ROUND BUTTE HATCHERY

PROGRAM MANAGEMENT PLAN
2024

Round Butte Hatchery and Satellite
(Pelton Ladder)

INTRODUCTION

Round Butte Hatchery is located on the Deschutes River at the base of Round Butte Dam, 10 miles west of Madras, Oregon. The site is located at an elevation of 1,745 feet above sea level, at latitude 44.6058 and longitude -121.2758. The site area is 3 acres. The facility is funded by Portland General Electric (PGE) and the Bonneville Power Administration (BPA).

Water is supplied to the hatchery from tunnels in the canyon wall that collect seepage from the upstream reservoir (Lake Billy Chinook). Water is not reused in any of the rearing units. Water rights are for 20 cfs.

Pelton Ladder is operated as a satellite rearing facility. The facility is a former fish passage ladder which has had some sections converted for rearing fish. It is located at the base of Pelton Reservoir (Lake Simtustus), an impoundment on the Deschutes River. The site is at latitude 44.70667 and longitude -121.2428.

A constant water flow of 7,184 gpm is provided from Lake Simtustus.

Round Butte Hatchery is staffed with 4 FTE's and 2 PTE's. This includes the personnel required to operate the Pelton Ladder facility.

Rearing Facilities at Round Butte Hatchery

Unit Type	Unit Length (ft)	Unit Width (ft)	Unit Depth (ft)	Unit Volume (ft^3)	Number Units	Total Volume (ft^3)	Construction Material	Age	Condition	Comment
Round Butte										
Adult Holding Ponds	50.5	15	3.59	2,719	2	5,439	concrete	1973	fair	
Burrows Raceways	75	17	3.25	3,950	10	39,500	concrete	1973	poor	
Raceway	10	6	3.0	180	1	180	concrete	2017	good	
Circular Tanks		6	2.5	71	30	2,130	fiberglass	1981	poor	
Vertical Incubators					128		fiberglass	1973	fair	
Vertical Incubators					128		plastic	1991	good	
Vertical Incubators					96		plastic	2005	good	
Pelton Fish Ladder										
Ladder Section	2000	10.8	7.5	161,250	1	161,250	concrete		poor	

PURPOSE

Round Butte Hatchery was constructed in 1972 to mitigate for the fishery losses caused by Pelton/Round Butte (PRB) Hydroelectric Complex. Round Butte and its satellite (Pelton Ladder) are used for adult collection, egg incubation and rearing of spring chinook, and summer steelhead.

PROGRAM TYPES

The ODFW Hatchery Management Policy defines hatchery programs as either harvest or conservation programs. Harvest programs operate to enhance or maintain fisheries without impairing naturally reproducing populations. Conservation programs operate to maintain or increase the number of naturally produced fish without reducing the productivity of naturally reproducing populations.

Round Butte Hatchery has both harvest and conservation programs. The Deschutes River Spring Chinook and Summer Steelhead programs are harvest programs that provide fishing and harvest opportunities in mitigation for habitat loss and migration blockage resulting from the construction of the Pelton-Round Butte (PRB) hydroelectric project. The Hood River Spring Chinook program is a conservation program used for restoration of a wild fish population in vacant habitat. This is a cooperative program between the Confederated Tribes of the Warm Springs Reservation of Oregon Branch of Natural Resources (CTWSRO-BNR), ODFW, and Bonneville Power Administration (BPA) with the goal of reestablishing spring Chinook in the Hood River Subbasin to provide sustainable harvestable fisheries. Round Butte Hatchery also plays a critical role in the reintroduction of salmon and steelhead above the PRB complex.

GOALS

Hood River (50H) Spring Chinook: To re-establish and maintain a naturally sustaining spring Chinook salmon population in Hood River sub-basin AND provide sustainable and consistent in-basin tribal and sport harvest opportunities by releasing up to 250,000 yearling spring Chinook salmon smolts annually into the Hood River basin.

Deschutes River (66H) Spring Chinook: Three goals have been identified for this program:

1) Produce 380,000 spring Chinook smolts annually to mitigate for production and habitat losses caused by the PRB.

2) Raise 100,000 spring Chinook juveniles for transfer to the Hood River acclimation site in order to rebuild populations of spring Chinook into this river system.

3) Utilize hatchery broodstock to provide 128,000 eyed eggs for transfer to Fall River Hatchery to produce 100,000 spring Chinook smolts annually. These smolts will then be acclimated and released above the Project to restore self-sustaining and harvestable populations of native Chinook salmon in the Deschutes River and its tributaries upstream from PRB, and to reconnect native resident fish populations that are currently fragmented by PRB.

Deschutes River (66H) Summer Steelhead: Four goals have been identified for this program:

1) Produce 162,000 smolts annually to mitigate for production and habitat losses caused by the PRB.

2) Produce 30,000 post-smolt steelhead yearlings for release into Lake Simtustus as catchable trout to mitigate for production and habitat losses caused by the PRB.

3) Produce 3,000 post-smolt steelhead yearlings for release into Jefferson County Fishing Pond as catchable trout.

4) Utilize hatchery broodstock to provide 152,000 eyed eggs for transfer to Wizard Falls Hatchery in order to produce 100,000 spring Chinook smolts annually. These smolts will then be acclimated and released above the Project to restore self-sustaining and harvestable populations of native summer steelhead in the Deschutes River and its tributaries upstream from PRB, and to reconnect native resident fish populations that are currently fragmented by PRB.

5) Produce 10,000 post-smolt steelhead yearlings for release into Haystack Reservoir as catchable trout.

OBJECTIVES

Objective 1: Foster and sustain opportunities for sport, commercial, and tribal fishers consistent with the conservation of naturally produced native fish.

Spring Chinook:

Hood River (50) Stock:
Produce 100,000 smolts (6,700 pounds) for acclimated release into the Hood River System.

Deschutes River (66) Stock:
Provide 128,000 eyed eggs to Fall River Hatchery.

Produce 380,000 smolts (25,334 pounds) for release into the lower Deschutes River.

Summer Steelhead:

Deschutes River (66) Stock:
Produce 152,000 eyed eggs for transfer to Wizard Falls Hatchery.

Produce 5,500 fingerlings (98 pounds) for transfer to Opal Springs Hatchery.

Produce 15,000 fingerlings (600 pounds) for release into Haystack Reservoir.

Produce 10,000 legals (5,000 pounds) for release into Haystack Reservoir.

Produce 162,000 smolts (40,500 pounds) for release into the lower Deschutes River.

Produce 30,000 legals (15,000 pounds) for release into Lake Simtustus.

Produce 3,000 legals (1,500 pounds) for the Jefferson County Fishing Pond.

Objective 2: Contribute toward the sustainability of naturally produced native fish populations through the responsible use of hatcheries and hatchery-produced fish.

Objective 3: Maintain genetic resources of native fish populations spawned or reared in captivity.

Objective 4: Restrict the introduction, amplification, or dissemination of disease agents in hatchery produced fish and in natural environments by controlling egg and fish movements and by prescribing a variety of preventative, therapeutic and disinfecting strategies to control the spread of disease agents in fish populations in the state.

Objective 5: Minimize adverse ecological impacts to watersheds caused by hatchery facilities and operations.

Objective 6: Communicate effectively with other fish producers, managers and the public.

CURRENT PRACTICES TO ACHIEVE OBJECTIVES

The sections that follow describe the current hatchery practices associated with anadromous fish production at this facility. Because ODFW hatcheries are managed to maximize use of the hatchery rearing space, hatchery operations are dynamic and subject to annual change depending upon statewide program needs.

The Native Fish Conservation Policy, the Fish Hatchery Management Policy, the Fish Health Management Policy and Hatchery Genetic Management Plans provide guidelines for the

management of wild and hatchery fish in Oregon. These policies describe the brood collection, rearing, release, and health management strategies currently used at this facility.

Objective 1: Foster and sustain opportunities for sport, commercial, and tribal fishers consistent with the conservation of naturally produced native fish.

Adult Collection

Spring Chinook:

Hood River (50H) Stock: No adults are collected at this facility. Adults are collected and spawned at the CTWS Parkdale Facility.

Deschutes River (66H) Stock: Entry of adults into the subbasin occurs between May and August. Spawning begins in mid-August. Fish are collected at the Pelton Ladder trap and transported to Round Butte Hatchery for spawning. A systematic approach to broodstock selection is used to ensure that factors such as genetic variability and run timing are preserved. Approximately 800 adults (50% female) are retained.

Summer Steelhead:

Deschutes River (66H) Stock: Adults arrive in the Deschutes River from August through April. Three groups of adults are collected at the Pelton Ladder trap and transported to Round Butte Hatchery for spawning; Group 1 is collected from September 15th to December 1st, Group 2 from December 2nd through January 15th, and Group 3 from January 16th to February 15th. Spawning of Groups 1 and 2 takes place in January, and Group 3 in February and March. Approximately 400 adults (50% female) are retained.

Sockeye Salmon:

Lake Billy Chinook (66W) Stock: Adults arrive in the Deschutes River from May through September. All unmarked sockeye are released above the project into Lake Billy Chinook. Marked out of basin sockeye will be floy tagged and returned to the river.

Objective 2: Contribute toward the sustainability of naturally produced native fish populations through the responsible use of hatcheries and hatchery-produced fish.

Rearing and Release Strategies

Rearing and release strategies are designed to limit the amount of ecological interactions occurring between hatchery and naturally produced fish. Fish are reared to sufficient size that smoltification occurs within nearly the entire population, which will reduce the retention time in downstream migration. Rearing on parent river water, or acclimation to parent river water for several weeks, is used to ensure strong homing to the hatchery, thus reducing the stray rate to natural populations. Various release strategies are used to ensure that fish migrate from the hatchery with least amount of interaction with native populations. The specific rearing and release strategies used at this hatchery are outlined below.

Spring Chinook:

Hood River (50) Stock:

Rear 105,000 fish to a size of 20 fpp for transfer to Pelton Ladder in late November for final rearing to a size of 15 fpp. 100,000 fish are transferred from Pelton Ladder to Moving Falls Acclimation site in early March for acclimation and release into the West Fork Hood River. All fish are fin-clipped.

Deschutes River (066H) Stock:
Rear 395,000 fish to a size of 20 fpp for transfer to Pelton Ladder in early November. Due to the current conditions of the Pelton Ladder Rearing Cells as well as environmental concerns that could lead to a catastrophic fish loss. To safeguard this stock, beginning in 2021 100,000 smolts will be transferred to Fall River Hatchery in late May to be reared until early March. The 100,000 smolts will then be transferred back to Pelton Ladder in early March and incorporated back into existing smolt release groups. This will produce a final rearing of 380,000 smolts at 15 fpp for direct release into the Deschutes River in early April. All fish are fin-clipped and coded-wire tagged, and 15,000 (5,000 per rearing pond) are pit tagged prior to transfer.

Summer Steelhead:

Deschutes River (66H) Stock:
Rear 5,500 fingerlings to a size of 56 fpp for transfer to Opal Springs Hatchery.

Rear 15,000 fingerlings to a size of 25 fpp for release into Haystack Reservoir.

Rear 162,000 smolts to a size of 4 fpp and release directly into the Deschutes River near Pelton Ladder in early April. All fish are fin-clipped prior to release.

Rear 30,000 fish to a size of 2 fpp for release into Lake Simtustus from mid-April to early June. All fish are fin-clipped prior to release.

Rear 3,000 fish to a size of 2 fpp for release into the Jefferson County Fishing Pond beginning in mid-April. All fish are fin-clipped prior to release.

Rear 10,000 fish to a size of 2 fpp for release into Haystack Reservoir in mid-April. All fish are fin-clipped prior to release.

Objective 3: Maintain genetic resources of native fish populations spawned or reared in Captivity

Broodstock Selection and Spawning

Oregon's recently adopted Native Fish Conservation Policy and Hatchery Fish Gene Resource Management Policy will likely change future broodstock selection and spawning protocols for some fish stocks. Until these policies are fully implemented, the following interim practices are currently being used at Round Butte Hatchery:

Spring Chinook:

Hood River (50H) Stock: No adults are spawned at this facility. Adults are collected and spawned at the CTWSIR Parkdale Facility.

Deschutes River (66H) Stock: Adults are collected throughout the entire run and spawned at a 1:2 or 1:3 male to female spawning ratio. Deschutes stock, and at times Warm Springs stock spring chinook are used for broodstock. Jacks and 3-year old spring Chinook males are integrated as normal adults into the spawning schedule.

Summer Steelhead:

Deschutes River (66H) Stock: Adults are collected throughout the run in three groups and spawned at a 1:1 male to female ratio. Only Deschutes stock summer steelhead is used for broodstock. Future programs involving mating wild and hatchery fish are being developed to

help improve the current broodstock. Collection of wild fish for this program would occur at Sherars Falls and Pelton trap.

Objective 4: Restrict the introduction, amplification, or dissemination of disease agents in hatchery produced fish and in natural environments by controlling egg and fish movements and by prescribing a variety of preventative, therapeutic and disinfecting strategies to control the spread of disease agents in fish populations in the state.

Fish Health Management Programs—All Stocks

ODFW has adopted a Fish Health Management Policy that describes measures that minimize the impact of fish diseases on the state's fish resources. The primary objective of fish health management programs at ODFW hatcheries is to produce healthy smolts that will contribute to the fishery and return sufficient numbers of adults to continue propagation of the stocks and provide supplementation if desired. Equally important is to prevent the introduction, amplification or spread of fish pathogens that might negatively affect the health of both hatchery and naturally reproducing stocks.

ODFW has implemented both disease control and disease prevention programs at all of its facilities to achieve these objectives. These programs include the following standard elements:

Disease Control (Reactive)

- Perform necropsies of diseased and dead fish to diagnose the cause of loss.
- Prescribe appropriate treatments and remedies to disease. This includes recommending modifications in fish culture practices, when appropriate, to alleviate disease-contributing factors.
- Apply a disease control policy as stated in the Oregon Administrative Rules which dictates how specific disease problems will be addressed and what restrictions may be placed on movements of diseased stocks.
- Conduct applied research on new and existing techniques to control disease epizootics.

Disease Prevention (Proactive)

- Routinely remove dead fish from each rearing container and notify ODFW Fish Pathology if losses are increasing. Monthly mortality records are submitted to Fish Pathology from each hatchery.
- Routinely perform examinations of live fish to assess health status and detect problems before they progress to clinical disease or mortality.
- Implement disease preventative strategies in all aspects of fish culture to produce a quality fish. This includes prescribing the optimal nutritional needs and environmental conditions in the hatchery rearing container based on historical disease events. It also involves the use of vaccines or antibiotics in order to avoid a disease problem.
- Use a disease prevention policy that restricts the introduction of stocks into a facility. This will help avoid new disease problems and fish pathogens not previously found at the site.
- Use sanitation procedures that prevent introduction of pathogens into and/or within a facility.

- Conduct applied research on new and existing disease prevention techniques.
- Utilize pond management strategies (e.g., Density Index and Flow Index guidelines) to help optimize the quality of the aquatic environment and minimize fish stress that can be conducive to infectious and noninfectious diseases. For example, a Density Index is used to estimate the maximum number of fish that can occupy a rearing unit based on the rearing unit's size. A Flow Index is used to estimate the rearing unit's carrying capacity based on water flows.

Fish Health Activities at Round Butte Hatchery and Satellite

Health Monitoring

- Monthly health monitoring examinations of clinically diseased fish are conducted on each fish lot at the hatchery. The sample includes a minimum of 10 dead fish (if available) per lot. Live "healthy" fish are examined because parasites have been found in the juveniles reared in hatchery spring water.
- All fish are given a health inspection no longer than 6 weeks before fish are released or transferred. This exam may be in conjunction with the routine monthly visit.
- Examinations for *Myxobolus cerebralis*, agent of whirling disease, are conducted annually on 60 fish held for a minimum of 180 days at the facility.
- Infectious Hematopoietic Necrosis Virus (IHNV) has been identified both upstream and downstream of the Project since anadromous fish passage was terminated in 1968. The possibility exists that different strains of this virus detected below the project may be more pathogenic to fish above the Project but there is no data to support this inference. Loss to this pathogen occurs at the hatchery on a frequent basis and losses have been documented in reservoir fish populations. A sampling protocol to determine virus prevalence of returning adult fish to the Pelton Trap began in September, 2018. Briefly, this sampling includes mucus swabs from 20 hatchery adults per month and every adult being passed above the Project. Any IHNV+ samples will be submitted for genotyping to determine the strains and inform management decisions regarding adult fish passage.
- At spawning, all ovarian fluids and all kidney/spleen/pyloric caeca are examined for viral pathogens from each salmon lot. If prespawning mortality is above normal, necropsies are conducted on dead adult fish for bacteria, parasites and other causes of death.
- Whenever abnormal behavior is reported or observed, or mortality exceeds 0.1% per day over five consecutive days in any rearing container, the fish pathologist will examine the affected fish, make a diagnosis and recommend the appropriate remedial or preventative measures.
- Reporting and control of specific fish pathogens are conducted in accordance with the Fish Health Management Policy. Results from each examination mentioned above are reported on the ODFW Fish Health or Virus Examination forms.

Fish and Egg Movements

- Movements of fish and eggs are conducted in accordance with the Fish Health Management Policy.

Therapeutic and Prophylactic Treatments

- Adult spring Chinook and sockeye salmon are injected with antibiotics for the control of bacterial diseases. Adult steelhead are not injected with antibiotics.

- At spawning, eggs are water-hardened in iodophor for disinfection.
- Juvenile fish are administered antibiotics orally as needed for the control of bacterial infections and for prevention of diseases.
- Juvenile spring Chinook are fed an erythromycin medicated 28 day feeding to control the occurrence of *Renibacterium salmoninarum* (Bacterial Kidney Disease [BKD]).
- Formalin is dispensed into water for control of fungus on eggs and adult brood stock being held. Treatment dosage and exposure time varies with species, life stage and condition being treated.
- Only approved or permitted therapeutic agents are used for treatments:
    - FDA labeled and approved for use on food fish
    - Allowed by the FDA as an Investigational New Animal Drug
    - Obtained by extra-label prescription from a veterinarian
    - Allowed by the FDA as low regulatory priority or deferred regulatory status
    - Approved by the FDA through USFWS for fish listed under the federal Endangered Species Act.

Sanitation

- All eggs brought to the facility are surface-disinfected or water-hardened in buffered iodophor as well as incubated in an ultra violet (UV) treated water supply.
- Disinfection footbaths (or other means of disinfection) are provided at the incubation facility's entrance and exit areas while embryos are incubating in the facility.
- All equipment (e.g., nets, tanks, rain gear, boots) is disinfected with iodophor between uses with different fish/egg lots or different rearing containers.
- Dead fish are disposed of promptly and in a manner that prevents introduction of disease agents to the waters of the state.
- Rearing units are cleaned on a regular basis.
- Fish transport trucks are disinfected between the hauling of different fish lots.
- Rearing units are sanitized after removing fish and before introducing a new fish stock either by thorough cleaning and use of a disinfectant or by cleaning and leaving dry for an extended time.

Objective 5: Minimize adverse ecological impacts to watersheds caused by hatchery facilities and operations.

Environmental Monitoring

Primarily, environmental monitoring is conducted at ODFW facilities to ensure these facilities meet the requirements of the National Pollution Discharge Elimination Permit administered by the Oregon Department of Environmental Quality. It is also used in managing fish health. On a short-term basis, monitoring helps identify when changes to hatchery practices are required. Long-term monitoring provides the ability to quantify water quality impacts resulting from changes in the watershed (e.g., logging, road building and urbanization). The following environmental parameters are currently monitored at all ODFW hatcheries:

- Total Suspended Solids (TSS) – measured quarterly. Two composite samples are collected, one during normal operations and one during cleaning. Some facilities may take more samples because of multiple outfalls.
- Settleable Solids (SS) – measured quarterly. Two composite samples are collected, one during normal operations and one during cleaning. Some facilities may take more samples because of multiple outfalls.
- pH – measured quarterly when settleable solids are measured.
- Total Ammonia and Total Phosphorus – measured quarterly during the first 12 months of the permit when settleable solids are measured.
- Water Temperatures – daily maximum and minimum water temperatures are measured within the hatchery. Temperature units are recorded for egg development in some hatcheries. Effluent and receiving stream temperatures are measured weekly from April to October.
- Dissolved Oxygen (DO) – measured only when conditions warrant (e.g., periods of low flows and high temperatures).
- Air Temperatures – maximum and minimum temperatures are recorded daily at some stations, but there are no special monitoring requirements.
- Flow Logs – changes in water flows through the hatchery ponds are recorded weekly.

Objective 6: Communicate effectively with other fish producers, managers and the public.

Coordination/Communication within ODFW

Annual Fish Production Meetings: ODFW conducts meetings throughout the state to set annual fish production goals for all public hatcheries in Oregon. These meetings involve the participation of ODFW research, management and fish culture staff as well as representatives from applicable federal agencies and tribes.

Record Keeping: The following records are kept at all ODFW hatcheries:

- Anadromous Adult Transaction Report – details the collection and disposition of all adult fish handled at the facility.
- Mark Recovery Report – details sex, fish length and tag information from all marked adult fish that are captured.
- Egg and Fry Report – records all egg and fry movements, treatments, etc.
- Monthly Ponded Report – updates hatchery operations from the previous month (i.e., current number of fish, size, transfers or releases, feed conversion, mortality, medication, etc.).
- Monthly Progress Report – document summarizing operational activities for the hatchery and all satellite facilities (e.g., fish culture, fish health, fish distribution, maintenance and safety).
- Fish Loss and Treatment Report – records disease problems and daily mortality.
- Fish Loss Report/Investigation – when 1,000 or more juveniles or 10 or more adult fish are accidentally lost in a single accident.
- Predator Mortality Report – documents any fish predators that may die at the hatchery facility.
- Fish Liberation Reports – details information regarding all fish releases (e.g., fish numbers, size, location, method of release, marks, etc.).

- Coded–Wire Tag Release Reports – record of all juvenile fish released with coded-wire tags.
- Length Frequency Record – details fish lengths of all anadromous fish released (based on a sample of the releases).
- Chemical use, waste discharge monitoring, purchasing, budget, hazardous materials, safety, vehicles, equipment, maintenance and alarm logs.
- Visitor Log – some facilities record the daily visitor use of the facility; however, this is not a requirement.

Hatchery Management System (HMS): Computerized system to collect, report, summarize and analyze hatchery production data. This system is a tool to be used in production control at all hatchery management levels.

Interagency Coordination/Communication

Production Advisory Committee (PAC): The Columbia River PAC is comprised of representatives from the regulatory management agencies and tribes. This group meets monthly to discuss anadromous fish production issues and to provide an opportunity for communication among the anadromous fish hatchery managers.

Technical Advisory Committee (TAC): The Columbia River TAC is comprised of regulatory fish harvest technicians. This group provides management direction used in establishing hatchery fish production goals. TAC meets monthly.

Pacific Northwest Fish Health Protection Committee (PNFHPC): This group is comprised of representatives from U.S. and Canadian fish management agencies, tribes, universities, and private fish operations. The groups meets twice a year to monitor regional fish health policies and to discuss current fish health issues in the Pacific Northwest.

In-River Agreements: State and tribal representatives meet annually to set Columbia River harvests as part of the *U.S. v. Oregon Agreement*. Periodic meetings are also held throughout the year to assess if targets are being met.

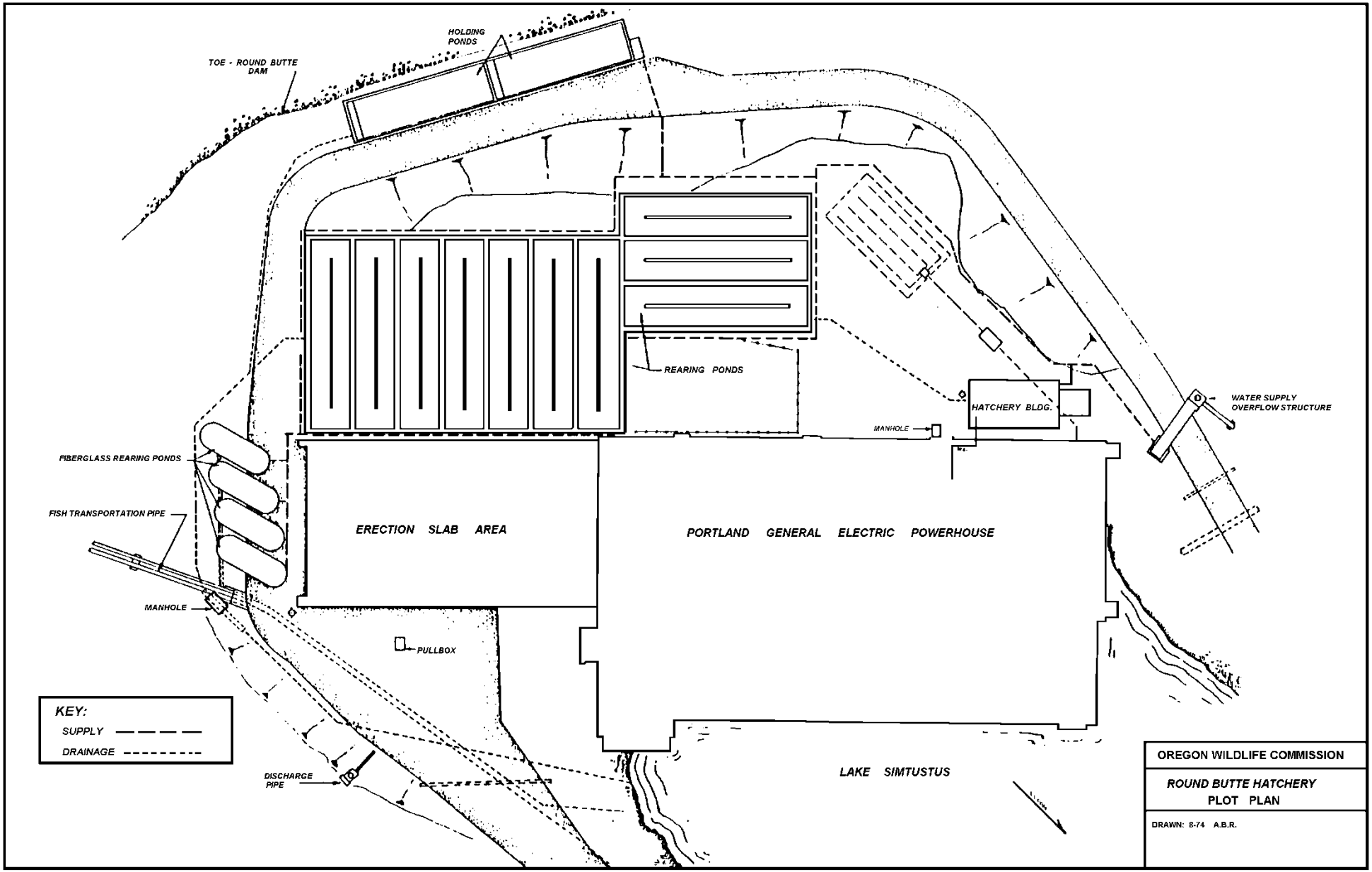
Streamnet (www/streamnet.org)): Hatchery return data are input into StreamNet, a cooperative information management and data dissemination project focused on fisheries and aquatic related data and data related services in the Columbia River basin and the Pacific Northwest. StreamNet is funded through the Northwest Power and Conservation Council's Fish and Wildlife Program by the Bonneville Power Administration and are administered by the Pacific States Marine Fisheries Commission. The data are maintained and disseminated through the Pacific States Marine Fisheries Commission (PSMFC).

Project Licensees: The Licensees and ODFW will communicate regularly in regard to RBH operations and fish development. According to the Hatchery Agreement, meetings will be held between the two parties twice a year to coordinate fish culture activities. One meeting will be held in December, to coordinate spring Chinook reintroduction releases above the PRB. The other will be held in May, prior to reintroduction releases of summer steelhead above the PRB.

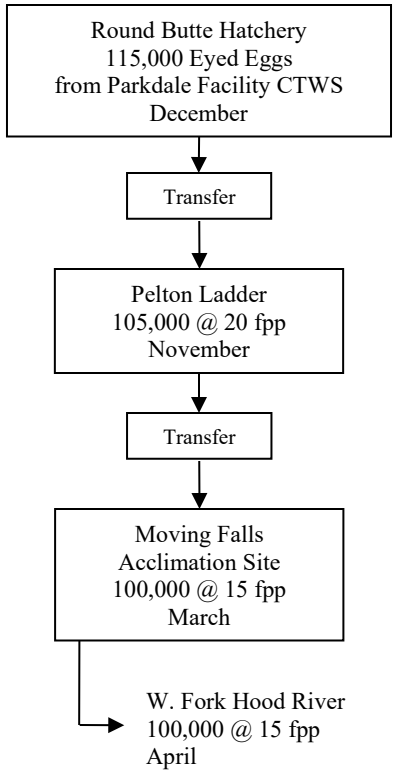
In-Season Communications: Communication with PAC, the Columbia River Inter-Tribal Fish Commission, Washington Department of Wildlife, Washington Department of Fisheries, U.S. Fish and Wildlife Service and Idaho Department of Fish and Game takes place each year to coordinate proper fish and egg transfers in an effort to meet basin-wide goals at all facilities, where applicable.

Other: Meetings between ODFW, the Confederated Tribes of Warm Springs, U.S. Fish and Wildlife Service, Bonneville Power Administration, PGE, private land owners, Oregon State Police, Bureau

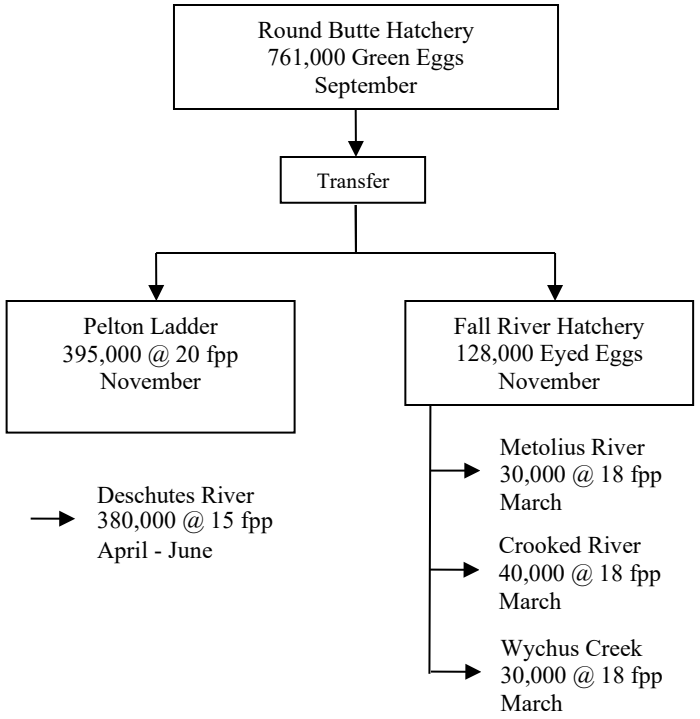
of Land Management, and special interest groups are periodically held to discuss Deschutes River management issues.


HOLDING PONDS
TOE - ROUND BUTTE DAM
REARING PONDS
HATCHERY BLDG.
MANHOLE
WATER SUPPLY OVERFLOW STRUCTURE
FIBERGLASS REARING PONDS
FISH TRANSPORTATION PIPE
ERECTION SLAB AREA
PORTLAND GENERAL ELECTRIC POWERHOUSE
MANHOLE
PULLBOX
KEY:
SUPPLY
DRAINAGE
DISCHARGE PIPE
LAKE SIMTUSTUS
OREGON WILDLIFE COMMISSION
ROUND BUTTE HATCHERY
PLOT PLAN
DRAWN: 8-74 A.B.R.

Round Butte Hatchery
Spring Chinook Salmon – Stock 50H (Hood River)



Round Butte Hatchery
Spring Chinook Salmon – Stock 66H (Deschutes River)



Round Butte Hatchery
Summer Steelhead – Stock 66 (Deschutes River)