WALLOWA HATCHERY

PROGRAM MANAGEMENT PLAN
2024

Wallowa Hatchery and Satellites
(Big Canyon and Little Sheep Creek)

INTRODUCTION

Wallowa Hatchery is located along Spring Creek, a tributary of the Wallowa River (Grande Ronde River Subbasin), 1 mile west of Enterprise, Oregon. The site is at an elevation is 3,700 feet above sea level, at latitude 45.4583 and longitude -117.2933. The site area is 11 acres. Most of the fish production at this facility consists of summer steelhead. Water rights for the entire hatchery total 23,813 gpm (gallons per minute) from several sources. The acclimation ponds receive water from Spring Creek. The hatchery is staffed with 3 FTE's. Big Canyon and Little Sheep acclimation facilities are operated as satellites.

The Big Canyon acclimation facility is located at the junction of Deer Creek and the Wallowa River, just east of the town of Minam, Oregon. The site is at an elevation of 2,590 feet above sea level, at latitude 45.6194 and longitude -117.6990. The site area is 48 acres. This facility consists of three acclimation ponds and one adult holding pond. Water rights total 5,835 gpm from Deer Creek. The facility is staffed by Wallowa Hatchery personnel from February through May.

Little Sheep Creek acclimation facility is located along Little Sheep Creek, a tributary of the Imnaha River. The site is at an elevation of 2,768 feet above sea level, at latitude 45.4778 and longitude -116.9302. This facility consists of one acclimation pond and one adult holding pond. Water rights total 8,797 gpm from Little Sheep Creek. The facility is staffed by Wallowa Hatchery personnel from February through May.

PURPOSE

Wallowa began operation in 1920 as a resident trout hatchery. In 1985, the hatchery was renovated as part of the Lower Snake River Compensation Program (LSRCP)—a program to mitigate for spring chinook and summer steelhead losses caused by the four federal dams constructed on the lower Snake River.

Wallowa Hatchery is one of six fish production facilities under the LSRCP. It is used for adult collection, spawning, acclimation and release of summer steelhead. (Egg incubation and rearing occurs at Irrigon Hatchery.) The two satellite facilities (Big Canyon and Little Sheep Creek) are used to trap adult summer steelhead and acclimate smolts prior to release.

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.

Wallowa Hatchery participates in both harvest and conservation programs. The Wallowa River and Imnaha River Summer Steelhead programs are harvest programs that mitigate for fishing and harvest opportunities lost due to habitat loss and migration blockage due to construction of dams on the Lower Snake River.

Rearing Facilities at Wallowa 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
Wallowa										
Acclimation Ponds	300	42	3.50	44,100	2	88,200	concrete	1985	good	
Adult Holding Pond	80	20	4.0	7,200	1	7,200	concrete	1985	good	
Adult Trap	25	8.6	5.0	931	1	931	concrete	1985	good	
Circular Ponds (#6-8)		19	2.50	708	2	1,416	concrete	1980's	fair	Water used for incubation Feb-May
Oval Raceways	47.2	20	3.50	3,000	6	18,000	concrete	1950	poor	3 x 2 in series
Raceways	100	20	4.50	9,000	2	18,000	concrete	1950	fair	Rearing water not avail.
Raceways (#1-5)	100	20	4.50	9,000	5	45,000	concrete	1950	poor	
Starter Tanks	14	4	2.75	154	12	1,848	concrete	1950	good	Only 6 are plumbed
Circular Tanks		4	2.5	31.4	12	376.8	Fiberglass	2003	excellent	Captive Brood Program
Vertical Incubators					216		plastic	1985	good	
Big Canyon										
Acclimation Pond	70	30	3.50	7,350	1	7,350	concrete	1988	good	
Acclimation Pond	150	30	3.50	15,750	2	31,500	concrete	1988	good	
Adult Holding Pond	30	10	4.50	1,350	1	1,350	concrete	1988	good	
Little Sheep Creek										
Adult Holding Pond	40	20	4.00	3200	1	3200	concrete	1988	good	
Acclimation Pond	195	50	3.50	34,125	1	34,125	concrete	1988	good	

GOALS

Rainbow Trout: To produce legal-size and trophy-size triploid fish to provide sport fishing opportunities in northeastern Oregon lakes, reservoirs and streams.

Summer Steelhead:

Wallowa River (56H) Stock: To mitigate for summer steelhead harvest opportunity lost as a result of the construction of four Lower Snake River dams while minimizing impacts to listed populations. The LSRCP adult return goal is 9,200 adults for harvest and escapement to the area above Ice Harbor Dam.

Imnaha River (29H) Stock: To mitigate for fish losses occurring as a result of the construction and operation of the four Lower Snake River Dams. The program goal is to return 2,000 hatchery adults to the area above Ice Harbor Dam. Based upon this adult goal and an estimated 0.61% smolt-to-adult survival rate, the target for smolt production was set at 215,000 fish.

Program specific goals include:

- Establishing an annual supply of brood fish that can provide an egg source capable of meeting compensation goals.

- Restore and maintain the natural spawning population.
- Reestablish sport and tribal fisheries.
- Establish a total return of adult fish resulting from LSRCP activities in Oregon that meets the compensation goal.
- Minimize the impacts of the program on resident stocks of game fish.

OBJECTIVES

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

Rainbow Trout:

Cranebow (127T) Stock:
Rear 13,000 fingerlings (173 pounds) for airstocking into waterbodies in the Wallowa district every other year on odd years.

Cranebow (127T) Stock:
Rear 800 fingerlings (10 pounds) for release in the Wallowa District in non-airstock years (even years).

Oak Springs Triploid (53T) Stock:
Rear 65,350 legal-size trout (23,383 pounds) and 5,785 trophy trout (8,765 pounds) for release into waterbodies in the Wallowa and LaGrande District.

Summer Steelhead:

Imnaha River (29H) Stock:
Provide 247,500 eggs for transfer to Irrigon Hatchery.

Acclimate 215,000 smolts at Little Sheep Acclimation facility for release into Little Sheep Creek.

Wallowa River (56H) Stock:
Provide 907,000 eyed eggs for transfer to Irrigon Hatchery.

Provide 1,600 eyed eggs to High Desert STEP program.

Acclimate 560,000 smolts for release into the Wallowa River.

Acclimate 240,000 smolts at Big Canyon Acclimation facility for release into Deer Creek.

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 to help guide 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

Rainbow Trout: No broodstock are maintained at this facility.

Summer Steelhead:

Imnaha Stock (29H): Entry of adults into the Imnaha River Subbasin occurs between September and May. Trapping at the Little Sheep Creek facility begins in February and continues until there are 10 days without capturing fish, usually around the end of May. During this time period adults are collected and either outplanted to Little Sheep Creek, used for spawning, used for stream enrichment, or donated to local Charity Food Banks. Peak spawning occurs in April. Adult collection rate is adjusted annually based upon recent average adult and green egg to smolt survival rates. Recent broodstock collection includes approximately 111 adults with approximately a 50/50 sex ratio.

Wallowa Stock (56H): Wallowa stock is used as the broodstock for hatchery releases into the Grande Ronde River System. Entry of adults into this system occurs between August and late May. Trapping at Wallowa Hatchery and the Big Canyon facility begins at the end of January. Collection continues until there are 10 days without capturing fish, usually around the end of May. Peak spawning occurs in April. Broodstock consists of 206 females and 205 males.

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.

Rainbow Trout:

Cranebow (127T) Stock:
Rear 13,000 at 75 ffp that will be air stocked in high lakes.

Cranebow (127T) Stock:
Rear 800 fingerlings to a size of 75 fpp for release into Noregaard Pond during non-airstock years (even years).

Oak Springs Triploid (53T) Stock:
Rear 65,350 legal-size trout at 3 fpp and 5,785 trophy-size trout at 1.0 – 0.66 fpp for release into Wallowa and La Grande District waterbodies from April to September.

Summer Steelhead:

Imnaha Stock (29H):
Rear 215,000 fish to 5 fpp at Irrigon Hatchery. Transfer 215,000 smolts at 5 fpp from Irrigon to the Little Sheep Creek facility for 2- 4 week acclimation and release into Little Sheep Creek at 4.5 fpp no later than April 29th. All fish are adipose fin-clipped.

Wallowa Stock (56H):
Rear 800,000 fish at Irrigon Hatchery. Transfer 560,000 smolts from Irrigon Hatchery to Wallowa Hatchery for acclimation and release into the Wallowa River in two groups, the first release in early April (400,000) and the second in late April (160,000). All fish are adipose fin-clipped prior to release.

Transfer 240,000 smolts from Irrigon Hatchery to Big Canyon for 2-4 week acclimation and release into Deer Creek in April. All fish are adipose 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 Native Fish Conservation Policy and Hatchery Genetic Management Plans outline broodstock selection and spawning protocols for some fish stocks. The following practices are currently being used at Wallowa Hatchery:

Rainbow Trout: No spawning takes place at this facility.

Imnaha Stock (29H) Summer Steelhead: The trap at the Little Sheep Creek facility is opened from early March to late-May. To meet the production goal 55 pairs are needed for spawning. Hatchery and wild (estimated at 9 males and 9 females) fish are matrix spawned usually in 3 X 3 combinations using not more than 1 wild fish in any group to maximize the contribution of wild fish. The gametes

are taken from the fish at the Little Sheep Creek facility and transferred to Wallowa Hatchery where fertilization and initial incubation occur.

Collect 275,000 green eggs to produce 247,500 eyed eggs to produce 215,000 smolts. At eye-up the eggs are transferred to Irrigon Hatchery for further incubation and final rearing.

Wallowa Stock (56H) Summer Steelhead:

Original Wallowa stock adult steelhead return to Wallowa Hatchery and are collected and held for spawning throughout the run. Nearly all adults collected at this facility are of hatchery origin since no fish are passed above the weir to spawn naturally. Only hatchery fish are used for spawning and all fish are spawned at a 1:1 male to female ratio. To meet the production goal 206 pairs are needed for spawning. During recent years adequate numbers of adult steelhead have returned to Wallowa Hatchery to meet production goals. When or if adult returns to Wallowa hatchery are below production goals fish will be transferred from the Big Canyon facility to supplement spawning.

Collect 1,010,000 green eggs to produce 911,500 eyed eggs. Transfer 911,500 eyed eggs to Irrigon Hatchery to produce 800,000 smolts.

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 Wallowa Hatchery and Satellites

Health Monitoring

- Monthly health monitoring examinations of healthy and clinically diseased fish are conducted on each stock of steelhead. The sample includes a minimum of 10 moribund/dead fish (if available) and 4-6 live fish per stock. Results are reported on the ODFW Fish Examination form and the Lower Snake River Compensation Plan monthly report.
- Prior to liberation from acclimation ponds, steelhead smolts are given a health exam. This is a special exam that includes aspects of the monthly monitoring exam. Results are reported on ODFW Fish Examination forms and in the Lower Snake River Compensation Plan monthly report.
- 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.
- At spawning, a minimum of 60 (30 from Fall Collected Brood) ovarian fluids, kidney/spleen/pyloric caeca samples are examined for viral pathogens. Necropsies on all prespawning mortality (up to 20 fish) are conducted for bacteria, parasites and other causes of death. Additional examinations are conducted if mortality exceeds normal levels. Results are reported on ODFW Viral Examination forms and in the Lower Snake River Compensation Plan monthly report.
- Examinations for *Myxobolus cerebralis*, agent of whirling disease, are conducted on each water supply that is used for rearing fish. At Wallowa Hatchery this includes the Upper Spring and Well water sources where the captive brood spring Chinook are reared.
- 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

- Eggs are spawned into colanders to remove ovarian fluid, fertilized, and then water-hardened in iodophor for disinfection.
- Formalin is dispensed into water for control of parasites and fungus on eggs and juveniles. 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 freshly fertilized eggs are water-hardened in iodophor within their incubation trays either using well or lower spring water depending on the desired rate of development.
- Different egg stocks at Wallowa Hatchery are physically isolated from each other by separate incubator rooms and water supplies. Different fish lots are segregated by separate ponds/tanks and water supplies.
- 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. Footbaths are also present in the captive brood room at entrance and exit, while fish are present.
- All equipment (nets, tanks, rain gear, boots, etc.) is disinfected with iodophor and rinsed 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) – Composite samples are collected once per week during normal operations and each time a cleaning event occurs during the month of highest production for each calendar quarter. Samples are also taken during severe disturbance of stream due to storms, run-off, etc.
- Settleable Solids (SS) – Grab samples are collected once per week during normal operations and each time a cleaning event occurs during the month of highest production for each calendar quarter.
- pH – measured once during normal operations for the month of highest production for each calendar quarter.
- Dissolved Oxygen (DO) – measured only when conditions warrant (e.g., periods of low flows and high temperatures).
- Flow Logs – Measurements are taken once per week during normal operations and during each cleaning event for the month of highest production for each calendar quarter. Flows are also recorded when using a chemical which discharges into the effluent, in order to follow prescribed dilution rates.

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:

- All Adult Transaction Reports – 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.

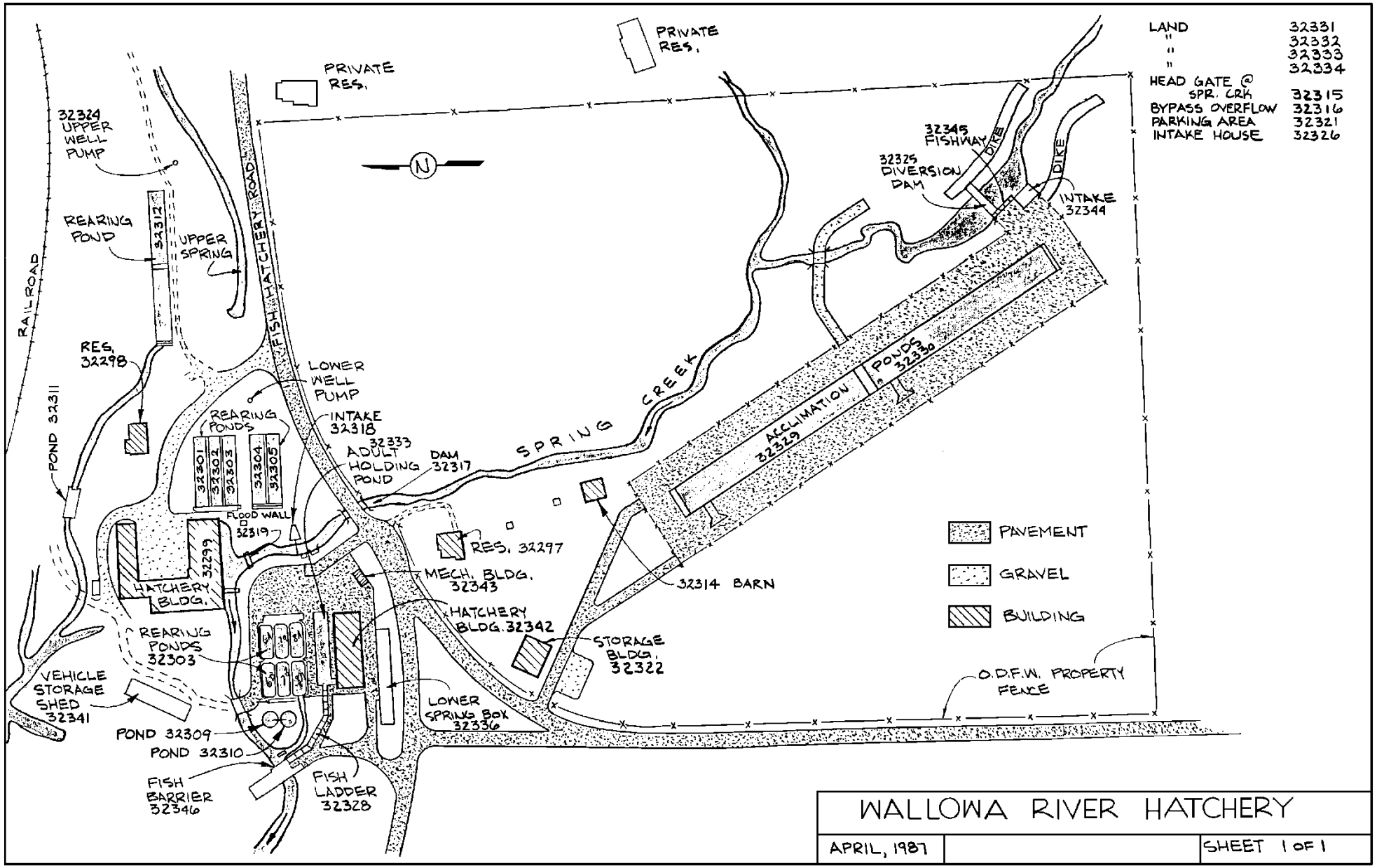
Streamnet (www/streamnet.org)): Hatchery return data are input into StreamNet, a cooperative information management and data dissemination project focused on fisheries and aquatic related data and data related services in the Columbia River basin and the Pacific Northwest. StreamNet is funded through 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).

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: Periodic meetings are held with staff from the U.S. Fish and Wildlife Service and appropriate Indian tribes to discuss hatchery operations.

Communication with the General Public

Wallowa Hatchery and the satellite facilities receive approximately 2,000 visitors each year.


LAND 32331
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HEAD GATE @ SPR. CRK 32315
BYPASS OVERFLOW 32316
PARKING AREA 32321
INTAKE HOUSE 32326
PRIVATE RES.
PRIVATE RES.
32324 UPPER WELL PUMP
REARING POND
32312
UPPER SPRING
RAILROAD
FISH HATCHERY ROAD
N
32345 FISHWAY
DIKE
32325 DIVERSION DAM
DIKE
INTAKE 32344
RES. 32298
POND 32311
LOWER WELL PUMP
REARING PONDS
32301
32302
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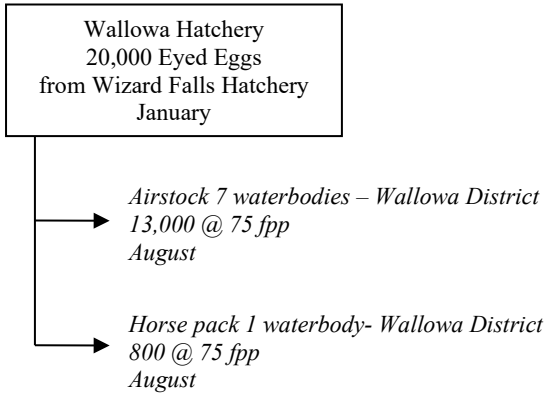
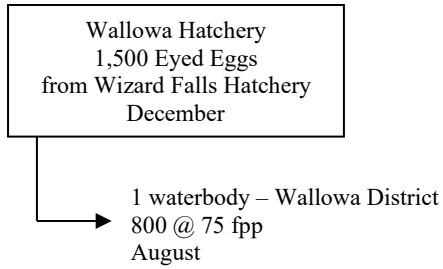
32304
32305
INTAKE 32318
32333 ADULT HOLDING POND
DAM 32317
SPRING CREEK
ACCLIMATION 32329
PONDS 32330
FLOOD WALL 32319
RES. 32297
MECH. BLDG. 32343
32314 BARN
HATCHERY BLDG. 32299
HATCHERY BLDG. 32342
STORAGE BLDG. 32322
REARING PONDS 32303
VEHICLE STORAGE SHED 32341
LOWER SPRING BOX 32336
O.D.F.W. PROPERTY FENCE
POND 32309
POND 32310
FISH BARRIER 32346
FISH LADDER 32328
PAVEMENT
GRAVEL
BUILDING
WALLOWA RIVER HATCHERY
APRIL, 1987
SHEET 1 OF 1

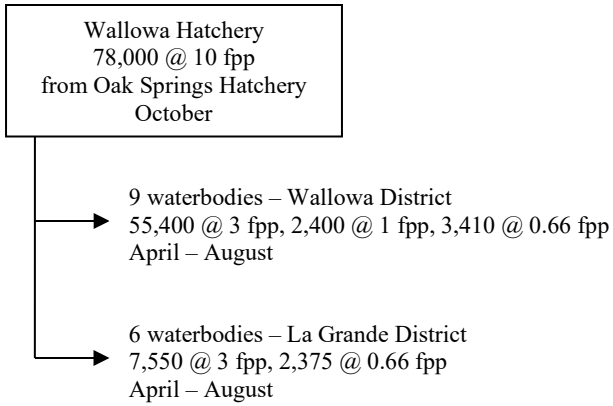
Wallowa Hatchery
Rainbow Trout – Stock 127T (Cranebow)
Airstocking – odd years only



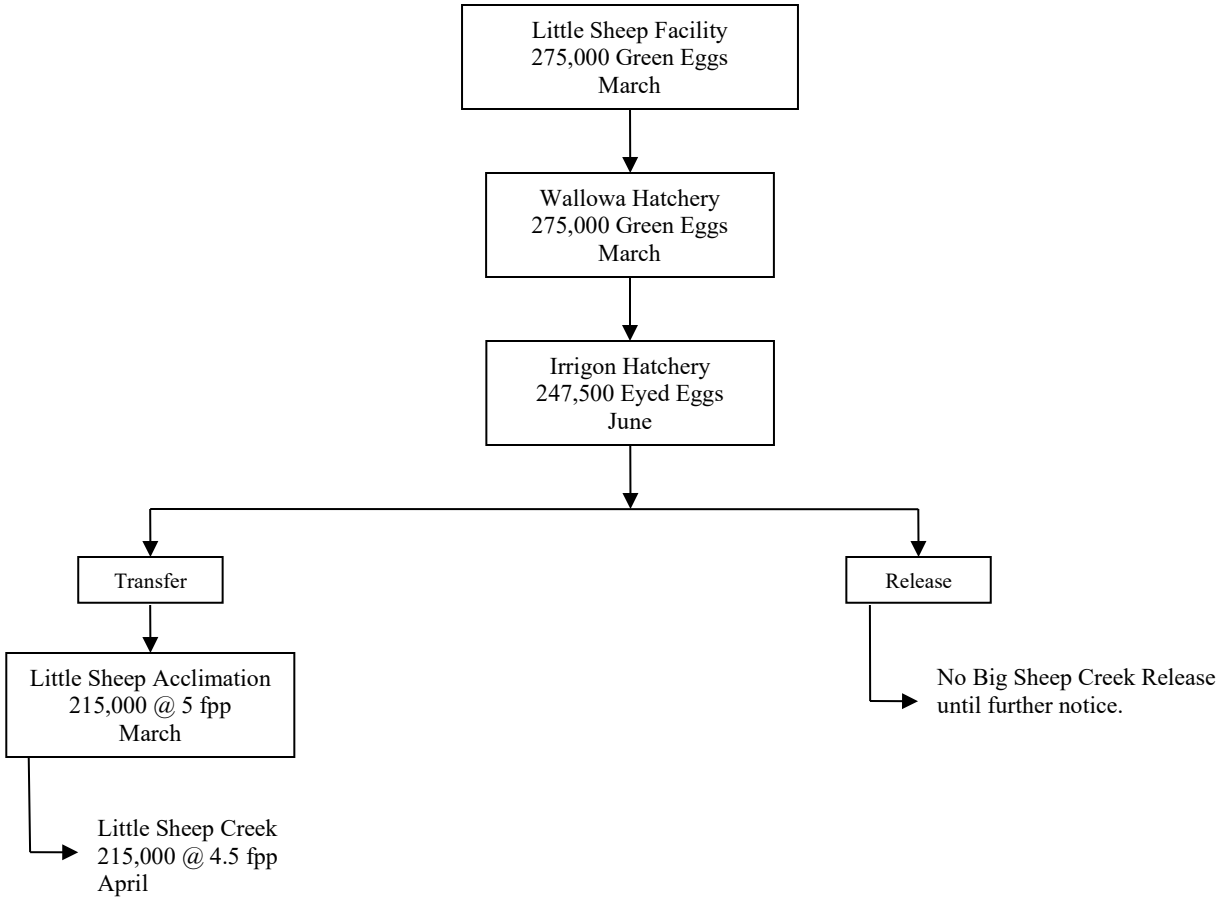
Wallowa Hatchery
Rainbow Trout – Stock 72T (Cape Cod Triploid)
Non-airstock years only



Wallowa Hatchery
Rainbow Trout – Stock 53T (Oak Springs Triploid)



Wallowa Hatchery
Summer Steelhead – Stock 29H (Imnaha River and Tributaries)



Wallowa Hatchery
Summer Steelhead – Stock 56H (Wallowa River)