ROCK CREEK HATCHERY

PROGRAM MANAGEMENT PLAN
2023

Rock Creek Hatchery

INTRODUCTION

Rock Creek Hatchery is located on the North Umpqua River, 23 miles east of Roseburg, just off Highway 138. The site is at an elevation of approximately 820 feet above sea level, at latitude 43.3353 and longitude -123.0014. Total land area is 26.5 acres.

The hatchery water supply is obtained from two sources: Rock Creek and the North Umpqua River. Water from Rock Creek is supplied by gravity; North Umpqua water is pumped during the summer months. Water rights are 30 cfs for Rock Creek and 25 cfs for the North Umpqua. .

The facility is staffed with 5 FTE's.

Rearing Facilities at Rock Creek 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
Holding Pond	135	26	3.5	12,285	1	12,285	concrete	1944	good	
Raceways	145	20	4	11,600	4	69,600	concrete	1944	poor	
Raceways	66	19	6	7,524	4	30,096	concrete	2015	new	
Raceways	80	20	4.5	7,200	7	50,400	concrete	1979	good	
Raceways	80	30	4.5	10,800	2	21,600	concrete	1979	good	
Troughs	16	2	2	64	1	64	fiberglass	1994	good	
Troughs	16	2	3	96	6	576	fiberglass	2003	good	
Vertical Incubators					300			1994	good	20 stacks of 15 trays
Abatement Pond	110	90	6		1		concrete w/ dirt bottom	1979	good	

PURPOSE

The present facility was constructed in 1925, across the North Umpqua River from an earlier trout hatchery built in 1920. The hatchery was closed in 1975 due to low stream flows and high-water temperatures and was reopened in 1979 after extensive reconstruction.
In 2012 a state-of-the-art fish passage ladder was completed to provide NMFS criteria fish passage. It also included a fish video window for Rock Creek basin fish inventory and a fish trap facility.
In 2015 two 1944 vintage 145’ x20’ concrete raceways were converted into four smaller 66’ x 19’ raceways.
The hatchery produces fall and spring Chinook, Coho, summer, and winter Steelhead, and two stocks of Rainbow Trout. The facility is used for adult collection, spawning, incubation, and rearing of Chinook, Coho, Steelhead, and Rainbow Trout.

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.

Rock Creek Hatchery participates in both harvest and conservation programs. The Umpqua River programs are harvest programs used for augmentation of fishing and harvest opportunities. The Fish Creek Rainbow Brood Development program is a conservation program providing supplementation of an imperiled wild population. The Cow Creek and Smith River Fall Chinook programs are integrated recovery programs intended to increase production in areas of suitable habitat that are presently underutilized.

GOALS

Fall Chinook:

Lower Umpqua/Smith River (151H) Stock: to aid the recovery of fall Chinook in sub-basins which have adequate habitat but depressed population levels. Program fish are intended to be reproductively integrated with naturally produced Chinook in the target streams to help aid the recovery of the sub-basin's population. A goal of 10 - 15 returning spawners per mile is used as a baseline objective to aid recovery.

Spring Chinook:

Umpqua River (55) Stock: to provide fish primarily for commercial harvest and sport fishing that are genetically and ecologically similar to wild populations to minimize any potential impacts to wild populations in the Umpqua River Basin.

Coho:

Cow Creek (18H) Stock: to mitigate for loss of habitat and to provide adult fish for the ocean and inland fisheries, providing a freshwater harvest of 1,000 to 3,000 adult Coho.

Rainbow Trout:

Cape Cod Triploid (72T) Stock: to produce triploid legal-size and trophy trout to meet management objectives for various water bodies.

Fish Creek – N. Umpqua (551H) Stock: to develop a hatchery brood stock similar to wild populations to minimize any potential impacts to wild populations for reseeding and angler harvest in water bodies in the North Umpqua High Cascade Basin.

Summer Steelhead:

Umpqua River (55H) Stock: to provide approximately 5,000 hatchery-produced steelhead primarily for angler harvest that are genetically and ecologically similar to wild populations to minimize any potential impacts to wild populations in the Umpqua River Basin.

Winter Steelhead:

Cow Creek (18H) Stock: to provide a significant number of hatchery steelhead for recreational fishing in the Umpqua Basin. To accomplish harvest and escapement goals, the program annually releases about 150,000 hatchery winter steelhead smolts.

OBJECTIVES

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

Fall Chinook:

Smith River (151H) Stock

Produce 100,000 fingerlings (1,667 pounds) for transfer to Gardiner STEP.

Produce 70,000 smolts (7,000 pounds) for transfer to Winchester Bay Acclimation.

Spring Chinook:

Umpqua River (55H) Stock

Produce 342,000 smolts (37,450 pounds) for release in the North Fork Umpqua River.

Coho:

Cow Creek (18H) Stock

Produce 60,000 smolts (3,000 pounds) for release in Cow Creek.

Rainbow Trout:

Cape Cod Triploid (72T) Stock:

Produce 47,500 legal-size (19,792 pounds) and 7,500 trophy trout (10,714 pounds) for release into various standing water bodies.

Fish Creek – N. Umpqua (551H) Stock:

Produce 17,000 fingerlings (80 pounds) and 4,000 sub-legals (800 pounds) for release into various High Cascades lakes.

Summer Steelhead:

Umpqua River (55H) Stock

Provide 1,000 eyed eggs for STEP.

Produce 165,000 smolts (23,571 pounds) for release in the Umpqua River system.

Winter Steelhead:

Cow Creek (18H) Stock

Provide 4,000 eyed eggs for STEP.

Produce 145,000 smolts (25,000 pounds) for transfer to Canyonville acclimation sites.

Produce 5,000 smolts (1,000 pounds) 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 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

Fall Chinook:

Smith River (151H) Stock: Adults arrive at the collection sites between August and November. Peak spawning occurs during October. Adults are collected at Mill Creek Trap, Paradise Creek Trap, Winchester Creek and Weatherly Creek Trap; additional broodstock may be collected by use of tangle nets and angling. Adults are transported to the Gardiner STEP Facility for spawning. One adult is kept out of every four that enter the traps. The annual collection goal is 55 pairs.

Spring Chinook:

Umpqua River (55H) Stock: Adults are collected at Winchester Dam ladder and 2 hatchery trap collection facilities from April to June. Peak spawning occurs in September / October. The annual adult collection goal is 155-195 pairs.

Coho:

Cow Creek (18H) Stock: Adults are collected at the base of Galesville Dam and transported to the hatchery for spawning. Adults arrive at the collection site from mid-September to December. Peak spawning occurs in November. The annual adult collection goal is 46 pairs.

Rainbow Trout:

Cape Cod Triploid (72T) Stock: No broodstock are maintained at this facility.

Fish Creek – N. Umpqua (551H) Stock: Wild fish are collected from Fish Creek during the summer months and held at the hatchery until ready to spawn the following year.

Summer Steelhead:

Umpqua River (55H) stock: Adults are collected at Winchester Ladder and 2 hatchery trap collection facilities. Adults arrive at the collection sites from June to November. Peak spawning occurs in February. The annual adult collection goal is 110-140 pairs.

Winter Steelhead:

Cow Creek (18H) Stock: Wild and hatchery adults are collected by contracted anglers, Canyon Creek Trap, Galesville Dam Trap and South Umpqua Falls Trap. Adults arrive at collection site from January to May. Peak spawning occurs in April. The annual adult collection goal is 80-130 pairs.

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.

Fall Chinook:

Smith River (151H) Stock:

Produce 100,000 eyed eggs for transfer to Gardiner STEP in December.

Produce 70,000 smolts at a size of 10 fpp for transfer to Winchester Bay in late September for acclimation and release into the Umpqua River in mid-September. All fish are fin-clipped prior to transfer.

Spring Chinook:

Umpqua River (55H) Stock:

Produce 212,000 smolts at 8-10 fpp for release into the North Fork Umpqua River in late September – early October. All fish are fin-clipped prior to release.

Produce 130,000 smolts at 6-8 fpp for release into the North Fork Umpqua River in early February. All fish are fin-clipped prior to release.

Coho:

Cow Creek (18H) Stock:

Produce 60,000 smolts at a size of 10 fpp for direct release into Cow Creek in early April. All fish are fin-clipped prior to release.

Rainbow Trout:

Cape Cod Triploid (72T) Stock:

Rear 47,500 fish to an average size of 2.4 fpp for release into various standing water bodies from March to June.

Rear 7,500 fish to a size of 0.7-0.5 fpp for release into various standing water bodies in late August.

Fish Creek – N. Umpqua (551H) Stock:

Rear 17,000 fish to a size of 200 fpp for release into various waterbodies in August.

Rear 4,000 sub-legals to a size of 5 fpp for release into Lemolo Reservoir in August.

Summer Steelhead:

Umpqua River (55H) Stock:

Produce 165,000 1-year smolts at 6 fpp for volitional release into the North Fork Umpqua River in mid-April. Surplus juveniles are released into Galesville Reservoir. All fish are fin-clipped prior to release.

Winter Steelhead:

Cow Creek (18) Stock:

Produce 145,000 1-year smolts at 6 fpp for transfer to Canyonville Acclimation site in January for acclimation and release into the South Fork Umpqua River in April.

Produce 5,000 1-year smolts at a size of 6 fpp for release into Deer Creek in early March.

All releases are 100% adipose-clipped.

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 Rock Creek Hatchery:

Fall Chinook:

Smith River (151H) Stock: Adults are collected throughout the run, and are spawned at a 1:1 male to female ratio, in a matrix procedure. Jacks are incorporated at random proportional to population. The broodstock must contain at least 10% wild fish; up to 100% wild fish have been utilized.

Spring Chinook:

Umpqua River (55H) Stock: Adults are collected throughout the run, and spawned at a 1:1 male to female ratio, in a matrix procedure. Jacks are incorporated at random proportional to their existence in the run for that year. The proposed goal for wild broodstock is 25%-30%.

Coho:

Cow Creek (18H) Stock: A total of 92 adults are collected throughout the run, with a mix of 70% hatchery fish and 30 % wild fish. Fish are spawned at a 1:1 male to female ratio, in a matrix system. Jacks are incorporated at random and are proportional to the population.

Rainbow Trout:

Cape Cod Triploid (72T) Stock: No broodstock are maintained at the hatchery.

Fish Creek – N. Umpqua (551H) Stock: Broodstock are spawned at a 1:1 male to female ratio in a matrix procedure. Only wild and hatchery F1 fish are used as broodstock.

Summer Steelhead:

Umpqua River (55H) Stock: Adults are collected throughout the run, and spawned at a 1:1 male to female ratio in a matrix procedure. Jacks are incorporated at random proportional to their existence in the run during that year. Broodstock has consisted of 10 - 20% wild fish.

Winter Steelhead:

Cow Creek (18H) Stock: Adults are collected throughout the run, and spawned at a 1:1 male to female ratio in a 10x10 matrix procedure. The target is 20% - 60% naturally occurring brood stock.

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 Rock Creek Hatchery

Health Monitoring

- 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.
- Monthly health monitoring examinations of healthy and clinically diseased fish are conducted on each fish lot at the hatchery.
- Examinations for Myxobolus cerebralis, agent of whirling disease, are conducted annually on 60 fish held for a minimum of 180 days at the facility.
- At spawning, a minimum of 60 ovarian fluids and 60 kidney/spleen/pyloric caeca (based on a minimum sampling at the 5% incidence level) 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 brood fish are injected with antibiotics for the control of bacterial diseases.
- Juvenile fish are administered antibiotics orally as needed for the control of bacterial infections and for prevention of diseases.
- 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 eggs brought to the facility are surface-disinfected or water-hardened in buffered iodophor.
- 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 and one during active cleaning operations at each of the 3 outfalls and one incoming water supply if applicable. Settleable Solids (SS) – measured quarterly. Two composite samples are collected, one during normal and one during active cleaning operations and one incoming water supply if applicable.
- pH – measured quarterly when settleable solids are measured.
- Total Ammonia and Total Phosphorus – measured quarterly 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 whenever flows are altered for hatchery management activities (i.e., ponding of fish, splitting of fish lots, fish releases, etc.).

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.
- Rock Creek fish passage operation log.
- Quarterly DEQ discharge monitoring report (DMR)

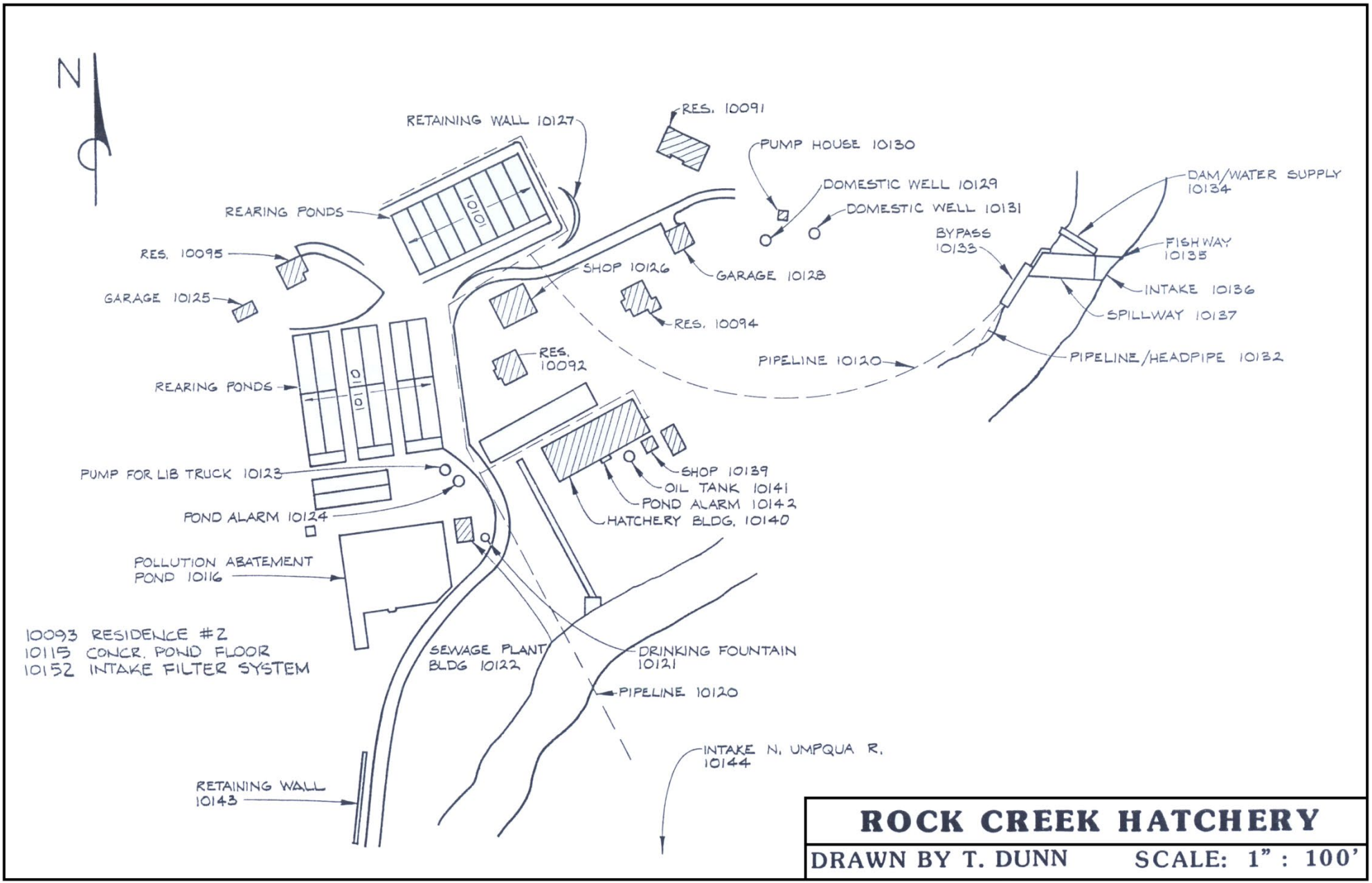
Hatchery Management System (HMS): Computerized system to collect, report, summarize and analyze hatchery production data. This system is a tool to be used in production control at all hatchery management levels.

Interagency Coordination Communication

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.

Communication with the General Public

Rock Creek Hatchery receives approximately 7,000 visitors each year, and an average of 15 tours are given in a year.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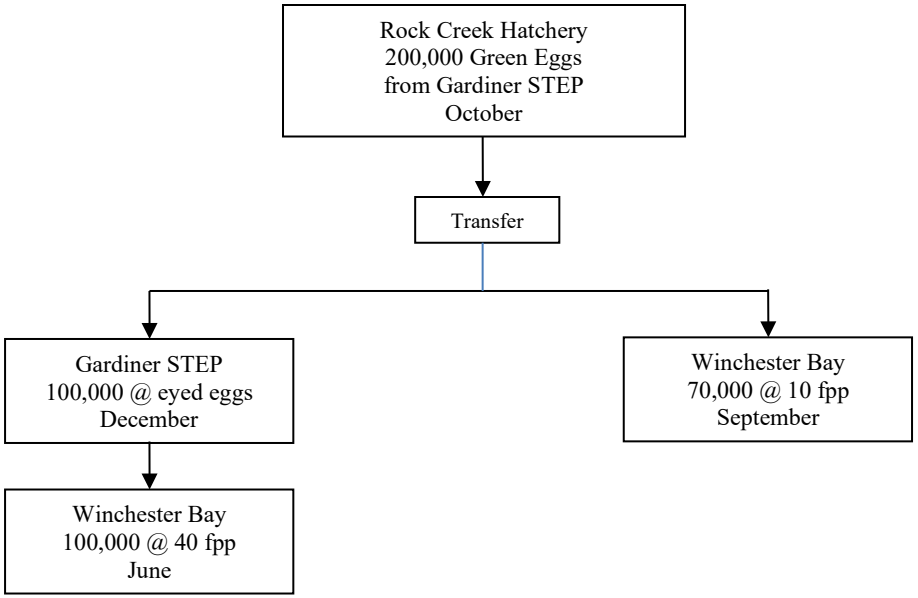
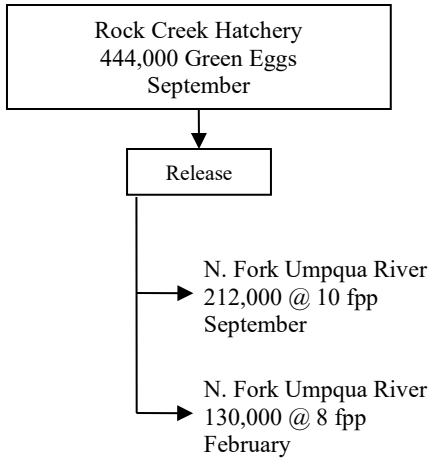
RETAINING WALL 10127
RES. 10091
PUMP HOUSE 10130
DOMESTIC WELL 10129
DOMESTIC WELL 10131
DAM/WATER SUPPLY 10134
REARING PONDS
10101
BYPASS 10133
FISH WAY 10135
RES. 10095
SHOP 10126
GARAGE 10128
INTAKE 10136
GARAGE 10125
RES. 10094
SPILLWAY 10137
RES. 10092
PIPELINE 10120
PIPELINE/HEADPIPE 10132
REARING PONDS
10110
PUMP FOR LIB TRUCK 10123
SHOP 10139
OIL TANK 10141
POND ALARM 10142
POND ALARM 10124
HATCHERY BLDG. 10140
POLLUTION ABATEMENT POND 10116
10093 RESIDENCE #2
10115 CONCR. POND FLOOR
10152 INTAKE FILTER SYSTEM
SEWAGE PLANT BLDG 10122
DRINKING FOUNTAIN 10121
PIPELINE 10120
INTAKE N. UMPQUA R. 10144
RETAINING WALL 10143
ROCK CREEK HATCHERY
DRAWN BY T. DUNN
SCALE: 1" : 100'

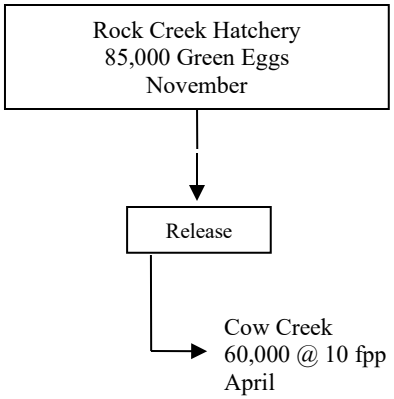
Rock Creek Hatchery
Fall Chinook Salmon – Stock 151H (Smith River)



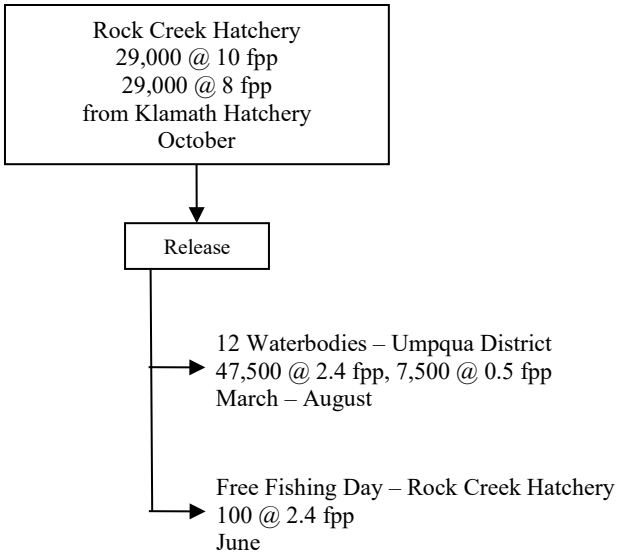
Rock Creek Hatchery
Spring Chinook Salmon – Stock 55H (Umpqua River)



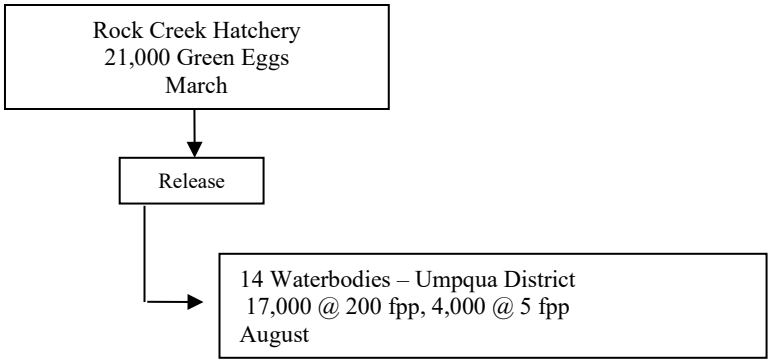
Rock Creek Hatchery
Coho Salmon – Stock 18H (Cow Creek)



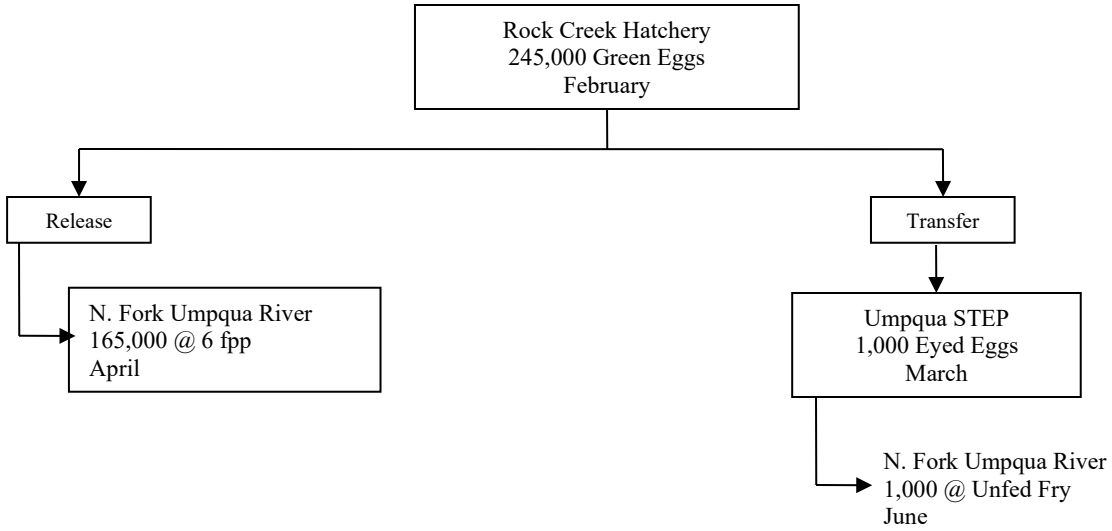
Rock Creek Hatchery
Rainbow Trout – Stock 72T (Cape Cod Triploid)



Rock Creek Hatchery
Rainbow Trout – Stock 551H (Fish Creek)



Rock Creek Hatchery
Summer Steelhead – Stock 55H (Umpqua River)



Rock Creek Hatchery
Winter Steelhead – Stock 18H (Cow Creek)