



# Annual Report

FISCAL YEAR 1975 -

Dworshak National Fish Hatchery  
(Hatchery)

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DIVISION OF FISH HATCHERIES

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STATION HISTORY .

The construction of the Dworshak National Fish Hatchery was authorized under Public Law 10-USC-2304(a) and constructed under appropriation 96 X 3122 Construction, General, Corps of Engineers, Civil, Dworshak Dam and Reservoir. The prime contract was awarded to M. Morrin and Sons of Ogden, Utah, effective September 16, 1967. Subsequently additional contracts were awarded to complete the station. A relative small amount of work remains to be done.

There follows a summary of the contracts and other costs. These figures are in most cases final figures representing adjusted costs. Because of the method of contract award used by the Corps of Engineers, accurate costs of individual buildings and facilities are impractical to assemble.

A description of the major buildings and related facilities of the hatchery and their cost follows:

Pump Station

The pump station is of course the water supply source for the entire project. Water is pumped from the North Fork of the Clearwater River into the water treatment facility which is a structure which will serve two or more purposes. The pump house is of reinforced concrete construction - 36' wide and 89' long. The exterior surface is finished in tan trowelled marble. The interior of the building is equipped with five pumps, three link belt traveling screens, and the necessary switchgear and bus bars for the electrical equipment. In addition, there is a five-ton bridge crane for handling the equipment within the building. There are three 200 H.P. pumps, one 100 H.P. pump, and one 2-speed pump which operates either at half speed or full speed. These combinations of pumps will give sixteen different water flows from a minimum of 4,000 gallons per minute to a maximum of 64,000 gallons per minute in increments of 4,000 gallons per minute. The pumps are protected by three traveling water screens of link belt design. These water screens are automatic in that there are sensors which determine the differential head between the outside and the inside of the screen. When the head equals six inches, the screens are automatically turned on and backflushed. If the head should reach ten inches, the alarm system is activated and the alarm shows on the annunciator system at the pumphouse and is transmitted to the monitoring equipment. In addition, the pumphouse is equipped with a steam generator which can generate steam to remove ice from the traveling water screens if the occasion arises.

Fire and Maintenance Pumphouse

The fire and maintenance pumphouse is of concrete block construction, 15'4" X 22'8". It has a painted tan finish. It contains the pumps necessary to supply the fire suppression system and the water necessary for general cleanup purposes as well as watering

**B. Has the Hatchery Met Mitigation Goals?**

The record shows that the hatchery has not met its mitigation goals of 3,300,000 - 170 mm smolts per year. However, when one considers the complexities of operating a totally mechanized hatchery on a water re-use system, one is inclined not to condemn, but to commend the manager and his staff for their performance over the six years the hatchery has been in operation. Two of the six years they exceeded the mitigation goal by substantial margins. Even the 1974 brood year is not as bad as the record based on numbers alone indicates. Smolts released in the spring of 1975 were 190 mm in length instead of 170 mm as called for in initial mitigation requirements. Some 190,000 smolts not measuring 190 mm in length this spring will be held over a year, at which time they should exceed even the 190 mm length. Since return percentages are size-connected, the results of 1974 brood year releases should be better than the number released might indicate.

of shrubbery and lawns. This pumphouse is automatic in operation; as the demand increases on the system, the pumps automatically cut in as needed.

#### Water Treatment Facility

The water treatment facility is of reinforced concrete construction, 91'2" wide and 113'6" long. It serves as an equalization reservoir and settling basin to maintain a head upon the system. Originally, 12 Vortair aerators were mounted on the upper level of the facility. Maintenance problems with the gear cases prompted the Corps of Engineers to initiate procedures which will result in replacement of these units. The operation of the aerators is necessary due to high nitrogen levels experienced at the time of spilling of water at the Dworshak Dam. Spilling has occurred each year since the pool was filled in the spring of 1972.

#### Visitors' Parking Lot - Restroom Facility

This building is of concrete block design, 22' X 32', painted yellow. The facility includes men's and women's restrooms and a service room for caring for the building.

#### Shop and Garage Building

This building contains eight stalls for vehicles plus two shop areas. At the west end of the building is located the carpenter's shop. At the east end of the building is located the welding shop and the maintenance shop for grounds. The building is of concrete construction and concrete block, 49'4" X 89'. The building is painted tan.

#### Water Reuse Pumping Plant - System I

This building is of reinforced concrete design, 21' X 24'10", with tan trowelled marble exterior. It contains four pumps of varying sizes with a total pumping capacity of 15,000 gallons per minute. There is also included in the building a volume air compressor for backflushing the filter beds. Directly adjacent to this facility is the aeration chamber for the reuse system. This reuse aeration chamber is equipped with aspirator type aerators and has the capacity to aerate 15,000 gallons per minute of total pumping capacity of the reuse pumping plant. This system is equipped with oxygen sensors and with low and high level water alarms in the sump area.

#### Mechanical Building No. 1.

This building is of reinforced concrete construction, 69' X 96', with tan trowelled marble exterior. The building houses the complete mechanical components necessary for the operation of reuse system No. 1 and the incubator supply system. Water for use in the reuse system and the incubator supply system enters this building and passes through an electric grid sterilizer. From this point, the water is pumped through pressure filters for the removal

of foreign matter larger than 15 microns. It then passes through ultraviolet ray sterilizers and thence to heat exchangers before it enters the system. The heat exchangers are connected to either two 450 H.P. oil-fired boilers, or as the occasion arises, to four 350 H.P. chillers. The water is either heated or chilled as the season demands and enters the reuse system or enters the incubator supply system. In addition to the water conditioning facilities in the building, there are sufficient amounts of switchgear and electrical components to supply the demands of the units. Installed in a small room is a 795 H.P. diesel generator. Upon power failure, this generator automatically starts and picks up the load which has been previously determined necessary by the setting of the proper control switches.

#### Fish Food Facility

A complete description of the automated fish feeding facilities is included in another section of this document. In addition to housing the computer room and the fish feeding equipment, the fish food facility includes storage for fish food. Originally the plans called for the storage of Oregon Moist Pellets at 0 degrees temperature. The building was originally designed and constructed so that the storage rooms could be kept at low temperature. The building is of two story design constructed of reinforced concrete, 94'6" long and 52' wide. The external finish is of dark, greenish-gray trowelled marble. The basement contains one room which houses the pneumatic equipment for the fish food conveying to the ponds and the cold storage machinery. An additional room in the basement is used and designed for the storage of fish food and other materials. The main floor houses two storage rooms which can be maintained at any temperature down to -10°F. The storage hoppers are in a separate room and the temperature may be maintained at any point. The conveyors especially are very sensitive in their operation to varying temperatures. On the main floor is also housed the rest-room plus a room temperature work area. Fish food may be unloaded from trucks by the use of a fork lift and pallets. Immediately in front of the truck unloading door is truck leveling device for leveling the trucks to the level of the unloading dock.

#### Hatchery and Office Building

The main hatchery and office building houses many functions. This building is of three story design, 96' X 120'. The second story contains the administrative offices and part of the public lobby. These rooms are finished in glazed tile with accoustic tile ceilings. The main lobby upstairs contains several of the units of instrumentation. Also is included some public display material. The painting which was presented at the dedication of the hatchery is also displayed in the lobby in a glass enclosure.

The instrumentation which is located in the lobby area includes recording devices, a summary cabinet for the annunciation system, and a display board which shows a diagram of the hatchery and the

waterflow systems including the handling of the fish. The display board serves as an informational source for the visiting public. However, its main purpose is to show the electrical equipment which is in operation on the project. Each of the electrical units are represented on this display by a two-light square module. All units that are operational but in standby status with the control power on are shown in green.

Off the lobby, connected by glass swinging doors, is an observation balcony immediately over the spawning area. The public can observe the sorting of the fish and the spawning operations without being actually in the immediate area. Immediately below the balcony on the main floor, is the highly mechanized spawning equipment.

To the west of the hatchery building are located nine holding ponds. Across the end of these ponds and connected to them by air operated gates is located the transportation channel. Operating on rails on the walls of the transportation channel are two channel crowders. These are used to crowd the fish into the hatchery building at the time of spawning and sorting. The crowders may be operated either at the site of the crowder or by remote control from inside the spawning area.

Immediately within the building at the end of the transportation channel is located a control gate which allows the fish to enter a basket located in the anesthetic tanks in the basement of the building. From this point, the fish are hoisted to the sorting table which is of stainless steel. Immature steelhead are returned to the ponds through a fiberglass pipe system. In order to get the fish into this system, the controls are operated by foot, the fish drop through a trap door and into the tubes as selected by the foot pedals. The female steelhead which are sexually mature are passed through the "guillotine" in which the backbone and the dorsal aorta are severed. The fish then go down into the spawning area where the eggs are taken by the usual incision or air injection method.

Adjacent to the spawning area on the main floor is the incubator room. The incubator room has a capacity of approximately 8,000,000 steelhead trout eggs. The water supply to the incubators comes from the mechanical building after having been processed through the sterilization and heat exchanger units.

The portion of the main lobby which is located on the main floor contains fairly extensive public rest rooms, the guest register and four aquaria. These aquaria are stocked with small steelhead, large steelhead and trout of the Idaho area as available.

Behind the public area in the building is located a corridor or passageway which is accessible to mechanized equipment. Towards the rear of the building is located the crew's quarters which includes lunchroom, shower and locker area and restrooms.

#### Grounds and Other Facilities

The general layout of the Dworshak National Fish Hatchery is rather unique. Passing through the center of the property is the right of way for the Camas Prairie Railroad. This railroad links Lewiston with the towns upriver from the hatchery. The visitor parking lot is located on the north side of the track area. There is adequate parking for the number of visitors that have observed the hatchery up to this time. The main pumping station and the water treatment facility are located on the north side of the tracks adjacent to the parking lot. For visitor use and connecting the parking lot to the main hatchery area is an underpass under the railroad track system. This is the only access to the public in reaching the hatchery system. Access by official personnel and vehicles as well as suppliers is by an overpass over the railroad tracks at the eastern edge of the hatchery complex. To the east of the north approach of the overpass is located the housing area. There are four three-bedroom houses of a ranch style design with full basements. Key personnel are assigned to these housing units because of the standby requirements of the installation.

In the area east of the hatchery building are located the rearing tanks. These are covered by an aluminum roof and are equipped with automatic feeding devices controlled by timers in the hatchery building. The complex is well landscaped with attractive lawn areas, shrubbery and flower beds. At the present time, the lawns have established themselves and are in very attractive condition.

#### Automated Feeding System

The automated feeding system in operation at the Dworshak National Fish Hatchery comprises several complex units. The heart of the system is an IBM 1800 computer. The computer is equipped with a 16K memory and double disc drive. In addition there is a card-reader, a card punch and keyboard pointers located in the visitor lobby and the computer room.

The computer is programmed to control the feeding process as well as to calculate the feeding requirements for each pond based on the variables of fish number and size, water temperature and conversion. The computer maintains feed inventories and writes reports as requested by the operator.

The computer is coupled to the feeding system through interface equipment. This is a complicated electronic complex that transmits signals to the computer and in turn receives signals from

the computer which are then converted into the required actions of the feeding system. Most of the signals received by the computer are analogue in nature and must be converted to digital read-outs through an analogue digital converter.

In addition to the automatic feeding process, the computer continually scans 156 alarm points. These range from equipment failure, through undesirable environmental conditions for the fish being reared, to feeding equipment malfunction. The alarm monitoring system is designed that if the local annunciator board alarm is not acknowledged a relay closes which energizes an alarm in a preselected residence.

The mechanical-electrical part of the feeding system consists of the hopper loading system, the hopper storage and batching system, and the pond distribution system. The loading system consists of a debagging hopper with air lock and pneumatic delivery equipment.

There are six hoppers for the storage of pelleted feed. Four are of 450 cubic feet capacity and two will hold 225 cubic feet. Feed is conveyed to the weighing equipment by vibratory conveyor. It is weighed electronically and conveyed to the selected pond by pneumatic piping. The entire process is under the control of the computer.

In case of a failure of the computer, manual overrides are available to provide an alternate method of feeding.

#### Mechanical Building No. II

This building houses the electric boilers, electric grid sterilizers, sand filters and ultraviolet radiation equipment for treating the makeup water to systems II and III. This building is of masonry construction with a trowelled marble finish. The dimensions are 67'6" X 81'. In addition the structure contains heat exchangers, a 250 H.P. chiller, and necessary monitoring and control equipment.

#### Reuse Systems II and III

During fiscal year 1974 construction was completed to convert the remaining 59 recirculating ponds to reuse. In this connection, the necessary piping control equipment, bio-filters and sludge removal equipment were constructed. The bio-filters are of the upflow design. A clarifier was incorporated into the lower sections of the filters. Sludge is removed by sludge scrapers to a hopper at the end of the filter and then by automatic valve through pipes to a sludge chamber. It is digested at this point. The residue has been used to date on the station lawns and shrubbery.

#### Generator Building

A building to house a 795 H.P. 500 KW, 480 V, 3-phase standby generator was constructed to house the generator formerly in the main pump house. The alteration was necessary to supply standby

power to the new mechanical building II and to the reuse pumps in reuse systems II and III. This building houses the necessary switch gear for the above systems. It is 27' X 27' of tan trowelled marble finish over masonry construction.

#### Laboratory Building

This building is 42' X 60' of masonry construction finished in gray trowelled marble. It contains office space for the hatchery biological staff, three dry laboratories, one sterile room, and a wet laboratory. The laboratory is designed for water quality testing, pathology, scale and bone reading, and cell culture. It can be adapted for any purpose that may be required by the installation of the proper equipment. Adjacent to the dry lab area is a wet lab 24' X 42' equipped with incubators, troughs, and circular tanks of various sizes for testing in vivo.

#### Electrical System

Starting with the completion of the reuse systems, electrical energy is received directly from Dworshak Dam with the only charge to the project being a "wheeling" charge. This represents the maintenance cost of the transmission equipment. Electricity is carried over 110,000 volt lines to a substation at the west end of the highway bridge in Ahsahka, Idaho. At that point the voltage is stepped down to two 12,500 volt circuits to the electric boilers and two 22,000 volt circuits which supply two substations on the hatchery property. One of these substations is in a vault adjacent to the main pumphouse and supplies the 480, 3 phase power to the northern section of the hatchery. The other substation is located between the new generator building and mechanical building No. 1.

#### Storage Building

At the time the construction of Dworshak Dam was completed, the testing lab building became available for transfer to the Dworshak National Fish Hatchery. This structure was moved by force account to a floor slab constructed under the contract completed in fiscal year 1974. The building is of frame construction with exterior plywood finish which is painted to match existing structures. The dimensions are 20' X 86'.

The title to the property is vested in the U.S. Corps of Army Engineers. Legal description is attached.

The original construction contract was let in the fall of 1966. The original construction contract was accepted October 1, 1969. Prior to that on August 22, 1969, the hatchery was dedicated. Operation began in the fall of 1968 with the trapping of adult upstream migrating steelhead. The first eggs were collected in May and June, 1969. The first releases of steelhead smolts were made in April and May, 1970. Dworshak Dam was substantially completed and the gates were dropped and sealed on September 27, 1971. With the filling of the reservoir resulting from the spring snow

runoff of 1972, the hatchery became involved in the management of Dworshak Reservoir. In May and June, 1972, initial stockings of rainbow trout and kokanee were made.

DESCRIPTION OF FISH HATCHERY

Government Lot 8 of Section 33 and all that portion of Government Lots 5 and 6 of Section 34, Township 37 North, Range 1 East of the Boise Meridian, Clearwater County, Idaho, lying southwesterly of the southwesterly right-of-way line of State Highway No. 7, and EXCEPTING the right-of-way of the Camas Prairie Railroad.

There is also EXCEPTED therefrom all of the east 660 feet of said Lot 6.

There is also EXCEPTED therefrom a parcel of land described as follows:

Commencing at a point on the east line of said Lot 6, said point lying north 660 feet from the southeast corner thereof;

thence west to a point on the westerly right of way line of State Highway No. 7;

thence continuing west to a point lying southwesterly a distance of 45 feet from said right of way line, when measured at right angles;

thence southeasterly and parallel with said Highway right of way line, a distance of 95 feet and the TRUE POINT OF BEGINNING;

thence South 24°0' West, to a point on the northeasterly right of way line of the Camas Prairie Railroad;

thence northeasterly along said railroad right of way line to a point on a line lying southerly a distance of 45 feet from the north line of said south half of Government Lot 6;

thence easterly along a straight line to the point of beginning.

Together with easements from said Camas Prairie Railroad for pedestrian underpass, pipelines, drainage ditch, underground utility conduit, sanitary sewer, access road overpass, water line, and storm sewer.

**DWORSHAK FISH HATCHERY CONTRACTS**

<b>NAME OF CONTRACT</b>	<b>CONTRACT</b>	<b>CONTRACTOR</b>	<b>FINAL CONTRACT COST</b>
Preparation DM	66-272	Carey & Kramer	\$67,580.00
Fish Trucks	66-297	Logel & Houchin	30,820.00
Design Railroad Overpass	67-106	Northern Pacific Railway	6,300.00
Alter CPRR Facilities	68-07	Northern Pacific Railway	16,288.00
Main Pumps & Motors	68-11	Rogers Machinery Company	50,843.00
Emergency Generator (2) 500 KW	68-17	Holt Brothers	98,061.00
Main Hatchery	68-28	M. Morrin & Sons	8,337,448.50
480 V Power & Control Centers	68-51	Powell Electric	81,249.00
Tractor-Loader-Forklift	68-84	Carroll Adams	4,856.00
Fish Crowders	69-27	Thompson Metal Fab	52,651.00
Forklift	69-30	Hyster	6,273.00
Forklift	69-31	F.E. Bennett	6,435.00
Operators Quarters	69-42	K & K Construction	132,334.00
Automatic Fish Feed System	69-47	Wisner & Becker	661,584.00
Spawning Room Equipment	69-50	R.J. McCarthy Co.	28,785.00
Fish Feeders	69-53	Neilsen Metal Industries, Inc.	18,185.00
Metal Roofs for Rearing Tanks	69-54	Drew Fabricators, Inc.	15,927.00
Oyster Shells	70-59	Pacific Mineral	7,151.00
Water Treatment Study	71-59	Kramer-Chin-Mayo	27,623.00
Modify Batching Equipment	71-126	Wisner & Becker	17,083.00
Mechanical-Electrical Alt. (Garbage Cont)	71-206	W.H. Gregory	252,599.00
Reuse Filter Backwash	72-22	Mottner & McCutchen	49,057.00
Power	72-67	Clearwater Power Company	333,727.00
Process Design for Filter Beds, Review	72-141	Kramer-Chin-Mayo	9,885.00
Filter Unit, Chemical Feed Unit	72-143	Baker Filtration	45,410.00
PH Control Tank	72-149	Welk Brothers	3,390.00
54-Inch Butterfly Valve	72-176	Allis Chalmers	6,650.00
Instrumentation System	72-178	Honeywell	17,588.00
Phase II Hatchery	72-179	Century Construction	3,643,285.00
Piping & Sand Filters	72-205	Warren, Little & Lund	37,575.00
480-V Switchgear for Control Center	72-263	Westinghouse	70,063.00
Programming Change, Feeder	73-43	Wisner & Becker	91,180.00
Ultraviolet Sterlizer	73-50	Aquafine Corp	104,467.00
Water Filtration System	73-85	O & G Construction Co.	98,219.74

HAK FISH HATCHERY CONTRACTS (Con'd)

NAME OF CONTRACT	CONTRACT	CONTRACTOR	FINAL CONTRACT COST
Services	73-109	Dr. A.T. Wallace	4,500.00
Bio-Filter Media, Step 2	73-131	Norton Co.	296,321.00
Fiberglass Holding Tank	73-229	Lynnwood Fiberglass Co.	14,308.00
Test Biofilter Beds	74-21	Dr. A.T. Wallace	8,000.00
Sludge Collection Controller	74-77	Electro-Power Corp.	3,718.00
Steel Floor Grating	74-99	Brodhead Steel Products	4,342.00
TOTAL			\$14,761,762.00

## COOPERATION WITH OTHER AGENCIES

The U.S. Corps of Army Engineers worked with the staff of the Dworshak National Fish Hatchery in many relationships. Spawn taking at Breakfast Creek was assisted by the use of Corps equipment. Stocking of some areas in the Dworshak Reservoir was achieved through the use of Corps barge and tug. Distribution trucks were transported to various parts of the reservoir and stocking accomplished at predetermined points.

The laboratory situated at this station was used by the Corps of Engineers, Idaho Department of Fish and Game, the University of Idaho, and the U.S. Forest Service. Studies of interest to the agencies involved included water quality, limnology, and sedimentation.

The Dworshak National Fish Hatchery cooperated as close as possible with the Idaho Department of Fish and Game. In the management of the Dworshak Reservoir, biologists of the Idaho Department of Fish and Game established what ever management program was in effect. The Dworshak National Fish Hatchery personnel spent every effort to fulfill the requirements as they became apparent.

During the year a running battle occurred between the U.S. Fish and Wildlife Service allied with the U.S. Corps of Army Engineers apposed to the Environmental Protection Agency and the Idaho Department of Water Resources concerning the requirements of the discharge permit to be issued for Dworshak National Fish Hatchery. The contention revolves around the capricious decision by E.P.A. to require much more rigid standards for this installation than those in effect or proposed for the industry as a whole. At the end of the fiscal year the controversy had not been resolved. The increased discharge requirements would increase the cost of construction of this type of hatchery to a prohibitive level. If a precedent is established there is a possibility that all future reuse hatcheries would have to be engineered to meet the increased requirements at much elevated construction costs.

## FISH CULTURAL OPERATIONS

Fish culture, at Dworshak, is a very diversified operation. Dolly Varden were reared at this station this year, with reasonable success. Idaho Fish and Game Department held some bass and bullheads in the Dworshak holding ponds while they poisoned a farm pond. Chinook were hauled from Kooskia NFH and held in the cooler water at Dworshak until spawning.

The Dworshak computer system was used to count the votes for Clearwater County in the November General Election.

### Steelhead

The steelhead rearing program was very hectic. It seemed as if the fish were continually plagued with problems, such as dusty feed, high nitrite levels, diet deficiencies, etc. In September they were started on Oregon Moist Pellets, which helped them to withstand the problems.

In January, the Idaho Fish and Game Department requested that the fish be graded. There were 160,000 graded out at 38 per pound. As of June 30, there were 76,000 remaining. The mortality was due to fungus.

The smolts were planted in late April and immediately moved downstream.

The return of adults for Brood Year 1975 was dissappointing. There were only slightly over 5½ million eggs taken. Spawning began in early March and continued until June. All females were spawned with air and then cut open for the remaining eggs. The carcasses were given to the Idaho Fish and Game Department to be used for bait in their bear studies.

### Rainbow

Rainbow spawning of Dworshak brood stock began in September and continued until January. Due to the poor quality and high cost of the eggs, the program of keeping rainbow brood stock was discontinued. Future requirements for rainbows will be met with eggs from other sources.

A put-and-take fishery was begun in February. Weekly plants of catchable rainbows were made until June. The rainbow fry and fingerling plants were accomplished in June, by barge.

### Kokanee

There was a small run of kokanee into the hatchery from the North Fork Clearwater. A trap was built on Breakfast Creek, a tributary to the Dworshak Reservoir. The trap was installed in August and operated until October 15. In January, 2,500,000 late spawning kokanee eggs were received from Colorado Fish and Game and 1,500,000 from Washington Department of Game. The fish resulting from all

sources were planted into Dworshak Reservoir, except 200,000 held for release September, 1975.

#### Cutthroat

Cutthroat spawning from Dworshak brood stock yielded 114,962 green eggs, of which 14,945 eyed-up. Washington Department of Game has advised that their source is not infallible and the Dworshak brood stock program should not be discontinued.

#### Feed System

The feed system worked better this year than in previous years. The pneumatic blowers were slowed down to lessen degradation of dry pellets. Oregon Moist Pellets work acceptably if the hoppers are filled daily with that day's food supply. There is some plugging of the tubes above the blowers, but it is hoped this can be remedied by teflon coating the tubes.

## HATCHERY BIOLOGIST ACTIVITIES

### Diagnostic Services

The hatchery biologist's staff is responsible for disease diagnosis, annual inspections and fish health at five federal hatcheries: Dworshak, Kooskia, Hagerman, Coleman, Lahontan and the Tehama-Colusa spawning channel. Assistance is also provided to other federal hatcheries, the Idaho Fish and Game Department and commercial hatcheries when requested.

### Hatchery Classification

Three wild brood stocks were examined prior to shipment of eggs to federal hatcheries. Kokanee brood stock from Dworshak Reservoir in Northern Idaho, cutthroat brood stock from Kings Lake in Washington and the Summit Lake cutthroat in Nevada were found to be disease-free.

Small mouth bass scheduled for planting in the Dworshak Reservoir by the Idaho Fish and Game Department were examined and found free of disease.

Classifications for the federal hatcheries are as follows:

<u>Hatchery</u>	<u>Classification</u>	<u>Date Inspected</u>
Dworshak	B-BR(BK-SC)	3-4-75
Kooskia	B-BK(SC)	2-75
Hagerman	B-(BK)	3-4-75
Lahontan	B-(BK)	3-1-75
Coleman	B-VH-BF(BK)	3-1-75
Tehama-Colusa	C	2-75

### Adult Steelhead Evaluation

The 1975 steelhead spawning season totaled 1,560 handled at the hatchery. Bone, scale and otolith samples were taken from 266 marked fish and 284 unmarked fish. Nose samples were taken from over 75% of the adults to be checked by National Marine Service personnel for wire tags.

Of the 1560 fish handled 33% were below 28 inches. The majority of fish returning would be two and three year olds.

In January of 1975 approximately 200,000 smolts were adipose fin clipped and marked with magnetic wire coded nose tags. Three groups of fish fed different diets were marked. Diets fed were Oregon Moist Pellet, Silver Cup diet and Abernathy diet. Returns will be evaluated.

Mass-marking of kokanee and rainbow trout was tried using a fluorescent pigment applied by air pressure gun. This will be a short term study for evaluating the dynamics and distribution of fish populations above the Dworshak Dam.

Otoliths were taken from the 1975 returns for the purpose of aging fish. An evaluation will be attempted in hopes that a more precise

method of aging steelhead can be found.

Fish Cultural Management

During the 1974-75 steelhead production season it was found that Ichthyophthirius was not a problem until the fish were stressed by other conditions. A high percentage of dust in the diet weakened the fish and mortalities occurred after bacterial gill disease and "Ich" had further stressed the fish. The Oregon Moist Pellet and hand feeding helped to alleviate the stress condition.

Montana hatching boxes were tried at Dworshak this year and no significant difference in percent hatch or incidence of white spot was apparent.

The acclimation of smolts to raw river water prior to release was extended and appeared to be beneficial to smolt movement and condition.

Several tests were made this season to evaluate the incidence of white spot disease. Green eggs were transported to three other water sources; flow rates were varied; fungus treatments and levels were varied. To date no significant differences could be observed.

Heavy metal testing of Dworshak hatchery water supplies and fish tissue was performed. The data are not complete at this time.

Environment

Monitoring of all system water and effluents was conducted all year at Dworshak and Kooskia. Considerable time has been spent at each station on EPA monitoring.

Reuse Systems

Problems associated with reuse systems are apparent. A reuse seminar was held at Dworshak in June of 1975. Standardization of analyses for monitoring water quality parameters, a better understanding of how the systems work and an in-depth study of each station's water quality and fish species will be accomplished this year.

Cooperation With Other Agencies

A close working relationship with State, University and other federal agencies has been continued this past year. Joint studies and exchange of information will result in benefits to all concerned.

## SAFETY

Twenty formal staff safety meetings and safety committee meetings were held during the past year. In addition to formal organized meetings many informal sessions were held with individuals and small groups of the crew. As new employees arrived, they were given safety orientation.

Some aspects of safety discussed during the year were; "Effects of Alcohol on Driving Ability"; State of Idaho "Alcohol Rehabilitation Program"; Idaho State Police "Driving Safety Program"; use of station fire equipment; ultra-violet light and it's hazards; operation of Cushman electric vehicles.

Twelve DI-134's were filed during the year. Most accidents were caused by lifting strains. Others involved ultra-violet light eye damage, slipping in ponds, poke in eye, shoulder strain, back strain, and ankle strain.

The safety committee has held numerous on-the-spot discussions with employees about their accidents. The members of the safety committee have made efforts to seek out accident suspect areas and bring those areas to the attention of the crew.

Four unscheduled fire drills were held this year.

There have been 180 man days of lost time accident free operation through June 30, 1975.

The entire crew has been supplied with steel-toed protective boots. Special safety shields have been obtained for use when working with ultra-violet light. Leather palmed work gloves have been obtained for the use of the crew members. Safety shields and glasses are for the crew when grinding or chipping operations are undertaken. Ear muffs are stationed throughout the project for use in areas of high noise levels. Face masks are available when handling dangerous chemicals. Hard hats are available for the entire crew.

## MAINTENANCE AND REPAIR

Preventive maintenance and repairs accounted for most maintenance cost during the year. Charges to maintenance cost codes, with a few exceptions, were for personnel costs and for acquisition of materials and equipment necessary in conducting the maintenance program.

Breakdown repair work included major overhaul of 5 system aerators, replacement of one tank truck engine, and replacement of chain drives on System II and III sludge scrapers.

The Corps of Engineers has purchased new aerators which will be delivered and installed in October 1975.

Sludge scrapers in System II and III filter beds are showing excessive wear on sprockets and chain links. The manufacturer has been contacted about the problem and a representative from Link Belt will inspect the installation sometime in the next few months.

A contract was let by CGS in the amount of \$15,144.00 for replacement of bearings and gaskets in the Chrysler Air-temp Water Chillers. This work was accomplished before the 1975 cooling season started.

During the year we experienced many problems with the Coats Electrode Boilers. A conference involving the Corps of Engineers, manufacturers representatives and staff personnel concluded that dissolved iron was causing all the problems. On recommendation of the Coats' representative, we purchased \$1,060.50 of filtering equipment but did not solve the problem. Subsequent investigation by staff disclosed that circulating pumps were not performing as designed and, after readjustment, the boilers operated the last two months of the heating season without problems.

The four resident houses on the project were repainted at a total cost of \$1,730.60.

All hatchery access door key locks were changed to a non-reproducible key.

Two additional electrical utility vehicles were purchased at a cost of \$4,607.70. The two gas cushion, three wheel scooters were returned to the Corps of Engineers.

The Corps of Engineers purchased and the hatchery personnel installed an automatic sludge wasting system on System II and III filter beds.

One hundred and five system alarms occurred during off duty hours, all of which indicated problems which standby personnel corrected.

# BROODSTOCK AND SPAWNING OPERATIONS

(See Fishery Manual Section 4438a for Instructions)

No.	ITEM	ANADROMOUS OR WILD TROUT - Indicate Species			DOMESTICATED TROUT - Indicate Species		
		KOE-5-D-550	1974	STT-5-D-51X	CUT-5-D-561	RBT-5-D-570	
1.	NUMBER OF FEMALES STRIPPED	911		815	94	230	
2.	TOTAL WEIGHT OF FEMALES				84	632	
3.	NUMBER OF MALES STRIPPED	1,000		745	112	275	
4.	TOTAL WEIGHT OF MALES				100	755	
5.	NUMBER OF GREEN EGGS TAKEN	366,716		5,488,188	114,962	489,144	
6.	EGGS TAKEN PER POUND OF FEMALES				1,366	774	
7.	EGGS TAKEN PER FEMALE	403	6,255	6,825	1,223	2,128	
8.	NUMBER OF EYED EGGS PRODUCED	312,466	14,558,080	4,264,421	14,945	237,316	
9.	EGG SURVIVAL: PERCENT TO EYED STAGE	85 %	75 %	78 %	13 %	49 %	%
	PERCENT TO HATCHING	68 %	63 %	74 %	12 %	38 %	%
	PERCENT TO FEEDING	36 %	54 %	72 %	10 %	28 %	%
10.	LABOR COST	11,938.24		6,813.52	735.46	596.18	
11.	NON-LABOR COST	5,868.17		1,541.20	693.70	1,422.50	
12.	TOTAL COST	17,806.41		8,354.72	1,429.19	2,018.68	
13.	CREDIT CURRENT YEAR WEIGHT GAIN OF LOT ( lbs. @ \$ )						
14.	ADJUSTED TOTAL COST (Item 12 minus Item 13)						
15.	DEBIT CURRENT YEAR WEIGHT LOSS OF LOT ( lbs. @ \$ )						
16.	ADJUSTED TOTAL COST (Item 12 plus Item 15)						
17.	COST PER THOUSAND EYED EGGS	57.35		1.96	95.63	8.52	

**DISTRIBUTION DATA AND COSTS**

(See Fish Hatchery Manual Section 4438b for Instructions)

**PART 1 - COSTS**

SPECIES	DISTRIBUTION COSTS			FISH DISTRIBUTED		AVERAGE COSTS (6)
	Labor (1)	Non-Labor (2)	Total (3)	Pounds (4)	Number (5)	
PONDFISH		149	149		100,253	Per M. 1.49
TROUT	3,376	3,276	6,652	83,327	3,947,449	Per lb. .08
ANADROMOUS	7,029	2,827	9,856	291,668	1,761,878	Per lb. .03
TOTALS	10,405	6,252	16,657	374,995	5,809,580	

**PART 2 - DISTRIBUTIONS**

SPECIES	TRANSFERS TO OTHER NFH's		TRANSFERS TO STATES		OTHER DISTRIBUTION	
	Pounds (1)	Number (2)	Pounds (3)	Number (4)	Pounds (5)	Number (6)
PONDFISH						100,253
TROUT					83,327	3,947,449
ANADROMOUS					291,668	1,761,878
TOTALS					374,995	5,809,580

**\* PART 3 - TRIP DATA**

SPECIES	NUMBER OF TRIPS			POUNDS PER TRIP			NUMBER PER TRIP		
	Transfers (1)	Other (2)	Total (3)	Transfers (4)	Other (5)	Total (6)	Transfers (7)	Other (8)	Total (9)
PONDFISH		1	1		80	80		253	253
TROUT		58	58		1,462	1,462		39,887	39,887
ANADROMOUS									
TOTALS		59	59						
AVERAGE					1,439	1,439		39,216	39,216

**PART 4 - MILEAGE AND SPECIES DELIVERIES**

ITEM	PONDFISH	TROUT	ANADROMOUS	TOTAL
MILES TRAVELED	100	1,065		1,165
AVERAGE NUMBER OF MILES PER TRIP				20
NUMBER APPLICATIONS (species delivered) THIS YEAR	1	4	1	6
NUMBER FARM POND DELIVERIES				
NUMBER INDIVIDUAL FARM PONDS INVOLVED				

PONDFISH DISTRIBUTED, 6" and larger: \_\_\_\_\_ POUNDS \_\_\_\_\_ NUMBER



Bureau of Sport Fisheries and Wildlife

**SALMONIDAE PRODUCTION**

(Fish and Eggs)

\*See Fish Hatchery Manual Section 4438c for Instructions)

(1) Species	(2) ON HAND JULY 1		(3) Received During Year		(4) Total Distribution		(5) ON HAND JUNE 30		(6) Total Production in Pounds
	Number	Weight	Number	Weight	Number	Weight	Number	Weight	
Cutthroats									
0-C-S-6X	2,500	420					500	420	0
4-UWA-461			51,200	64	44,680	804	6,270	214	954
SUB TOTAL	2,500	420	51,200	64	44,680	804	6,770	634	954
Dolly Varden			615,296	99	122,777	107			8
SUB TOTAL			615,296	99	122,777	107			8
Kokanee									
5-D-550			332,438	85	74,120	436			351
5-UCO-X 515			2,496,000	453	1,808,497	1,581	124,200	225	1,353
5-UWA-X 505			1,581,000	296	1,015,800	351	73,000	102	157
SUB TOTAL			4,409,438	834	2,898,417	2,368	197,200	327	1,861
Rainbow									
0-E-F-10X	2,700	8,100			1,061	2,915			-5,189
4-E-X-472			556,399	37	123,518	44,533	36,000	16,800	61,296
Y-419			150,688	34	60,425	21,692			21,658
CF-491			246,500	56	23,695	7,803			7,747
5-D-X 570			237,316	46	96,020	2,567			2,521
5-E-X 517			1,636,149	200			195,000	1,853	1,653
5-YWA-X 518			1,225,000	272	577,506	595			323
SUB TOTAL	2,700	8,100	4,052,052	645	882,225	80,105	231,000	18,653	90,013
Steelhead									
SUB TOTAL			14,558,080	5,870	1,763,878	291,676	76,000	5,700	291,506
TOTALS	5,200	8,520	23,686,066	7,512	5,711,977	375,060	510,970	25,314	384,342

## ANADROMOUS DISTRIBUTION

Species

Steelhead Trout

Source (parent waters)

North Fork of Clearwater River

(See Fish Hatchery Manual Section 4438d for Instructions)

BROOD YEAR	NUMBER OF EGGS		EGGS AND FISH SHIPPED to another Hatchery			FISH PLANTED				
	Collected	Received	Number	Number per pound	Weight	Date Mo./Yr.	Number	Number per pound	Weight	Waters
1969	11,472,500	--	1,200,000		eggs	7/69	1,583,066	2,500	633	North Fork, Clearwater River
						4/70	1,248,227	7.10	175,766	
						5/70	123,316	9.15	13,472	
						4/71	1,341,366	5.63	238,209	
1970	11,627,946	--	2,795,500	--	eggs	4/71	1,802,205	10.19	176,837	UMFS, Little Coose University of Idaho UMFS, Columbia River Clearwater River Station UMFS, Columbia River
						10/71	1,500	7.5	200	
						10/71	50	7.5	7	
						4/72	17,669	5.7	3,117	
						4/72	943,659	5.8	162,319	
						5/72	15,226	4.9	3,088	
1971	6,448,600	--	401,159	--	eggs	7/72	480	46	10	University of Idaho University of Idaho UMFS, Little Coose Willard Nutrition Lab. North Fork, Clearwater River
						9/72	200	25	8	
						10/72	500	20	25	
						1/73	6,000	20	300	
						4/73	1,270,197	14.2	89,373	
1972	5,244,698	--	10,000		eggs	8/72	15,000	2,500	6	University of Idaho N-Fork Clearwater " S-Fork Clearwater " S-Fork Clearwater University of Idaho Lolo Creek N-Fork Clearwater University of Idaho N-Fork Clearwater Oregon Game Commission U.M.F.S. Lolo Creek Clearwater River
						3/73	77,903	13.0	6,077	
						4/73	1,280,619	15.0	85,162	
						4/73	841,377	54.7	15,383	
						6/73	200,800	62.0	3,240	
1973	26,561,861	--	12,951,000		eggs	6/73	748,300	2,144	349	S-Fork Clearwater University of Idaho Lolo Creek N-Fork Clearwater University of Idaho N-Fork Clearwater Oregon Game Commission U.M.F.S. Lolo Creek Clearwater River
						10/73	1,800	225	8	
						12/73	230,335	76	3,012	
						3/74	492,827	9.7	50,627	
						2/74	2,781	9.3	300	
						4/74	2,907,031	8.1	357,378	
						4/74	400	8.5	47	
						5/74	287,539	10.2	28,329	
						5/74	101,975	11.1	12,504	
						5/74	72,318	8.6	7,866	

## ANADROMOUS DISTRIBUTION

Species

Steelhead Trout

Source (parent waters)

North Fork Clearwater River

(See Fish Hatchery Manual Section 4438d for Instructions)

BROOD YEAR	NUMBER OF EGGS		EGGS AND FISH SHIPPED to another Hatchery			FISH PLANTED				
	Collected	Received	Number	Number per pound	Weight	Date Mo./Yr.	Number	Number per pound	Weight	Waters
1974	26,047,748		2,000	eggs	1	7/74	1,000	500	2	University of Idaho
			5,342,000	eggs	2058	9/74	1,000	167	6	University of Idaho
			1,350,000	eggs	551	3/75	31,565	5.10	6,189	Clearwater River
			550,000	eggs	225	4/75	544,008	5.91	92,126	Clearwater River
			210,000	eggs	86	4/75	1,186,305	6.14	193,353	North Fork Clearwater River
			300,000	fry	123					
1975	5,561,988		*73,800	eggs						

\* Transferred to Hatchery Biologist for research uses.

## FISH FOOD

SPECIES

 Trout Anadromous Salmon Other

(See Fish Hatchery Manual Section 4438f for Instructions)

ITEM	POUNDS		TOTAL COST or VALUE
	(a)	(b)	(b)
1. FISH FOOD ON HAND JULY 1		15,623	2,890.65
2. FISH FOOD RECEIVED BY DONATION			
3. FISH FOOD RECEIVED BY TRANSFER			
4. SUB-TOTAL RECEIVED AND ON HAND		15,623	2,890.65
5. LIST TYPE PURCHASED DURING YEAR	Cost Per Pound		
Chinook Mash	.3506	400	140.24
Silver Cup	.2180	85,000	18,530.00
PR-9	.1676	37,000	6,201.20
OMP	.2335	95,592	22,320.73
6. SUB-TOTAL PURCHASED	Average: .2165	217,992	47,192.17
7. TOTAL RECEIVED AND PURCHASED (Item 4 + 6)		233,615	50,082.82
8. LESS FISH FOOD TRANSFERRED TO OTHER HATCHERIES			
9. LESS FISH FOOD ON HAND JUNE 30		97,100	26,032.85
10. TOTAL FISH FOOD EXPENDED		136,515	24,049.97
11. COST PER POUND OF FISH FOOD EXPENDED (Line 10, col. (b) $\div$ col. (a))			.1762
12. GAIN IN WEIGHT OF FEEDING FISH PRODUCED DURING YEAR			98,224
13. FOOD CONVERSION (Line 10, col. (a) $\div$ line 12)			1.3898
14. FOOD COST PER POUND OF FISH PRODUCED (Line 10, col. (b) $\div$ line 12)			.2448

GIVE DETAILS ON REVERSE SIDE FOR ENTRIES ON LINES 2, 3, and 8

## FISH FOOD

SPECIES

 Trout Anadromous Salmon Other

Fish Hatchery Manual Section 4438f for Instructions)

2	ITEM	POUNDS		TOTAL COST
		(a)	(b)	or VALUE
1.	FISH FOOD ON HAND JULY 1		296,837	54,923.03
2.	FISH FOOD RECEIVED BY DONATION			
3.	FISH FOOD RECEIVED BY TRANSFER			
4.	SUB-TOTAL RECEIVED AND ON HAND		296,837	54,923.03
5.	LIST TYPE PURCHASED DURING YEAR	Cost Per Pound		
	Chinook Mash	.3506	600	210.36
	Silver Cup	.2191	19,500	4,272.75
	Abernathy	.1875	53,150	9,964.48
	PR	.1676	73,700	12,349.89
	OMP	.2430	209,000	50,787.00
	OMP	.2335	224,258	52,364.25
6.	SUB-TOTAL PURCHASED	Average: .2240	580,208	129,948.73
7.	TOTAL RECEIVED AND PURCHASED (Item 4 + 6)		877,045	184,871.76
8.	LESS FISH FOOD TRANSFERRED TO OTHER HATCHERIES		170,882	28,355.53
9.	LESS FISH FOOD ON HAND JUNE 30		121,420	21,238.39
10.	TOTAL FISH FOOD EXPENDED		584,743	135,277.84
11.	COST PER POUND OF FISH FOOD EXPENDED (Line 10, col. (b) $\div$ col. (a))			.2313
12.	GAIN IN WEIGHT OF FEEDING FISH PRODUCED DURING YEAR			293,238
13.	FOOD CONVERSION (Line 10, col. (a) $\div$ line 12)			1.9941
	FOOD COST PER POUND OF FISH PRODUCED (Line 10, col. (b) $\div$ line 12)			.4613
14.	GIVE DETAILS ON REVERSE SIDE FOR ENTRIES ON LINES 2, 3, and 8			

**FOOD TRANSFERRED**

September 1974 transferred	101,000 lbs.	\$19,316.28
June 1975 Bad Food = Waste	69,882 lbs.	9,039.25

**Feed Transferred September 1974.**

**Coleman NFH**

15,000 lbs. - #3 PR  
15,000 lbs. - #4 PR

**Hagerman NFH**

1,000 lbs. - #1 - SD5-25  
3,000 lbs. - #2  
6,000 lbs. - #3 PR  
25,000 lbs. - #4 PR

**Winthrop NFH**

17,000 - #2  
9,000 - #3 PR  
10,000 - #4 PR



OPERATIONS COST SUMMARY

(See Fish Hatchery Manual Section 4438) for instructions.)

	ITEM	Cost Code	LABOR EXPENDITURES *				NON-LABOR EXPENDITURES *				Total Expenditures (i)
			Warmwater (a)	Trout (b)	Anadromous (c)	Total (d)	Warmwater (e)	Trout (f)	Anadromous (g)	Total (h)	
1	Broodstock and spawning	01 06		13,270	6,814	20,084		8,580	8,380	16,960	37,044
2	Rearing	07 12		16,711	102,540	119,251	273	79,311	218,405	297,989	417,240
3	Distribution	13 18		3,376	7,029	10,405	149	3,276	2,827	6,252	16,657
4	PRODUCTION Sub-total			33,357	116,383	149,740	422	91,167	229,612	321,201	470,941
5	Fish production facilities	21 22				82,638				104,468	187,106
6	Buildings	23 24				27,165				15,493	42,658
7	Other physical facilities	25 26				25,615				42,900	68,515
8	MAINTENANCE Sub-total					135,418				162,861	298,279
9	Public use	27 28				11,199					11,199
10	Training	31 32				1,943				262	2,205
11	Opr. fish passage facilities	41 42				2,699					2,699
12	OPERATIONS & MAINTENANCE TOTAL					300,999				484,324	785,323
13	Fish production facilities	51 52									
14	Buildings	53 54									
15	Other physical facilities	55 56									
16	Public use facilities	57 58									
17	REHABILITATION TOTAL										
18	GRAND TOTALS					300,999				484,324	785,323
19	O & M Expenditures - Percent for Fish Production		Column (d): Line 4 + Line 12			.50	Column (i): Line 4 + Line 12			.60	
20	TOTAL EXPENDITURES - Percent for Fish Production		Column (d): Line 4 + Line 18			.50	Column (i): Line 4 + Line 18			.60	

## Bureau of Sport Fisheries and Wildlife

## PRODUCTION COSTS

Fish Hatchery Manual Section 4438k for Instructions)

## PART 1 - PRODUCTION and EXPENDITURES

No.	ITEM	PONDFISH	TROUT	ANADROMOUS	TOTAL
1	Number Produced				
2	Pounds Produced		92,836	291,506	384,342
3	Labor Expenditures		33,357	116,383	149,740
4	Non-Labor Expenditures	422	91,167	229,612	321,201
5	TOTAL EXPENDITURES	422	124,524	345,995	470,941

## PART 2 - ANALYSIS OF PRODUCTION COST

ITEM	COST	PERCENTAGE
<b>PONDFISH</b>		
PRODUCTION COST PER POUND		
LABOR COST PER POUND		
LABOR COST PERCENT OF PRODUCTION COST		
PRODUCTION COST PER THOUSAND FISH	.000004	
LABOR COST PER THOUSAND FISH		
<b>TROUT</b>		
PRODUCTION COST PER POUND	1.34	
LABOR COST PER POUND	.36	
LABOR COST PERCENT OF PRODUCTION COST		.27
<b>ANADROMOUS</b>		
PRODUCTION COST PER POUND	1.19	
LABOR COST PER POUND	.40	
LABOR COST PERCENT OF PRODUCTION COST		.34
<b>AVERAGE PRODUCTION COST PER POUND OF ALL FISH PRODUCED</b>	1.23	

**REARING FACILITIES AND WATER SUPPLY**

(See Fish Hatchery Manual Section 4438m for Instructions)

**PART 1 REARING FACILITIES**

TYPES OF FACILITIES IN USE	NUMBER IN USE	CAPACITY (Calculated at normal water level)	MONTHS IN USE	TOTAL (Months x Cu.Ft.)
TROUGHS	10	110 Cu.Ft.	4	440
TANKS	64	6,114 Cu.Ft.	9	55,296
RACEWAYS	84	214,200 Cu.Ft.	8	1,713,600
OTHER POOLS AND PONDS - Concrete		Cu.Ft.		
OTHER POOLS AND PONDS - Earthen		Cu.Ft.		
<b>TOTAL . . . . .</b>				<b>1,769,336</b>
<b>TOTAL CUBIC FEET IN USE ON YEARLY BASIS (Divide Total by 12) . . . . .</b>				<b>147,445</b>

**PART 2 - WATER SUPPLY**

2. SOURCE OF SUPPLY	Check appropriate source for each supply				OTHER (Explain on reverse)
	SPRING	WELL	LAKE	STREAM	
Supply No. 1				X	
Supply No. 2					
Supply No. 3					

3. AVERAGE VOLUME OF WATER - g.p.m. (Give total flow in parenthesis, if not all used)	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	ANNUAL AVERAGE
Supply No. 1	24,000	50,200	41,200	21,300	34,200
Supply No. 2					
Supply No. 3					

4. AVERAGE WATER TEMPERATURE - F°	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	ANNUAL AVERAGE
<del>Supply No. 1</del> River	57.5	47.4	41.4	42.9	47.3
<del>Supply No. 2</del> Incubator	50.8	48.8	45.6	44.4	47.4
<del>Supply No. 3</del> System I	54.9	52.6	49.8	47.2	51.1
<del>Supply No. 4</del> System II	54.3	58.0	52.4	49.8	53.6
<del>Supply No. 5</del> System III	57.0	58.4	54.7	52.9	55.8

5. TOTAL POUNDS OF TROUT OR ANADROMOUS SPECIES PRODUCED: 384,342

6. TOTAL POUNDS OF TROUT OR ANADROMOUS SPECIES PRODUCED per g.p.m. AVERAGE FLOW USED: 11.3

7. TOTAL POUNDS OF TROUT OR ANADROMOUS SPECIES PRODUCED per Cu. Ft. (annual) FLOW: 2.61

8. IS ANY WATER PUMPED FOR FISH PRODUCTION? YES  NO  HEATED? YES  NO   
 (If YES in either case, give details as to flow involved, estimated cost, etc. on reverse.)

Estimated cost involved to pump, cool, and heat water:

Electrical for pumping, cooling and heating	=	\$27,036.00
#5 fuel oil for heating	=	<u>26,599.12</u>
Total		\$53,635.12

## Bureau of Sport Fisheries and Wildlife

## SUMMARY OF LABOR EXPENDED AND UTILIZATION

(See Fish Hatchery Manual Section 4438n for Instructions)

## PART 1 - STATION LABOR ANALYSIS

No.	ITEM	Man-Years of Labor
1	PERMANENT PERSONNEL	17.47
2	ALL OTHER LABOR	6.36
3	OVERTIME FOR WORK PERFORMED AT STATION BY ABOVE EMPLOYEES	.17
4	DETAIL OF PERSONNEL TO STATION	
5	OVERTIME OF DETAILED PERSONNEL AT STATION	
6	TOTAL LABOR - ALL PERSONNEL	24.0

## PART 2 - LABOR UTILIZATION

No.	ITEM	Permanent	Other
7	PRODUCTION	8.28	2.75
	PONDFISH (Cost Codes 01, 07)		
	TROUT (Cost Codes 03, 09)		
	SALMON (Cost Codes 05, 11)		
8	DISTRIBUTION (Cost Codes 13, 15, 17)	.82	
9	MAINTENANCE		
	MAINTENANCE (Cost Codes 21, 23, 25)	7.91	2.85
	REHABILITATION (Cost Codes 51, 53, 55, 57)		
10	PUBLIC USE (Cost Code 27)	.63	.76
11	TRAINING (Cost Code 31)		
12	SUB TOTAL	17.64	6.36
13	TOTAL PERMANENT AND OTHER (Equals Item 6)		24.0

Bureau of Sport, Fisheries and Wildlife  
**REPORT OF PERMANENT PERSONNEL**

(See Fish Hatchery Manual Section 4438a for Instructions)

**PART 1 - STATION PERSONNEL**

NAME OF EMPLOYEE	Age	Grade	Marital Status	Children Under 18	Period Worked	COMPENSATION PAID			Total Compensation
						Total Regular Salary	Uniform Allowance	Paid Overtime	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ANKNEY, WILLIAM G.	41	06	S	2	7/1/74-9/6/74	2,268.00		.75	2,268.75
BILLI, JAMES L.	36	11	M	2	7/1/74-6/30/75	17,023.00	125.00		17,148.00
BRAINARD, LILA N.	57	06	M	0	7/1/74-6/13/75	10,007.00	125.00		10,132.00
CARLSON, DWAIN A.	40	06	M	5	7/1/74-6/30/75	11,291.96	125.00	143.63	11,560.59
ESPINOSA, SUSAN D.	26	05	M	1	7/1/74-6/30/75	8,228.64	125.00		8,353.64
GRIFFITH, JIMMY R.	30	05	M	3	9/23/74-6/30/75	7,665.60	125.00	516.48	8,307.08
HARRIS, WALTER G.	41	09	M	3	7/1/74-6/30/75	16,716.24	125.00		16,841.24
<b>1. TOTAL - STATION PERSONNEL</b>									

**PART 2 - PERSONNEL DETAILED TO STATION**

NAME OF EMPLOYEE	From Station	Period of Detail	COMPENSATION PAID			Total Compensation
			Regular Salary Costs	Per Diem and Expenses	Paid Overtime	
	(1)	(2)	(3)	(4)	(5)	(6)
<b>2. TOTAL - DETAILED TO STATION</b>						
<b>3. TOTAL COMPENSATION PAID TO PERMANENT PERSONNEL ON DUTY AT STATION</b>						

WILLIAM G. ANKNEY -- Transferred to Division of Fish Hatcheries, Eagle Creek National Fish Hatchery, Estacada, Oregon on September 6, 1974.

LITA N. BRAINARD -- Resignation effective June 13, 1975.

JIMMY R. GRIFFITH -- Re-instatement effective September 23, 1974.

NAME	POSITION	STATUS	DATE	REMARKS
WILLIAM G. ANKNEY	Division of Fish Hatcheries	Transferred	September 6, 1974	Transferred to Division of Fish Hatcheries, Eagle Creek National Fish Hatchery, Estacada, Oregon
LITA N. BRAINARD		Resignation	June 13, 1975	Resignation effective June 13, 1975
JIMMY R. GRIFFITH		Re-instatement	September 23, 1974	Re-instatement effective September 23, 1974

507 ACF 04128

Bureau of Fisheries and Wildlife  
**REPORT OF PERMANENT PERSONNEL**

(See Fish Hatchery Manual Section 4438o for Instructions)

**PART 1 - STATION PERSONNEL**

NAME OF EMPLOYEE	Age	Grade	Marital Status	Children Under 18	Period Worked	COMPENSATION PAID			Total Compensation
						Total Regular Salary	Uniform Allowance	Paid Overtime	
						(6)	(7)	(8)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
HAYES, CHARLES H.	38	06	S	0	7/1/74-6/30/75	9,972.55	125.00	265.34	10,362.89
HEATHCO, MERLE S.	51	06	M	0	7/1/74-6/30/75	11,826.16	125.00	1,133.77	13,084.93
LIENTZ, JOSEPH C.	36	11	M	2	7/1/74-6/30/75	15,469.52	125.00		15,594.52
MOFFETT, CLARENCE P.	43	WG 05	S	0	7/1/74-6/30/75	10,130.15	125.00	17.06	10,272.21
PARVIN, JOHN R.	61	13	M	0	7/1/74-6/30/75	25,371.92	125.00		25,496.92
REYNOLDS, LAVERNE W.	40	05	S	0	7/1/74-6/30/75	9,313.74	125.00	183.74	9,622.48
SANDERS, BOYCE O.	59	09	M	0	7/1/74-6/30/75	15,422.88	125.00		15,547.88
<b>1. TOTAL - STATION PERSONNEL</b>									

**PART 2 - PERSONNEL DETAILED TO STATION**

NAME OF EMPLOYEE	From Station	Period of Detail	COMPENSATION PAID			Total Compensation
			Regular Salary Costs	Per Diem and Expenses	Paid Overtime	
			(3)	(4)	(5)	
(1)	(2)	(3)	(4)	(5)	(6)	
<b>2. TOTAL - DETAILED TO STATION</b>						
<b>3. TOTAL COMPENSATION PAID TO PERMANENT PERSONNEL ON DUTY AT STATION</b>						

EMPLOYMENT HISTORY

CLARENCE P. MORETTI --- Full time appointment effective June 9, 1974.

Agency	Position	Grade	Start Date	End Date	Remarks
U.S. DEPT. OF JUSTICE	ASSISTANT ATTORNEY GENERAL	GS-15	06/09/74		
U.S. DEPT. OF JUSTICE	ASSISTANT ATTORNEY GENERAL	GS-15	06/09/74		
U.S. DEPT. OF JUSTICE	ASSISTANT ATTORNEY GENERAL	GS-15	06/09/74		
U.S. DEPT. OF JUSTICE	ASSISTANT ATTORNEY GENERAL	GS-15	06/09/74		
U.S. DEPT. OF JUSTICE	ASSISTANT ATTORNEY GENERAL	GS-15	06/09/74		
U.S. DEPT. OF JUSTICE	ASSISTANT ATTORNEY GENERAL	GS-15	06/09/74		
U.S. DEPT. OF JUSTICE	ASSISTANT ATTORNEY GENERAL	GS-15	06/09/74		
U.S. DEPT. OF JUSTICE	ASSISTANT ATTORNEY GENERAL	GS-15	06/09/74		
U.S. DEPT. OF JUSTICE	ASSISTANT ATTORNEY GENERAL	GS-15	06/09/74		
U.S. DEPT. OF JUSTICE	ASSISTANT ATTORNEY GENERAL	GS-15	06/09/74		

U.S. DEPARTMENT OF JUSTICE

WASHINGTON, D.C. 20530

DATE: 06/09/74

BY: [Signature]

Bureau of Fisheries and Wildlife  
**REPORT OF PERMANENT PERSONNEL**

(See Fish Hatchery Manual Section 4438o for Instructions)

**PART 1 - STATION PERSONNEL**

NAME OF EMPLOYEE	Age	Grade	Marital Status	Children Under 18	Period Worked	COMPENSATION PAID			Total Compensation
						Total Regular Salary	Uniform Allowance	Paid Overtime	
						(6)	(7)	(8)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
SIMONSEN, ROLF W.	53	07	M	0	7/1/74-6/30/75	12,982.32	125.00		13,107.32
TAGGART, THOMAS M.	41	06	M	0	7/1/74-6/30/75	11,008.88	125.00	334.04	11,467.92
THORNTON, WARREN L.	46	WG 12	M	0	7/1/74-6/30/75	14,000.08	125.00	224.28	14,349.36
WILLIAMS, GEORGE L.	46	11	M	3	7/1/74-6/30/75	17,757.84	125.00		17,882.84
WURTH, RICHARD L.	42	WG 10	M	2	7/1/74-6/30/75	13,385.36	125.00	17.80	13,528.16
<b>1. TOTAL - STATION PERSONNEL</b>									

**PART 2 - PERSONNEL DETAILED TO STATION**

NAME OF EMPLOYEE	From Station	Period of Detail	COMPENSATION PAID			Total Compensation
			Regular Salary Costs	Per Diem and Expenses	Paid Overtime	
			(3)	(4)	(5)	
(1)	(2)	(3)	(4)	(5)	(6)	
<b>2. TOTAL - DETAILED TO STATION</b>						
<b>3. TOTAL COMPENSATION PAID TO PERMANENT PERSONNEL ON DUTY AT STATION</b>						<b>244,928.73</b>

**Standby Pay:**

John R. Parvin	\$ 3476.00
George L. Williams	3476.00
Boyce O. Sanders	3476.00
James L. Billi	<u>3476.00</u>
<b>Total Standby Pay FY75 -</b>	<b>\$ 13904.00</b>

## FIVE YEAR PRODUCTION AND DISTRIBUTION SUMMARY

(See Fish Hatchery Manual Section 4438p for Instructions)

## PART 1 - PRODUCTION

YEAR	TOTAL POUNDS (All Species)	NUMBER of POND FISH	PER TOTAL MAN YEARS		PER PRODUCTION MAN YEARS	
			Pounds (All Species)	Number (Pondfish)	Pounds (All Species)	Number (Pondfish)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1971	404,917		22,850		44,350	
1972	260,625		13,863		30,305	
1973	284,807		13,340		27,922	
1974	495,073		23,243		51,091	
1975	384,342		16,014		34,845	

## PART 2 - COST ANALYSIS

YEAR	Percent Production Cost of Total	Percent Labor Cost of Total	Production Cost per Pound of Fish	Labor Cost per Pound of Fish	Food Cost per Pound of Fish	Food Conversion
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	66	33	.89	.31	.26	2.00
1972	57	47	1.05	.45	.32	2.73
1973	63	38	1.43	.48	.28	2.47
1974	64	38	.97	.29	.39	1.82
1975	60	38	1.23	.39	.42	1.88

## PART 3 - DISTRIBUTION

YEAR	TOTAL DISTRIBUTION		Number of Truck Trips	Miles Traveled in Fish Distribution	Average Miles per Trip	AVERAGE DISTRIBUTION PER TRIP		Average Cost per Trip	Dist. Cost per Pound of Fish
	Pounds	Number				Pounds	Number		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1971	415,046	3,143,571							
1972	278,933	3,035,149	73	3,602	49	1,509	28,172	109.79	.032
1973	338,635	20,544,274	80	4,847	61	1,910	61,722	653.15	.1543
1974	503,705	5,247,859	76	3,950	52	1,148	21,985	147.87	.022
	374,995	5,809,580	59	1,165	20	1,439	39,216	282.32	.044

**Bureau of Sport Fisheries and Wildlife**  
**ANALYSIS OF PROGRAM**

(See Fish Hatchery Manual 4438r for instructions)

**PART 1- PRODUCTION**

Line Number	Species	PROGRAM SCHEDULE		ANNUAL REPORT		DIFFERENCE			
		Pounds	Numbers	Pounds	Numbers	Pounds	%	Numbers	%
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1	Trout	100,000	5,880,000	92,836	3,948,099	-7,164	-7.2	-1,931,901	-32.9
2	Warmwater								
3	Anadromous	503,000	7,000,000	291,506	1,763,878	-211,494	-42.2	-5,236,122	-74.8
4	TOTALS	603,000	12,880,000	384,342	5,711,977	-218,658	-36.3	-7,168,023	-55.7

**PART 2 - COSTS**

Category	PROGRAM SCHEDULE		ANNUAL REPORT		DIFFERENCE			
	Dollars	Man Years	Dollars	Man Years	Dollars	%	Man Years	%
5 Production	452,600	10.9	454,284	11.0	1,684	.4	0.1	0.9
6 Distribution	22,400	0.7	16,657	0.8	-5,743	-25.7	0.1	14.3
7 Maintenance	262,000	9.0	298,279	10.8	36,279	13.8	1.8	20.0
8 Rehabilitation								
9 Public Use	14,000	1.4	11,199	1.4	-2,801	-20.0		
10 Training			2,205		2,205			
11 TOTALS	751,000	22.0	782,624	24.0	31,624	4.2	2.0	9.1

**PART 3 - INDEXES**

Costs Lb/M	PROGRAM SCHEDULE		ANNUAL REPORT		DIFFERENCE				
	Per. Lb.	Per M	Per. Lb.	Per M	Per. Lb.	%	Per M	%	
12 Total Cost	1.25	58.31	2.04	137.49	.79	63.2	79.18	136	
13 Production Cost	0.75	35.14	1.23	82.45	.48	64.0	47.31	135	
Pounds/Man Years	PROGRAM SCHEDULE		ANNUAL REPORT		DIFFERENCE				
14 Total Man Years	27,409		16,014		-11,395				-41.6
15 Total Pounds/Man Years	55,321		32,571		-22,750				-41.1

**Part I - Production:** Fewer eggs taken and poorer survival than anticipated in kokanee and rainbow trout.

**Problems with steelhead** as explained in detail in narrative.

**Part II - Costs:** Not as many steelhead to plant as anticipated and rainbow distribution was modified by Idaho Fish and Game for more plants but shorter trips.

The increase over estimates was due to the unpredictability of Idaho Fish and Game's requirements for kokanee spawning and to work the "Bugs" out of phase facilities. Inflationary pressures have been greater than anticipated.

Slightly fewer visitors, fewer guided groups and fewer outside speeches.

**Part III - Indexed:** Related to steelhead problems described in narrative.

## PUBLIC RELATIONS

TOTAL PUBLIC VISITORS<sup>1/</sup>

(See Fish Hatchery Manual section 4438q for instructions)

32,644

## A - INTERPRETATIVE PRESENTATIONS

TYPE OF GROUPS	ON HATCHERY		OFF HATCHERY	
	Number of Groups	Number in Group	Number of Groups	Number in Group
Sportsman Clubs				
Schools	27	1,776	1	40
Service Clubs				
Professional-Scientific	2	57		
Religious Groups	1	52		
Camp Groups				
Youth Groups	3	53		
State or Federal Government	6	52		
Other	1	12		
<b>TOTALS</b>	40	1,992	1	40

## B - OTHER PUBLIC RELATIONS ACTIVITIES

TYPE OF ACTIVITY	NUMBER	TYPE OF ACTIVITY	NUMBER
Press Releases (field level)		Hatchery Exhibits	
Number of newspapers (receiving releases)		Off Hatchery Exhibits	
TV Presentations		Estimate number of exhibit viewers	
Radio Presentations		Other (Explain in remarks - i. e., open house, participation in local events, etc.)	

REMARKS

## INTRODUCTION

The Dworshak National Fish Hatchery was designed and built to replace the spawning and nursery area denied to the North Fork steelhead trout by the construction of Dworshak Dam. During fiscal year 1975, all steelhead smolt releases were made into the Clearwater River at the hatchery. Rainbow trout, kokanee, dolly varden trout and cutthroat trout were released into the 53 mile long Dworshak Reservoir.

The Dworshak National Fish Hatchery is located on the point of land at the confluence of the North Fork and the Middle Fork of the Clearwater River near the unincorporated town of Ahsahka, Idaho. The hatchery site is approximately 8,000 feet downstream from Dworshak Dam on the north bank of the Middle Fork of the Clearwater River approximately three miles west of Orofino, Idaho, on Idaho State highway 7.

The distribution area of this station includes the Dworshak Reservoir and its tributaries under Inland Fisheries, Federal Reservoirs. The Anadromous Fisheries program distribution area includes the Clearwater River watershed.

During the fiscal year, several adverse production conditions resulted in the inability of the station to meet its total mitigation commitments for steelhead smolts. Originally 25 million green eggs were collected in the spring of 1974. Approximately 6 million eggs were shipped green to the Idaho Department of Fish and Game. Subsequently these were a total loss at their Rapid River Hatchery. Of the remaining 19 million eggs, 1.3 million were shipped as eyed eggs. A very high mortality from coagulated yolk sac was experienced in the fry and early feeding fish. Somewhat over 4 million survived as feeding fingerlings. A high incident of coagulated yolk sac was experienced in 1970.

After the steelhead fingerlings had been feeding for some time a dietary deficiency was encountered. Previous experiments had shown that PR and SD diets as formulated by the Speerfish Diet Center had been satisfactory. We were required to submit our requirements for bidding by Region II. The diet supplied by the successful bidder was substandard and resulted in dietary deficiencies. This condition caused further mortality resulting in a below mitigation release of steelhead smolts. An additional problem occurred in reuse system II. Shortly after January 1, 1975, the nitrite level began to climb. The cause was probably the unbalance of bacteria in the bio-filters. A loss of smolts occurred which would have been of minor significance if any one of the previous mortalities had not occurred.

The trout being reared for release in the reservoir showed no

apparent early dietary or environmental problems although later some diet deficiency was suspected. The Clearwater strain of steelhead have consistently shown a high dietary and environmental requirement. They are very susceptible to gill problems as well as other environmental parameters. The difficulty in rearing this strain of steelhead approaches that of Atlantic salmon or lake trout.

To compound the problems experienced during the summer, high water temperature discharges from Dworshak Dam occurred. This condition made it impossible to hold the water temperature at the optimum 55°F. Temperatures at times in the reuse systems rose to well above 60°F, even though the chillers were operating at maximum capacity. The reason for the high temperature discharges can be attributed to the requirement by Idaho Department of Fish and Game that discharges be manipulated to favor a small bass fishery in the lower river rather than operate for optimum conditions at the Dworshak National Fish Hatchery. This rather biased attitude has resulted in greatly increased energy consumption in this period of energy conservation induced by national shortages.

The 1974 brood year smolts were released in April, 1975. Subsequent observations indicated that they made good progress downstream. These fish appeared to be in excellent condition at Lower Granite and Little Goose Dams on the Snake River.

On March 14, <sup>1975</sup>1974, a news release by Governor Andrus to the Lewiston Tribune, a local daily newspaper, made accusations of mismanagement of the Dworshak National Fish Hatchery because of the problems which had occurred. It can only be surmised how the distorted information could have been channelled to the Governor's office. Internal reports of a State research biologist who frequently visited the station and who is completely ignorant of hatchery operations and problems is suspected.

According to the demands of the Idaho Fish and Game Department, a task force was assembled to look into the purported mismanagement and to make recommendation for correction. On April 14, 1975, Mr. Kayler Martinson, Regional Director of the U.S. Fish and Wildlife Service, and Mr. Joseph Greenley, Director of the Idaho Department of Fish and Game, met with the task force at the Dworshak National Fish Hatchery. A complete report of the task force is attached.

Apparently Mr. Kayler Martinson was not satisfied with the report of the task force. He requested Mr. Harvey Willoughby, Associate Regional Director from Region 6, to evaluate the operation of the Dworshak National Fish Hatchery in the light of the findings of the task force. Mr. Willoughby's reports are also attached, as well as pertinent correspondence.

Visitor load was approximately the same as the previous fiscal year but somewhat lower than the previous averages due to the cost of gasoline and other energy shortages. Tour guides were available during the summer months.

The weather was near normal with a late wet spring of 1975. High snow packs in the mountains failed to cause a dangerously high runoff due to the prolonged cool period in the spring. This resulted in an extended period of high runoff without flooding.

Inspection of the station was accomplished by Mr. John Miller, Assistant Regional Supervisor, on October 30, 1974. Two meetings were held with personnel of the Idaho Department of Fish and Game. The fall meeting was held on December 10, 1974 and the spring on June 5, 1975.



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

1500 N.E. IRVING STREET  
P.O. BOX 3737  
PORTLAND, OREGON 97208

July 7, 1975

Mr. Joseph C. Greenley, Director  
Idaho Fish and Game Department  
600 S. Walnut  
Boise, Idaho 83702

Dear Mr. Greenley:

One phase of the Dworshak National Fish Hatchery program review and Task Force evaluation involved a proposal to transport small lots of 1975 brood steelhead eggs to at least two other hatcheries to evaluate egg survival as related to those incubated at Dworshak. Eggs were shipped to Kooskia, Pahsimeroi and Hayden Creek.

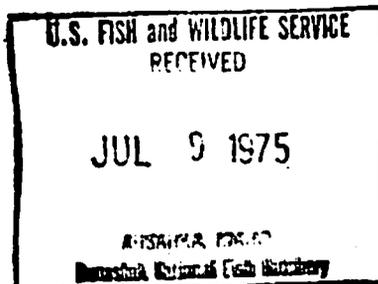
We feel that since Kooskia has diseases not found at Dworshak, the possibility exists these diseases could be carried into Dworshak by straying adults originally reared and released at Kooskia. For this reason we are proposing to destroy the young steelhead at Kooskia following completion of the test program. You may want to consider the same action at Hayden Creek although the likelihood of this happening appears very remote, since it is on a different river system than Dworshak.

Sincerely yours,

ORIGINAL SIGNED BY  
DONALD J. HANKLA

Acting Regional Director

cc: ✓ Dworshak NFH 3114  
Kooskia NFH



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ENERGY

Save Energy and You Serve America!



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

1500 N.E. IRVING STREET

P.O. BOX 3737

PORTLAND, OREGON 97208

April 1, 1975

Colonel Nelson P. Conover  
Walla Walla District Engineer  
Department of the Army  
Bldg. 602, City-County Airport  
Walla Walla, Washington 99362

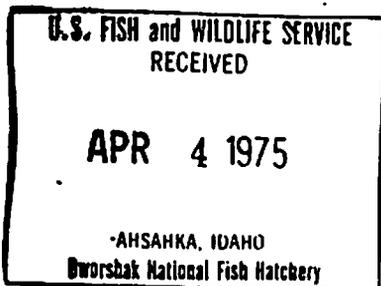
Dear Colonel Conover:

On April 14 at the Dworshak National Fish Hatchery, a meeting has been scheduled to discuss the operational and fish cultural problems of the hatchery. In addition to Director Greenley and myself, a Task Force composed of the following fisheries and engineering expertise will be available to attempt to provide an objective resolution to these problems.

The below named persons have agreed to participate as Dworshak Task Force members:

- Dr. George Klontz - University of Idaho
- Dr. Thomas Parisot - Western Fish Disease Laboratory,  
Fish and Wildlife Service, Seattle
- Mr. Ernest Jeffries - Supervisor of Hatcheries, Oregon  
Fish Commission
- Mr. Grant Christianson - Engineer, Idaho Fish and Game Dept.
- Professor Milo Bell - University of Washington

It is the State's and this Service's request that a member of the U.S. Corps of Engineers be assigned as a Task Force member. As previously indicated, we desire someone who will approach the problems objectively with the other Task Force members.



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# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

1500 N.E. IRVING STREET  
P.O. BOX 3737  
PORTLAND, OREGON 97208

April 2, 1975

Mr. Joseph C. Greenley, Director  
Idaho Fish and Game Department  
600 S. Walnut  
Boise, Idaho 83702

Dear Mr. Greenley:

Tentative plans for the Dworshak Task Force meeting have been firmed up with Mr. Simpson of your staff for Monday, April 14, 1975, and the following schedule and list of participants are provided for your information.

The Task Force members will consist of the following persons:

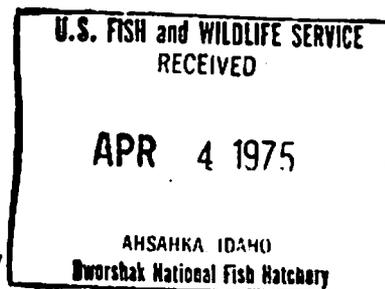
Dr. George Klontz	- University of Idaho
Dr. Tom Parisot	- Western Fish Disease Laboratory
Mr. Ernie Jefferies	- Oregon Fish Commission
Mr. Grant Christianson	- Idaho Fish and Game Dept.
Professor Milo Bell	- University of Washington
To be selected	- Corps of Engineers

It is my understanding you and I are ex-officio members of the Task Force with the responsibility of making the Task Force members aware of the problems they are attempting to objectively resolve. We, as well as the Task Force, have the latitude to call on staff members for pertinent information and technical expertise.

In as much as you are not scheduled to arrive until early afternoon, the Task Force will not officially convene until that time. Early arriving participants to the meeting will be afforded every opportunity to become acquainted with station operations and records. It is conceivable that the Task Force meeting could be extended over to the morning of April 15, 1975 and participants should arrange their schedules accordingly. It is my understanding, however, that Professor Bell will have to leave Dworshak in time to catch a 9:00 p.m. plane to Seattle from Spokane.



*Save Energy and You Serve America!*



Page 2

Both Mr. Greenley and myself will have staff members available for discussions with the Dworshak Task Force and an invitation is extended to your attendance and for those members of your staff who might be asked to participate in discussions with the Task Force.

Sincerely yours,

~~Original Signed By~~

~~Donald H. Reese~~

Regional Director

*for*

cc: Idaho Fish and Game Department  
Dworshak NFH

Page 2

Those desiring transportation from Spokane, Washington to Dworshak should advise Marvin Smith of this office.

Sincerely yours,

Original Signed By  
Donald H. Reese

Acting Regional Director

cc: Milo Bell  
Ernie Jefferies  
Tom Parisot  
Grant Christianson  
George Klontz  
Dworshak NFH  
Corps of Engineers, Walla Walla

A Task Force composed of Professor Milo Bell, University of Washington (UW); Grant Christensen, Idaho Department of Fish and Game (IDFG); Morris Croker, Corps of Engineers (USCE); Ernie Jeffries, Fish Commission of Oregon (FCO); Dr. George Klontz, University of Idaho (UI); and Dr. Tom Parisot, Western Fish Disease Laboratory, Seattle (USFWS) met on April 14 and 15 at Dworshak National Fish Hatchery to discuss current hatchery production problems. Because of prior commitments and airline schedules, Milo Bell, Grant Christensen, George Klontz and Tom Parisot did not attend the full two day sessions. Other personnel in attendance for varying lengths of time were:

Walt Brown	IDFG	Lewiston
Bobby Combs	USFWS	Abernathy Salmon Cultural Lab
Ken Johnson	FCO	Clackamas, Oregon
Joe Lientz	USFWS	Dworshak
Dave Ortman	IDFG	Lewiston
John Parvin	USFWS	Dworshak
Dick Patton	USCE	Walla Walla
Steve Pettit	IDFG	Lewiston
Marvin Smith	USFWS	Portland

Mr. Joseph C. Greenley, Director of the Idaho Fish and Game Department, Boise and Mr. Kahler Martinson, Regional Director of the U. S. Fish and Wildlife Service, Portland, provided guidelines to the Task Force.

- A. Investigate systems and operations of Dworshak National Fish Hatchery with the objective of identifying and recommending immediate corrective measures.
- B. Has the hatchery met mitigation goals?
- C. Develop means to improve communication between staff members of the USFWS and IDFG.

With concurrence of the IDFG, the hatchery was sited at the juncture of the Main Stem and North Fork Clearwater rivers as mitigation for blocked steelhead runs on the North Fork by Dworshak Dam. It was further agreed that in view of North Fork water quality limitations (e.g. temperature and disease) a "reuse" system with sterilization and temperature control components was necessary. There was also agreement that the USFWS would operate the hatchery.

With the objective of meeting a mitigative level of 420,000 pounds of production annually (3.3 million steelhead smolts and other fish), the Walla Walla Corps of Engineers designed and constructed a reuse facility, based on current technology, at a cost of \$14 million. The hatchery is staffed by USFWS personnel. Technical personnel, laboratories, facilities, and equipment at other installations are also provided by the USFWS as needed.