exhibit B
OKANOGAN
RIVER
COLVILLE
PROJECT BOUNDARY
H-40

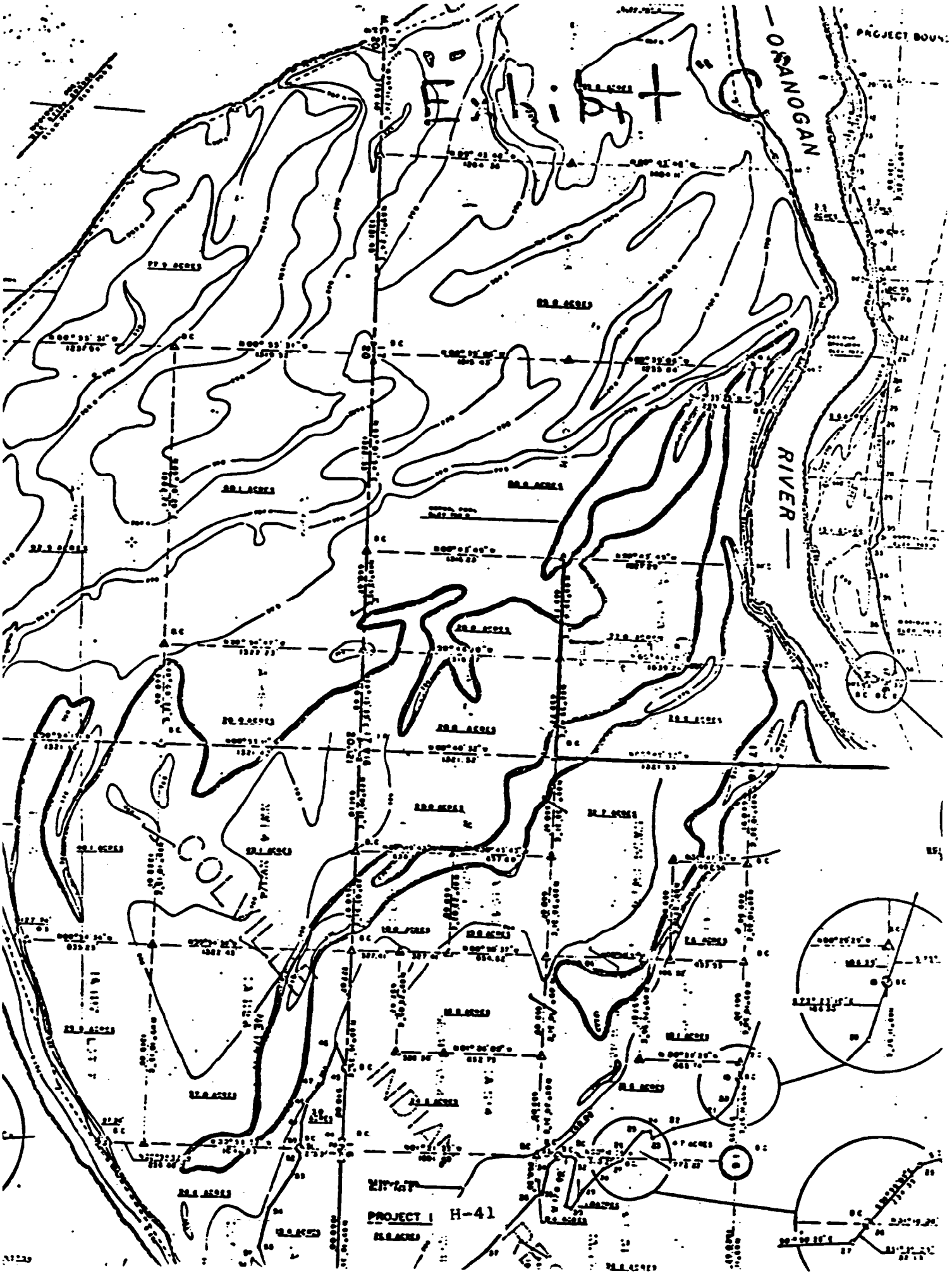


Exhibit
OKANOGAN
RIVER
PROJECT BOUN
COLVILLE
INDIAN
PROJECT
H-41

RESOLUTION NO. 3357

A RESOLUTION AUTHORIZING THE EXECUTION OF AN AGREEMENT BETWEEN THE DISTRICT AND THE STATE OF WASHINGTON DEPARTMENT OF GAME FOR WILDLIFE MITIGATION

RECITALS:

(1) The construction of the Wells Hydroelectric Projec by the District has affected wildlife resources within the Projec area on the Columbia River and its tributaries. The District and the State of Washington Department of Game have negotiated over an extended period of time in an effort to reach an agreeme as to the District's obligation to Game as required by the District's Federal Power Commission License No. 2149.

(2) The District desires to enter into an agreement with the State of Washington Department of Game in order to defi the responsibilities and obligations of the District and Game fo the period of the Federal Power Commission License in regard to mitigating losses to wildlife resources. An agreement has been prepared which sets forth a negotiated settlement and defines the responsibilities of the District and Game. Said agreement has been signed by Carl N. Crouse, the Director of the State of Washington Department of Game, and approved by an Assistant Attorney General. District personnel and its attorneys strongly believe that it is in the best interests of the District that it execute said agreement, a copy of which is attached to this resolution.

NOW, THEREFORE, BE IT RESOLVED that the Commission of the District is hereby authorized to execute an agreement dated July 15, 1974, between the District and the State of Washington Department of Game, a copy of which is attached to this resolution. Said agreement provides for the mitigation of wildlife

HUGHES, JEFFERS & JEFFERS
ATTORNEYS AT LAW
Professional Centre, P.O. Box 1488
Telephone (509) 663-2146
Wenatchee, Washington 98801

resources affected by the Wells Hydroelectric Project and defines the responsibilities of the Department of Game and the District in relation to mitigation programs and procedures.

BE IT FURTHER RESOLVED that the District is empowered and directed to pay to the State of Washington Department of Game the amounts of money set forth in said agreement and to transfer title to the properties set forth in the agreement, as well as effect all other provisions in said agreement.

UNANIMOUSLY ADOPTED this 15th day of July, 1974.

Lloyd McLean, President

ATTEST:

(not present)
~~Howard Frey, Secretary~~

Michael Doneen, Vice President
and Assistant Secretary

HUGHES, JEFFERS & JEFFERS
ATTORNEYS AT LAW
Professional Centre, P.O. Box 1086
Telephone (509) 663-2146
Wenatchee, Washington 98801

AGREEMENT BETWEEN PUBLIC UTILITY DISTRICT NO. 1 OF DOUGLAS COUNTY, WASHINGTON, AND THE STATE OF WASHINGTON DEPARTMENT OF GAME FOR WILDLIFE MITIGATION

THIS AGREEMENT, made and entered into this 15th day of July, 1974, by and between PUBLIC UTILITY DISTRICT NO. 1 OF DOUGLAS COUNTY, WASHINGTON, hereinafter referred to as the "District", and THE STATE OF WASHINGTON, DEPARTMENT OF GAME, hereinafter referred to as "Game", WITNESSETH:

I

The District is a municipal corporation organized under the laws of the State of Washington, and is authorized under Federal Power Commission License No. 2149 to construct and operate the Wells Hydroelectric Project on the Columbia River.

II

Game, as an agency of the State of Washington, is charged with the responsibility of preserving the sports fishery and wildlife resources on the Columbia River and its tributaries within the area affected by the Wells Hydroelectric Project, and which includes seeking mitigation, insofar as is practicable, for losses sustained.

III

Federal Power Commission License No. 2149, Article 41, provides as follows:

> The Licensee shall construct, maintain and operate such protective devices and shall provide such measures and facilities for mitigating losses to fish and wildlife resources as may result from project construction, alteration, or operation and shall comply with such reasonable modifications of the project structures and operation in the interest of fish and wildlife resources, provided that such modifications shall be reasonably consistent with the primary

MURRAY, JEFFERS & JEFFERS
ATTORNEYS AT LAW
Professional Centre, P.O. Box 1663
Telephone (509) 663-2146
Wenatchee, Washington 98801

purpose of the project, as may be prescribed hereafter by the Commission upon its own motion or upon recommendation of the Secretary of the Interior or the Washington State Departments of Fisheries and Game after notice and opportunity for hearing and upon a finding that such modifications are necessary and desirable and consistent with the provisions of the Act: provided further, That subsequent to approval of the final design drawings prior to commencement of construction no modifications of project structures in the interest of fish and wildlife resources which involve a change in the location, height or main structure of a dam, or the addition of or changes in outlets at or through a dam, or a major change in generating units, or a rearrangement or relocation of a powerhouse, or major changes in a spillway structure shall be required.

IV

The parties desire to enter into this Agreement in order to define the responsibilities and obligations of the parties hereto one to the other for the period of the License and to provide a means of meeting these responsibilities and obligations required under Article 41 of the License set forth above pertaining to the measures and facilities for mitigating losses to wildlife resources by the methods and pursuant to the limitations defined in this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained, the parties agree as follows:

SECTION I

The parties hereto have negotiated over an extended period of time in an effort to reach an agreement as to the District's obligation to Game as required by Federal Power Commission License No. 2149 authorizing the Wells Hydroelectric Project. In accordance with the terms of this Agreement, said negotiations have resulted in a full, final and complete settlement of all of the obligations of the District to Game, representing the State of Washington, pertaining to wildlife and

MUCHMORE, JEFFERS & JEFFERS
ATTORNEYS AT LAW
Professional Centre, P.O. Box 1600
Telephone (509) 663-2146
Wenatchee, Washington 98801

migratory bird resources. In the event of an extension of time, renewal or relicensing of the District's Project No. 2149 from the Federal Power Commission, the District shall not be required to pay to Game any additional funds for capital expenditures, but there shall be left open for negotiation at said time the cost of operation and maintenance of the then existing lands and facilities in connection with the Wells Hydroelectric Project.

SECTION II

Within ten (10) days following the approval of this Agreement by the Federal Power Commission, the District shall pay to Game the sum of One Million Two Hundred Fifty Thousand Dollars ($1,250,000.00) cash, which funds shall be used for wildlife resources including the development, management, acquisition of lands and propagation of wildlife within the Counties of Douglas and Okanogan within the close proximity of the Wells Reservoir and the Columbia River and its tributaries in the Counties of Douglas and Okanogan.

SECTION III

The District has acquired and will transfer title to Game, subject to existing easements and reservations, the following properties:

(A) William F. Shenyer property, also known as Central Ferry Canyon, Wells Tract No. 1479.0, containing approximately 1,569 acres.

(B) Deane Schmidt property, also known as the Foster Creek property, Wells Tract No. 1473.0, containing approximately 1,025 acres.

(C) Charles A. McCartney property, also known as Indian Dan Canyon property, Wells Tract No. 1477.0, consisting of approximately 2,865 acres, together with assignment of lease

[illegible], JEFFERS & JEFFERS
ATTORNEYS AT LAW
Professional Centre, P.O. Box [illegible]
Telephone (509) 663-3146
Wenatchee, Washington 98801

rights from the State of Washington and United States of America acquired by the District in connection with this acquisition, consisting of approximately 1,400 acres.

(D) Harold B. Vaughn property, Wells Tracts 781.0 and 786.0, consisting of approximately 64.8 acres.

(E) That portion of the Louise Reeve property, Wells Tract No. 783.0, which is now undeveloped and consisting of approximately 14.0 acres. The balance of this tract, consisting of approximately 8.0 acres now in orchard and upon which a residence is located, shall be retained by the District subject to Section IV, paragraph (C) herein.

(F) Bridgeport Bar properties already owned by the District, containing approximately 105.0 acres, lying above the Wells Project Boundary, known as Wells Tracts 708.0A, 765.0, 769.0, 773.0, 779.0, 777.0 and 774.0.

(G) The Asmussen property, Wells Tract No. 766.0, consisting of approximately 22.0 acres above the Wells Project Boundary.

(H) The Bonar property, Wells Tract No. 77.0, that portion lying east of the county road.

(I) The Williams property, Wells Tract No. 78.0, that portion lying east of the county road.

SECTION IV

(A) The District acquired and leased to Game the lands known as the "Washburn Island" properties and herein referred to as Wells Tracts 1126.0, 1128.0 and 1054.0. The District also acquired approximately 297.0 acres of property on the Bridgeport Bar and transferred it to the State of Washington Parks & Recreation Commission and which is now known as Chief Joseph State Park.

HUGHES, JEFFERS & JEFFERS
ATTORNEYS AT LAW
Professional Centre, P.O. Box 1688
Telephone (509) 663-3146
Wenatchee, Washington 98801

Game is desirous of acquiring the State Park property and to effect the same, the State Parks & Recreation Commission would give up its rights to said property in exchange for an exclusive easement to the Washburn Island properties for public park purposes subject to the appropriate reservations of the District as set forth in Section V of this Agreement. The District believes said exchange would be for the best interests of said parties. In an effort to consummate said exchange, the District agrees to cooperate with Game in attempting to negotiate said exchange and, at the suggestion of Game, will participate in any meetings and negotiations when requested.

(B) The District is the owner of the C. W. Schulke property, Wells Tract No. 749.0, and agrees to retain title to said property for a period of not less than three (3) years from the date the Federal Power Commission approves this Agreement, with the understanding that if, during said period. it becomes apparent that the only way in which the State Parks & Recreation Commission would relinquish its rights in the Chief Joseph State Park to Game is that said Schulke property would be required to complete said exchange, the District would transfer said Wells Tract No. 749.0 to either Game or the State of Washington Parks & Recreation Commission.

In the event an agreement for the exchange of said properties as hereinbefore set forth has not been entered into between the District, Game and the State of Washington Parks & Recreation Commission within said three (3) year period, the District shall then grant to Game an exclusive easement to the Washburn Island properties, Wells Tracts 1126.0, 1128.0 and 1054.0, subject to the same appropriate reservations of the District as set forth in Section V of this Agreement, for the

BRUNER, JEFFERS & JEFFERS
ATTORNEYS AT LAW
Professional Centre, P.O. Box 1600
Telephone (509) 663-2146
Wenatchee, Washington 98801

sole purpose of game management, and the Schulke property, Wells Tract No. 749.0, is released from this Agreement.

(C) The District agrees to acquire public access for hunting purposes within thirty-six (36) months from the date of approval of this Agreement by the Federal Power Commission on, over and across Wells Tract No. 782.0, with or without the residence located thereon.

The District shall not be obligated to acquire said rights to Wells Tract No. 782.0 if the acquisition costs of said rights exceed the sum of Twenty-five Thousand Dollars ($25,000.00). In the event the District does not acquire said rights as herein set forth, the District agrees to make available to Game the sum of Twenty-five Thousand Dollars ($25,000.00) for Game's acquisition of whatever rights it may acquire for public access on, over and across Wells Tract No. 782.0. To provide said funds or a part thereof, the District may dispose of that portion of Wells Tract No. 783.0 consisting of the house and present portion now in growing orchard and consisting of approximately 8.0 acres. Said funds shall remain in the possession of the District subject to use as set forth herein for a period not to exceed ten (10) years. In the event said funds have not been utilized as hereinabove set forth within ten (10) years from the date this Agreement is approved by the Federal Power Commission, said funds shall then automatically be paid to Game, and the District's obligations herein pertaining to Wells Tract No. 782.0 shall be concluded.

SECTION V

(A) The District agrees to grant to Game subject to the reservations set forth herein, except as to any properties within the Colville Indian Reservation lying adjacent to the

HUGHES, JEFFERS & JEFFERS
ATTORNEYS AT LAW
Professional Centre, P.O. Box 1680
Telephone (509) 662-2145
Wenatchee, Washington 98801

Wells Reservoir, a continuous right during the period of the Federal Power Commission License for the Wells Hydroelectric Project to manage the fish and wildlife resources on property lying between the Wells Project Boundary and the Wells Reservoir, which includes the policing thereof in connection with fish and wildlife and its management and the closing of portions thereof to hunting and fishing by the public when Game determines proper under the circumstances, except the District reserves unto itself all rights of ownership except that of game management as set forth herein.

(B) The District specifically excepts herefrom all easements and grants it has made for property rights above or below the Wells Project Boundary and reserves unto the District the right to grant such easements at all times in the future as limited herein. The District agrees to inform Game in writing of all applications for easements on land abutting the Wells Reservoir and shall not grant said easements for a period of sixty (60) days from the date of said notice to Game. Game shall, within said sixty (60) day period, have the right to submit in writing any objections or recommendations it may have to said easements, and the District shall give said objections and/or recommendations every reasonable consideration to minimize adverse impact upon wildlife resources and recreational uses thereof prior to the issuance of such easements; except that the District shall not grant such easements without the written authorization from Game over Project lands lying below the Wells Project Boundary and abutting the property conveyed or to be conveyed to Game under this Agreement.

SECTION VI

All rights granted herein are subservient to the use

MARINER, JEFFERS & JEFFERS
ATTORNEYS AT LAW
Professional Centre, P.O. Box 1000
Telephone (509) 663-3146
Wenatchee, Washington 98801

of said property by the District in the impoundment of the waters of the Columbia River in connection with the operation of the Wells Hydroelectric Project and to raise and lower the same in connection with the operation of said Project under Federal Power Commission License No. 2149 and any amendments thereto and without liability of any kind to Game and/or its heirs and assigns by reason thereof. No buildings or structures of any kind will be installed upon properties below Project Boundary without the written permission of the District first having been obtained. Game waives any claim for damage that may be sustained or that it may sustain at any time in the future arising out of the operation by the District of said Wells Reservoir.

This Agreement shall be binding upon the successors and/or assigns of the parties hereto.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement this 15th day of July, 1974.

PUBLIC UTILITY DISTRICT NO. 1
OF DOUGLAS COUNTY, WASHINGTON

By Lloyd McLean
Lloyd McLean, President

By Michael Doneen
Michael Doneen, Vice President
and Assistant Secretary

ATTEST:

(not present)
~~Howard Prey, Secretary~~

THE STATE OF WASHINGTON
DEPARTMENT OF GAME

By Carl N. Crouse
Carl N. Crouse, Director

ATTEST:

H-51

HUGHES, JEFFERS & JEFFERS
ATTORNEYS AT LAW
Professional Centre, P.O. Box 1600
Telephone (509) 663-7146
Wenatchee, Washington 98801

APPROVED AS TO FORM:

RICHARD G. JEFFERS
Attorney for the District

APPROVED AS TO FORM:

JOSEPH L. CONIFF, JR.
Assistant Attorney General
Representing Game

H-52

RODNEY, JEFFERS & JEFFERS
ATTORNEYS AT LAW
Professional Center, P.O. Box 1600
Telephone (509) 663-2146
Wenatchee, Washington 98801

A G R E E M E N T

THIS AGREEMENT is made and entered into this ____ day of July 19, 1982 by and between:

PUBLIC UTILITY DISTRICT NO. 1 OF DOUGLAS COUNTY, WASHINGTON, hereinafter referred to as "the District",

and

THE STATE OF WASHINGTON, DEPARTMENT OF GAME, hereinafter referred to as "the Department".

R e c i t a l s

1. The District is a municipal corporation organized under the laws of the State of Washington, and is authorized under Federal Power Commission License No. 2149 to construct and operate the Wells Hydroelectric Project on the Columbia River;

2. The Department, as an agency of the State of Washington, is charged with the responsibility of preserving wildlife on the Columbia River within the area affected by the Wells Hydroelectric Project;

3. Federal Power Commission License No. 2149, Article 41, provides as follows:

> The Licensee shall construct, maintain and operate such protective devices and shall provide such measures and facilities for mitigating losses to fish and wildlife resources as may result from project construction, alteration, or operation and shall comply with such reasonable modifications of the project structures and operation in the interest of fish and wildlife resources, provided that such modifications shall be reasonably consistent with the primary purpose of the project, as may be

prescribed hereafter by the Commission upon its own motion or upon recommendation of the Secretary of the Interior or the Washington State Departments of Fisheries and Game after notice and opportunity for hearing and upon a finding that such modifications are necessary and desirable and consistent with the provisions of the Act: provided further, That subsequent to approval of the final design drawings prior to commencement of construction no modifications of project structures in the interest of fish and wildlife resources which involve a change in the location, height or main structure of a dam, or the addition of or changes in outlets at or through a dam, or a major change in generating units, or a rearrangement or relocation of a powerhouse, or major changes in a spillway structure shall be required.

4. The District has applied to the Federal Power Regulatory Commission for an amendment to it's License No. 2149 for the Wells Hydroelectric Project to raise the maximum operating elevation of it's reservoir to 781 at the dam. The change applies only from Wells Dam to approximately Pateros. This elevation remains unchanged throughout the rest of the reservoir.

5. Through a previous agreement with the District, the Department made a study to determine the impact on wildlife and migratory fowl that would occur due to this two foot raise in forebay elevation.

6. The District and the Department agree that there are adverse impacts on waterfowl and wildlife and have agreed on the measures necessary to mitigate these adverse impacts.

NOW, THEREFORE, In consideration of the mutual covenants and agreements herein contained, the parties agree as follows:

The following mitigation measures recommended by the Department will be implemented by the District to lessen the adverse impacts to wildlife and migratory fowl from the

raise in forebay elevation. It is agreed that if the measures which are described in this agreement are provided, that they will provide sufficient mitigation to the adverse impacts of the raise in forebay elevation.

WILDLIFE MITIGATION

(1) Goose Nesting Islands

The islands used by geese for nesting (Pateros, Kirk and Bridgeport Bar Islands) will be protected from erosion. Attachment A gives the detailed plans for the protection of the islands. The small Bridgeport Bar and Kirk Islands will be raised and protected with pit run cobble riprap. The three large upstream Bridgeport Bar Islands will be bermed along the shoreline perimeter. Pateros Island will be protected with cobble riprap. Riparian habitat damaged during the protection operation will be replaced with wildlife habitat plantings.

(2) Pheasant Wintering Habitat

The cattail marsh along the east shore of Washburn Island pond will be preserved. The downstream pump installation will be modified to maintain the pond at the present elevation. The pond elevation will be increased in yearly increments over four years to allow the vegetation to move upslope. The pond elevation and marsh will be monitored to prevent the loss of vegetation during this process. The pond will be drawn down if marsh vegetation begins to die.

(3) Waterfowl Feeding Area

A waterfowl feeding area will be established at RM 517 to replace the grass strip. This strip will be ten feet wide and 4,000 feet long or a comparable area. The sage brush along the shoreline will be cleared and the area seeded. The pasture will be planted with a mixture of clover (trifolium spp), grasses and legumes. Irrigation will be used if necessary to establish these areas.

(4) Raptor Perch Poles

Raptor perch structures will be constructed in the areas specified by the Department. The District may consider perches presently installed in the specified areas

as part of the requirement since they are utilized by raptors.

(5) Riparian Vegetation

Riparian vegetation along the shoreline will not be cleared. The present vegetation will be allowed to re-establish upslope where possible. The estimated three and nine-tenths (3 9/10) acres of lost shoreline riparian vegetation (McGee 1979) will be replaced with three and nine-tenths (3 9/10) acres of wildlife habitat plantings.

Wildlife habitat plantings will take the form of riparian tree and shrub species. Modification of the shoreline will be done in areas where it is necessary to establish the habitat plantings. Attachment B lists the kind and number of shrubs which will be used and location of the wildlife plantings.

(6) Loss of Shorelands

The loss of shoreland due to the raise in forebay elevation will be mitigated by improving habitat on Project lands. Inundated shorelands will be replaced by providing ten (10) acres of wildlife habitat plantings. Attachment B gives the locations of the plantings and shrub species which will be used.

(7) All construction will be completed by the District or at the District's expense by a private contractor. All reasonable cost of the mitigation program will be covered by the District.

It is the intent of the parties that the island protection work will be sufficiently completed so that the reservoir may be raised in the fall of 1982. The habitat replacement will be performed after this time. This will require that the amendment to the license be received from the Federal Energy Regulatory Commission prior to June 1, 1982. The reservoir work would be done during the month of July, which would allow the pool to be raised in September.

Should the amendment be received later than June 1, but prior to October 1, it is the intent of the parties to raise the pool by October 1, 1982, and the work described in this agreement to be completed during 1983. Should the amendment be received later than October 1, 1982, and prior

to September 1, 1983, the work will be performed in 1983 and the pool will be raised on September 1, 1983.

DATED this _____ day of _____, 198__.

APPROVED AS
TO FORM

PUBLIC UTILITY DISTRICT NO. 1 OF
DOUGLAS COUNTY, WASHINGTON

_____
GARFIELD R. JEFFERS
Attorney for the
District

By _____
Michael Doneen, President

By _____
William E. Bechtol,
Vice President

ATTEST: _____
Howard Prey, Secretary

APPROVED AS
TO FORM

STATE OF WASHINGTON, DEPARTMENT OF GAME

_____
Attorney General

By _____

By _____

ATTACHMENT B

WILDLIFE HABITAT PLANTINGS

The loss of riparian and other shoreline habitat will be replaced by planting 13.9 acres of wildlife habitat plantings. These plantings will take the form of riparian tree and shrub species and ground cover. Interim losses of riparian habitat will be replaced with 3.9 acres of habitat planted in the upper reaches of the Wells Reservoir (RM 525) where the major stands of vegetation are present. Losses of shoreline habitat will be replaced by 10 acres of wildlife plantings below RM 525. The largest portion of shoreline habitat will be lost in this area.

The replacement of wildlife habitat will be planted in clumps rather than border strips or large plots of vegetation. This method will increase the edge between plantings and possibly allow the plantings to spread naturally. All wildlife plantings will be along the reservoir shoreline.

Irrigation will be provided for a minimum of two years to establish the plantings. Additional irrigation will be utilized if necessary to insure survival of the plantings. The plantings will be irrigated once a week, the minimum rate of water application will be 10 gpm/acre/8 hours. A drip or standard impact sprinkler irrigation system will be used to irrigate the plantings depending upon water supply and power source.

Tree and shrub species which will be used in the wildlife plantings will include black cottonwood, black locust, Russian olive, water birch, multiflora rose, red-osier dogwood and elderberry. Douglas hawthorn, matrimony vine and native willows will be used if a source for nursery stock can be located. The wildlife plantings will have a density of 1,400 plants per acre. The following table gives the number of plants/acre by species.

PLANTS PER ACRE BY SPECIES *

SPECIES	PLANTS/ACRE
Black Cottonwood	30
Black Locust	50
Russian Olive	75
Douglas Hawthorn	75 (1)
Water Birch	30
Multiflora Rose	520
Elderberry	100
Red-Osier Dogwood	520
Matrimony Vine	Unknown
Native Willows	Unknown (2)
	1,400

(1) If Douglas Hawthorn is unavailable, an adoptable medium size shrub will be substituted.

(2) Native willow species will also be utilized for shoreline planting where conditions will allow it to be established.

* Plant species and numbers of each species per acre may be changed depending upon availability of nursery stock.

Soil samples will be taken at each planting site to determine soil deficiencies. The recommended levels of fertilizer will be applied to ensure proper growth of the plant stock.

Proposed planting Sites:

A. Shoreland habitat replacement (10 acres)

1. RM 518 - Douglas County shoreline. 5 acres of habitat will be planted. The soil in this area is very rocky and will need extensive site preparation to remove steppe vegetation.

2. RM 520 - Okanogan County shoreline. 4.5 acres of habitat will be planted.

The soil in this area has some cobbles. Site preparation will require mechanical soil preparation.

3. RM 528.1 - Okanogan County shoreline. .5 acres of habitat. Site may have adequate sub-irrigation. Mechanical site preparation will be necessary.

B. Riparian habitat replacement (3.9 acres)

1. RM 533 - Confluence Columbia & Okanogan Rivers, north shore. .5 acres of habitat. Site may have sufficient sub-irrigation.

2. RM 540 - Douglas County shoreline. 1 acre of habitat plantings. Area will need some site preparation.

3. RM 526.8 - Douglas County shoreline. 1 acre of habitat plantings.

4. RM 537.5 - Douglas County shoreline. 1.4 acres of habitat plantings (reclaimed borrow site for goose nesting island protection).

GARFIELD R. JEFFERS
JAMES M. DANIELSON
DAVID E. BOHN
J. PATRICK AYLWARD
T. W. SMALL, JR.

GREGORY A. LAIR
SUSAN CARLEY
DOUGLAS J. TAKASUGI

JEFFERS, DANIELSON, BOHN & AYLWARD, P. S.
ATTORNEYS AT LAW
217 NORTH MISSION
P. O. BOX 1086
WENATCHEE, WASHINGTON 98801
(509) 662-3000

JOSEPH L. HUGHES
(1905-1982)
RICHARD B. JEFFERS
(1910-1979)

November 21, 1983

Mr. Thomas P. Schlosser
Ziontz, Pirtle, Morisset,
Ernstoff & Chestnut
Attorneys at Law
Metropolitan Park, 16th Floor
Seattle, Washington 98101

Re: Offer of Partial Settlement - Wildlife Mitigation for Forebay Elevation Increase

Dear Tom:

Enclosed please find three originals of the "Offer of Partial Settlement Regarding Wildlife Habitat Mitigation for Forebay Elevation Increase". The originals are identical to the September 12, 1983, draft, other than removing the language referring to it as a draft and the changes on pages 7, 8 and 9 we discussed on the phone, specifically, changing the dates to November and changing the reference from page 7 to page 8.

When the three original agreements have been executed by the Tribe, please forward the originals to my attention and I will have them executed by the District. After execution of the agreements by the District, I will return one original to you, retain one original myself and file the third original with the Federal Energy Regulatory Commission.

Also, per our conversation, enclosed please find a copy of the Order making the Tribe a party to the present FERC proceeding dealing with downstream migration.

Thank you for your offer of cooperation on our problems with the Corps of Engineers. Chip Small of our

COPY

office and Glen Aurdahl of Sverdrup & Parcel are putting together some data to submit to the Corps. I will see that copies are forwarded to you. Any additional factual or legal support would be much appreciated.

Thanks for your attention to these matters.

Sincerely,

J. PATRICK AYLWARD

JPA:js
Enclosures

cc: Mr. Fred Lieberg, w/enclosures
Mr. John A. Gregg, w/enclosures
Mr. T. W. Small, Jr., w/enclosures
Mr. Glen Aurdahl, w/enclosures

UNITED STATES OF AMERICA

FEDERAL ENERGY REGULATORY COMMISSION

PUBLIC UTILITY DISTRICT NO. 1 OF DOUGLAS COUNTY, WASHINGTON,	
Application for Amendment to License	Project No. 2149

OFFER OF PARTIAL SETTLEMENT RE: WILDLIFE HABITAT MITIGATION FOR FOREBAY ELEVATION INCREASE

Public Utility District No. 1 of Douglas County, Washington, hereinafter PUD, is the applicant for an amended license for the Wells Hydroelectric Project No. 2149, filed April 26, 1981, which would allow an increase in forebay elevation to elevation 781 m.s.l. The Confederated Tribes of the Colville Indian Reservation, hereinafter Tribe, an intervenor in proceedings concerning the license amendment and a petitioner appealing the Order of the Director of Electric Power Regulation, issued September 23, 1982, has opposed the increased forebay elevation because of the damage it would cause to wildlife resources, as well as for other reasons.

After negotiations between the parties concerning measures that will avoid wildlife losses, the Tribe withdraws its wildlife objections to the forebay elevation increase. Furthermore, the PUD agrees to proceed with wildlife resources mitigation activities described herein at its

own expense. References herein to McGee and Judd refer to the parties' biologists James McGee and Steven Judd, or, in the absence of either, to such other biologists as the parties, respectively, may designate. These agreements are based upon the following terms and conditions:

1. The PUD will provide for stabilization of the water level and preservation of wildlife habitat in the three sloughs at Cassimer Bar, as follows:

(a) As soon as possible following the increase in forebay elevation, McGee and Judd will examine the Cassimer Bar vicinity and agree upon the location and general design of water stabilization dikes with one-way tide gates or similar devices.

(b) The PUD shall direct its operation and maintenance engineers, SVERDRUP & PARCEL, to prepare construction plans for stabilizing the water levels in the sloughs, which plans shall be subject to the approval of McGee and Judd.

(c) Work pursuant to the agreed construction plan shall be completed within twelve (12) months of the forebay elevation increase. The timing of the construction work, within that period, shall be agreed upon by McGee and Judd to minimize construction impacts to wildlife.

2. The PUD shall complete the mitigation measures described in the agreement dated July 19, 1982, between Public Utility District No. 1 of Douglas County, Washington and the State of Washington, Department of Game, filed pursuant to Article 57 of the Order issued September 23, 1983, in accordance with the following schedule:

(a)	Goose Nesting Islands, raised and protected with pit run cobbles. Construction Completed	September 1983
	Plant ground cover and willow cuttings:	
	Start	September 1983
	Complete	September 1984
(b)	Pheasant Wintering Habitat: Start pumping immediately after pool raise	
(c)	Waterfowl feeding area:	
	Shoreline Clearing	Spring-Summer 1984
	Planting Complete	September 1984
(d)	Raptor Perch Poles:	
	Completed by	September 1984
(e)	Riparian Vegetation:	
	Clear land and fence and install irrigation	September 1984
	Readily available plant material planted	Spring 1985
	Custom Grown plant material order	Summer 1984

	Planting of Hawthorne & Matrimony Vine	Spring	1986
(f)	Waterfowl Pasture	Spring	1984

The mitigation measures described in that agreement shall be completed to the satisfaction of McGee, Judd and the Washington State Department of Game.

3. Several of the mitigation measures described in paragraphs 1 and 2, above, require excavation, modification of ground contours or placement of fill. Wherever any disturbance of the ground surface of any project lands is likely to be necessary in order to complete the mitigation measures described in this agreement, the PUD shall, prior to the commencement of construction, take the following steps to protect cultural resources:

(a) by majority decision, Drs. Grabert, Whitlam and Aikens will define cultural resource information requirements for the mitigation activities, including any necessary surveying, testing or recovery of proposed sites and access routes found to be eligible for the National Register by the Washington State Historic Preservation Officer;

(b) the PUD shall authorize funds necessary to complete archaeological work defined under (a), through archaeologists acceptable to Drs. Grabert, Whitlam and Aikens;

(c) if preliminary archaeological work indicates that an extensive data recovery program will be necessary at any affected site, the PUD shall have the option, subject to the approval of McGee and Judd, to relocate the affected mitigation work to another site, in which case the procedure described in this paragraph shall again be followed.

4. The PUD will monitor and maintain all wildlife mitigation structures covered by paragraph 1 of this agreement. Monitoring will be carried out by qualified PUD personnel on a monthly basis until expiration of the present license on July 12, 2012. The monitoring will specifically include operation of the gates and erosion of the dikes. Monitoring methods will be agreed upon by McGee and Judd and reports of all monitoring activities shall promptly be made available to the parties for review and comment. If monitoring reveals difficulties in the operation of any of the mitigation measures described in paragraph 1 of this agreement, then the PUD will correct the problems to the satisfaction of McGee and Judd.

5. The PUD will monitor and maintain all wildlife structures and facilities covered by paragraph 2 of this agreement through use of qualified PUD personnel or contractors. Monitoring methods will be agreed upon by

McGee and Judd and reports of all monitoring activities shall promptly be made available to the parties for review and comment. The protection of the goose nesting islands will be examined at least once a year until expiration of the present license on July 12, 2012. Raptor perches will be checked once a year until expiration of the present license on July 12, 2012. The Washburn Island pump will be examined at least once a month from April 1 of each year through October 31 of each year for the first four years after the pool is raised; thereafter the Washburn Island marsh vegetation will be monitored at least once each three years until expiration of the present license on July 12, 2012. The wildlife planting will be monitored at least once a week from April 1 of each year through October 31 of each year until established, and thereafter at least once each three years until expiration of the present license on July 12, 2012 following the pool raise. If monitoring revels the need for repair or maintenance of the structures or facilities described in paragraph 2, then the PUD will correct the problems to the satisfaction of McGee, Judd and the Washington Department of Game.

6. The PUD will continue the current winter bald eagle aerial surveys in the Wells Project area. Monitoring methods will be agreed upon by McGee, Judd and the United

States Fish and Wildlife Service and reports of all monitoring activities shall promptly be made available to the parties for review and comment.

7. If the monitoring described herein reveals wildlife losses due to project operations at a forebay elevation in excess of 779 m.s.l., then the PUD will correct the problems to the satisfaction of McGee, Judd and the Washington State Department of Game.

8. This agreement constitutes a real covenant running with the project land, and the PUD shall file it of record in Douglas County to bind the parties, assignees, and purchasers of the land until July 12, 2012. The parties also agree that any order or amended license issued by the Federal Energy Regulatory Commission addressing wildlife aspects of the requested license amendment for Project No. 2149 should include an article as follows: The PUD shall comply with the terms of the Offer of Partial Settlement Re: Wildlife Habitat Mitigation For Forebay Elevation Increase, dated November _____, 1983. See p.8.

9. In the event McGee and Judd are unable to agree as required in this Agreement, a third party agreeable to McGee and Judd shall settle the dispute. In the event of total non-performance of any part of this agreement, or in the event the PUD fails to abide by the decision of the

arbiter just referenced, the Tribe shall notify the Federal Energy Regulatory Commission and the Washington Department of Game and the project operations shall be reduced to forebay elevation 779 m.s.l. on the next succeeding September first. The project shall be operated at forebay elevation 779 until the issue is resolved by the parties or by Federal Energy Regulatory Commission.

10. This partial settlement is not intended to address any other issues between the parties in this proceeding, including, without limitation, the effects of the license amendment on fish or cultural resources or rights arising under the Order Issuing License, issued July 12, 1962; nor is it a relinquishment of any cause of action of the parties in any court or in any other proceedings before the Federal Energy Regulatory Commission, or of any right to seek any license amendment, including the right to reapply for an amendment allowing an increase in forebay elevation.

DATED this _____ day of November, 1983

PUBLIC UTILITY DISTRICT NO. 1
OF DOUGLAS COUNTY, WASHINGTON

By _____
Howard Prey, President

By _____
William E. Bechtol,
Vice President

ATTEST:

_____
Michael Doneen, Secretary

DATED this _____ day of November, 1983.

CONFEDERATED TRIBES OF THE COLVILLE
INDIAN RESERVATION

By _____
Al Aubertin, Chairman

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Public Utility District No. 2 of Grant County, Washington	)	Project No. 2114
Public Utility District No. 1 of Chelan County, Washington	)	Project Nos. 943 and 2145
Public Utility District No. 1 of Douglas County, Washington	)	Project No. 2149
State of Washington, Department of Fisheries	)	
v.	)	Docket No. E-9569
Public Utility District No. 2 of Grant County, Washington	)	

ORDER PERMITTING INTERVENTION AND
SUSPENDING PROCEDURAL DATES

(November 29, 1979)

On October 16, 1979, the Confederated Tribes of the Colville Indian Reservation (Tribes) petitioned for an Order allowing the Tribes to intervene in the above-entitled proceedings, relating to the provision by the Licensees' Public Utility District No. 2 of Grant County, Washington, Public Utility District No. 1 of Chelan County, Washington, and Public Utility District No. 1 of Douglas County, Washington, of certain flows and operational procedures for the protection of the anadromous fishery resource in the Columbia River. For good cause shown, the petition is granted, subject to the Rules and Regulations of the Commission; provided, however, that participation shall be limited to the matters set forth in the petition to intervene.

All pleadings and documents from this proceeding are to be served upon:

DC-A-2

Sam Sampson, Colville Business Council
Colville Confederated Tribes
P. O. Box 150
Nespelem, WA 99155

Moshe J. Genauer
Ziontz, Pirtle, Morisset, Ernstoff & Chestnut
600 First Avenue
Pioneer Building
Seattle, WA 98104

On November 20, 1979, Petitioners filed an Offer of Settlement. Prior and subsequent to the filing of the Offer of Settlement by Petitioners, negotiations have been conducted among the parties with the objective of reaching a settlement agreement which is satisfactory to all of the parties. Petitioners' Offer of Settlement may be premature, as it evidently does not contain all the Respondents' views on an appropriate basis for settlement. However, since negotiations are continuing it is well to suspend all procedural dates for the time being.

The Chairperson of the Coordinating Committee is to keep me informed about the progress of the negotiations, and, when necessary, propose new procedural dates.

In the event settlement is not reached, a separate order will be issued scheduling the hearings in this proceeding to commence on or about January 28, 1980.

Allen C. Lande
Presiding Administrative Law Judge

Status Report on Wildlife Mitigation

CHIEF JOSEPH PROJECT

Prepared by

Washington Department of Game

and

U.S. Fish and Wildlife Service

for

Bonneville Power Administration

in response to the

Fish and Wildlife Program
Northwest Power Planning Council

1984

I. PROJECT NAME

Chief Joseph Dam and Reservoir Project

II. PROJECT OPERATOR

Department of the Army, Corps of Engineers (CE)

III. PROJECT DESCRIPTION

A. Location and Size

The project consists of Chief Joseph Dam and powerplant located on the upper Columbia river just upstream from the Town of Bridgeport in north-central Washington at River Mile (RM) 545.0. The powerplant contains 27 generating units with a combined output capacity of 2,069 MW. Rufus Woods Lake (Chief Joseph Reservoir), which was formed by the dam, extends upstream 51 miles to the tailrace of Grand Coulee Dam (RM 596.5), contains 106 miles of shoreline and occupies a surface area of 8,600 acres.

B. Authorized Purposes

The project is operated for single purpose power generation.

C. Brief History of Construction and Operation

The project was authorized by the 1946 River and Harbor Act, 79th Congress 2nd Session with revisions to the project made in the same Act, June 1948. The original authorization included provisions for initial installation of the first 16 generating units (1-16) and additions of the next 11 units (17-27) at a later date. Coincident with the expansion to 27 units, Rufus Woods Lake was raised an additional 10 feet to elevation 956. The original project was completed in 1958, and the expansion in 1981. By resolution of July 27, 1962, the Senate Committee on Public Works requested that the CE review plans for the Columbia River and tributaries and to determine if power generating capacity at Chief Joseph Dam should be increased beyond the existing 27 units completed in 1979.

D. Other Pertinent Data

1. Water level fluctuation and timing

The project is operated to provide baseload generation of electricity with peak-load capability. Expansion of the project was made to accommodate additional storage and provides a mean annual discharge of 114,000 cfs. Rufus Woods Lake elevations are set at 956.0 with normal operating range of 930 to 956. The lake has a storage capacity of 593,000 acre-feet.

2. Land Ownership

Lands adjacent to the north shoreline are primarily under Colville Confederated Tribes (CCT) ownership, although the CE has a flowage/flood easement to elevation 991. Remaining shoreline lands are under private ownership with appropriate easements. Additional lands on the left (south) bank are under Federal ownership by the CE and Bureau of Land Management. There is only one public access area on the lake, built by the CE but operated and managed by the Washington State Parks Department under a Memorandum of Agreement (MOA) providing recreational use facilities. Of the lands affected by reservoir inundation, flowage easements, and fee purchase, some 3,500 acres were located on the CCT Reservation in Okanogan County.

3. Indian Rights

Under the auspices of the Commissioner of Indian Affairs and the Secretary of the Interior, a series of treaties and agreements were enacted during the late 1800's which consolidated several Indian Tribes and their lands throughout north-central Washington into what is now known as the Colville Confederated Tribes and their reservation. This reservation adjoins the Columbia River on the north in Okanogan and Ferry Counties and provides the Tribes with opportunity to exercise their inherent rights of fishing and hunting. The Tribes have the responsibility to administer their own conservation laws within reservation boundaries.

With development of the project, it was necessary for the United States Government to acquire some 3,500 acres of reservation lands which would be inundated upon project completion. Initially, the CE desired to acquire these lands in fee; however, due to losses of reservation lands attributable to the Grand Coulee Project upstream, the CCT did not want their land base to be diminished further. Therefore, the CE and CCT negotiated flowage easements over their lands to allow the project to continue. The CCT were reimbursed for loss of land, but due to lack of adequate methodology, no attempt was made to assess the impacts of the original project construction to wildlife and habitat on Tribal lands.

IV. WILDLIFE SPECIES AND HABITAT ASSESSMENTS

A. Preconstruction Period

Due to the lack of legal mandates and adequate study methods, wildlife losses were not considered during initial project construction (USACE 1980). However, wildlife known to have occurred historically in the inundation zone included mule deer, black bear, bobcat, coyote, beaver, river otter, muskrat, mink, cougar, numerous species of waterfowl and nongame birds, doves, forest grouse, sharp-

tailed grouse, and sage grouse (USACE 1980). Later, wildlife studies conducted on unimpounded reaches downstream of Chief Joseph Dam indicate that the Columbia River Valley in this region provided winter habitat for mule deer, white-tailed deer, and chukar (Oliver and Barnett 1966). Other species found in the preproject area included mourning doves, pheasants, quail, grouse, and cottontail rabbits, and several furbearer species (Oliver and Barnett 1966). There is no quantitative data available on preproject wildlife or habitat in the Chief Joseph area, although preproject aerial photographs are available.

B. Postconstruction Period

No wildlife studies were conducted in the project area until the 1970's. Habitat and wildlife have been inventoried by USACE (1976) and several other studies.

In 1981, after construction was completed on units 17-17 at Chief Joseph Dam, Chief Joseph pool was raised from elevation 946 feet to 956 feet Mean Sea level (MSL). Prior to the pool raise, studies were conducted by Erickson et al. (1976), Fielder (1977a), and Tabor et al. (1980) to predict the impact of the pool raise on wildlife and habitat.

Erickson et al. (1976) determined that the pool raise would inundate 616 acres of habitat including 173 acres of islands, 168 acres of shrub-steppe, 104 acres of riparian, and 77 acres of coniferous tree over shrub layer habitat. Ninety-nine percent of the riparian habitat and 94 percent of the islands would be lost.

A team of biologists from the CCT, CE, U.S. Fish and Wildlife Service (FWS), U.S. Bureau of Reclamation (BR), and Washington Department of Game (WDG) used the Habitat Evaluation Procedures (HEP) to determine that 15,093 habitat units would be inundated by the pool raise (Fielder 1977a). The team felt that all islands in Rufus woods Lake constituted "special and critical" habitat. All islands were valuable for nesting waterfowl. Buckley Bar was an important mule deer fawning area and was used by mourning doves and upland birds (Fielder 1977a).

Some of the lost vegetation will probably reestablish at the new water line in some places. However, natural reestablishment of vegetation would take at least 10 years in the arid climate of the project area. Mudd et al. (1980) found that only 22 percent of the riparian cover inundated by the construction of the four lower Snake River dams had naturally revegetated by the late 1970's, and most of that revegetation had occurred on sites flooded 14 to 18 years previously. It is doubtful that complete reestablishment of riparian vegetation will occur on Rufus woods Lake after the pool raise (Erickson et al. 1976), particularly with water fluctuations.

A fall census of game animals estimated that 431 mule deer, 5,200 pheasants, 7,100 chukar partridge, 2,800 California quail, 2,800 gray partridge, and less than 100 ruffed blue, sharp-tailed and sage grouse used the inundation zone and an adjacent area extending up the slope for 1/4 mile on each side of the pool (Erickson et al. 1976). An estimated 4,700 mourning doves used the 1/4-mile strip bordering each side of the reservoir (Erickson et al. 1976). Losses of game animals as a result of habitat inundation were estimated at 126 pheasants, 111 chukar partridges, 57 California quail, 46 gray partridges, 4 ruffed grouse, 152 doves, and 20 mule deer (Erickson et al. 1976).

The projected fall population decline for Canada geese was estimated to be 54 birds, mostly a result of flooded nest sites (Erickson et al. 1976). Only 24 percent of the nest sites found by Erickson et al. (1976) in 1975 were above the new pool level. Only 1 of 25 (4 percent) of the goose nest sites found by Tabor et al. (1980) were above the new pool level. All goose brooding areas would be inundated (Tabor et al. 1980). FWS aerial waterfowl surveys for the period 1975-78 indicated an annual average utilization of 9,784 ducks and 5,502 geese.

Tabor et al. (1980) estimated that of the terrestrial furbearers found in the project area, coyotes would be the most significantly impacted by the pool raise. Bobcats, raccoons, badgers, and striped skunks were determined likely to suffer moderate impact; bear and cougar would be impacted only slightly because of low population levels (Tabor et al. 1980). The small number of aquatic furbearers in the area would probably be eliminated by inundation of nearly all the riparian habitat (Tabor et al. 1980).

Erickson et al. (1976) trapped 163 small mammals, representing four families and seven species, during 5,004 trap-nights in various habitat types in the project area. Riparian habitat supported the greatest density of small mammals. Buckley Bar, an important small mammal area, would be converted from a 55-acre bar to two islands with a total area of 20 acres following the pool raise (Erickson et al. 1976).

Payne et al. (1975) identified eight species of raptors on Rufus Woods Lake. An undetermined number of raptors, including the threatened bald eagle, would suffer from the loss of perch trees along the reservoir shoreline (Erickson et al. 1976). Cliff swallows would lose 40 percent of their nest sites, and bank swallows would lose at least 10 percent of their nest sites, with a potentially greater loss occurring from increased bank sloughing (Tabor et al. 1980). Nongame songbirds would lose nest and perch sites and food in the form of insects, fruits, seeds, and berries (Fielder 1977a).

Six species of reptiles and two species of amphibians found in the inundation zone would be severely reduced or eliminated by loss of habitat (Tabor et al. 1980).

Another potential wildlife impact associated with the 10-foot pool raise is the development of recreation sites along Rufus Woods Lake by the CE. Fielder (1977b) determined that the development of one such site, Box Canyon, would significantly impact mule deer, Canada geese, eagles, and prairie falcons.

Annual fall-winter bald eagle surveys conducted by FWS, WDG, and, starting in 1982-83, Chelan PUD, indicate that through the period 1975-1983 an average 13 adults and four subadults used Rufus Woods reservoir. No bald eagle nesting is documented for the project area.

Aerial waterfowl surveys conducted monthly for the period 1975-78 by the FWS indicated the following average annual use for Rufus Woods Lake: 815 ducks and 460 geese, with 18 mated pairs of geese producing an average brood of six young. For the same period, five whistling swans were observed and an annual average of 130 coot.

V. WILDLIFE MITIGATION HISTORY

A. Mitigation Requested or Proposed

1. Original Project Construction

Due to the lack of adequate methodologies and legislative mandates to provide replacement for wildlife losses, no mitigation was proposed or implemented for the original project construction.

2. Project Modifications/Operation

Coincident with plans to add an additional 11 generating units to the project and raise Rufus Woods Lake 10 feet, amendments to the Fish and Wildlife Coordination Act of 1958 (Public Law 85-624) and implementation of the National Environmental Policy Act (NEPA) of 1969 provided means to address wildlife losses of the proposed expansion and to seek mitigation.

Prior to development of the final mitigation plan for the 10-foot pool raise, mitigation recommendations came from several sources including Erickson et al. (1976), Tabor et al. (1980), and Fielder (1977a, 1977b, and 1977c). Recommendations included replacement of riparian and island habitat, enhancement of goose nesting and brooding areas, creation of subimpoundments, raptor perch sites, cattle fencing and planting of food plots for upland game.

Using HEP, Fielder (1977a) determined that 25,093 habitat units would need to be generated to replace shoreline habitat inundated. Additional mitigation would be needed for loss of island habitat. Thirty-four potential mitigation sites were identified by Fielder (1977c), and the CE selected 16 of those sites for mitigation development (USACE 1980).

The CE mitigation plan included the acquisition of easements for wildlife mitigation on 2,729 acres, irrigation of 107 acres, and fencing of 751 acres. Development plans for the sites included planting of native vegetation and creation of islands, nest structures, and raptor perches. Funding of a mule deer study to be conducted by the CCT was also in the plan.

B. Mitigation Agreements or Requirements

1. Original Project Construction

Since no wildlife loss assessments or mitigation proposals were made for this period, no agreements were established.

2. Project Modifications/Operation

The CE agreed to the mitigation plan described in A.2. above for the 10-foot pool raise. However, a dispute over public access on Chief Joseph Project wildlife mitigation lands took place between wildlife agencies and the CE during preparation of the mitigation plan. The CE determined that acquisition of easements on private land was the best way to secure lands for mitigation. However, public access was denied to those lands to make the program more acceptable to the landowners. WDG and FWS asserted that full mitigation could not be achieved unless public access was allowed on mitigation lands. Forty-six percent of the mitigation land is privately owned (USACE 1980). This dispute was not resolved, and public access is still denied on those privately owned lands.

C. Mitigation Implemented

The mitigation plan described above has been implemented (Ken Brunner, pers. comm.).

VI. CURRENT STUDIES AND PLANNING

The CCT is currently in year 3 of a 5-year study of mule deer in the Chief Joseph Project area, using funds provided by CE.

No further mitigation is planned for the project. Evaluation of the mitigation already implemented will be conducted soon by a team composed of representatives from CE, CCT, and wildlife agencies.

VII. REFERENCES CITED

Erickson, A., Q. Stober, J. Brueggeman, and R. Knight. 1976. An assessment of the impact on the wildlife and fisheries of Rufus Woods Reservoir expected from the raising of Chief Joseph Dam from 946 to 956 m.s.l. coll. of Fisheries, univ. of Washington, Seattle, WA. 419 pp.

Fielder, P.C. 1977a. An assessment of Chief Joseph Dam--units 1 to 27 project impacts and their mitigation and compensation by means of the habitat unit evaluation procedure. Applied Research Bull. No. 14. WDG, Olympia, WA. 32 pp.

Fielder, P.C. 1977b. Some potential impacts on park development of Box Canyon on wildlife populations, Columbia River, Washington. WDG, Olympia, WA. 10 pp.

Fielder, P.C. 1977c. Evaluation of potential wildlife mitigation sites and their development: Chief Joseph Dam project, Washington. WDG, Olympia, WA. 40 pp.

Mudd, D., L. Boe, and R. Bugert. 1980. Evaluation of wildlife habitat developed on government project lands along Snake River in Washington. WDG. 184 pp.

Oliver, W.H. and D.C. Barnett. 1966. Wildlife studies in the Wells Hydroelectric Project area. Wash. State Dept. of Game, Olympia, WA. 37 pp.

Payne, N., G. Munger, J. Matthews, and R. Taber. 1975. Inventory of vegetation and wildlife in riparian and other habitats along the upper Columbia River. Univ. of Washington, Seattle, WA. 564 pp.

Tabor, J., B. Thompson, C. Turner, R. Stocker, C. Detrick, and J. Howerton. 1980. Study of impacts of project modification and river regulation on riparian habitats and associated wildlife along the Columbia River. WDG, Olympia, WA. 770 pp.

U.S. Army Corps of Engineers. 1980. Chief Joseph Dam Additional Units project, design memorandum 52, wildlife and threatened species mitigation. Seattle, WA.

U.S. Army Corps of Engineers. 1976. Inventory of riparian habitats and associated wildlife along the Columbia and Snake Rivers.

OTHER MATERIAL REVIEWED

Fielder, P.C., R.A. McKeel, C.E. McKay, and R.L. Perleberg. 1981. Mule deer assistance and immediate impacts of the pool raise along Rufus Woods Lake. WDG, Olympia, WA.

Fielder, P.C. and C.E. McKay. In press. Vegetation types used by mule deer fawns, mid-Columbia River, Washington.

Fielder, P.C. 1977. The flooding of lower Foster Creek: its impacts, compensation needs and enhancement potential. WDG, Olympia.

Fielder, P.C. and C.E. McKay. 1979. Wildlife observations associated with the Chief Joseph Dam project. WDG Olympia, WA.

Fielder, P.C. and R.G. Starkey. 1980. Wintering bald eagle use along the upper Columbia River, Washington IN Knight, R.L., G.T. Allen, M.V. Stalmaster, and C.W. Servhenn (editors). Proceedings of the Washington Bald Eagle Symposium, Seattle, WA.

McKeel R.A. 1980. Jordan Creek pumped storage planning study wildlife reconnaissance assessment. CE, Seattle, WA.

U.S. Army Corps of Engineers. 1971. Final Environmental Impact Statement, Chief Joseph Dam Additional Units, Columbia River, Washington.

U.S. Army Corps of Engineers files, Seattle, WA.

Washington Department of Game files, Olympia and Yakima, Washington.

AERIAL PHOTOGRAPHY AVAILABLE

1930 Preimpoundment photos taken by CE, 4-1/2"x4-1/2" - scale unknown.

VII. APPENDICES

APPENDIX A - Study Team

Washington Department of Game - Gretchen Van Lom
U.S. Fish and Wildlife Service - Ron Starkey

APPENDIX B - Consultation/Coordination

July 13, 1983 - Letter from FWS Regional Office to CE Seattle District initiating contact, requesting cooperation.

July 22, 1983	-	CE responded to July 13 FWS letter, naming Ken Brunner as contact person.
July/August 1983	-	Telephone contacts between Ken Brunner and Don Kraege (WDG)
August 10, 1983	-	Meeting between Ken Brunner and Don Kraege to discuss information needed for status review.
October 1983	-	First draft status review sent to CE for informal review and comment.
Oct./Nov. 1983	-	Telephone discussion between R. Starkey (FWS) and Jack Thompson (CE) to discuss draft status review and CE concerns.
December 9, 1983	-	Received CE comments on first draft of status review.
March 30, 1984	-	Several unsuccessful attempts were made between the study team {nd CCT to make phone contact is August/September. Contact was made in March with Steve Judd, who gave oral comments on mitigation that the CCT received for Chief Joseph.

APPENDIX C

Comments

JOHN SPELLMAN
Governor

JUN 14 1984

STATE OF WASHINGTON
DEPARTMENT OF GAME

May 31, 1984

John Palensky, Director
Division of Fish and Wildlife
Bonneville Power Administration
Post Office Box 3621
Portland, Oregon 97208

ATTN: James Meyer

Dear Mr. Palensky:

We have reviewed the mitigation status review report for Chief Joseph Project.

Chief Joseph Project inundated more than 8,000 acres of wildlife habitat including 3,500 acres of Colville Reservation lands. The tribes were reimbursed for losses of land but no attempt was made to assess the impact of wildlife and habitat losses on the reservation or mitigate those losses.

There were no wildlife impact assessments conducted which dealt with initial project construction. Studies were conducted to determine the impacts of adding additional units of Chief Joseph Dam and the associated 10 foot pool raise. In this effort a team of biologists, including members from Corps of Engineers, Washington Department of Game, Fish and Wildlife Service, Colville Confederated Tribes, and Bureau of Reclamation estimated impacts of the 10 foot pool raise using habitat evaluation procedures.

Pre-flood information on impacts to wildlife from the pool raise is more extensive than for most other northwest hydroelectric projects. There is, however, a lack of postflood data to substantiate the pre-flood studies. The pre-flood studies were estimates of losses based on pre-flood inventories. Quantitative data from these studies are lacking on a number of species groups such as aquatic mammals and nongame birds, including raptors. Impacts to terrestrial mammals other than deer were not investigated in detail. In addition this study did not address impacts of the project other than inundation.

Based on the above studies and recommendations of the agencies and tribe, the Corps of Engineers developed a mitigation plan for the installation of additional units and associated pool raise. The Corps mitigation plan included acquistion of easements for wildlife mitigation, irrigation, and fencing. The Corps, however, determined that acquistion of easements would be easier if public access were denied to those lands to make the program more acceptable to

landowners. Washington Department of Game and Fish and Wildlife Service asserted that full mitigation could not be achieved unless public accesss was allowed on mitigation lands. Forty-six percent of the mitigation land is privately owned. This dispute was not resolved and public access is still denied on those lands.

Losses of wildlife and habitat from original project construction have not been mitigated. According to the Corps of Engineers the impacts of additional units and pool raise have been mitigated. Evaluation of measures implemented to mitigate impacts of those additional units are to be conducted in 1984 according to Mr. Bruner of the Corps of Engineers. Results of this evaluation will determine if habitat developments are successful. We are anxious to determine if the loss of riparian habitat and island habitat have been successfully mitigated. As indicted in the mitigation status review report, Erickson (1976) predicted the loss of 173 acres of island habitat while the mitigation plan calls for replacement of only 5 acres on two sites. Other islands were formed by the pool raise, but whether these new islands provide habitat of sufficient qualilty to replace that which was lost needs to be determined.

Obviously, mitigation is lacking and therefore inadequate for the original construction of Chief Joseph project. Studies are needed to determine impacts of the original construction. It is our understanding that preinundation aerial photographs exist for the project, therefore habitat acreage lost to inundation can be calculated. Habitat quality of existing similar habitats can be evaluated using a habitat based evaluation. This could provide the basis for establishing mitigation levels.

Following this, a mitigation plan should be developed to adequately mitigate losses from initial construction and for losses caused by project operations.

A proposed cooperative study by Battelle, Chelan P.U.D., Corps of Engineers, Fish and Wildlife Service, and Washington Department of Game to collect bald eagle wintering data on the Columbia and Snake River would contribute to the current information on bald eagle winter use of Chief Joseph Shoreline and tributaries. The study is designed to determine peak winter populations, age classes, concentration areas, food sources, perch sites, and other habitat components for this important species. Conservation agencies support the above study which will be valuable to identify important bald eagle habitat areas and provide background for protection of this rare species.

There is an alternative method of achieving mitigation on this project which may be more efficient. This would involve 1) review of aerial photos, maps and other existing records to estimate the kinds and amounts of habitat lost to construction of the project, 2) acquisition of a like amount of acreage, to be identified by agencies, tribe and project operator, and 3) development and implementation of a mitigation and maintainance plan to replace the loss of habitat and wildlife.

We are looking forward to consultation and coordination on this project to determine the next step in the wildlife mitigation process.

Very truly yours,

THE DEPARTMENT OF GAME

Frank R. Lockard
Director

FRL:pr-b

United States
Department of the Interior

Fish and Wildlife Service
Lloyd 500 Building, Suite 1692
500 N.E. Multnomah Street
Portland, Oregon 97232

In Reply Refer To:

Your Reference:

June 11, 1984

Mr. John Palensky
Director, Division of Fish and Wildlife
Bonneville Power Administration
Department of Energy
P.O. Box 3621
Portland, Oregon 97208

Dear Mr. Palensky:

As requested we have reviewed a copy of the Status Report on Wildlife Mitigation for the Chief Joseph Dam and Reservoir Project, which was jointly prepared by the Habitat Resources Division of the Fish and Wildlife Service (FWS) and the Washington State Department of Game (WDG) under contract with the Bonneville Power Administration. The following represents the formal response of the FWS regarding the subject project.

General Comments

We have completed an extensive search of agency files and reference materials, and find that we have no additional information with which to make corrections or additions to the subject report. Insofar as our resource interests are concerned, we find the report to be complete and accurately written.

It is clear from the report's content that original construction and operation of the project has resulted in substantial adverse impacts to wildlife resources, which have been neither adequately assessed nor mitigated. Therefore, the Service recommends that the Bonneville Power Administration provide funds to: 1) conduct a comprehensive evaluation of the impacts of the Chief Joseph Project on wildlife resources; and 2) based on the findings of that evaluation, develop a mitigation and enhancement plan which would fully compensate the adverse wildlife impacts attributable to the project.

The Service has the expertise and would like to participate in both the impact evaluation and mitigation plan development.

Special Comments

A comprehensive evaluation of Chief Joseph's impact on wildlife resources should be conducted by a team of qualified biologists composed of representatives from appropriate State, Federal and Tribal agencies. These include the WDG, CE, Colville Confederated Tribes, and the FWS. We suggest the evaluation be based on habitat supported by population data where available. We believe that such an evaluation could be accomplished with a minimum of new data collection by: 1) detailed survey of all historical pre-impoundment topographic/photographic data; 2) review of records and accounts of pre-project conditions, if available, from long-time residents, sportsmen, and fish and game personnel familiar with the area; 3) comparison of 1 and 2 above with onsite production estimates from habitat types which currently exist adjacent to project boundaries and within the basin; and finally, 4) this inforamtion can be combined with methods contained in a habitat based evaluation procedure commonly employed by the FWS to determine mitigation needs. The evaluation's results should be presented in an impact assessment report and based on those results, a mitigation plan developed. This plan, if implemented, would fully compensate the adverse wildlife impacts identified.

In addition to assessing the direct impacts, we strongly believe the cumulative and secondary effects of this and other Columbia Basin reservoirs should be evaluated. A principal focus of multiple project evaluation should be the broader effects of operation of projects as a "system", such as water fluctuations resulting from power peaking, etc. The extensive development that has occurred along the Columbia River's flood plain has also cumulatively reduced a variety of wildlife habitats and related resources. Such development and related wildlife losses would have been considerably less without construction and operation of Grand Coulee and other major Columbia River projects. In some instances there may have been some net benefits to certain species/resources which need to be better identified.

In conclusion, we believe no single agency or user group is responsible for the wildlife losses resulting from development and operation of the Chief Joseph Project. The proposals outlined in this letter would be considered as "standard operating procedures" for evaluating new water development proposals under present State and Federal laws, rules, regulations, and policies. Unfortunately, these legal mandates which today provide for the protection of our wildlife resources were either nonexistent or in their infancy when the Chief Joseph Project was being developed. However, both the Northwest Power Act and the Power Council's Fish and Wildlife Program recognize this and together have given us an opportunity to correct our past mistakes. The Service is eager to move toward that end.

Sincerely,

J. W. Teeter

James W. Teeter
Acting Assistant Regional Director
Habitat Resources

cc: ES-Olympia/Moses Lake
CE-Seattle
Colville Tribes
WDG

Colville Confederated Tribes

P.O. Box 150 · Nespelem, Washington 99155 (509) 634-4711

May 10, 1984

Mr. John Palensky, Director
Division of Fish and Wildlife
Department of Energy
Bonneville Power Administration
P. O. Box 3621
Portland, Oregon 97208

Attention: Mr. James Meyer PJS

Dear Mr. Palensky:

Our staff has reviewed the Project Report on the "Wildlife Mitigation Status Review" for the following projects: Chelan, Tumwater/Dryden, Rock Island, Priest Rapids/Wanapum, Wells and Chief Joseph Dams.

We feel, at this time, that they present the wildlife mitigation situation fairly well.

Sincerely,

Al Aubertin, Chairman
Colville Business Council

Status Report on Wildlife Mitigation

GRAND COULEE PROJECT

Prepared by

Washington Department of Game

and

U.S. Fish and Wildlife Service

for

Bonneville Power Administration

in response to the

Fish and Wildlife Program
Northwest Power Planning Council

1984

I. PROJECT NAME

Grand Coulee Dam Project (Columbia Basin Project)

II. PROJECT OPERATORS

U.S. Department of the Interior/Bureau of Reclamation (BR)

III. PROJECT DESCRIPTION

A. Location and Size

The project consists of Grand Coulee Dam and three associated powerplants located in north-central Washington on the upper Columbia River at River Mile 596.5. The powerplants contain 24 generating units with a combined output capacity of 6,580 MW. FDR Lake (Franklin D. Roosevelt Reservoir) which was formed by the dam extends 151 miles upstream to the Canadian border, contains about 650 miles of shoreline and occupies a surface area of 80,000 acres.

B. Authorized Purposes

The project is multipurpose with provisions for power generation, flood control, improvement in navigation, and irrigation.

C. Brief History of Construction and Operation

The original project was authorized for construction by the River and Harbor Act of August 30, 1935. FDR lake was formed in 1939 following completion of the dam. Project completion occurred in 1942 with two powerplants operational. The project was then reauthorized by the Columbia Basin Project Act of March 10, 1943. A third powerplant was authorized in 1966 (P.L. 89-448) and completed in 1980, with plans for an extension still under consideration.

D. Other Pertinent Data

1. Water level fluctuation and timing

The project is operated to provide baseload generation of electricity and irrigation, with peak-load capability provided through the use of reversible pump generators which pump water from FDR to nearby Banks Lake. With addition of the third powerhouse, large surges and fluctuations of downstream flows have required riverbank protection measures to avoid instability and erosion. Average annual discharge is 107,000 cfs (CWMG 1981).

To avoid flooding Canadian lands to the north, maximum FDR Lake elevation has been set at 1,290 feet above sea level.

Normal operating elevations vary between 1,208-1,290. The lake has a total storage capacity of 9,562,000 acre-feet, and an active capacity of 5,232,000 acre-feet.

2. Land Ownership

All lands adjacent to the lake shoreline are under Federal ownership up to elevation 1,310. The Bureau of Reclamation has acquired higher elevation lands where bank sloughing is particularly severe. Of these Federally controlled lands, 21,000 acres are administered by the National Park Service (NPS) as a national recreation area (BR 1976). Included are 25 sites specifically set aside as campgrounds with appropriate facilities, and 12 swimming beaches. Lands acquired for the project include 21,103 acres previously owned and/or allotted by the Colville Confederated and Spokane Indian Tribes.

3. Indian Rights

Under the auspices of the Commissioner of Indian Affairs and the Secretary of the Interior, a series of treaties and agreements were enacted during the 1800's which consolidated several Indian Tribes and their lands throughout north-central Washington (BR 1976). These Tribes are now known as the Colville Confederated and Spokane Tribes, and their reservations adjoin the Columbia and Spokane Rivers, respectively. The reservations provide the Tribes with opportunity to exercise their inherent rights of fishing and hunting. The Tribes have the responsibility to administer their own conservation laws within reservation boundaries.

With the onset of the Grand Coulee Project, it was necessary for BR to acquire some 21,103 acres of reservation lands which would be inundated upon project completion. Additionally, it was also necessary to relocate a number of homesteads, roads, and other reservation facilities. The Tribes were reimbursed for the losses of land, but due to lack of adequate methodology no attempt was made to assess the impact of wildlife and habitat losses on the reservation, nor to develop compensatory measures.

IV. WILDLIFE SPECIES AND HABITAT ASSESSMENTS

A. Preconstruction Period

Although no preimpoundment surveys exist to document the specific acreages and types of habitat lost, habitat for big game, upland birds, migratory birds, furbearers, and nongame wildlife was eliminated by the project; and wildlife dependent on this habitat was lost (BR 1976). Historical records also indicate that lands and vegetation inundated by formation of FDR Lake were similar to that which currently exists on the uplands adjacent to the project.

Landform, topography, and vegetation of the lower one-third to one-half of the project is characteristic of the Okanogan Highlands Province to the north and Shrub-Steppe Province to the south, as described by Franklin and Dyrness (1973). The uplands consist of moderately sloped benches and terraces occasionally cut by deep ravines and broken by steep rocky outcrops. Ground cover is predominantly native grasses interspersed with improved pasture and irrigated grazing lands. Other undisturbed areas consist of dense growths of shrubby vegetation and occasional stands of ponderosa pine and broadleaf trees. upstream of the mouth of the Spokane River (Spokane Arm) the uplands become generally more steep and mountainous, heavily forested with fir, pine, and western larch.

Historical records also show the existence of riparian communities along tributary stream courses and selected reaches of the original floodplain (Oliver 1974). The vegetation in these riparian zones contained a diversity of plant species dependent upon moist soils such as water birch, hawthorn, chokecherry, currant, snowberry, serviceberry, wild rose, clematis, mock orange, and tall grasses and sedges. Ponderosa pine, aspen, cottonwood, juniper, dogwood, and willow dominated the overstory (Oliver 1974). It is also reasonable to assume that small vegetated islands, rock outcrops, tree snags, and gravel bars/mud flats existed which were important to wildlife. Habitat conditions along the Grand Coulee tailwater prior to the downstream fill/stabilization project were similar to the reservoir basin upstream but never documented (WPRS 1981).

The riparian zone and nearby uplands of the inundated area, combined with the micro-climate effect of the river and protected reaches of the river corridor, provided an essential, vital environment for a wide variety of wildlife during all seasons of the year. However, these areas were most important during winter months and periods of lifecycle stress. The basin was, and still is, an important wintering area for big game such as mule deer and white-tailed deer, and occasionally elk (WPRS 1981). Upland birds most commonly found were chukar partridge, sharptail grouse, forest grouse, and mourning dove. Migratory waterfowl (particularly Canada geese), furbearers, and large avian predators such as bald and golden eagles, hawks, and owls also used the bottomlands in addition to the coyote, black bear, bobcat, and a large variety of nongame birds and mammals (WPRS 1981). Early records indicate that breeding geese were probably absent from the upper Columbia prior to the 1900's due to poor forage production, use of the river for human travel, and overexploitation of breeding birds on nearby islands. Following the turn of the century, goose population estimates were unreliable because of access difficulty and the variety of nesting locations/habitat. No estimates are available for the number of nesting geese or other waterfowl on the Columbia prior to FDR inundation;

however, evidence suggests that populations were small and widespread (Ball et al. 1981). Further, since about 80 percent of nest sites in the Columbia Basin area are on islands, those in the upper river above Grand Coulee were obviously inundated. No preproject estimate of animal populations is currently available, but preliminary estimates by WDG biologists in the mid-1960's calculated populations of 5,000 to 10,000 deer, 5,000 pheasants, and 100,000 mourning doves (Wash. Dept. of Game unpublished data). Surveys for nongame and threatened/endangered species were not conducted prior to project completion.

Historical records suggest that bald eagles used the river corridor for wintering and occasionally for nesting. Early Colville residents report seeing three to five pairs or more nesting at the mouth of the San Poil River (Steve Judd pers. comm.).

B. Postconstruction Period

The project eliminated a major portion of the free-flowing river/stream courses in the basin, including 151 miles of the Columbia River, 32 miles of the Spokane River, 11 miles of the Kettle River, 2-3 miles of the Colville River, and 20-30 miles of minor tributary streams (BR 1976). FDR Lake inundated 68,000 acres, with another 2,500 acres affected by relocated roads, homesteads, power lines, and related facilities. A minimum of 24 slide areas are known to exist with bank sloughing continuing annually due to water-saturated soils and wind/wave action.

Aerial bald eagle surveys have been conducted since 1975 during the months of October-March by the U.S. Fish and Wildlife Service (FWS) and Washington Dept. of Game (WDG). These censuses reflect a sizeable wintering population averaging about 60-70 adult and 15-20 immature/subadult bald eagles using FDR Lake (Fielder and Starkey 1980).

1. Project Operation

Construction of the Third Powerhouse resulted in disturbance of 82 acres for project structures, 400 acres for switch yards and transmission lines, and 32 acres for roads (USDI/BR 1976). In addition, over 4 million cubic yards of excavated material from the powerhouse site were deposited along 6 miles (about 150 acres) of the right bank shoreline downstream from the dam.

Riverbanks downstream from Coulee Dam are subject to increased landslides because of river fluctuations from operation of the Third Powerplant. To prevent erosion, BR has implemented a downstream riverbank stabilization program, which resulted in the loss of approximately 250 acres of wildlife habitat (WPRS 1981).

Fluctuating water levels in FDR Lake prevent the growth of submergent/emergent vegetation and leave potential nest sites susceptible to predation (Ball et al. 1981). As a result, although the reservoir has some value for resting and wintering waterfowl, nesting and feeding habitat is very limited. Other waterfowl species use the reservoir most probably as a temporary stopover during migration periods. There is no known nesting by bald eagles in the area.

V. WILDLIFE MITIGATION HISTORY

A. Mitigation Requested or Proposed

No mitigation for wildlife affected by the original project was developed or proposed. Losses to wildlife resulting from the project were considered acceptable by project proponents in view of the benefits expected from primary project purposes.

To mitigate for the impacts of downstream filling of material from the Third Powerplant, WDG and FWS submitted a plan to BR for development of the fill area as wildlife habitat. The plan included shaping the fill, planting suitable plant species important to wildlife, and creating goose nesting islands. Compensation measures proposed by WDG included creation of an artificial stream to establish riparian vegetation and/or development of goose pasture on Banks Lake. Planning for this effort was halted due to an ownership dispute among involved agencies and affected Tribes. In 1980, FWS prepared a separate wildlife mitigation plan for the downstream fill project to offset losses from bank stabilization alternatives (FWS 1980). This plan proposed wildlife enhancement measures for implementation on both banks of the Grand Coulee tailwater. A supplemental plan providing specifications and details of the 1980 plan was submitted to BR and accepted in 1983 (FWS 1983).

Conservation agencies also proposed compensation measures in earlier recommendations submitted to the Northwest Power Planning Council. The main recommendation involved acquisition of lands to compensate for wildlife and habitat lost due to inundation and construction activities. In particular, agencies proposed evaluation of specific drainages below 3,000 feet elevation to compensate for loss of prime winter range and increase wildlife production. Specific drainages listed included reaches of the Columbia, Pend Oreille, Colville, Kettle, Okanogan, San Poil, Curlew, and Methow Rivers.

B. Mitigation Agreements or Requirements

In 1981 BR agreed to accept the 1980 FWS mitigation plan for impacts created by the downstream riverbank stabilization project. The plan also contained provisions for mitigation of downstream fill impacts.

C. Mitigation Implemented

None.

VI. CURRENT STUDIES AND PLANNING

There are no studies currently being conducted in relation to the Grand Coulee Project wildlife impacts.

Based on the 1980 FWS mitigation plan submitted to BR, measures are being implemented to retain or replace project-impacted wildlife affected by the Downstream Riverbank Stabilization Project. The project is currently in the engineering phase and scheduled for completion in 1985.

The basic framework of the 1980 mitigation plan on the Downstream Riverbank Stabilization project includes the following: development of 14 acres of riparian-like habitat on level ground adjacent to the draws that transect Washington Flats on the left bank of the river; improvement of 14 acres of shrub-steppe habitat inside the draws; and establishment of a crop-sharing arrangement whereby existing dryland wheat fields at Washington Flats continue to be farmed for wheat, with the lessee (farmer) agreeing to raise and leave unharvested a 10-foot-wide strip around each field (FWS 1980). Additionally, while cattle grazing would not be anticipated, it would be allowed at the discretion of the managing agency. Irrigation would also be required throughout the 100-year life of the project to improve the quality of the shrub-steppe habitat and to establish the riparian habitat base. These measures are intended to offset a major portion of the losses from the downstream stablilization project (FWS 1980).

VII. REFERENCES CITED

Ball, I.J., E.L. Bowhay, and C.F. Yocom. 1981. Ecology and management of the Western Canada goose in Washington. WDG. Biol. Bull. No. 17. 68 pp.

Columbia Water Management Group. 1981. Columbia River Water Management Report for 1981. CWMG. 153 pp.

Fielder, P.C. and R.G. Starkey. 1980. Wintering bald eagle use along the upper Columbia River, Washington in Knight, R.L., G.T. Allen, M.V. Stalmaster, and C.W. Servheen (ed.) Proceedings of the Washington Bald Eagle Symposium, Seattle, WA.

Franklin and Dyrness. 1973. Natural vegetation of Oregon and Washington. USDA. Forest Service Gen. Tech. Rpt. PNW-18. 417 pp.

Oliver, W. 1974. Wildlife problems associated with hydropower reservoirs. WDG. Apl. Res. Bull. No. 3. 9 pp.

Washington Department of Game. Unpublished data.

Water Power Resource Service. 1982. Downstream riverbank stabilization program - Grand Coulee Dam. Final EIS. USDI.

U.S. Bureau of Reclamation. 1976. Columbia Basin Project, Washington. Final EIS. USDI/BR 775 pp. 2 vols.

U.S. Fish and Wildlife Service. 1980. Grand Coulee Dam downstream riverbank stabilization project. Fish and Wildlife Mitigation Planning Aid Report. USDI. 13 pp.

U.S. Fish and Wildlife Service. 1983. Wildlife mitigation plan for Washington Flats. Grand Coulee Downstream Riverbank Stabilization Project. USDI. 9 pp.

VII. APPENDICES

APPENDIX A - Study Team

Washington Department of Game - Gretchen Van Lom
U.S. Fish and Wildlife Service - Ron Starkey

APPENDIX B - Consultation/Coordination

July 1, 1983	-	Letter to Dick Woodworth (BR Boise) from FWS requesting information and identification of contact person.
early July 1983	-	Response to July 1, 1983, FWS letter received from BR.
July 18, 1983	-	Letter to CCT and Spokane Tribes from FWS initiating contact for stafus review and requesting name of contact persons from Tribes.

mid-July 1983	-	Telephone contact with BR biologist Dr. R. McKown to set up meeting to discuss mitigation status review.
late July 1983	-	Telephone contact with CCT biologist Judd. No contact received from Spokane Tribes. Meeting with BR biologist McKown to discuss status review.
July 29, 1983	-	Letter to CCT biologist from FWS transmitting information on Grand Coulee status review requested by Tribe.
early August 1983	-	FWS meeting with BR biologist to discuss status review, progress, availability of information, status of current mitigation and planning. FWS reviewed BR documents.
August 8, 1983	-	FWS received letters from CCT biologist Judd providing CCT comments on draft status review, recommended changes, and CCT concerns. Still no response from Spokane Tribes.
August 15, 1983	-	Sent copies of second draft Grand Coulee status review to CCT, Spokane Tribes, and BR Grand Coulee office for review and comment.
mid-Aug./early Sept. 1983	-	Attempted telephone contact with Spokane Tribes--no response.
August 30, 1983	-	FWS received letter from CCT biologist Judd providing input to status review report.
September 22, 1983	-	BPA received letter from BR regarding formal comments on Grand Coulee status review.
late September 1983	-	Another attempt to make telepone contact with Spokane Tribes--no response.

October 13, 1983	-	Letter to BR Boise from FWS with copy of final draft status review for review and comment.
December 1, 1983	-	Letters received from BR Boise citing concurrence with status review report.
March 27, 1984	-	Meeting between Starkey (FWS), Van Lom (WDG), and Adair (BR) to discuss status review.

Individuals contacted during the Status Review:

Washington Department of Game	- R. Friesz
U.S. Fish & Wildlife Service	- C. Chambers M. Stempel R. Starkey
Colville Confederated Tribes	- S. Judd A. Aubertin
Spokane Indian Business Council	- J. Samuels
U.S. Bureau of Reclamation	- R. Woodworth R. McKown R. Adair

APPENDIX C

Comments

JOHN SPELLMAN
Governor

Received: MAY 18 1984

STATE OF WASHINGTON
DEPARTMENT OF GAME
600 N. 70 Capitol Way C/O 11 • Olympia Washington 98504 • (206) 753-5700

May 14, 1984

John Palensky, Director
Division of Fish and Wildlife
Bonneville Power Administration
Post Office Box 3621
Portland, Oregon 97208

Attn: James Meyer

Dear Mr. Palensky:

My staff has reviewed the mitigation status review report for Grand Coulee project. Our comments follow.

The report points out that no pre-impoundment surveys were conducted to document specific acreages and types of habitat loss or the kinds and numbers of wildlife affected by the project. I think we can safely say, however, that habitat for big game, upland birds, migratory birds, furbearers, and nongame wildlife was eliminated, and wildlife dependent upon this habitat was lost. Historical records show existence of riparian communities along the stream courses on the lower parts of the flood plain. Uplands were most likely similar to uplands in the present vicinity of the project. The riparian zone and nearby uplands, combined with the micro-climate effect of the river, provided an essential environment for a wide variety of wildlife during all seasons of the year. The basin was a particularly important wintering area for big game such as mule deer and white-tailed deer. Upland birds most commonly found in the area were chukar, partridge, sharp-tailed grouse, forest grouse, and mourning dove. Migratory waterfowl, particularly Canada geese, furbearers, and large avian predators such as bald and golden eagles also use this area. Coyote, black bear, bobcat, and a large variety of nongame birds and mammals were also common to the area. The project eliminated 151 river miles of riparian and flood plain habitat along the Columbia River. The lake itself inundated approximately 70 thousand acres of wildlife habitat. Construction of the third powerhouse resulted in the loss of an additional 600 acres of habitat. In addition, fluctuating water levels prevent growth of littoral and riparian vegetation within the fluctuation zone.

Assessments of impacts to wildlife resulting from Grand Coulee project have been after-the-fact, with data that were generalized, vague, and unquantitative. The effect of construction activities on wildlife has never been properly addressed. Identification of habitat types and acreages has never occurred.

While there are references to animal species and variety, population levels were not accurately estimated. Evaluation of the significance of loss of habitat for these species in quantitative or ecological terms was not provided. The influence of FDR Lake on migration routes or historical ranges, of certain affected species, has not been assessed. Finally, impacts to nongame species were generally overlooked and rare, threatened, and endangered species ignored.

The impact of FDR Lake operation identified in existing studies has been covered only in general qualitative terms. Most reports focus on bank sloughing and downstream fluctuation of tail water levels. The impacts of increased recreational use on wildlife and habitat have been omitted, as well as effects of development of public use facilities on wildlife which currently use the lake and uplands.

No mitigation for wildlife affected by the original project was developed or proposed. Losses to wildlife resulting from the project were considered acceptable by project proponents in view of benefits expected from primary project purposes.

Some measures were proposed to mitigate effects of construction of the third powerhouse on wildlife, but none have been implemented. Based on evidence, knowledge of habitat types, extent of wildlife use/dependancy of habitats adjacent to the project boundaries, and what we know concerning preproject conditions, it is reasonable to conclude that there were major losses of critical range and associated wildlife in the reservoir basin when Lake FDR was formed. The protected lower elevation habitat found in this area is particularly important to big game species. Similarly, the riparian zone which existed was critical to a wide variety of wildlife as discussed in the report. Because of these factors this department feels that impacts resulting from the original Grand Coulee project have never been adequately assessed.

Since assessments of wildlife damages were never conducted for the original Grand Coulee dam and reservoir project, mitigation was neither developed nor implemented. The mitigation plan developed for the third powerhouse/downstream riverbank stablization project should achieve satisfactory mitigation for this part of the project if implemented.

Resources affected by the third powerhouse project were assessed after-the-fact and a mitigation plan was developed. If measures recommended by the state and federal wildlife agencies are fully implemented, an acceptable level of mitigation should be achieved for the third powerhouse project.

Colville Confederated Tribes however, feel that resources affected on the reservation have not been properly assessed or mitigated.

Impact assessments for the original project development need to be conducted. This could be achieved through a detailed survey of historical pre-impoundment topigraphic and photographic data, review of records and accounts of preproject and conditions, if available, from long-term residents, sportsmen and fish

and game personnel familiar with the area and on-site production estimates from habitat types which currently exist adjacent to the project boundaries and within the basin. This information can then be used in habitat-based analyses to determine habitat and wildlife losses and establish mitigation levels. These analyses must consider habitat gains and losses due to operations occurring after project completion, as well as assumed habitat changes had the project not been built. Proposed mitigation lands and habitat development can be evaluated to identify suitable sites for acquisition and mitigation plans then developed.

There are some measures which could be implemented without further study. The 1980 mitigation plan and the 1983 supplemental plan submitted to Bureau of Reclamation by the Fish and Wildlife Service should be fully implemented to achieve mitigation for the downstream river bank stabilization project. Further, the five-year monitoring program to document success of the plan's recommendations should commence so that further refinements in mitigation efforts can be made to achieve the desired results.

Two studies have been proposed to collect baseline information on several wildlife species which use FDR Lake area. Colville Confederated Tribe proposed a study to identify big game movement patterns, migration routes, seasonal range used, population parameters, and habitat components on the Colville Reservation. This information should be combined with similar studies in other reservoir areas to include current big game use and provide data for the habitat-based analyses to determine overall impacts of the project on big game species.

The second is a proposed cooperative study with Battelle Northwest, Chelan PUD, Corps of Engineers, Fish and Wildlife Service, and Washington Game Department to collect bald eagle wintering data on Columbia and Snake rivers. Information gathered in this study would contribute to current information on bald eagle winter use of Franklin Delano Roosevelt shorelines and tributaries. The study is designed to determine peak wintering populations, age classes, concentration areas, food sources, perch sites, and other habitat components for this important species. We support these studies, which will be valuable to identify important big game and bald eagle habitat areas around FDR reservoir and provide background for further mitigation studies proposed above.

There is, if all parties agree, a shorter method of achieving mitigation on this project which may be more efficient. This would involve: (1) a review of any maps, photos, and aerial photos available to estimate kinds and amounts of habitat lost due to construction of Grand Coulee project; (2) acquisition of a similar amount of land (to that lost to inundation) to be identified by wildlife agencies, tribes, and project operator; and (3) development and implementation of a mitigation and maintenance plan to replace the lost habitat and wildlife.

We're looking forward to a consultation and coordination session with all parties involved to determine the next step in the wildlife mitigation process.

Very truly yours,

THE DEPARTMENT OF GAME

James M. Johnston
Assistant Director

JMJ:pr-b

United States
Department of the Interior

Fish and Wildlife Service
Lloyd 500 Building, Suite 1692
500 N.E. Multnomah Street
Portland, Oregon 97232

In Reply Refer To: Your Reference:

May 18, 1984

Reviewed: MAY 22 1984

John Palensky
Director, Division of Fish and Wildlife
Bonneville Power Administration
Attention: James Meyer
P. O. Box 3621
Portland, Oregon 97208

Dear Mr. Palensky:

As requested we have reviewed a copy of the Status Report on Wildlife Mitigation for the Grand Coulee Dam and Reservoir Project, which was jointly prepared by the Habitat Resources Division of the Fish and Wildlife Service (FWS) and the Washington State Department of Game (WDG) under contract with the Bonneville Power Administration. The following represents the formal response of the FWS regarding the subject project.

General Comments

We have completed an extensive search of agency files and reference materials and find that we have no additional information with which to make corrections or additions to the subject report. Insofar as our resource interests are concerned, we find the report to be complete and accurately written.

It is clear from the report's content that original construction and operation of the project has resulted in substantial adverse impacts to wildlife resources, which have been neither adequately assessed nor mitigated. Therefore, the Service recommends that the Bonneville Power Administration provide funds to: 1) conduct a comprehensive evaluation of the impacts of the Grand Coulee project on wildlife resources; and 2) based on the findings of that evaluation, develop a mitigation and enhancement plan which would fully compensate the adverse wildlife impacts attributable to the project.

The Service has the expertise and would like to participate in both the impact evaluation and mitigation plan development.

Specific Comments

A comprehensive evaluation of Grand Coulee's impact on wildlife resources should be conducted by a team of qualified biologists composed of representatives from appropriate State, Federal, and Tribal agencies. These include the WDG, BR, Colville Confederated and Spokane Tribes, and the FWS. We suggest the evaluation be based on habitat supported by population data where available. We believe that such an evaluation could be accomlished with a minimum of new data collection by: 1) detailed survey of all historical preimpoundment topographic/photographic data; 2) review of records and accounts of preproject conditions, if available, from long-time residents, sportsmen, and fish and game personnel familiar with the area; 3) comparison of 1 and 2 above with onsite production estimates from habitat types which currently exist adjacent to project boundaries and within the basin; and finally, 4) this information can be combined with methods contained in a habitat-based evaluation procedure commonly employed by the FWS to determine mitigation needs. The evaluation's results should be presented in an impact assessment report and based on those results, a mitigation plan developed. This plan, if implemented, would fully compensate the adverse wildlife impacts identified.

In addition to assessing the direct impacts, we strongly believe the cumulative and secondary effects of this and other Columbia Basin reservoirs should be evaluated. A principal focus of multiple project evaluation should be the broader effects of operation of projects as a "system," such as water fluctuations resulting from power peaking, etc. The extensive development that has occurred along the Columbia River's flood plain has also cumulatively reduced a variety of wildlife habitats and related resources. Such development and related wildlife losses would have been considerably less without construction and operation of Grand Coulee and other major Columbia River projects. In some instances there may have been some net benefits to certain species/resources which need to be better identified.

In conclusion, we believe no single agency or user group is responsible for the wildlife losses resulting from development and operation of the Grand Coulee Project. The proposals outlined in this letter would be considered as "standard operating procedures" for evaluating new water development proposals under present State and Federal laws, rules, regulations, and policies. Unfortunately, these legal mandates which today provide for the protection of our wildlife resources were either nonexistent or in their infancy when the Grand Coulee project was being developed. However, both the NWPA and the

Council's Fish and Wildlife Program recognized this and together have given us an opportunity to correct our past mistakes. The Service is eager to move toward that end.

Sincerely yours,

Assistant Regional Director
Habitat Resources

MAY 1 5 1984

Colville Confederated Tribes

P.O. Box 150 - Nespelem, Washington 99155 (509) 634-4711

May 10, 1984

Mr. John Palensky, Director
Division of Fish and Wildlife
Department of Energy
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208

Attention: Mr. James Meyer PJS

Dear Mr. Palensky:

Our staff has reviewed the Project Report on the "Wildlife Mitigation Status Review" for Grand Coulee Dam.

We feel that it presents an accurate picture of the wildlife mitigation situation for the Grand Coulee Dam project.

We are looking forward to working with you further on wildlife mitigation efforts for the area.

Sincerely,

Shirley Palmer

for Al Aubertin, Chairman
Colville Business Council

United States Department of the Interior

BUREAU OF RECLAMATION
PACIFIC NORTHWEST REGION
FEDERAL BUILDING & U.S. COURTHOUSE
BOX 043-550 WEST FORT STREET
BOISE, IDAHO 83724

IN REPLY REFER TO PN 152
565.

MAY 17 1984

Mr. John Palensky, Director
Division of Fish and Wildlife
Attention: Mr. James Meyer
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208

Dear Mr. Meyer:

We have reviewed the mitigation status report for Grand Coulee Dam which you sent by letter dated April 23, 1984. Following are our comments:

III.C: FDR Lake was filled in 1941. Project completion was not in 1942. In 1942, there were only six units installed in the Left Powerplant. The Right Powerplant was not constructed until after World War II.

III.D.3., Second Paragraph: Rather than lack of methodology, we suggest that the reason no attempt was made to assess the impact on wildlife was because the nation's primary goals of the 1930's were economic recovery and employment.

IV.A. and B: The reference to loss of animals should not be a part of this report. The purpose of this report is to discuss what mitigation was implemented for the project. The next report, which is the Loss Estimate Report, will assess the habitat and numbers of animals lost.

V.C: Mitigation for the Downstream Riverbank Stabilization Project has been initiated. The Washington Flats area has been purchased and a test well drilled for a source of water to irrigate the vegetation that will be planted for wildlife habitat.

Sincerely yours,

L.W. Lloyd

Regional Director

cc: U.S. Fish and Wildlife Service, Olympia, WA
Washington Department of Game, Attention: Gretchen Von Lom, Yakima, WA
Project Manager, Grand Coulee, WA

Status Report on Wildlife Mitigation

BANKS LAKE PROJECT

Prepared by

Washington Department of Game

and

U.S. Fish and Wildlife Service

for

Bonneville Power Administration

in response to the

Fish and Wildlife Program
Northwest Power Planning Council

1984

I. PROJECT NAME

Banks Lake

II. PROJECT OPERATORS

United States Department of the Interior/Bureau of Reclamation (BR)

III. PROJECT DESCRIPTION

A. Location and Size

Banks Lake is a man-made reservoir located in the 50-mile-long gorge known as the Grand Coulee in central Washington. The lake was formed by the construction of two earth filled dams, one at either end of the coulee. North Dam, near the town of Grand Coulee, is 145 feet high and 1,400 feet long. Dry Falls, at the south end of the lake near Coulee City, is 123 feet high and 8,880 feet long.

Water is pumped from Franklin D. Roosevelt (FDR) lake and enters Banks lake through a feeder canal. The lake is 27 miles long and varies from 1 to 3 miles wide, with a surface area of 27,800 acres at full pool. At full capacity, Banks Lake holds 1,275,000 acre-feet of water. Active capacity is 715,000 acre-feet.

The pumping-generating plant is located at Grand Coulee Dam. The plant was originally built to pump irrigation water into Banks Lake, with facilities for power generation added over 20 years later. The plant contains six 65,000 horsepower centrifugal single-stage pumps rated at 1,600 cubic feet per secnd and six reversible pump-turbine units rated at 1,750 cubic feet per secnd. Each pump-turbine unit has a rated generating capacity of 50,000 kilowatts of electricity. The planned power generating capacity when all six units are in operation is 300,000 kilowatts of power (USBR 1976).

B. Authorized Purposes

The project is multi-purpose with features for flood control, navigation improvement, streamflow regulation, irrigation storage, and power generation.

C. Brief History

Banks Lake was formed in 1951, 10 years after the first generators at Grand Coulee Dam began operation. The original purpose of the project was to provide an equalizing reservoir for the Columbia Basin Project (CBP). Power generation facilities were added to the project over 20 years after its formation.

In 1974, construction of the first two reversible pump-

generator (P/G) units was completed. These two units, P/G 7 and 8, were followed by P/G 9, 10, and 11 which became operational in 1983. P/G 12 is expected to be operational in April 1984.

D. Other Pertinent Data

1. Water level fluctuation and timing

Maximum and minimum water levels in Banks Lake are 1,570 feet and 1,517 feet above sea level, respectively. Between 1956 and 1976, annual water fluctuations in Banks Lake during the irrigation season ranged from 8 to 27 feet. The 27-foot drawdown occurred to facilitate maintenance activities (USBR 1976). With complete CBP development, fluctuations may be as much as 40 feet (USBR 1976).

2. Land Ownership

The Bureau of Reclamation (Bureau) acquired approximately 44,700 acres of land for the construction of Banks lake. In 1953, the Bureau transferred fish and wildlife and recreational management of the land and surrounding Bureau lands the State of Washington through a Memorandum of Agreement. Subsequent agreements between Washington Department of Game and Washington State Parks and Recreation Commission designated areas to be managed by each agency individually and by both cooperatively. These verbal agreements are presently being revised. The Banks Lake Habitat Management Area managed by Washington Department of Game comprises 36,470 acres. In addition, 8,230 acres at Steamboat Rock State Park are managed jointly by Washington Department of Game and Washington State Parks and Recreation Commission.

3. Indian Rights

None known.

IV. WILDLIFE SPECIES AND HABITAT ASSESSMENTS

A. Preconstruction Period

No site-specific wildlife and habitat studies exist for Banks Lake prior to 1951 when the lake was formed. Impacts to wildlife and habitat specifically related to hydroelectric power generation at Banks Lake are difficult to pinpoint and are generally restricted to effects of power-related water level fluctuations (see "Operational History").

Banks Lake is located in the geologic region known as the channel scablands, an area in which basalt rock has been eroded by ice and water to form deep, steep-walled canyons (Brackett 1970). Lakes, marshes, and potholes are found

throughout the area; most of them contain water during only part of the year. The sagebrush-bunchgrass vegetation zone in which Banks Lake is found is characterized by grasses such as bunchgrass, foxtail, and cheatgrass and shrubs such as bitterbrush, sagebrush, and rabbitbrush (Brackett 1970).

Before Banks lake was formed, wildlife in the area included mule deer, ring-necked pheasants, valley quail, Hungarian partridge, sage grouse, mourning doves, cottontail rabbits, muskrat, mink, and a variety of nesting and migratory waterfowl. All of these species still existed in the Banks Lake area after the formation of the lake, although habitat quality and quantity was reduced for some and enhanced for others as a result. Initial inundation impacts and benefits will not be discussed here, as the original and primary purpose of Banks lake was for irrigation and not hydroelectric power generation.

B. Post-Construction Period

The first two pump-turbine units began generating power from water stored in Banks Lake in 1974. For purposes of this report, "post-construction" will refer to the period following initiation of power production at Banks Lake. All but one of the pump-generators has been in operation; the final unit, P/G-12, is expected to be commercial in spring of 1984.

There is no quantitative information available on the impacts of power generation at Banks Lake to wildlife and habitat. In 1983, the U.S. Fish and Wildllfe Service (FWS) presented recommendations for enhancement of wildlife at Banks Lake to the BR. The WDG is currently reviewing these recommendations. USFWS (1983) found that waterfowl populations at Banks Lake peaked during spring and fall migration. Eight species of dabbling ducks and seven species of diving ducks were observed during spring aerial surveys, as well as coots, mergansers, and Canada geese (USFWS 1983). Surveys in 1982 found 102 Canada goose nests at Banks Lake, most of them on islands at the north and south ends of the lake. Human disturbance and lack of brood-rearing habitat are the most likely factors limiting goose production at Banks Lake (USFWS 1983).

Chukars are numerous throughout the project area, while California quail, ring-necked pheasant, and gray partridge are locally common. Mourning doves are common migrants (USFWS 1983). Mule deer populations are thought to be "significant" in the Banks Lake area, although no population estimates are available (USFWS 1983). Muskrat, coyote, bobcat, raccoon, mink, weasels, striped skunk, badger, and beaver are furbearers found in the Banks Lake area (USFWS 1983). Significant winter bald eagle use occurs at Banks Lake. Over the last 10 years, an average of 21 bald eagles (13 adults and eight subadults) have wintered at Banks Lake

(Fielder and Starkey 1980). Aerial counts in December 1981 found 119 eagles at the lake (USFWS 1983). Two bald eagle night roosts exist near the lake (USFWS 1983). Other nongame birds and mammals provide nonconsumptive recreational enjoyment for many people (USFWS 1983).

C. Operational History

Fluctuation in reservoir water levels is the major factor limiting wildlife and habitat at Banks Lake (USFWS 1983). Alternate flooding and drying of the lake perimeter prevents establishment of emergent and riparian vegetation (USFWS 1983).

Factors which determine the magnitude and timing of fluctuations in Banks lake include (1) water levels in FDR Lake, (2) operations at Grand Coulee Dam, (3) irrigation demands of CBP, and (4) maintenance and construction activities (USFWS 1983). Use of water from Banks Lake to provide power to Grand Coulee during peak demand periods and increased irrigation demands of the CBP are expected to further affect water level fluctuations in the future (USFWS 1983).

V. WILDLIFE MITIGATION HISTORY

A. Mitigation Requested or Proposed

In 1974, when the first pump-generator units began operation at Banks Lake, no mitigation for possible impacts to wildlife and/or wildlife habitat was proposed.

More recently the FWS provided management objectives and specific recommendations for Banks Lake wildlife (USFWS 1983). General recommendations include fencing, controlling vehicle access, planting suitable vegetation, creation of wetlands, and placement of nesting platforms (USFWS 1983).

To mitigate the impacts of increased power generation (water level fluctuation), USFWS (1983) recommends operating Banks Lake at full pool year round and crearing subimpoundments for wildlife. Recommendations for control of erosion caused by fluctuating water levels include vegetation plantings, construction of offshoer log booms or reefs, riprapping and grooming/structuring of banks (USFWS 1983).

B. Mitigation Agreements or Requirements

No agreements were made to mitigate losses of wildlife and habitat caused by development of hydroelectric power facilities at Banks Lake.

C. Mitigation Implemented

None.

VI. CURRENT STUDIES AND PLANNING

BR has received and reviewed the Banks Lake Wildlife Enhancement Report prepared by USFWS (1983). BR and FWS are in the process of prioritizing the recommendations given in the report and preparing cost:benefit analysis on those recommendations. It is estimated that actual implementation of enhancement measures will not take place for 2-3 years (Cline Sweet, BR, pers. comm.).

VII. REFERENCES CITED

Brackett, G.K. 1970. Results of 1969 fish and wildlife study of East Banks area, Bureau of Reclamation's Central Washington Project. Bureau of Sport Fisheries and Wildlife, Division of River Basin Studies.

Fielder, P.C. and R.G. Starkey. Wintering bald eagle use along the upper Columbia River, Washington in Knight, R.L., G.T. Allen, M.V. Stalmaster, and C.W. Servheen (ed.). Proc. of the Washington Bald Eagle Symp., Seattle.

United States Bureau of Reclamation. 1976. Draft Environmental Impact Statement, Columbia Basin Project, Washington. USDI/BR. 775 pp.

United States Department of the Interior/Washington Department of Game. 1955. A preliminary report on the fish and wildlife resources and development plans recommended for Columbia Basin Project, Columbia River, Washington. 80 pp.

United States Fish and Wildlife Service. 1983. Banks Lake wildlife enhancement report. Ecological Services, Olympia, Washington. 44 pp.

APPENDICES

APPENDIX A - Study Team

Washington Department of Game - Gretchen Van Lom
U.S. Fish and Wildlife Service - Ron Starkey

APPENDIX B - Consultation/Coordination

1. Project Contacts

Bob Adair, BR, Boise
Cline Sweet, BR, Ephrata
Jerry Pederson, BR, Grand Coulee
Dick Woodworth, BR, Boise

2. Summary

July 1, 1983	- Letter to Dick Woodworth (BR, Boise) from FWS requesting information and identification of contact person.
early July 1983	- Response to July 1, 1983, FWS letter received from BR.
March 1, 1984	- WDG made phone contact with Bob Adair (BR, Boise) to inform him of initiating of status review, set date for meeting.
March 2, 1984	- Made phone contact with Cline Sweet (BR, Ephrata) to get information on Banks Lake Enhancement Report.
March 27, 1984	- Meeting between study team and BR to discuss status review.
March 29, 1984	- Made phone contact with Jerry Pederson (BR, Grand Coulee) to get information on Banks Lake power Production

APPENDIX C

Comments

United States Department of the Interior

JUN 28 1984

FISH AND WILDLIFE SERVICE
Lloyd 500 Building, Suite 1692
500 N.E. Multnomah Street
Portland, Oregon 97232

June 27, 1984

Mr. John Palensky
Director, Division of Fish and Wildlife
Bonneville Power Administration
Department of Energy
P.O. Box 3621
Portland, Oregon 97208

Dear Mr. Palensky:

As requested, we have reviewed a copy of the Status Report on Wildlife Mitigation for the Banks Lake Project, which was jointly prepared by the Habitat Resources Division of the Fish and Wildlife Service (FWS) and the Washington Department of Game (WDG) under contract with the Bonneville Power Administration. The following represents the formal response of the FWS regarding the subject project.

General Comments

We have completed an extensive search of agency files and reference materials and find that we have no additional information with which to make corrections or additions to the subject report. Insofar as our resource interests are concerned, we find the report to be complete and accurately written.

Impacts resulting from original development of the Banks Lake Project were specifically related to the project's primary purposes of irrigation and, therefore, fall outside the scope of the NWPA. However, subsequent expansion of the project to include power generation, resulting in water fluctuations and other changes of reservoir operation, have created impacts to wildlife resources of primary interest to the FWS. Such impacts do fall under the purview of the NWPA and, to our knowledge, have never been adequately assessed. Since there may have been some benefits to certain wildlife species and there is opportunity for additional mitigation or enhancement, such as outlined in our Enhancement Report to the Bureau of Reclamation (1983), we believe an assessment study is vitally needed. Therefore, the Service recommends that the Bonneville Power Administration provide funds to: (1) conduct a comprehensive evaluation of the impacts of the Banks Lake Project on wildlife resources; and (2) based on the findings of that evaluation, develop a mitigation and/or enhancement plan which would fully compensate impacts attributable to the project.

The Service has the expertise and would like to participate in both the impact evaluation and mitigation/enhancement plan development.

Specific Comments

A comprehensive evaluation of the Banks Lake Project's impact on wildlife resources should be conducted by a team of qualified biologists composed of representatives from appropriate private, State, Federal, and Tribal agencies. These include the WDG, BR, Colville Tribes, and FWS. We suggest the evaluation be based on habitat supported by population data where available. We believe that such an evaluation could be accomplished with a minimum of new data collection by: (1) detailed survey of all historical pre-impoundment topographic/photographic data; (2) review of records and accounts of pre-project conditions, if available, from long-time residents, sportsmen, and fish and game personnel familiar with the area; (3) comparison of 1 and 2 above with onsite production estimates from habitat types which currently exist adjacent to project boundaries and within the basin; and finally (4) this information can be combined with methods contained in a habitat-based evaluation procedure commonly employed by the FWS to determine mitigation needs. The evaluation's results should be presented in an impact assessment report and, based on those results, a mitigation plan developed. This plan, if implemented, would fully compensate the adverse wildlife impacts identified.

In addition to assessing the direct impacts, we strongly believe the cumulative and secondary effects of this and other Columbia Basin reservoirs should be evaluated. A principal focus of multiple project evaluation should be the broader effects of operation of projects as a "system", such as water fluctuations resulting from power peaking, etc. The extensive development that has occurred along the Columbia River floodplain has also cumulatively reduced a variety of wildlife habitats and related resources. Such development and related wildlife losses would have been considerably less without construction and operation of the Banks Lake Project and other major Columbia River projects. In some instances, there may have been some net benefits to certain species/resources which need to be better identified.

In conclusion, we believe that no single agency or user group is responsible for the wildlife losses resulting from development and operation of the Banks Lake Project. Unfortunately, the legal mandates which today provide for the protection of our wildlife resources were either nonexistent or in their infancy when the Banks Lake Project was being developed. However, both the NWPA and the Council's Fish and Wildlife Program recognize this and together have given us an opportunity to correct our past mistakes. The Service is eager to move toward that end.

Sincerely,

Doug E. Waters

Assistant Regional Director
Habitat Resources

cc: ES, Olympia and Moses Lake
WDG
BR (Adair)
Colville Tribes

JUL 3 1 1984

United States Department of the Interior

BUREAU OF RECLAMATION
PACIFIC NORTHWEST REGION
FEDERAL BUILDING & U.S. COURTHOUSE
BOX 043-550 WEST FORT STREET
BOISE, IDAHO 83724

IN REPLY REFER TO: PN 150
565.

JUL 27 1984

Mr. James Meyer
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208

Dear Mr. Meyer:

Our Grand Coulee Project Office, Columbia Basin Project Office, and regional office have reviewed the "Mitigation Status Report on Banks Lake" which you sent by letter dated June 8, 1984.

Our general comment is that Banks Lake has developed into one of the State's most important lake sport fisheries, and has enhanced waterfowl habitat significantly. In addition, the Banks Lake area provides a food source for bald eagles which winter in the project area. We find it difficult to believe that mitigation should be considered for this project.

Our specific comments are:

Page 1, III.B.--The Columbia Basin Project is a multiple-purpose project having as its initial purposes control of floods, improvement of navigation, regulation of streamflow, provisions for storage and for delivery of stored waters for the reclamation of lands and other beneficial uses, and the generation of electric energy as a means of financially aiding and assisting in the carrying out of such purposes. While individual project features do not have "authorized purposes," feature costs are allocated to one or more of the specific project-wide authorizations. We suggest deleting the sentence in the report and substituting the following sentence: "Banks Lake is a multipurpose equalizing reservoir. Operation of the reservoir provides for the resident kokanee fishery, recreation, winter power peaking, and summer irrigation."

Page 2, D.1.--We suggest adding the following sentences: "Banks Lake fluctuations were discussed in Attachment B of the Bureau's November 17, 1983, letter to the Power Planning Council. Attachment B covers measures to be taken by the Bureau and states the 'operation objective will be to keep Banks Lake as full as possible year-round and not fluctuate the reservoir more than 5 feet whenever possible.'"

Page 2, D.2.--We suggest substituting the following paragraph for the paragraph in the report: "The Bureau of Reclamation (Bureau) acquired approximately 44,700 acres of land for the construction of Banks Lake. In 1953, the Bureau transferred fish and wildlife and recreational management of the lake and surrounding Bureau lands to the State of Washington through a Memorandum of Agreement. Subsequent agreements between Washington

Department of Game and Washington State Parks and Recreation Commission designated areas to be managed by each agency individually and by both cooperatively. These verbal agreements are presently being revised. The Banks Lake Habitat Management Area managed by Washington Department of Game comprises 36,470 acres. In addition, 8,230 acres at Steamboat Rock State Park are managed jointly by Washington Department of Game and Washington State Parks and Recreation Commission."

Page 3, B., First Paragraph--The last sentence of this paragraph should be changed to reflect the fact that all of the pump generators have been operational since April 1984.

Page 3, B., Second Paragraph--We suggest the following insert after the second sentence: "The Department of Game is currently reviewing these recommendations."

We look forward to meeting with you, the Fish and Wildlife Service, and the Department of Game on this project.

Sincerely yours,

L. W. Lloyd

Regional Director

cc: Field Supervisor, Ecological Services, Fish and Wildlife Service, Olympia, Washington
Area Manager, Washington Department of Game, Ephrata, Washington

Status Report on Wildlife Mitigation

LOWER SNAKE RIVER PROJECT
Ice Harbor, Little Goose, Lower Monumental,
and Lower Granite Locks and Dams

Prepared by

Washington Department of Game

and

U.S. Fish and Wildlife Service

for

Bonneville Power Administration

in response to the

Fish and Wildlife Program
Northwest Power Planning Council

1984

I. PROJECT NAME

Lower Snake River Dams (Ice Harbor, Lower Monumental, Little Goose, and Lower Granite)

II. PROJECT OPERATORS

U.S. Army Corps of Engineers (USACE), Walla Walla District

III. PROJECT DESCRIPTION

A. Location and Size

The project is a series of four dams and reservoirs located southeastern Washington and western Idaho.

Ice Harbor Dam is located 9.7 miles upstream from the mouth of the Snake River. The dam is a concrete gravity structure 2,790 feet long and 100 feet high and includes fish passage facilities, a six-unit powerhouse, a ten-bay spillway section, and a navigation lock. The generating capacity is 603,000 kw. Lake Sacajawea (Ice Harbor Reservoir) extends 31.9 miles upstream with a surface area of 8,375 acres and a shoreline length of 83.4 miles. Ice Harbor project occurs in Walla Walla and Franklin counties.

Lower Monumental Dam is located at River Mile (RM) 41.6 about 32 miles upstream from Ice Harbor Dam. The dam is a concrete gravity structure 100 feet high with a crest length of 3,800 feet and includes a navigation lock, two fish ladders, an eight-bay spillway, and a six-unit powerhouse. The generating capacity is 810,000 kw. Lake Herbert G. West (Lower Monumental Reservoir) extends 28.7 miles upstream with a surface area of 6,590 acres and a shoreline length of 83.6 miles. Lower Monumental project occurs in Walla Walla, Franklin, Columbia, and Whitman counties.

The Little Goose Dam is located at RM 70.3, upstream of Lower Monumental Dam. The dam is a straight line, concrete gravity structure 98 feet high and 2,670 feet long and includes a navigation lock, a six-unit powerhouse, station service bay, an eight-bay spillway, and fish passage facilities. Lake Bryan (Little Goose Reservoir) extends 37.2 miles upstream to Lower Granite Dam. There are 93.2 miles of shoreline with a surface area of 10,025 acres. The generating capacity is 810,000 kw. Little Goose project occurs in Whitman, Columbia, and Garfield counties.

Lower Granite Dam is located at RM 107.5, upstream of Little Goose Dam. The dam is a concrete gravity structure 100 feet high and 3,200 feet in length and includes a fish ladder, six-unit powerhouse, spillway, and navigation lock. The maximum generator rating is 810,000 kw. Lower Granite Lake (Lower Granite Reservoir) extends 39.3 miles upstream to the vicinity of Asotin, Washington (Whitcom, Garfield, and

Asotin counties), and 4.6 miles upstream on the Clearwater River into Idaho (Nez Perce County). Eight miles of the Snake River are included in the Idaho portion of the reservoir. The surface area is approximately 8,900 acres at normal elevation with a shoreline length of 92 miles. Two levees along the Snake and Clearwater rivers (7.6 miles total) protect the city of Lewiston.

Power lines for each dam are 0.25 to 0.5 mile long, 500 kw, and connect with the nearest Bonneville substation.

B. Authorized Purposes

The authorized purposes of the Lower Snake River dams and locks include navigation and hydroelectric power generation. Ice Harbor is also authorized for irrigation. Although not authorized, additional uses of the project include recreation, wildlife, irrigation, and flood control.

C. Brief History

The first formal proposal for development of the lower Snake River was adopted by Congress in 1902. Other actions followed in 1910 and 1935 leading to the River and Harbor Act of 1945. Under the provisions of this Act, construction of a series of dams was authorized on the Snake River between the confluence of the Columbia and Snake Rivers and Lewiston, Idaho. House Document 531, Eighty-First Congress, Second Session, dated 20 March 1950 proposed four dams on this portion of the Snake River. This report is the basis for much of the water resource development which has taken place in the Columbia River Basin in the last two decades.

Construction on Ice Harbor Lock and Dam began in 1955. Appropriations were obtained annually as construction proceeded. The impoundment occurred in two stages: to an elevation of 400 ft. in November 1961, and to full pool elevation of 440 ft. on 27 April 1962. An Environmental Impact Statement (EIS) was prepared for the addition of three power units in 1971. The power units were completed in 1976.

Construction of the Lower Monumental Lock and Dam was initiated in 1961. The reservoir was filled in 1968 and the dam completed in 1969. Initial installed capacity of the power house was 405,000 kw. The maximum generation of 810,000 kw was achieved in 1979.

Development of the Little Goose Lock and Dam was initiated in 1963. The project, including filling of the reservoir, was completed in 1970. The initial generating capacity was 405,000 kw. Three additional units were added in 1973 to bring power generation to 810,000 kw.

Funds were appropriated for Lower Granite Lock and Dam construction in 1965. The reservoir was filled and the project completed in 1975 Initial generating capacity was 405,000 kw. Three additional power units were aded in 1979 to bring power generation to 810,000 kw.

D. Other Pertinent Data

1. Water level fluctuation and timing

The normal pool operating range at Ice Harbor Reservoir is 437.0 to 440.0 mean sea level (msl) (USACE 1963) with a maximum drawdown of 5 feet (McKern, personal communication). Fluctuations usually occur September through March with more constant pool levels during the summer months. Backwater effects of higher river flows result in some significant pool fluctuations in the upper reservoir.

At Lower Monumental, the normal operating pool elevation range is 537.0 to 540.0 msl with 3 feet (±5 feet) of drawdown to provide for power peaking. A maximum drawdown of 5 feet is authorized (McKern, personal communication). During annual low stream flow (August through March) the pondage capacity of the top 3 feet of the reservoir is used to meet power peaking demands. At high flows, water elevation in the upper end of the reservoir is relatively higher than levels at the dam site.

Little Goose Reservoir has a normal pool elevation range of 633.0 to 638.0 feet msl with a maximum drawdown of 5 feet. The low flow period is August through March. During peak power demand, usually December through January, a full 5 foot drawdown may be required. Backwater effects at high river flows also occur.

Lower Granite Lock and Dam has a normal pool elevation of 733 to 738 feet with a range of 5 feet. Pool fluctutions during flooding periods are authorized to 8 feet (McKern 1984, personal communication). In general, power peaking occurs from December to February when flows are relatively low.

2. Land Ownership

Project acreages are as follows: Ice Harbor, 4,864; Lower Monumental 8,188; Little Goose, 6,790; and Lower Granite, 5,440 (McKern 1976).

To date, only 12 acres of off-project mitigation lands have been obtained. The land, located along Asotin Creek, was obtained to provide fishing access (McKern, personal communication).

3. Indian Rights

Indian Nations affected by the project include the Umatilla, Yakima, and Nez Perce. Ceded areas (in regard to the Lower Snake River Project) are as follows:

Umatilla	Confluence of the Snake and Columbia rivers to confluence of the Palouse River and Snake River, North Bank (Ice Harbor and Lower Monumental)
Yakima	Confluence of the Snake and Columbia rivers to the confluence of the Palouse River, South Bank (Ice Harbor and Lower Monumental)
Nez Perce	Confluence of the Palouse and Snake rivers to the Washington/Idaho border, both sides of the river (Lower Granite and Little Goose). Also, according to the Nez perce, the Lower Monumental and Ice Harbor dams and reservoirs are historical "usual and accustomed" hunting and fishing rights areas. A copy of the Nez Perce response to our request for information is appended (see Appendix C).

No wildlife mitigation was requested by the Tribes, and none was received (Keith Lawrence, personal communication; Melvin Joye, personal communication; Bill Bradley, personal communication). The Native American Indian Rights fund, representing the Umatilla Reservation and fishermen of the Yakima Tribe, did provide comments in support of the fish and wildlife compensation plan for the Lower Snake River Project (Record of Public Meeting, 1973d).

According to Corps of Engineers records (John McKern, personal communication; Paul Schroy, personal communication; Ed Mains, personal communication), no negotiations for wildlife mitigation were held between the Tribes and the Corps.

IV. WILDLIFE SPECIES AND HABITAT ASSESSMENTS

A. Preconstruction Period

1. Available Information

Several reports provide information on conditions prior to construction and predicted impacts to wildlife species within the project area. The U.S. Fish and Wildlife Service (USFWS) prepared individual reports on fish and wildlife resources affected by the first three locks and dams: Ice Harbor (1959), Lower Monumental (1960), and Little Goose (1963a). A draft report for Lower Granite was prepared but not released (USFWS 1966b). Information presented was

primarily general and nonquantitative. Predicted impacts centered around waterfowl, big game, upland game, and furbearers. Discussion was based on "with-project" and "without-project" conditions.

In 1964, WDG unilaterally began to conduct fish and wildlife surveys of the lower Snake River from its mouth to the Washington-Idaho border. In 1965 and 1966 the USFWS assisted these surveys. Survey results quantified harvest of important game species and recreation. This quantification contributed to situation reassessment by the fish and wildlife agencies, Indian Tribes, and the Corps.

In 1966, the approach to evaluation of the individual projects changed. A letter from the Walla Walla District Engineer (11 April 1966) to the Regional Director of the Bureau of Sport Fisheries and Wildlife requested a reevaluation of the fish and wildlife resources of the four lower Snake River dams "as a unit rather than a dam-by-dam basis." A special report concerning wildlife resources of the lower Snake River was jointly authored by USFWS and National Marine Fisheries Service (NMFS) in 1972. This report substantially augmented the previous individual project reports and eliminated the need for a separate Lower Granite project report. In this joint report, both game and nongame wildlife and their recreational values were assessed using information from State and Federal sources. A review of preconstruction conditions was presented in a comprehensive report evaluating the wildlife resources of the four-dam complex (USACE 1975). Preimpoundment studies of wintering mallards and nesting Canada geese were made by Buss and Wing (1966).

Preconstruction aerial photographs are available from the Corps for all four dams and reservoirs.

2. Conditions

The lower Snake River within the influence of the four-dam complex is situated in the Snake River Canyon between Ice Harbor Lock and Dam and Lewiston, Idaho. The canyon in this reach is about 140 miles long and lies in the semi-arid Columbia Plateau which typically has hot, dry summers and moderately cold winters. The depth of the canyon varies from about 100 feet near the confluence of the Snake and Columbia rivers to 2,000 feet near Lewiston, Idaho. The canyon is bounded by terraced bluffs, and the canyon walls consist of basalt outcroppings interspersed with steep, sparsely-soiled slopes and draws. The canyon floor consisted of basalt outcroppings, gravel flats, bars, and islands.

The rich alluvial soils of the river bottom supported a variety of trees, shrubs, forbs, grasses, and cultivated crops. Riparian vegetation of willows, alders, hackberries,

and cottonwoods were intermittently distributed along the riverbank and floodplain. Common understory vegetation was wild rose, currant, sumac, poison ivy, teasel, cocklebur, wild rye, and wheat grass. Drier areas supported sagebrush and rabbitbrush interspersed with various grasses. Associated species included Russian thistle, lupine, Jim Hill mustard, downy chess, and sanddock. Cover on agricultural land consisted primarily of grain and forage crops; orchards were located on riverbank bars in the canyon bottoms.

A summary of river acreages available for wildlife under pre-project and post-project conditions are listed in Table 1. Estimated populations of principal wildlife species in Washington pre-project are listed in Table 2. No pre-project estimate of wildlife species is available for Idaho (McNeil 1984, personal communication).

No historical information is available on endangered or threatened species which occurred in the project area prior to construction. One can infer, however, that both the ferruginous hawks and Swainson's hawk (both candidate species for listing) nested adjacent to the Snake River prior to construction (Gore 1984, personal communication).

a. Washington

Resident mule and white-tailed deer inhabited the bottomlands and adjoining slopes in moderate numbers (USFWS and NMFS 1972). Migrant deer from adjacent uplands used the river valley, especially during severe winter weather; during other seasons mule deer were commonly observed in the river bottom lands and up to the canyon rim. Prior to inundation, WDG estimated that 1,800 deer were dependent upon habitat within the reservoir areas; hunter use was estimated at 12,600 man-days with an estimated annual harvest of 400 deer (USACE 1975a). The highest deer populations occurred in the areas impacted by the Little Goose and Lower Granite projects (USFWS and NMFS 1972).

A variety of upland game inhabited the floodplain and contiguous lands. The most abundant species were ring-necked pheasant, California quail, chukar, gray partridge, and mourning doves (USFWS and NMFS 1972). Shrubs and trees interspersed with agricultural lands on the flood plain provided excellent habitat for pheasant, quail, and cottontail populations. Chukar were abundant in the numerous draws and on slopes adjacent to the project-affected river reaches and were seasonally dependent upon streamside habitat (USFWS and NMFS 1972). The area supported high quality hunting, diverse species, and good access to the river (USACE 1975a). Prior to inundation approximately 279,400 upland birds and mammals were dependent upon habitat within the project area; hunter use was about 43,900 man-days with an estimated 27,400 animals

TABLE 1.

SUMMARY OF ACREAGES AVAILABLE FOR WILDLIFE
UNDER PREPROJECT AND POSTPROJECT CONDITIONS

Project Units	River Acreage[1]	Inundated Acreage	Preproject Vegetated[2] Acreage	Project Land Acreage[3] Above Reservoir
Ice Harbor	5,122	3,250	356	4,864
Lower Monumental	3,517	3,073	92	8,397
Little Goose	5,185	4,840	155	6,790
Lower Granite	5,640	3,260	520	5,440
Total	19,464	14,426	1,123	25,491

[1]Area occupied by river prior to project construction.

[2]Consists of high brush, trees, and orchards in narrow shoreline strips. Scaled from aerial photos made prior to clearing. All other lands inundated were grasslands with some sagebrush and rocky areas.

[3]Available for revegetation where soil and topography permit, except for those areas in use as industrial or recreation areas. Includes lands for relocation of railway and roads.

From USACE 1975

TABLE 2.

ESTIMATED POPULATIONS OF PRINCIPAL GAME SPECIES IN WASHINGTON BEFORE INUNDATION OF APPROXIMATELY 140 MILES OF LOWER SNAKE RIVER BY HYDROPOWER DEVELOPMENT (1)

Species	Base No. Before Inundation (2)
Big Game	
Deer	1,800
Upland Game	
Pheasant	22,000
Quail	56,900
Huns	19,800
Chukar	52,100
Doves	120,200
Cottontail	8,400
Subtotal	279,400
Waterfowl (3)	
Ducks	17,500
Geese	2,200
Subtotal	19,700
Fur Animals	
Beaver	1,100
Muskrat	26,900
Mink	2,300
Otter	200
Raccoon	2,600
Subtotal	33,100
Game Units	
Total	334,000

(1) Ice Harbor, Lower Monumental, Little Goose, Lower Granite Projects.
(2) Determined from special survey of 1964-65-66 Harvest in Project Areas, Numbers rounded.
(3) Reflects hunting season population only. Does not indicate production changes. Actual preproject production in the project area approximated 600 goslings from a resident population of400 geese.

From USACE 1975

harvested (USFWS and NMFS 1972).

Furbearers living along the lower river were beavers, muskrats, mink, skunks, raccoons, weasels, river otters, bobcats, badgers, and coyotes (USFWS and NMFS 1972). The principal species of economic importance were beaver, muskrat, and mink. Prior to the project, approximately 33,100 fur animals inhabited the area with an estimated average annual harvest of 4,200 pelts (USFWS and NMFS 1972).

The lower Snake River provided important waterfowl habitat (USACE 1975a). Islands and shorelands along the river provided resting and feeding areas used annually by winter populations of 140,000 ducks and 35,000 geese (USFWS and NMFS 1972). Buss and Wing (1966) found that several thousand ducks, primarily mallards, were attracted to feedlots along the river near Clarkston. Few ducks nested in the area.

An estimated 600 goslings were reared annually by 400 resident Canada geese (USFWS and NMFS 1972). Buss and Wing (1966) found the resident Canada goose population to be 4.5 to 8.5 geese per river mile with an average nesting density of 8.4 acres per nest.

Restrictions prohibited waterfowl hunting on or near the lower Snake River for 84 miles, but hunting in adjoining counties was largely dependent on duck and goose populations that would winter on the river and fly out to feed on nearby croplands (WDG 1970). The average annual hunter use of waterfowl based on goose production was estimated at 1,100 man-days (USFWS and NMFS 1972).

Excellent vegetative cover and moderate winters along the river provided excellent habitat for various nongame wildlife species (USFWS and NMFS 1972). Migratory and resident birds such as sparrows, vireos, flycatchers, robins, orioles, hawks, owls, kingfishers, and shorebirds depended upon the riparian habitat (USACE 1975a). Other less conspicuous wildlife included several species of snakes, lizards, amphibians, and small mammals including the uncommon Merriam's shrew (USACE 1975a). Buss and Wing (1966) regularly observed red-tailed hawks, American kestrels, magpies, ravens, and raccoons during their waterfowl studies. Appreciative use of wildlife species approximately equaled hunter use and was increasing at the rate of 4.14 man-days per year in proportion to hunting use (USACE 1975a).

b. Idaho

Prior to the Lower Granite project, Idaho wildlife resources were similar to Washington except in the urbanized areas influenced by Lewiston, Idaho, and Clarkston, Washington. The population of these two communities totalled over 32,000

with networks of roads, highways, bridges, barge docks, and railroads.

Four miles up the Clearwater river was a dam built in 19__ by Washington Water Power Company (WWPC).

Waterfowl hunting in the project area was permitted only in Nez Perce County. The Lewiston Wildlife Preserve, from Lewiston to Spaulding on the Clearwater River, was closed to hunting. No studies regarding wildlife resources were conducted prior to impoundment in Idaho (McNeil 1984, personal communication).

B. Post-Construction Period

1. Available Information

Both individual project reports and combination reports for the Lower Snake River complex provide information on wildlife resources after construction of the dams. Individual detailed reports were released by the USFWS and NMFS on the wildlife resources of Ice Harbor (1959), Lower Monumental (1960), and Little Goose (1966) locks and dams. These reports were subsequently found by WDG (1970) to be "extremely conservative in appraisal of wildlife resource losses." The effects of all four projects including the Lower Granite project on wildlife were reevaluated by WDG using hunter surveys beginning in 1964; the results were presented in three reports (WDG 1965, 1966, 1967). In 1966 the agencies were requested to analyze wildlife impacts which had resulted from the four dams as an integral unit rather than on a dam-by-dam basis (USACE 1966). Information obtained from these WDG studies was used as the basis for a special report issued by the USFWS and NMFS (1972) on the effects of the four dams on fish and wildlife. A follow-up report was prepared by the Corps and revised in 1973 incorporating supplemental data from the wildlife agencies (USACE 1973a). A comprehensive report on the cumulative effects on wildlife caused by the dams was released in 1975 (USACE 1975a). This Lower Snake River Fish and Wildlife Compensation Plan was the foundation for succeeding documents concerning wildlife and evaluation of impacts on them in Washington.

Asherin and Claar (1976) provide a detailed listing of wildlife species and an inventory of vegetative communities of the Lower Snake River. Asherin and Orme (1978) present a census of the plant and wildlife species of the Lower Clearwater River in Idaho. Impacts of impoundment to vertebrate animals were studied by Lewke and Buss (1977). Post-construction aerial photographs are available from the Corps' Walla Walla District for each of the dams. National Wetlands Inventory maps include the lower Snake River.

2. Conditions

a. Washington

Construction of Ice Harbor, Lower Monumental, Little Goose, and Lower Granite locks and dams and project reservoirs has resulted in the inundation of 140.2 miles of the Snake River. These four impoundments have a total reservoir area of 33,890 acres, of which 19,500 acres have always been occupied by the Snake River and 14,400 acres were bottom lands and canyon walls (USACE 1975a). Although 92 embayments of five or more acres in size were formed, 34 of similar size were lost to flooding (USACE 1975a). In addition, 48 islands were inundated. Seven project-formed islands (only two of considerable size) totalled 275 acres for a net loss of 1,225 acres of island habitat (USACE 1975). Raising of the reservoirs has eliminated 1,123 acres of riparian vegetation (USACE 1975a). Table 1 presents the number of acres involved at each dam. This loss of riparian habitat caused a substantial reduction in wildlife populations and wildlife oriented recreation (USFWS and NMFS 1972; Lewke and Buss 1977). Above the reservoir level some higher side drainages with riparian vegetation, supported by springs and small streams remain unaffected.

Riprap embankments replaced approximately 40 percent of the shoreline due to roadway and railroad relocations (Mudd et al. 1980). These areas created hazards to wildlife in gaining access to the water, especially for deer. These bank stabilization measures precluded vegetation reestablishment "that is vital to the survival of wildlife" (USACE 1975a). Also, these embankments substantially reduced public access affecting both hunter and wildlife appreciation use (USACE 1975a).

Deer production and the carrying capacity of the canyon for deer during severe winters was adversely affected by the project reservoirs (USFWS and NMFS 1972). These habitat losses were reflected in reduced deer populations and hunting success. Post-construction losses for deer were approximately 1,200 animals and 9,900 annual hunter-days (USACE 1975a; WDG 1982).

Upland game populations were "severely reduced" due to the loss of riparian habitat (USACE 1975). The loss of upland game, including pheasant, quail, chukar, gray partridge, mourning dove, and cottontail was estimated at 120,800 birds and mammals with a resultant annual reduction of 28,500 hunter-days (USACE 1975a).

Furbearers such as beaver, mink, weasel, and river otter which are dependent on riparian habitats were adversely affected by losses of streamside vegetation and the alteration of a free-flowing river to a reservoir (USFWS and NMFS 1972). Bobcat, skunk, and coyote populations declined as a result of habitat loss and the resultant reduction of

upland game and nongame species which provided their primary food sources (USFWS and NMFS 1972). Beaver losses from all four dams were estimated at 80 percent of the original population (WDG 1970). The furbearer population was reduced by approximately 13,400 animals with an annual harvest loss of 2,100 pelts (USACE 1975a).

The cumulative effects of the four projects adversely affected waterfowl (USFWS and NMFS 1972). The important wintering waterfowl feeding sites identified by Buss and Wing (1966) near Clarkston were inundated. Approximately 100 goose nesting sites were lost with the inundation of 48 islands which totalled nearly 1,500 acres (USACE 1975a). The annual loss to Canada geese was estimated at 600 goslings reared-to-flight-stage (Mudd et al. 1970). Due to the abundance of winter migrants, little loss of waterfowl hunting occurred; however, based on goose production an annual average of 1,000 hunter-days was lost (USFWS and NMFS 1972).

Resident and migratory nongame wildlife suffered "severe losses" from project effects (USFWS and NMFS 1972). Over 3,100 acres of important nongame habitat was lost to inundation and other project-related activities (USFWS 1972). Bird species diversity declined sharply (USACE 1975a). Nongame bird losses were estimated at 33,400 breeding and 92,500 wintering for a total of 125,900 individuals (Mudd et al. 1980). Although other nongame wildlife losses were not quantified, reptiles, amphibians, and small mammals, including the uncommon Merriam's shrew, were also adversely affected by habitat loss (USACE 1975a). Appreciative use of nongame was reduced by an estimated 20,100 man-days annually (USACE 1975). Information regarding the effects of construction activities on wildlife were not addressed in any of the reports.

Post-construction endangered species records indicate wintering bald eagles (Federally and State threatened) and nesting Swainson's hawk (Federal candidate species) occur in the project area. The ferruginous hawk (Federal candidate species), according to USFWS records, no longer nests in the area (Gore 1984, personal communication).

b. Idaho

In Idaho, the Lower Granite project created slack water 8 miles up the Snake River and 4 miles up the Clearwater River. A total of 178 acres were inundated of which 93 acres were islands and 85 acres were riparian shoreline (IDFG, December 3, 1974, letter). However, the project resulted in the removal of the WWPC dam on the Clearwater River near Lewiston which restored 1.5 miles of free-flowing river and the emergence of 64 acres. A net loss of 114 acres of wildlife habitat was estimated for Idaho (Pengelly and McClelland 1978). As a result of the proposed

construction of Hells Gate State Recreation Area and Marina on the reservoir, an additional 357 acres of wildlife habitat was considered lost by IDFG (December 4, 1974, letter). Levee construction near Clarkston and Lewiston on both the Snake and Clearwater rivers contributed to the loss of wildlife habitat. Pengelly and McClelland (1978) compared pre-impoundment and post-impoundment aerial photographs and determined that "substantial riparian vegetation was lost." Species observed on sites 1 through 6 occur in the project area.

Threatened and endangered species information is similar to Washington and has been covered under that section.

3. Operational Changes

Operational changes were made at each of the four dams. At each dam three additional power units were constructed.

Additional power units were added to Lower Monumental Dam in 1979. In 1971, a brief environmental statement was published for the power unit additions at Ice Harbor (USACE). Wildlife was not mentioned, and only one sentence described the adverse effects of water fluctuations on aquatic vegetation.

Additional power units were added to Lower Monumental Dam in 1979. The EIS for Lower Monumental Dam was a combination report for additional power units and operation and management (USACE 1979a). Existing conditions for seven predetermined Wildlife Habitat Areas were described, although wildlife received only superficial mention.

Additional power units were added to Little Goose Dam in 1978. In 1973, the Corps prepared a draft EIS on additional generator units at Little Goose Dam. Impacts to wildlife were not discussed other than a brief statement "water levels in some areas may affect wildlife" (USACE 1973b). A final EIS for Little Goose, including operation, management, and additional power units was released by the Corps in 1974.

Additional power units were added to Lower Granite Dam in 1979. An EIS for the Lower Granite project was released in 1975 (USACE 1975b) and included the installation of generator units, implementation of fish and wildlife compensation measures, and operation and management of the project. Wildlife losses were qualitatively reviewed and proposed mitigation discussed.

I. WILDLIFE MITIGATION HISTORY

A. Mitigation Requested or Proposed

Mitigation for wildlife losses incurred from the Lower Snake

River dams has been a long and complex process. Compensation planning has produced a series of mitigation proposals which have been revised and continue to be modified.

Mitigation was first proposed for individual projects in reports by USFWS and NMFS on Ice Harbor (1959), Lower Monumental (1960), and Little Goose (1963) based on management of small tracts of land scattered along reservoir project lands. The initial recommendations were based on "very limited engineering and biological information" (USFWS and NMFS 1972). Implementation of these plans did not occur because of "adverse factors such as the Corps' 'interim use' concept (wildlife use permitted until a 'higher use' i.e. industry was found for area) and lack of project funding" (USFWS and NMFS 1972).

Mitigation for the four-dam complex was proposed in the USFWS and NMFS's 1972 Special Report. Recommendations included management plans for on-project and off-project lands. On-project plans included multi-year studies for big game, fur animals, nongame wildlife, and waterfowl. Proposed plans for off-project lands included upland game bird stocking, installation of watering devices, and acquiring in-fee lands and easements for public access. That report included the following mitigation measures:

1) A 3-year study to formulate a habitat management plan on project lands for big game, fur animals, and nongame wildlife.

2) A 5-year study to formulate waterfowl habitat development on project land.

3) A 2-year study to upgrade habitat for upland game birds on lands in the vicinity of the projects. The plan included watering device installation.

4) An upland game management program be undertaken that included land acquisition of about 660 acres and easements of an adjacent 14,250 acres.

5) The construction of a game bird farm for the purpose of stocking the wildlife management units proposed above.

6) Vegetation destruction be minimized on project lands.

7) Placement of dredged material by the Corps and programs using herbicides and pesticides on project lands or waters be evaluated in cooperation with both State and Federal agencies.

8) All project lands and waters that are of value for wildlife management as may be mutually determined by the Corps, USFWS, and WDG should be made available to WDG under terms of a general plan and subsequent cooperative agreement.

9) The development of a zoning plan to assure equitable use of the project and adjacent lands for hunting as well as other recreation uses.

10) Federal lands and project waters in the project area be open for public use including hunting and recreation except for reserved closures.

11) Federal land leases to assure the right of public use of such lands.

12) Reasonable modifications be made in the project facilities and operations for conservation, improvement, and development of wildlife resources as may be agreed upon by the concerned State and Federal agencies.

1. Washington

Mitigation measures proposed in the Lower Snake River Fish and Wildlife Compensation Plan were based on information contained in the aforementioned USFWS and NMFS 1972 Special Report (USACE 1975a). The Compensation Plan has been the foundation for Washington's mitigation program for the Lower Snake River dam complex. This plan and an accompanying environmental impact statement were submitted to Congress and authorized in the Water Resources Development Act of 1976. Recommendations were made for development of wildlife habitat for on-project lands, the acquisition and develpment of off-project lands, and an interim compensation plan.

The Compensation Plan authorized acquisition of certain off-project lands for wildlife public access. It specifically provided for acquisition of approximately 400 acres of riparian habitat in fee and 8,000 acres of farmland in easement adjacent to the riparian areas for some habitat development and hunter access, and stocking of upland game birds, primarily pheasants; acquisition of easements on about 15,000 acres of rangeland in canyons adjacent to project land for chukar hunting; and watering device installation for both game and nongame wildlife. Also authorized was an interim plan agreement between WDG and the Corps for the purchase of 20,000 game birds per year for 20 years to stock both on-project and off-project lands, by which time habitat and a natural brood stock should be developed.

The proposed off-project land acquisition in fee and easement plan was broken into three elements called X, Y, and Z (WDG 1978b). They are as follows:

> "Element X - 8,400 acres for upland game bird hunting (400 acres in fee and 8,000 acres in easement) to be acquired and developed by the Washington Department of Game with reimbursement by the Corps of Engineers.
>
> Element Y - 15,000 acres in easement for access to project lands primarily for chukar partridge hunting to be acquired and developed by the Corps of Engineers.
>
> Element Z - 700 riparian acres in easement or fee for steelhead fishing to be acquired and developed by the Washington Department of Game with reimbursement by the Corps of Engineers. This is an element of fisheries compensation but will be included as per contract with the Corps." (WDG 1978).

Proposed on-project land mitigation measures were only discussed briefly in terms of their important relationship to the overall Compensation Plan. Authorization for work on project lands already existed because the land was Federally owned; therefore, plans did not need to be included in the Compensation Plan for authorization. Specific plans for mitigation were contained in other documents described below.

A Design Memorandum for Wildlife Habitat Development on project lands was developed by Wirth Associates in 1975. The memorandum described plans for establishment of wildlife habitat along the lower Snake River through development of 20 irrigated management units (917 acres) and four dry land units (189 acres) totalling 1,106 acres. Habitat components to be developed included installation of watering devices, nest structures for nongame birds and waterfowl, especially Canada geese, and vegetation plantings of various types. Other measures included restricting land use, fencing to control grazing, and stocking game farm pheasants.

The Corps completed a Supplemental Design Memorandum No. 1 in 1979 (USACE 1979b). This report was a modification of the approved design memorandum and proposed the classification of 54 sites as wildlife lands within the Lower Snake River wildlife compensation area. Ten of these units were proposed for intensive management, 25 units for moderate management, and 19 units for no management (USACE 1979b). Also under this plan 11 irrigated (1,141 acres) and nine dry land (313 acres) units totalling 1,454 acres would be developed. The basic habitat components remained the same.

The three major changes between the approved design memorandum and the supplemental memorandum were an increase in the number of wildlife management units and an apparent increase in the amount of irrigation, and the deletion of the Henley property for management consideration based on the high cost of acquisition (USACE 1979b). A comparison between developmental recommendations made in these two documents are given in Table 3. Both documents contained detailed plans and maps for implementing the habitat development including cost estimates for construction and maintenance. Wirth Associates (USACE 1979) pointed out that "even if every acre of project land were dedicated to intensive wildlife management, such compensation would fall far short of full restitution of project incurred losses."

2. Idaho

Mitigation measures for wildlife in Idaho were not included in the Compensation Plan because project impacts were anticipated by IDFG to be minimal and "detailed comment was deferred to Washington Department of Game" (IDFG, 17 January 1972 letter). However, that evaluation was subsequently reviewed by IDFG and found to underestimate wildlife losses in Idaho related to the Lower Granite project. After discussions with the Corps, IDFG submitted a mitigation proposal in 1974 for the Corps to acquire, develop, and maintain 585 acres of islands and lands adjacent to the Clearwater and Snake rivers. Between 1975 and 1977, mitigation measures were again requested by IDFG and the USFWS. The Corps formally assured IDFG by letter in 1977 that mitigation would be provided when compensation funds became available. The Corps further assured Idaho that legislative authority to provide compensation existed because the Compensation Plan did not specify where the compensation measures would be provided (USACE 16 May 1977 letter).

An independent consultant was contracted by the Corps in 1977 to review and assess Idaho's mitigation requests. Pengelly and McClelland (1978) concluded that the development of goose brooding areas on the lower Clearwater River and the "dedication of the undeveloped acreage at Hells Gate State Park to wildlife should be adequate compensation." Agency negotiations followed, and in 1982 the Corps prepared a draft plan to develop Hells Gate lands as a wildlife management unit of Lower Granite project. Comments from Idaho Department of Parks and Recreation (IDPR), IDFG, and Corps personnel on the Hells Gate wildlife management plan were incorporated into the final plan.

Prior to the Pengelly and McClelland report, the development proposals of goose brooding areas on the lower Clearwater River were not considered part of the formal mitigation measures for impacts resulting from the Lower Granite project. Plans for development of these on-project lands

TABLE 3. Proposed changes in the development of irrigated and non-irrigated acreages of the various Wildlife Management Units located on Lower Snake River Project lands.

Project	Management Unit	River Mile	Habitat Number	Approved Design Memorandum			Supplemental Design Memorandum		
				Total Planting	Irrigated Planting	Dryland Planting	Total Planting	Irrigated Planting	Dryland Planting
ICE HARBOR	Ba Gone*	[illegible]					0		
	Charbonneau	[illegible]	[illegible]	96	96		10**	10**	
	Lake Charlene	[illegible]					0		
	Levey	[illegible]	[illegible]	12	12		0		
	Big Flat	[illegible]	[illegible]	144	144		341	322	19
	Quarter Circle	[illegible]					42		42
	Fishhawk	[illegible]	[illegible]	24	12	12	0		
	Sheepshead Mile	[illegible]					0		
	Lost Island	[illegible]	[illegible]	72	72		69	69	
	Hollenbeck	[illegible]	[illegible]	24	24		131	127	4
	Snake River Junction	[illegible]	[illegible]	17	17		0		
	Walker	[illegible]	[illegible]	24	24		0		
	Couch Landing	[illegible]	[illegible]	21	21		0		
	Deer Canyon*	[illegible]					0		
	Windmill*	[illegible]					0		
	Sub-Total			394	382	12	593	528	65
LOWER MONUMENTAL	Ba Gone*	[illegible]					0		
	Magellan	[illegible]					0		
	Sheehan	[illegible]	[illegible]	207	207		134	134	
	Ayer	[illegible]					0		
	Fifty-five Mile	[illegible]	[illegible]	30	30		182	177	5
	Joso	[illegible]	[illegible]	71	71		0		
	Palouse	[illegible]					0		
	Sixty Mile	[illegible]					0		
	Joso East	[illegible]					0		
	Sargent*	[illegible]					0		
	Tucannon	[illegible]	[illegible]	5	5		9		9
	Alkali Creek		[illegible]	86		86	0		
	Higgins - Hanley Property	[illegible]	[illegible]	207	207		Balanced		
	Texas Rapids*	[illegible]					0		
	Sub-Total			406	320	86	325	311	14
LITTLE GOOSE	Little Goose Retention Area	[illegible]							
	Flag Pole Gulch*	[illegible]					0		
	Brown Gulch	[illegible]					0		
	Ridgeth	[illegible]	[illegible]	24	24		31	31	
	Dry Gulch*	[illegible]					0		
	Gulch Complex	[illegible]	[illegible]	30	30		0		
	Dow Tank Island	[illegible]					0		
	Dow Tank Bar	[illegible]	[illegible]	78	78		110	110	
	Dead Man Creek	[illegible]					0		
	Purrington	[illegible]					0		
	Washington State University Willow Island	[illegible]					184		184
	Pomeroy*	[illegible]					0		
	Rice Bar	[illegible]					0		
	Swift Bar	[illegible]	[illegible]	92	24	68	111	111	
	Beebreth Bar	[illegible]	[illegible]	24	24		0		
	Schulte Bar	[illegible]	[illegible]	58	35	23	0		
	Tilla	[illegible]					20		20
	Sub-Total			306	215	91	456	252	204
LOWER GRANITE	Transmission Line	[illegible]					0		
	Wakhai*	[illegible]					0		
	Swamp Canyon	[illegible]					0		
	Granite Goose Pasture	[illegible]					0		
	Ba Gone*	[illegible]					0		
	Ba Gone*	[illegible]					0		
	Nezes	[illegible]					0		
	Chief Timothy	[illegible]					53	46	7
	Wilma-North Clarkston	[illegible]					37	14***	23
	Sub-Total			0	0	0	90	60	30
	TOTAL			1,306	917	189	1,434	1,141+	313

* Sites identified in Contract DACW68-78-C-0023 as study areas for Washington Department of Game to evaluate so as to allow comparisons between the effects of no development and maximum or moderate development.

** Windmill

*** Flood irrigation

\+ Total acreage developed for the buried Solid Set irrigation system is 1,117 acres.

from USACE 1979b

included irrigation system installation, fencing, wind breaks, goose nesting platforms, and alfalfa plantings. The area is within the Lewiston Wildlife Preserve, and no hunting is allowed.

B. Mitigation Agreements or Requirements

1. FPC/FERC requirements

Not applicable to this project.

2. Fish and Wildlife Coordination Act Proceedings.

In accordance with the FWCA several reports have been prepared by the USFWS, NMFS, and the Corps. Initially separate reports were prepared by USFWS and NMFS concerning fish nd wildlife resources affected by Ice Harbor (1959), Lower Monumental (1960), and Little Goose (1963) locks and dams. A draft report on Lower Granite was prepared but not released (USFWS and NMFS 1963). Due to the inadequacy of these documents a special report on the lower Snake River four-dam complex was published by USFWS and NMFS in 1972. This special report was the foundation for the Lower Snake River Fish and wildlife Compensation Plan completed in 1975 and submitted to Congress for authorization in 1976 (USACE 1975a).

The National Environmental Policy Act (NEPA) was not passed until 1969 by which time Ice Harbor, Lower Monumental, and Little Goose projects were completed and operational. Individual EIS's were prepared by the Corps regarding the installation of additional power units. An environmental impact statement for the Compensation Plan was completed and submitted to Congress in 1976 (USACE).

3. Memorandum of Understanding and Other Agreements

a. Washington

Implementation of wildlife compensation efforts for off-project lands was contracted under a Cooperative Agreement between the Corps and WDG in 1980 (contract DACW 68-80-C-0076). The Habitat Development, Operation, and Maintenance, Lower Snake River Project Wildlife Compensation sets forth arrangements under which both agencies will carry out planning, programming, development, operation, maintenance, and evaluation of the wildlife compensation measures. Each year the agreement is reviewed and Task Orders drawn up for specific work to be done. Funding for the Task Orders is then negotiated between the Corps and WDG.

On-project wildlife habitat development along the lower Snake River has been covered by many contracts between the Corps and WDG or others since 1976. These various contracts are listed in Table 4.

TABLE 4. WILDLIFE HABITAT CONTRACTS - LOWER SNAKE RIVER WILDLIFE HABITAT DEVELOPMENT ON PROJECT LANDS

CONTRACT NO.	PLANTING
DACW68-78-C-0019	Tree and Shrub Planting (Big Flat)
DACW68-79-C-0058	Plants for Wildlife Habitat Areas (Plant Propagation - Phase I)
DACW68-80-C-0085	Seeds (Grasses, Forbs, Legumes) and Tubers for Lower Snake River Wildlife Habitat
DACW68-80-C-0086	Seeds (Grasses, Forbs, Legumes) and Tubers for Lower Snake River Wildlife Habitat
DACW68-80-C-0087	Seeds (Grasses, Forbs, Legumes) and Tubers for Lower Snake River Wildlife Habitat
DACW68-80-C-0164	Planting of Tubelings - Phase I (Big Flat, Ridpath, Chief Timothy)
DACW68-81-C-0022	Plants for Wildlife Habitat Areas - Phase III
DACW68-81-C-0061	Planting of Tubelings - Phase II (Big Flat, Hollebeke, Chief Timothy)
	FENCING
DACW68-76-C-0250	Fencing of Wildlife Habitat Area - Tucannon River
DACW68-77-C-0183	Phase I (Little Goose)
DACW68-77-C-0187	Phase II (Lower Snake)
DACW68-77-C-0188	Phase III (Lower Granite)
DACW68-80-C-0165	Phase IV (Swift Bar)
DACW68-81-C-0095	Phase V (Quarter Circle, Tucannon, Chief Timothy, Wilma)
DACW68-81-C-0105	Phase VI (Lake Charlene, Sargent)
	IRRIGATION
DACW68-77-C-0060	Irrigation and Tree and Shrub Planting (Big Flat)
DACW68-78-C-0152	Phase I (Big Flat, Hollebeke, Fifty-Five Mile, Ridpath, Chief Timothy)
DACW68-79-C-0171	Phase II (Big Flat)
DACW68-79-C-0137	Phase III (Hollebeke, Lost Island, Skookum, Fifty-Five Mile, New York Bar, Swift Bar)
DACW68-81-C-0065	Phase IV, Replace Pumps (Ridpath and Chief Timothy)
	POWERLINES
DACW68-80-C-0014	Chief Timothy
DACW68-80-C-0028	Power to Wildlife Habitat Headquarters
DACW68-80-C-0058	Big Flat
DACW68-80-C-0061	Hollebeke
DACW68-80-C-0106	Ridpath
DACW68-80-C-0112	Swift Bar

Continued

Table 4. (Continued)

CONTRACT NO.	POWERLINES (Cont.)
DACW68-80-C-0113	Fifty-Five Mile
DACW68-81-C-0088	New York Bar
DACW68-81-C-0137	Lost Island
DACW68-82-C-0067	Planting of Tubelings - Phase III (Lost Island, Skookum, Fifty-Five Mile, New York Bar, Swift Bar, Wilma)
	MISCELLANEOUS
DACW68-77-C-0013	Native Plant Propagation Study (WSU)
DACW68-78-C-0023	Evaluation of Wildlife Habitat (WDG)
DACW68-78-C-0039	Native Plant Propagation Study (WSU)
DACW-78-C-0079	Service for Development of Wildlife Habitat (WDG)
DACW68-78-C-0120	Bird Watering Cisterns
DACW68-79-C-0165	Wildlife Habitat Headquarters (WDG O&M Building)
DACW68-80-C-0026	Nest Platforms
DACW68-80-C-0076	Wildlife Habitat Development, Operations, and Maintenance (O&M Contract)
DACW68-80-C-0147	Road Development (Hollebeke and Skookum)
DACW68-80-C-0100	Water Well - Lower Goose Pasture, Clearwater River
DACW68-82-C-0001	Cooperative Agreement for Lower Snake River Project Wildlife Habitat Development Program (WDG)
DACW68-82-C-0103	Fertilizer for Lower Snake River Wildlife Habitat Areas

b. Idaho

In 1983, after extensive negotiations, in 198? the Corps, IDFG, and IDPR signed the Memorandum of Agreement for Establishment of Hells Gate Habitat Management Unit (HGHMU). Under this agreement, the development of wildlife habitat on lands currently a part of Hells Gate State Park was proposed by the Corps based on recommendations from IDFG and Pengelly and McClelland (1978). Designated sections of the HGHMU will be made available for public access for hunting and fishing. The HGHMU land will be indefinitely classed as "wildlife-intensive" and developed in a similar manner to on-project wildlife mitigation lands in Washington. Following the deletion of certain lands from the IDPR Corps lease agreement, the Corps will assume responsibility for the development, operation, and maintenance of the HGHMU. The Corps agreed to develop habitats within 5 years following the lease amendment, dependent on sufficient funding. The IDFG agreed that no further wildlife mitigation would be requested if the HGHMU were developed according to the management plan.

C. Mitigation Implemented

1. Washington

The Compensation Plan was authorized in 1976; however, specific funding appropriations for implementation of the plan were not made until 1978. Because the program was given such high priority, initially both State and Federal agencies provided services under their own funding. The Compensation Plan considered three areas of wildlife mitigation:

a) On-project habitat development
b) Off-project land acquisition, and
c) Interim compensation plan.

a. On-project Habitat Development

Pilot developments of small irrigation systems and tree and shrub plantings were made as early as 1976 (USACE 1982). In March 1980, the Corps contracted WDG to develop and manage on-project lands (Contract No. DACW68-9-80-47). The Snake River Habitat Management Area was formed by WDG and funded by the Corps to fulfill the contract. The Corps reclassified many low-lying bench areas originally acquired for future recreation use and developed them as wildlife habitat in order to implement the proposed compensation plans.

Irrigation systems are operable at all 10 sites (1,073 acres) scheduled for intensive development. One thousand acres of various cover and food plantings and approximately 110,000 trees and shrubs have been planted. Installation of

93 artificial goose nesting structures, 200 bird houses, 68 bird-watering devices, 28 quail roost and brush piles, and 83 miles of boundary or livestock fencing was completed (USACE 1983a). However, some habitat features have worn out, died, or been destroyed by vandalism. Approximately 25 to 50 percent of original tree and shrub plantings have died, and none have been replaced even though irrigated planting sites are available. Several goose tubs have either worn out or been destroyed by vandals. Dry land development has been implemented on 11,400 acres, much of which is enclosed by livestock fencing (USACE 1983a). In some areas livestock fencing is the only development to date.

The majority of site development (all irrigated units and dryland units) as originally proposed in the Design Memorandum Supplement No. 1 was completed (Passmore 1984, personal communication). However, modification of some habitat units was necessary due to outgrants such as livestock watering corridors held by the original landowers (Athearn 1984, personal communication).

The Corps has done additional work on project-owned lands outside of the designated habitat management units (Passmore 1984, personal communication). This work includes vegetative plantings at recreational areas and placing raptor poles and burrowing owl cavities at several locations. The Corps funded an independent contractor to conduct studies on raptor and raven nests and food habits on project and adjacent lands (Fleming 1981 and 1982).

Between 1 March 1978 and 31 May 1980, the Corps contracted WDG to determine existing wildlife population levels prior to habitat development of the Corps-owned project lands (about 25,000 acres) along the Lower Snake River. These post-project baseline population estimates are to be used to determine the changes in wildlife populations attributable to habitat development. Measurements of wildlife compensation progress were also made. A report on these studies was published in May 1979 and 1980 (Mudd et al.) and accepted by the Corps the following September. Compensation progress will be evaluated at 5-year intervals through the year 2000 contingent on funding from the Corps.

A small amount of compensation progress has occurred due to natural revegetation of riparian areas, livestock exclusion by fencing, development of parks, island creation and artificial nesting structures, especially for Canada geese (WDG 1980). The 1980 estimate of wildlife compensation progress is given in Table 5.

b. Off-project Land Acquisition

A land acquisition study was conducted by WDG to determine the potential location and costs of off-site compensation as

Table 5. Wildlife losses due to dam construction and a current estimate of compensation progress, Lower Snake River Study, 1980.

Wildlife	Losses	Compensation	Percent of Compensation
Upland game[a]	66,800	1,303	2
Chukars	39,600	0	0
Mourning doves	14,400	454	3
Furbearers	13,400	-[b]	-
Deer	1,200	0	0
Canada geese	600[c]	646[c]	108
GAME SPECIES SUBTOTAL	136,000	2,403	2
Nongame birds			
Breeding	33,400	5,806	17
Wintering	92,500	2,823	3
TOTAL WILDLIFE	261,900	11,032	4

[a]Includes ring-necked pheasant, California quail, gray partridge, and cottontail.

[b]Not studied.

[c]Goslings reared to flight stage.

From Mudd, et al. 1980

described in elements X, Y, and Z (see Mitigation Proposed) (WDG 1978a). Criteria for selecting off-project lands were developed by WDG under Corps contract (WDG 1978b). In 1980, the Corps authorized reimbursement of up to $9,954,000 to WDG for acquisition of X and Z lands over a 10-year period (until 1990). A certain amount of these funds is approved each fiscal year subject to availability of funds in the Corps. Acquisition is strictly on a willing-seller/willing-buyer basis. There has been some opposition to this plan because many landowners are not willing to sell strips of shoreline or perpetual easements on their property Some landowners were willing to sell short-term leases or easements (USACE 1983a); however, both lease and administrative costs for this type of program made it infeasible. The Corps and WDG concluded in the Special Report to Congress that "Working under the authorized criteria, it is highly unlikely that compensation requirements for off-project land can be met" (USACE 1983a). At this time, only 12 acres of fisherman access under element Z have been acquired (Voelker 1984, personal communication).

Design Memorandum No. 6, Wildlife Compensation and Fishing Access Site Selection was completed by the Corps in 1979 (USACE 1979c). The purpose of this document was to identify the general location, estimated costs, and development aspects for land proposed for acquisition by fee or easement for wildlife compensation and fishing access in Washington.

c. Interim Compensation Plan

The proposed interim plan was only partially implemented because most of the game farm birds were to be released on off-project lands which have not yet been acquired, and WDG has reduced its use of artificially reared birds and phased out its game farms in eastern Washington (USACE 1983a). A game farm alternative proposal was considered with compensation plan funding originally intended for game farm production (USACE 1983a). The Corps contracted WDG to conduct a 3-year pilot program (20 August 1980 to 30 September 1983) to determine the cost-effectiveness of producing upland game birds by paying farmers to leave crops or plant nesting cover for natural production on private lands. A Game Farm Alternative Study, Final Report was prepared by Boe et al. (1983). Partial interim compensation has been provided by the release of 2,000 to 5,000 game farm pheasants annually on project management areas. These releases have been recommended to continue until the year 2002 (Boe et al. 1983). Total funds spent on the game farm alternative would not exceed the cost of the original proposal of 20,000 released pheasants annually for 20 years (Boe et al. 1983). It is presently unclear if Congressional authorization is needed before the game farm alternative program can continue as proposed (USACE 1983a; McKern 1984, personal communication; Ross 1984, personal communication).

2. Idaho

In Idaho, the Corps developed 30 acres of recreation lands into areas primarily for goose brooding for young geese produced on Hog Island and other islands of the lower Clearwater River (Passmore 1984, personal communication; McNeil 1984, personal communication) Development of the two parcels included installation of an irrigation system, fencing, wind breaks, nesting platforms, alfalfa plantings, and public observation points. The area is in the Lewiston Wildlife Preserve and is managed by the Corps.

Spraying for control of noxious weeds has begun at the HGHMU (Passmore 1984, personal communication). Approval of the HGHMU management plan is needed before further habitat development can be implemented.

VI. CURRENT STUDIES AND PLANNING

A. Washington

The implementation process is proceeding, although not all features of the Supplemental Design Memorandum have been implemented. Off-project land acquisition for wildlife compensation and public access has met with very limited success. A Special Report to Congress: Lower Snake River Fish and Wildlife Compensation Plan (USACE 1983a) is currently undergoing revision by the Corps and State and Federal wildlife agencies. This report outlines the compensation progress to date, program costs, coordination, proposed compensation plan revisions, and recommendation for supplemental authorization to the Lower Snake River Fish and Wildlife Compensation Plan. Recommendations are as follows:

"a. Continue the willing-seller/willing buyer estate acquisition concept;

b. Amend estate acquisition requirements to allow all land acquisition by either fee and/or perpetual easement, allow acquisition of total ownerships or whole farm units, and allow acquisition of lands which provide one or any combination of fishing access, upland game nesting and habitat, upland game hunting areas, and chukar hunting areas not to exceed an aggregate total of 24,150 acres.

c. Amend land management requirements so title to separable compensation lands vests with the State fish and wildlife agencies, and title to lands contiguous to Corps of Engineers projects will be retained by the Corps; development of all compensation components will be funded by the Corps of Engineers and operation, maintenance, and replacement costs will be borne by the agency holding title to the land.

d. Extend land acquisition efforts 5 years beyond the date of supplemental authorization and funding approved by adoption of this report. (Supplemental authorization was approved in 1982.)

e. Amend the game bird production requirement to allow the Corps of Engineers to fund a program by the Washington Department of Game to contract with local landowners to plant or leave nesting cover to increase natural game bird production in the project vicinity, and reduce the game garm bird stocking requirement by a commensurate amount such that the annual cost of natural and artificial rearing approximately equals the cost of rearing 20,000 game birds per year on a game farm, allow acquisition of game farm birds from the Washington Department of Game or private game farms, and authorize this program to continue to the year 2002." (USACE 1983a).

On-project lands are continuing to be developed, operated, and maintained by the Corps directly or by WDG with funding from the Corps. A development plan for dry land habitat units is presently in preparation by the Corps as a comprehensive followup supplement to the 1975 Design Memorandum (Passmore 1984, personal communication).

The reevaluation of on-project mitigation efforts is planned to be made at regular intervals through Fiscal Year (FY) 2000 (USACE 1983a). These studies are to be conducted by the WDG with funding from the Corps. Provided the Corps approves funding, the next evaluation will begin in FY 1985 (Ross 1984, personal communication).

Off-project land acquisition efforts are continuing under the original requirements of the Compensation Plan. Revisions to the requirements are discussed in the Special Report to Congress (USACE 1983a). When these revisions are approved by Congress, it is anticipated that the land acquisition program will be more readily accepted by landowners and substantial progress can then be made (Voelker 1984, personal communication).

B. Idaho

The Corps is preparing a Hells Gate management plan as a Letter Supplement No. 2 to the Design Memorandum for Wildlife Habitat Development (Passmore 1984, personal communication). Supplement No. 2, when completed and approved, would authorize funding and provide for joint management between the Corps and IDFG for both the HGHMU and Clearwater River goose areas. Approval of the supplement would also provide that the Clearwater River goose areas be considered as formal mitigation regarding the Lower Granite

project.

The HGTMU plan should be completed and circulated for internal review by the Corps by early summer 1984 (Passmore 1984, personal communication). The construction phase would not begin until the plan is approved and funding authorized. The funding would provide for continued operation and maintenance of the Clearwater River goose areas.

C. Enhancement

Enhancement, as defined under FWCA, is improvements above and beyond replacement or mitigation of wildlife losses. This contrasts with the definition used by the Fish and Wildlife Program of the Northwest Power Planning Council that enhancement is off-project lands mitigation. The definition under FWCA applies here.

The USFWS and NMFS (1978) prepared a report to assist the Corps in responding to an order issued in the U.S. District Court, Eastern District of Washington, on 30 September 1977. The court denied claims of the Plaintiffs, Northwest Steelheaders, et al., that the Corps did not adequately mitigate fish and wildlife losses under provisions of FWCA. However, it ruled that the Corps would provide Congress with a supplemental report on fish and wildlife enhancement for the Lower Snake River Project. The court order stated that the Corps be required to prepare and submit to Congress (on or before 1 October 1978) a report on measures that might be undertaken for enhancement of fish and wildlife resources in the lower Snake River Project as provided in 16 U.S.C. 662(f). These enhancement measures to not include interim measures. The Corps must include measures that develop and improve fish and wildlife resources in the Lower Snake River area to a level beyond that existing in the Lower Snake River prior to construction of the Lower Snake River Project by the Corps.

The supplemental report was prepared and submitted to Congress (USACE 1978). Suggested enhancement measures included detailed study of riparian vegetation improvement, streamflow improvement, pollution reduction, and wildlife user access. Specific plans were to be derived from these studies. In 1981, the Corps was to provide $640,000 to be divided among the Corps, WDG, IDFG, and USFWS for fish and wildlife enhancement studies. However, the majority of these funds were used in-house by the Corps. Funding was later terminated and wildlife enhancement has been delayed until success of compensation measures is known (Oliver 1982).

No enhancement efforts were required or are planned for Idaho.

VII. REFERENCES CITED

Asherin, D. and Orme. 1978. Inventory of riparian habitats and associated wildlife along the lower Clearwater River and Dworshak Reservoir. Coll. of Forestry, Wildl. and Range Sci., Univ. of Idaho.

Asherin, D. and J. Claar. 1976. Inventory of riparian habitats and associated wildlife along the Columbia and Snake Rivers. volumes IIIA and IIIB. Idaho Cooperative Wildlife Research Unit, Univ. of Idaho.

Athearn, James. 1984. Chief of Fish and Wildlife Operations. U.S. Army Corps of Engineers, Walla Walla District. 14 March, personal communication.

Boe, L., R.J. Ross, and D. Mudd. 1983. Game Farm Alternative Study. Final Report. Washington Dept. of Game, Olympia.

Bradley, Bill. 1984. Wildlife biologist., Yakima Indian Nation. 28 March, personal communication.

Buss, I.O. and L.D. Wing. 1966. Preimpoundment observations of wintering mallards and nesting Canada geese on the Snake River, Southeast Washington. Research studies 34(1):1-36.

Clegg, F.L. 1973. Vegetation inhabiting the Lower Granite Reservoir Basin. For U.S. Army Corps of Engineers, Walla Walla District.

Fleming, T.L. 1981. A nesting raptor survey of lower Snake and Columbia rivers, Lewiston, Idaho, to Umatilla, Oregon. For U.S. Army Corps of Engineers, Walla Walla District, Washington.

_____. 1982. Food habits and reproduction of raptors and ravens along and in the vicinity of the lower Snake River, Washington. For U.S. Army Corps of Engineers, Walla Walla District, Washington.

Gore, James F. 1984. U.S. Fish and Wildlife Service, Boise, Idaho. 8 May, personal communication.

Idaho Department of Game. 1974. Letter from Director J.C. Greenley to Col. Nelson Conover, U.S.Army Corps of Engineers, Walla Walla District. 4 December.

Lawrence, Keith. 1984. Chairman of the Fish and Wildlife and Law and Order Committee. Nez Perce Indian Nation. 26 March, personal communication.

Lewke, R.E. and I.O. Buss. 1977. Impacts of impoundment to vertebrate animals and their habitats in the Snake River Canyon, Washington. Northwest Science, 51(4):219- .

Mains, Edward. 1984. Wildlife Biologist, U.S. Army Corps of Engineers. 26 March, personal communication.

McKern, John. 1984. Chief of Environmental Affairs. U.S. Army Corps of Engineers, Walla Walla District. 14 March, personal communication.

McKern, J.L. 1976. Summary Report, Inventory of riparian habitats and associated wildlife along the Columbia and Snake rivers. Vol. 1. U.S. Army Corps of Engineers, Walla Walla District.

McNeil, Samuel. 1984. Idaho Department of Fish and Game, Lewiston. 30 March, personal communication.

Mudd, D., T. Clausing, L. Boe, and R. Bugert. 1979. Evaluation of wildlife habitat developed on government project lands along Snake River in Washington. Washington Department of Game, Habitat Management, Olympia.

Mudd, D., L. Boe., and R. Bugert. 1980. Evaluation of wildlife habitat developed on government project lands along Snake River in Washington. Washington Department of Game, Olympia. For contract DACW-68-78-C-0023.

Mudd, David. 1984. Washington Department of Game, Olympia. 6 February, personal communication.

Oliver, W.H. 1970. Progress report: wildlife mitigation requirements and proposals for the lower Snake River. Washington Dept. of Game. September.

Oliver, W.H. 1982. History of fish and wildlife compensation efforts lower Snake River-Washington. Presented at Seminar for Institute of Resource Management, Washington State University, Pullman. 9 December.

Oliver, Wendell. 1984. Yakima, Washington. 3 March, personal communication.

Passmore, Michael. 1984. Wildlife Biologist., U.S. Army Corps of Engineers, Walla Walla District. 14 March, personal communication.

Pengelly, L. and R. McClelland. 1978. Report of impacts on Idaho wildlife caused by Lower Granite project, Snake River, Washington. For U.S. Army Corps of Engineers, Walla Walla District. unpublished report, 21 December.

Ross, Rocky. 1984. Washington Department of Game, Pasco. 8 February, personal communication.

Schroy, Paul. 1984. Legal Counsel on Indian Affairs. U.S. Army Corps of Engineers. 26 March, personal communication.

U.S. Army Corps of Engineers. 1963. The master plan for development and management of Lake Sacajawea, Ice Harbor project, Snake River, Washigton. Design Memorandum No. 25B. Walla Walla District.

_____. 1964. Lower Granite Lock and Dam, Snake River, Oregon, Washington, and Idaho. Design Memorandum No. 3, General Design Memorandum. Walla Walla District.

_____. 1966. Letter from Col. Frank D. McElwee, Walla Walla District to Paul T. Quick, Regional Director, Bureau of Sport Fisheries and Wildlife, Portland, Oregon. 11 April.

_____. 1971. Environmental Statement: Ice Harbor additional generating units, Snake River, Washington. Walla Walla District, Washington.

_____. 1973a. Special Lower Snake River Report for compensation for fish and wildlife losses caused by Ice Harbor, Lower Monumental, Little Goose, and Lower Granite locks and dams projects, Washington and Idaho. Walla Walla District, Washington.

_____. 1973b. Draft environmental impact statement, Little Goose additional generator units. Walla Walla District, Washington.

_____. 1973c. Lower Granite Lock and Dam master plan (Design Memorandum No. 28). Walla Walla District, Washington

_____. 1973d. Record of public meetings, special Lower Snake River report: for compensation for fish and wildlife losses caused by Ice Harbor, Lower Monumental, Little Goose, and Lower Granite dams projects-Washington and Idaho. Walla Walla District, Washington.

_____. 1974. Little Goose Lock and Dam, Final Environmental Impact Statement. Walla Walla District, Washington.

_____. 1975a. A Special report: Lower Snake River Fish and Wildlife Compensation Plan. Walla Walla District, Washington.

_____. 1975b. Lower Granite Project, final environmental impact statement. Walla Walla District, Washington.

_____. 1975c. Ice Harbor: A master plan for the management of all natural and manmade resources of Ice Harbor Lock and Dam. Walla Walla District, Washington.

_____. 1975d. Lower Monumental: a master plan for the management of all natural and manmade resources of Lower Monumental Lock and Dam. Walla Walla District, Washington.

_____. 1975e. Little Goose: a master plan for the management of all natural and manmade resources of Little Goose Lock and Dam. Walla Walla District, Washington.

_____. 1976. Final environmental impact statement, Lower Snake River Fish and Wildl. Compensation Plan. Walla Walla District, Washington.

_____. 1977. Letter from Col. Allaire, Walla Walla District, to Senator McClure of Idaho. 16 May.

_____. 1978. Supplement to Special Report - Lower Snake River fish and wildlife compensation plan, Lower Snake River, Washington. 27 Sept.

_____. 1979a. Final environmental impact statement. Lower Monumental Lock and Dam, Snake River, Washington. Walla Walla District, Washington.

_____. 1979b. Design memorandum for wildlife habitat development: supplement No. 1, Lower Snake River project. Walla Walla District, Washington. April 20.

_____. 1979c. Wildlife compensation and fishing access site selection. Lower Snake River fish and wildl. compensation plan design memorandum No. 6, Walla Walla District, Washington.

_____. 1979d. Ice Harbor operations and maintenance, environmental impact statement. Walla Walla District, Washington.

_____. 1980. Lower Snake River Fish and Wildl. Compensation. Design Memorandum No. 2A, Real estate. Walla Walla District, Washington.

_____. 1983a. Special report to Congress. Lower Snake River fish and wildlife Compensation Plan. Walla Walla District, Washington.

_____. 1983b. Idaho fishing access site selection. Lower Snake River fish and Wildlife compensation plan design memorandum No. 8. Walla Walla District, Washington. revised October.

_____. Idaho Department. of Fish and Game, and Idaho Department of Parks and Recreation. 1983. Memorandum of agreement for establishment of Hells Gate Habitat Management Unit. 30 September.

U.S. District Court. 1977. Association of Northwest Steelheaders, et al., Plaintiffs. Departments of Game and Fisheries, State of Washington, Plaintiff-Intervenors, vs. Clifford L. Alexander, Jr., Secretary of Army, et al., Defendants. Civil Action File No. 3362.

U.S. Fish and Wildlife Service, 1959. A detailed report on fish and wildlife resources affected by Ice Harbor Lock and Dam project. Portland, Oregon.

_____. 1960. A detailed report on fish and wildlife resources affectd by Lower Monumental Lock and Dam project. Portland, Oregon.

_____. 1963. A detailed report on fish and wildlife resources affected by Little Goose Lock and Dam Project, Snake River, Washington. Portland, Oregon.

_____. 1966. A detailed report on fish and wildlife resources affected by Lower Granite Lock and Dam Project, Snake River. Portland, Oregon.

_____. 1970. Basic data for Lower Snake River dams, Washington-Idaho. Portland, Oregon.

_____. 1978. A special report on the Lower Snake River dams, Washington and Idaho: enhancement supplement. Portland, Oregon.

_____, and National Marine Fisheries Service, 1972. A special report on the lower Snake River dams: Ice Harbor, Lower Monumental, Little Goose, Lower Granite, Washington and Idaho. Portland, Oregon.

Voelker, George. 1984. Washington Department of Game, Olympia. Engineering Division. 19 March, personal communication.

Washington Department of Game. 1965. Research and analysis of hunting and fishing activities on completed and proposed Federal projects in southeastern Washington. T. Eldred and J. Stout, Olympia.

_____. 1967. Research and analysis of hunting activity on completed and proposed Federal projects in southeastern Washington. J. Stout, Olympia.

_____. 1965. Research and analysis of hunting activity on completed and proposed Federal projects in southeastern Washington. J. Stout, Olympia.

_____. 1978a. Preliminary land acquisition study and gross appraisal report for the Snake River Wildl. compensation plan. Olympia.

_____. 1978b. Off-project wildlife compensation criteria, Lower Snake River fish and wildlife compensation plan. Contract No. DACW68-78-C-0040. December.

Wirth Associates. 1975. Design memorandum for wildlife habitat development, Lower Snake River project. For U.S. Army Corps of Engineers, Walla Walla District, Washington.

VIII. APPENDICES

APPENDIX A - Study Team

Washington Department of Game - Martha Jordan
U.S. Fish and Wildlife Service - Elaine Rybak

APPENDIX B - Consultation/Coordination

Project Contacts

U.S. Army Corps of Engineers, Walla Walla District - John McKern, Mike Passmore, James Athearn

U.S. Army Corps of Engineers, Legal Counsel on Indian Affairs - Paul Schroy

Yakima Indian Nation - Bill Bradley, William Yallup

Umatilla Indian Nation - Gary James, Jerry Lauer

Nez Perce Indian Nation - Keith Lawrence

Idaho Department of Fish and Game - Ralph Pehrson, Sam McNeill

Summary

February 21, 1984	- Letter sent to Bill Bradley (Yakima Indian Nation) from Study Team requesting contact person and project information. No reply received.
February 21, 1984	- Letter sent to Walla Walla District, Corps of Engineers, from Study Team requesting contact person and project information. Reply received in March with name of contact person.
March 9, 1984	- Telephoned Bill Bradley (Yakima Indian Nation). Call never returned.
March 14, 1984	- Meeting between Study Team members and Walla Walla District to obtain project information.
March 22, 1984	- Study Team contacted Mike Passmore (USACE biologist).
March 26, 1984	- Study Team contacted Paul Schroy (USACE Legal Counsel on Indian Affairs).
March 26, 1984	- Study Team contacted Gary James (Umatilla Indian Nation). Tribe indicated Jerry Lauer would be contact person and would return Study Team call.
March 26, 1984	- Study Team contacted Keith Lawrence (Nez Perce Indian Nation).
March 27, 1984	- Study Team contacted William Yallup (Yakima Indian Nation). Left message to return call.
March 28, 1984	- Study Team contacted Bill Bradley (Yakima Indian Nation).
March 28, 1984	- Study Team contacted Ralph Pehrson (Idaho Department of Fish and Game).
March 28, 1984	- Study Team contacted Sam McNeill (Idaho Department of Fish and Game).

APPENDIX C

Comments

United States
Department of the Interior

Fish and Wildlife Service
Lloyd 500 Building, Suite 1692
500 N.E. Multnomah Street
Portland, Oregon 97232

In Reply Refer To: Your Reference:

September 25, 1934

Mr. John Palensky, Director
Division of Fish and Wildlife
Bonneville Power Administration
P. O. Box 3621
Portland, Oregon 97208

ATTN: James R. Meyer
Contracting Officer Technical Representative

Dear Mr. Palensky:

As requested in Mr. Meyer's letter of July 19, 1984, we have reviewed the "Wildlife Mitigation Status Review" report for the lower Snake River facilities. Our comments are provided for inclusion in the final report.

General Comments

We believe the report adequately describes the status of past, present and proposed wildlife mitigation for the projects.

Impact assessment on the project is apparently complete and mitigation needs have been sufficiently identified. A great deal of mitigation planning and implementation has occurred. Some mitigation is continuing to be implemented. However, a portion of project mitigation is still incomplete. Land acquisition, specifically, is lagging far behind.

In order to hasten the completion of the mitigation process, the Service recommends the Bonneville Power Administration provide funds for a team of qualified biologists to assess the reasons why the remaining mitigation has not been accomplished and to develop a strategy to hasten implementation. The team should include biologists from the Washington Department of Game, Fish and Wildlife Service, and U. S. Army Corps of Engineers, Walla Walla District.

We believe the Northwest Power Act and the Council's Fish and Wildlife Program provide a unique opportunity to evaluate and replace lost wildlife resources. The Fish and Wildlife Service is eager to move toward that end.

Sincerely,

J.W. Teeter

James W. Teeter
Acting Assistant Regional Director
Habitat Resources

cc:
Washington Department of Game (Howerton)
ES, Boise, Idaho (Wolflin)
ES, Olympia, Washington (Dunn)
ES, Moses Lake, Washington (Stempel)

Nez Perce
TRIBAL EXECUTIVE COMMITTEE
(208) 843-2253

April 19, 1984

Elaine Rybak
Ecological Services
U.S. Fish & Wildlife Services
2625 Parkmont Lane SW
Bldg. B-3
Olympia, WA 98506

Dear Ms. Rybak:

Enclosed you will find the Nez Perce Tribe's statement of "Indian Rights" for the Lower Snake Mitigation Report. When we receive the "rough" copy of the report we may be able to provide some additional information and citations to document particular conerns represented therein.

Sincerely,

Melvin S Joye

Melvin Joye
Chairman, Fish & Wildlife
Subcommittee

ATTEST:

for Allen Pinkham
Chairman, NPTEC

INDIAN RIGHTS

The Treaty of 1855 between the U.S. Government and the Nez Perce Tribe defined the responsibilities and rights of both parties. The treaty also defined the boundaries of the Nez Perce Reservation. Subsequent treaties reduced the size of the reservation, but the Nez Perce Tribe retained hunting and fishing rights over "open and unclaimed lands" within the boundaries of their aboriginal area. These lands, consisting of 13 million acres, are called ceded lands. The Snake River lies within the ceded area from that point, fifteen miles below the mouth of the Powder River to a point, defined in the Treaty of 1855, as a southerly direction to the Snake from the mouth of the Wo-na-ne-she or the southern tributary of the Palouse River. The Lower Granite and Little Goose projects are within that area. The Nez Perce Tribe also retained hunting and fishing rights in areas the Tribe historically frequented that were outside of the ceded lands. These areas are called "usual and accustomed".

The Nez Perce Tribe historically frequented the area between the current reservation and Celilo Falls following runs of anadromous fish, visiting neighboring tribes and trading (Deward, 1967),(Deward, ____). Thus, the Lower Monumental and Ice Harbor projects are within an area recognized as "usual and accustomed".

Any impact to wildlife populations that exist on, or cross federally owned land within the ceded or usual and accustomed areas, is therefore an impact on Nez Perce treaty rights. The Nez Perce Tribe therefore, has a voice in management decisions impacting treaty right resources.

In the past the Nez Perce Tribe has not had the technical expertise to formulate specific mitigation proposals or study requests. Since the Nez Perce did not have this expertise it was difficult or impossible for the tribe's Executive Committee to give input on the few management decisions they were asked to comment on concerning these four projects.

Deward, Walker E. Jr., A Feasibility Study of Evidence Supporting Aboriginal Nez Perce Fishing on the Columbia and its tributaries. Laboratory of Anthropology, Washington State University, Pullman, Washington.

1967 - Mutual Cross - Utilization of Economic Resources in the Plateau: An example from Aboriginal Nez Perce Fishing Practices. Washington State University, Laboratory of Anthropology, Report of Investigations No. 41. Pullman, Washington.

SEP 2 8 1984

IDAHO DEPARTMENT OF FISH AND GAME
600 South Walnut • Box 25
Boise • Idaho • 83707

September 18, 1984

Mr. John Palensky, Director
Division of Fish and Wildlife
Bonneville Power Administration
P. O. Box 3621
Portland, Oregon 97208

ATTENTION; MR. JAMES MEYER

Dear Mr. Palensky:

Thank you for the opportunity to review the Wildlife Mitigation Status Review for the Lower Snake River Project.

The report provides a useful review of wildlife mitigation on these four dams and reservoirs. The Lower Granite Reservoir is the only part of the project that directly impacted wildlife in Idaho.

On page 22, the Hells Gate Habitat Management Unit is discussed, but the number of acres designated for wildlife mitigation in the agreement among the Idaho Department of Fish and Game, the Idaho Department of Parks and Recreation, and the Corps of Engineers, was not specified. Approximately 776 acres have been assigned to the Hells Gate Habitat Management Unit according to the 1983 Memorandum of Agreement.

The current mitigation for the impacts on wildlife from Lower Granite Dam in Idaho is not adequate. The mitigation for Idaho that has been proposed and accepted would be adequate and needs to be implemented.

Sincerely,

Jerry M. Conley
Director

JMC:LN:db

• EQUAL OPPORTUNITY EMPLOYER •