



Oregon Department of Fish and Wildlife Salmon and Trout Enhancement Program

Fish Propagation Project Application

New: Renewal:

Project Name: Letz Creek Fish Rearing Facility

PART 1 – APPLICANT INFORMATION

Applicant: Northwest Steelheaders, Emerald Empire Chapter

501(c)(3) tax exempt status: Yes No

Contact Name:

Ken Johnson

Address: PO Box 17

City: Harrisburg

State: OR

Zip: 97446

Phone: 541-520-9082

Email: kenmjohnson@msn.com

Signature: 

Date: 12/17/2021

A goal of the Salmon and Trout Enhancement Program (STEP) is to achieve the recovery and sustainability of Oregon's native stocks of salmon and trout. Through STEP, Oregonians can submit a proposal to ODFW and the Fish and Wildlife Commission to conduct a project consistent with this goal.

The following sections of the STEP Fish Propagation Project Application will ask you to provide the information needed to thoroughly review your proposed project and determine if it is consistent with STEP goals. The review will also determine whether a project is consistent with the Native Fish Conservation Policy (NFCP) and contributes to the broader goals of the Oregon Plan for Salmon and Watersheds (OPSW) to restore salmon runs, improve water quality, and achieve healthy watersheds.

As a STEP volunteer, become familiar with these important plans and policies that guide and direct STEP activities. As you complete this application, consider and explain how your proposed project will help STEP to achieve its goals and will contribute to Oregon's efforts to recover native fish and establish healthy watersheds.

PART 2 – TYPE OF REARING PROJECT AND OBJECTIVE

Fish Species to be Reared:

Siuslaw winter steelhead (stock 38)

Intent of Rearing Project (check only one):

- Type 1** Increase fishing and harvest opportunities
- Type 2** Enhance existing natural production
- Type 3** Restore fish to vacant habitat
- Type 4** Develop broodstock

Note: OAR 635-009-0125 defines STEP fish propagation projects as the following:

Supplementation – A project involving continued planting to maintain or increase fish abundance where natural production is insufficient to meet management objectives (Type 1)

Rehabilitation – A project in which fish are released to rebuild a currently depressed run (Type 2 and 3)

Broodstock Development – A project in which reared fish are released and the resulting adults return to a recapture facility to provide an egg source for management program (Type 4)

Project Start Date: 12/01/2021 **Project End Date:** 12/01/2026

Project Duration:

- If Type 1:** 5 years
- If Type 2, 3, or 4:** 3 years Coho salmon
- 4 years Chum salmon
- 5 years Chinook salmon
- 4 years Steelhead
- 4 years Trout

Note: Projects that continue beyond the above-listed time periods must apply for renewal at the end of that time period.

Describe how the proposed project (please answer all that apply):

(a) Addresses ODFW fish management needs as outlined in subbasin fish management, species, recovery or conservation, or other plans (please cite specific plan, goal, objective, etc.)

The Coastal Multispecies Plan (2014) provides for the consumptive harvest of hatchery winter steelhead in the Siuslaw Basin. The harvest goal is met through the release of 100,000 hatchery smolts annually. 85,000 hatchery smolts are released into the lower Siuslaw Basin at Whittaker Creek (70,000), 15,000 hatchery smolts are released into the upper Siuslaw River at Letz Creek and Green Creek (15,000), a Lake Creek tributary.

(b) Will contribute to fisheries. Identify the fisheries and note any current special regulations such as “adipose fin-clipped only” that would affect the proposed project operation.

The release of winter steelhead smolts from the Letz Creek Fish Rearing Facility helps provide an in-river sport fishery in the mainstem Siuslaw River from river mile 0 to 105 (Letz Creek confluence). All fish released from Letz Creek are adipose fin-clipped to identify them as available for harvest. Current regulations require the release of all un-marked winter steelhead.

(c) Addresses the factors limiting adequate natural production in the basin (lack of spawning habitat, poor rearing habitat). Also, please cite any information that supports that determination.

Natural production of winter steelhead in the Siuslaw Basin is greatest in the North Fork Siuslaw and Lake Creek drainages. In the mainstem Siuslaw River drainage, winter steelhead production is most successful in Wolf Creek, Whittaker Creek and Wildcat Creek. Habitat in the upper Siuslaw River Basin

is generally more favorable for Coho salmon, with lower gradients, and slower flows. For this reason, past improvement projects that have been conducted under the STEP program at Letz Creek were specifically aimed at improving spawning and rearing habitat for Coho. However, all fish species present in Letz Creek likely benefited from the placement of root wads and woody structures in the channel.

(d) Contribute to other STEP, OPSW, and salmon and/or watershed recovery needs (education, citizen participation, other social benefit, etc.).

Fish rearing attracts many volunteers to the ODFW Salmon and Trout Enhancement Program. There are approximately 120 members of the Emerald Empire Chapter of NW Steelheaders, and about 25 of those members are active at the Letz Creek facility year-round. The Letz Creek facility provides citizens with a volunteer opportunity that fulfills personal enrichment goals. Tours are provided by request and include school groups (elementary and middle school students), service groups (Rotary Club, Lions Club), scouting groups (cub scouts, boy scouts), senior and retirement groups, natural resource groups, neighborhood groups, and members of other STEP groups.

The Emerald Empire Chapter of the NW Steelheaders are also involved with other ODFW programs including steelhead recycling (Leaburg Hatchery), trout stocking (Leaburg Hatchery), coded wire tagging (Willamette Hatchery), trap support (Whittaker Creek), river cleanup events (Siuslaw), angler education and outreach (Kid's Fishing at Carmen Reservoir, Kids with Cancer (McKenzie River), and a Veteran fishing program. The Emerald Empire Chapter of the NW Steelheaders also assists the South Willamette District with their STEP Egg to Fry Program.

Other opportunities for community involvement through this program include donations of cash, materials, equipment and professional expertise. Past support has ranged from timber interests, power companies, a steamfitter's union, paint suppliers, contractors, heavy equipment operators, gravel suppliers, landscape companies, boat manufacturers, trailer manufacturers, fabricators for local hardware suppliers, and other skilled individuals. In addition, a younger member of the Emerald Empire Chapter of NW Steelheaders designed and built an Eagle Scout trail project at the Letz Creek facility.

(e) Is addressed under an existing Hatchery Genetic Management Plan or Hatchery Management Plan.

The Siuslaw River Winter Steelhead HGMP identifies a release of 15,000 winter steelhead smolts from the Letz Creek facility for the purpose of providing sport angling opportunities.

(f) Is consistent with the goals of the Hatchery Management Policy and the NFCP (please answer all that apply):

- a. Fosters and sustains opportunities for sport, commercial, and tribal fishers consistent with the conservation of naturally produced native fish.

The Letz Creek program fosters and sustains opportunities for a sport fishery in the Siuslaw River by providing marked hatchery winter steelhead for sport angler harvest. 100 percent of the smolts released from the Letz Creek facility are adipose fin-clipped, and broodstock utilized at the Letz Creek facility are from Siuslaw stock. Since April 2000, release of smolts directly from the Letz Creek facility has provided winter steelhead fishing opportunities for an additional 58 river miles upstream of Whittaker Creek. Prior to 2000, smolts were trucked to the release location at Whittaker Creek.

The Letz Creek program is consistent with conservation of naturally-produced native fish through operational procedures that reduce the potentially negative impacts of hatchery fish on wild populations. Some recently adopted practices include holding fish until they start to exhibit smolting behavior, such as schooling and circling the pond, feeding fish based on ODFW hatchery recommendations, and withholding food for a week prior to release. These actions are believed to increase the ocean emigration

rate and minimize the potential for fish to residualize, thereby reducing the interactions between hatchery smolts and native fishes. Hatchery fish that return to the adult trap are also stripped of their gametes, reducing genetic interactions and competition for spawning habitat between native and hatchery stock. Stripping gametes from returning hatchery steelhead also helps to prevent the proliferation of naturally produced hatchery-origin juveniles, which compete for resources with wild-origin fish. Juvenile fish raised at the Letz Creek facility are also reared in an earthen pond. This provides an element of natural selection as juveniles must learn to avoid predators as they would under natural conditions, and they also learn how to feed on natural foods.

b. Contributes toward the sustainability of naturally produced native fish through the responsible use of hatcheries and hatchery-produced fish.

The Letz Creek facility has obligations under the Coastal Multispecies Plan to provide 15,000 winter steelhead smolts to the upper Siuslaw River to support a selective winter steelhead fishery. The consumptive harvest of hatchery fish must not impede native fish conservation. The operators of the Letz Creek facility understand this goal and promote wild fish production and conservation through education and river clean-ups, as well as their practices at the facility. In the past, the Letz Creek STEP Program has also completed habitat enhancement projects to contribute towards the sustainability of naturally-produced native fish. Early in its development the Letz Creek STEP Program was also instrumental in helping ODFW determine stray rates of different winter steelhead stocks, which led to a change from Alsea Hatchery stock to native Siuslaw River stock for the Siuslaw River hatchery winter steelhead program.

c. Maintains genetic resources of native fish spawned or reared in captivity.

Alsea Hatchery winter steelhead broodstock have been replaced with native Siuslaw broodstock, which helps protect the genetic integrity of the native Siuslaw population. Discontinuing the use of out-of-basin stock may also reduce the numbers of hatchery adults straying within and beyond the Siuslaw Basin.

This program aims to incorporate 30 percent wild fish in the broodstock each season to maintain a hatchery stock that is genetically similar to the naturally producing native stock. This goal is consistent with the winter steelhead program in the lower Siuslaw River at Whittaker Creek. Both programs aim to collect wild and hatchery origin brood randomly throughout the season to mirror returns of the native population. Low numbers of returning adults to the Letz Creek trap have made it difficult to achieve this goal, but it is standard operating procedure when there are adequate returns.

d. Minimizes adverse ecological impacts to watersheds caused by hatchery facilities and operations.

Letz Creek supports native populations of Coho salmon, Steelhead, and resident cutthroat trout. The adult trap at Letz Creek is operated to minimize interactions with returning Coho, and the trap design allows unimpeded upstream and downstream passage for cutthroat trout. Weir installation is typically delayed until mid-January to minimize interactions with Coho salmon and allow them to move freely through the system. Any Coho that enter the trap are placed upstream through a gate in the trap and are not removed from the water. Coho carcasses that are flushed down from upriver and caught against the trap are placed downstream and allowed to decompose naturally providing nutrients to the stream.

The Letz Creek Fish Rearing Facility has attracted a number of natural fish predators including great blue herons, mergansers, king fishers, bald eagles, osprey, river otters and cutthroat trout (during smolt release into Letz Creek). It is likely that the availability of hatchery fish has increased the abundance of fish predators in the vicinity, which could cause increased predation on native fishes. This issue is addressed through predator management efforts. Volunteers haze predators from the site, and reflective material suspended over the rearing pond has proved to be very effective in deterring avian predators and also

preventing some river otters from entering the pond. Some hazing also takes place in Letz Creek during smolt release.

No chemical water treatment is associated with the facility so discharge pollution is not an issue. The Letz Creek facility is also a 'flow through' facility, so water is not extracted from one stream and distributed to another.

PART 3 – LOCATION OF REARING PROJECT OR FACILITY

County: Lane Basin or Watershed: Siuslaw

Stream: Letz Creek

And one of the following:

Road Address: 79422 Letz Creek Rd, Lorane, OR

River or Stream Mile: _____

Legal (Township / Range / Section): T20S/R5W/29

UTM Coordinates: _____

Please include a map showing the project location within the watershed.

Other salmon, steelhead and/or trout species present in basin:

| Species | Run | Hatchery or Naturally Produced? | State or Federally Listed? |
|-------------------|-----------------------|---------------------------------|----------------------------|
| Coho | | Natural | Federally threatened |
| Chinook | Fall | Natural | |
| Coastal Cutthroat | Resident & Anadromous | Natural | |
| Steelhead | Winter | Natural and hatchery | |
| | | | |
| | | | |
| | | | |
| | | | |

List all other propagation programs in the basin or watershed:

| Species | Responsible Agency or Organization | Number Released | Program Objective |
|------------------|------------------------------------|-----------------|--|
| Winter Steelhead | ODFW | 85,000 Smolts | Provide a winter steelhead fishery in the Siuslaw Basin. |
| Coho | Florence STEP | 10,000 Fed Fry | Education |
| | | | |
| | | | |

If other propagation programs exist, what is the relationship of the proposed project to these other programs?

The production of Siuslaw winter steelhead at the Letz Creek Fish Rearing Facility is part of the basin-wide management plan for hatchery steelhead releases. Letz Creek occasionally receives unfertilized eggs and milt from the Whittaker Creek trap when there are not enough returning adults to the Letz Creek site to meet broodstock needs.

PART 4 – OPERATION

Please explain the proposed operation including the following (where applicable) or attach a copy of the existing Hatchery Genetic Management Plan (HGMP) or Hatchery Management Plan (HMP):

(a) Source of broodstock.

Letz Creek broodstock is obtained from returning hatchery and wild adults trapped at the Letz Creek facility. The alternate source for Letz Creek broodstock is the Whittaker Creek trap where Siuslaw winter steelhead are spawned for the lower river release (85,000 smolts). Whittaker Creek broodstock is only used when there are not enough fish returning to the Letz Creek facility.

(b) Number of eggs needed.

A maximum of 40,000 eggs are needed to meet production goals.

(c) Number of broodstock (males and females) needed.

A minimum of 26 pair of adults are needed to meet broodstock needs.

(d) Mating procedures.

Fish are live-spawned using a 3x3 spawning matrix when possible.

(e) Number of fry needed.

NA

(f) Number of fingerling needed.

A minimum of 20,000 fingerlings are needed at fin-clipping stage for placement in the pond. Fish size at clipping varies from 100-350 fish/pound, and timing depends on pond condition, water supply and volunteer availability. Fin-clipping typically occurs between late June and early September.

(g) Number of pre-smolts needed.

NA

(h) Number of smolts needed.

The production goal for the Letz Creek facility is 15,000 adipose fin-clipped smolts.

(i) Anticipated or historical losses at each stage.

Egg loss due to normal mortality and fungal pathogens varies from year to year and increases during warmer water periods. The 40,000 egg take target provides for a 50% loss during the egg stage. Formalin is not used to control fungus related egg loss because of environmental concerns, so the current treatment of eggs to prevent fungal growth is limited to a weak iodine solution.

Egg losses due to fungus have decreased with operational experience and improved techniques, but they still account for the greatest program losses. Access to incubating eggs is now limited to well-trained volunteers and eyed-eggs are shocked early to identify blanks. Eggs are picked 24 hours after shocking,

and removal of dead eggs is limited to once per week after reaching the eyed-egg stage. There is also a UV light assembly that kills waterborne pathogens in the water supply.

Mortality of fry and fingerlings in the circular tanks varies from year to year and can increase quickly due to fungus and pathogens. Most losses are attributed to cold water disease. Equipment failure is also a potential mechanism for losing fish, but volunteers visit the site daily so problems or potential problems are identified early.

(j) Anticipated or historical number of adult returns resulting from rearing project.

The average number of Letz Creek winter steelhead that contribute to the Siuslaw fishery is unknown, but during the last 5-year renewal period an average of 36 steelhead/year returned to the trap (0 in 2017 to 100 in 2020, Appendix E). In 2019, volunteers discovered that fish were escaping the adult trap and the weir entrance was fixed. As a result, trap return numbers underestimate the actual number of fish returning to Letz Creek, likely for several years. Adult returns to the trap have increased since the weir was fixed.

(k) How returning adults will be collected.

Returning adults are collected at a trap located near the release site (Appendix A, D). A temporary weir is placed in the stream next to the trap each January and removed at the end of the season. Broodstock are spawned on the stream bank by volunteers.

(l) Disposition of collected adults.

Both hatchery and wild broodstock are live-spawned at the fish trap and then given a caudal fin punch and released downstream. Hatchery adults that are not needed for spawning are stripped of their gametes, tail punched, and released downstream. Unmarked steelhead that are not used for spawning are passed upstream. All natural mortalities that drift down to the trap or are found in the trap are placed downstream.

(m) Other projects that may receive eggs or reared fish from this project.

No other project has received eggs or reared fish from this project. It is possible that Alsea Hatchery, Willamette Hatchery or Roaring River Hatchery could potentially receive eggs or reared fish from Letz Creek in the event of catastrophic losses, but such an event is highly unlikely.

Release Program (summarize proposed fish releases):

| Number Released | Date of Release | Size (fish/lb) or Stage | % Marked | Release Location |
|------------------------|------------------------|--------------------------------|-----------------|-------------------------|
| 15,000 | April 2022 | Smolt 6/lb | 100 | Letz Creek |
| 15,000 | April 2023 | Smolt 6/lb | 100 | Letz Creek |
| 15,000 | April 2024 | Smolt 6/lb | 100 | Letz Creek |
| 15,000 | April 2025 | Smolt 6/lb | 100 | Letz Creek |
| 15,000 | April 2026 | Smolt 6/lb | 100 | Letz Creek |

If fish are marked, please describe the type of mark and the reason for marking.

Letz Creek winter steelhead have been marked with a single adipose clip since 2000, as have the 85,000 smolts released at Whittaker Creek. Adipose-clipping Letz Creek steelhead identifies the fish as available for harvest and also allows for monitoring of hatchery stray rates.

PART 5 – FACILITY INFORMATION

Please describe (or provide attachments that describe) the facility including:

- (a) Design – include a diagram or sketch that shows structures, water diversions, water distribution system, settling ponds, fish ladders, adult traps, etc.

See Appendix A.

- (b) Water supply – identify source, quantity available, quantity needed, and provide existing water quality and temperature (daily, weekly, monthly) data.

Both unnamed tributaries utilized as water supplies at the Letz Creek Fish Rearing Facility are spring/seep fed and run year-round. Water temperatures at the hatch house and circulars typically vary from 38-58°F during the months of operation (January to August). The unnamed tributary B that supplies water to the hatch house and circulars has no fish presence upstream of the water intake structure due to a natural barrier. Water is gravity fed through two 3" diameter PVC pipes that run 500 feet from the intake to the circulars (Appendix B).

Unnamed tributary A flows into the rearing pond through a 3" diameter PVC pipe (Appendix C). The pond is dammed for fish rearing from August through April. Temperature monitoring of the rearing pond was conducted for several years and showed that pond temperatures mimic stream temperatures, which are similar to those of the hatch house and circulars (38-58°F).

Dissolved oxygen concentrations are monitored in the circulars and rearing pond. Aerators are available for use, if required. On occasion, aeration has been used in the rearing pond due to low water flows or surface freezing but is generally not needed. In the event of a power outage or failure, a gas-powered generator is available to provide power to the facility. A gas-powered trash pump and 750 feet of fire hose (3" diameter) are also stored on-site as a back-up water source for the pond. The gas pump, as well as an additional electric pump, can also be used to supply water to the circulars and hatch house.

- (c) Incubation, rearing, and/or broodstock holding facilities – dimensions, capacity, water required, etc.

Incubation now occurs in 12"x21.5" baskets that are placed in three 10'4"x14" troughs inside the locked hatch house (Appendix B). There are three troughs capable of holding 4 baskets each, which can accommodate 48,000 eggs. Flow rate through the troughs is maintained at 2.5-5 gal/min through a series of baffles that create upwelling of water through the eggs and baskets. Heath stacks were used prior to the 2015 season.

Fry are moved into two circular tanks by size class until they are fin-clipped in late summer. The two circular tanks have a six foot diameter and three foot depth. Four 300 gallon Rubbermaid tubs are used as settling tanks and are plumbed to receive water from both PVC water lines. Water flows from the fourth settling tank to the circulars at a rate of 2.5-3.0 gal/min. Each circular tank has a ball valve to control water flow, and flow direction and velocity can also be adjusted for each tank, as best suited for fish size and self-cleaning. Each circular tank has its own vibration feeder that delivers food to fish once an hour during daylight hours.

After fin-clipping, fish are released into the 0.5 acre rearing pond with a maximum depth of 10 feet. Unnamed tributary A flows into the pond formed by the earthen dam. Water depth is controlled via an exit tower with removable dam boards (Appendix C).

(d) Adult trapping, holding and handling facilities.

The adult trap is located in Letz Creek upstream of the rearing pond release site (Appendix A, D). The trap is checked daily by volunteers, and adult fish are held in the trap for a maximum of 4 days prior to spawning. The trap is on private property and secured with a lock, and the entire facility is behind a locked gate and not visible from the road.

The trap holds two volunteers and at least 70 fish. This is based on the maximum number of fish that have been processed at one time. Volunteers are able to release fish through a locked gate on the upstream side of the trap without removing them from the water. ODFW staff are available to assist volunteers with handling, spawning and rearing activities if needed.

(e) Water treatment (if applicable) and discharge process. Please also note whether a National Pollutant Discharge Elimination (NPDES) Permit is required.

Water is piped via gravity flow from unnamed tributary B directly into the settling tanks for the circulars and hatch house. Two pipe lines run 500 feet from the stream intake to the facility. Water is discharged back into the stream through three discharge pipes from the hatch house and circular tanks. Ovadine is used for cleaning/disinfecting and as a foot bath prior to hatch house entry. It is the only chemical agent regularly used on-site.

For unnamed tributary A, water flows through the pond, exits the tower (a 10 foot drop when pond is full) and flows through a culvert running beneath the earthen dam back to the original stream bed. No water treatments are used in the pond. During smolt release a valve is opened in the 6" release piping which extends through the base of the tower dam boards and continues 350 feet to Letz Creek. During normal water years the pond empties through the release piping in about 28 hours. Silt accumulates in the pond each year, and the sediment that is left in the pond after it is emptied gets removed by hand excavation and diaphragm pump. Silt is moved to an upslope location and does not get discharged into Letz Creek.

(f) Known existing or potential disease issues or considerations.

Cold water disease is common in the basin and has caused elevated fry losses at the facility. There was also a Trichodina outbreak in 2003, but it was successfully controlled after treatment with hydrogen peroxide.

(g) Process for disease monitoring.

ODFW Pathology at OSU provides disease monitoring services. Ovarian fluid is collected from spawned females during the spawning season and sent to pathology for virology testing. Within 6 weeks of smolt release, 6-10 freshly killed carcasses are also examined for signs of disease and parasites. In addition, a 60 fish sample is tested for whirling disease every three years. Fish are approved for release by ODFW staff prior to leaving the facility.

(h) Anticipated facility operation and maintenance costs.

The Emerald Empire Chapter of the Northwest Steelheaders provides about \$2,000/year to run the Letz Creek facility. Half of that pays for the portable toilet on-site, year-round, and the remainder covers electric and maintenance costs. Equipment replacement and site improvements are generally covered through STAC mini-grants or volunteer donations of time and materials. Fish food is provided by ODFW's Salmon and Trout Enhancement Program.

Documents attached that demonstrate legal access to the site or property rights:

| | | | |
|-----------|--------------------------|-----------------------------|-------------------------------------|
| Lease(s) | <input type="checkbox"/> | Access Agreement | <input checked="" type="checkbox"/> |
| Option(s) | <input type="checkbox"/> | Water Right | <input type="checkbox"/> |
| Easement | <input type="checkbox"/> | Other written Authorization | <input type="checkbox"/> |

Attach a written statement from the appropriate local planning authorities of the county or jurisdiction within which the proposed facility is located stating whether the proposed operation is in compliance with all local comprehensive land-use and/or estuary plans.

Note: It is the responsibility of the project sponsor to obtain all water rights, access agreements, easements, use permits or any other permits needed to undertake the project.

PART 6 – PROJECT MONITORING AND EVALUATION

Please explain how this project will be monitored and evaluated and by whom (volunteer, ODFW or other) including:

(a) Monitoring for disease.

Volunteers observe fish daily. Any non-typical fish behavior or mortality is noted and addressed. ODFW Pathology at OSU provides pathology support for any fish problems. Local hatchery personnel at Leaburg, McKenzie, and Willamette hatcheries have also been helpful in providing fish culture information.

(b) Monitoring of juvenile survival and/or distribution (if applicable).

Monitoring juvenile survival in the circular tanks is simple. Mortalities are collected and recorded daily, and any increased mortality is immediately reported to ODFW. Survival in the pond is difficult to assess. Predation ensures that dead fish are rarely observed, and it is difficult to assess losses due to predation over time.

(c) Monitoring of adult returns to this or other collection facilities (if applicable).

The trap is checked daily during operation, with fish marking/spawning/release occurring as needed during the season (typically twice a week). Data are sent to ODFW at the end of each month of trapping.

(d) Monitoring of adult returns to natural spawning areas (if applicable).

This is currently monitored anecdotally through a limited number of ODFW spawning surveys, but not at a level that could be used to determine stray rates.

(e) Contribution to sport or commercial fisheries (if applicable).

Not Monitored

(f) Estimated monitoring costs.

There are no monitoring costs directly associated with this STEP Program.

If this is a project renewal, please identify or provide a summary of past monitoring information including:

(a) Results of disease monitoring (please attach appropriate reports).

No disease pathogens have been identified in the ovarian fluid or milt of any adult spawners handled at the facility, but there have been pathogens documented in fry and fingerlings during periods of elevated fry loss at the facility. Smolts examined have always been cleared for liberation. No evidence of whirling disease has ever been detected in any fish reared at the facility.

(b) Results of any surveys (juvenile, adult trapping, spawning, creel, etc.)

Mark-recapture estimates were made to estimate the number of smolts released from the rearing pond in 2011, 2012 and 2015 (Appendix E). However, there were issues with this technique and the model assumptions given limitations of seining the upper end of the pond and short time frame for redistribution after marking. Results of the mark-recapture estimate are between 6000 and 12,000 smolts per year (Standard error +/- 209-900). Volunteers also directly counted smolts exiting the rearing pond in 2017, 2018 and 2019 (Appendix E). They took a break from this during the pandemic, but plan to direct count smolts for several more years until a reliable curve is established between the number of fish clipped and

the number of smolts counted. Smolts are counted by setting up a net pen at the fish release outlet. Volunteers attend the net and count individual fish until the pond is drained.

(c) Reports, management plans, technical documents, or journal articles that reference the project.

Heller, C. 1999. Letz Creek Fish Rearing Facility: An operational overview of winter steelhead smolt production.

Please identify any potential social consequences resulting from project returns and how those will be monitored or evaluated.

Neighbors living along Letz Creek have been very supportive of operations at the Letz Creek Fish Rearing Facility, but there are inherent problems with local residents trespassing onto facility property. In the past neighbors have followed adult fish to the trap site to observe where the fish are collected and how the fish are used. Volunteer management of the program has led some local residents to believe that the facility is a public operation, which it is not. Swanson Brothers (landowner of the facility) does not want uninvited guests on the property, nor do they want the subsequent liability and vandalism concerns associated with public access.

Volunteers politely inform uninvited people who enter the facility property that they are trespassing and that the site is not open to the public. In 1999, eight adult steelhead were removed from a circular tank where they were being held for broodstock. A police report was filed, but the responsible individuals were never apprehended. Rather than investing considerable funds to increase security around the circulars, spawning activity at the facility was suspended until adult fish were returning directly to the Letz Creek trap (2002). The Oregon State Police has also provided additional security at the facility during trap operation by making unscheduled visits to the facility. The trap is secured with a lock and not visible from the road, and it has not been the target of any vandalism since trap operation began in 2002.

One reoccurring social issue affecting site operations is the intentional blockage of the Siuslaw Falls fish ladder. It is believed that young people block the top end of the fish ladder with plywood to increase the depth of the swimming hole during the summer. ODFW or BLM staff remove the blockage each fall to allow returning adults unimpeded upstream passage.

PART 7– OTHER SUPPORTING INFORMATION

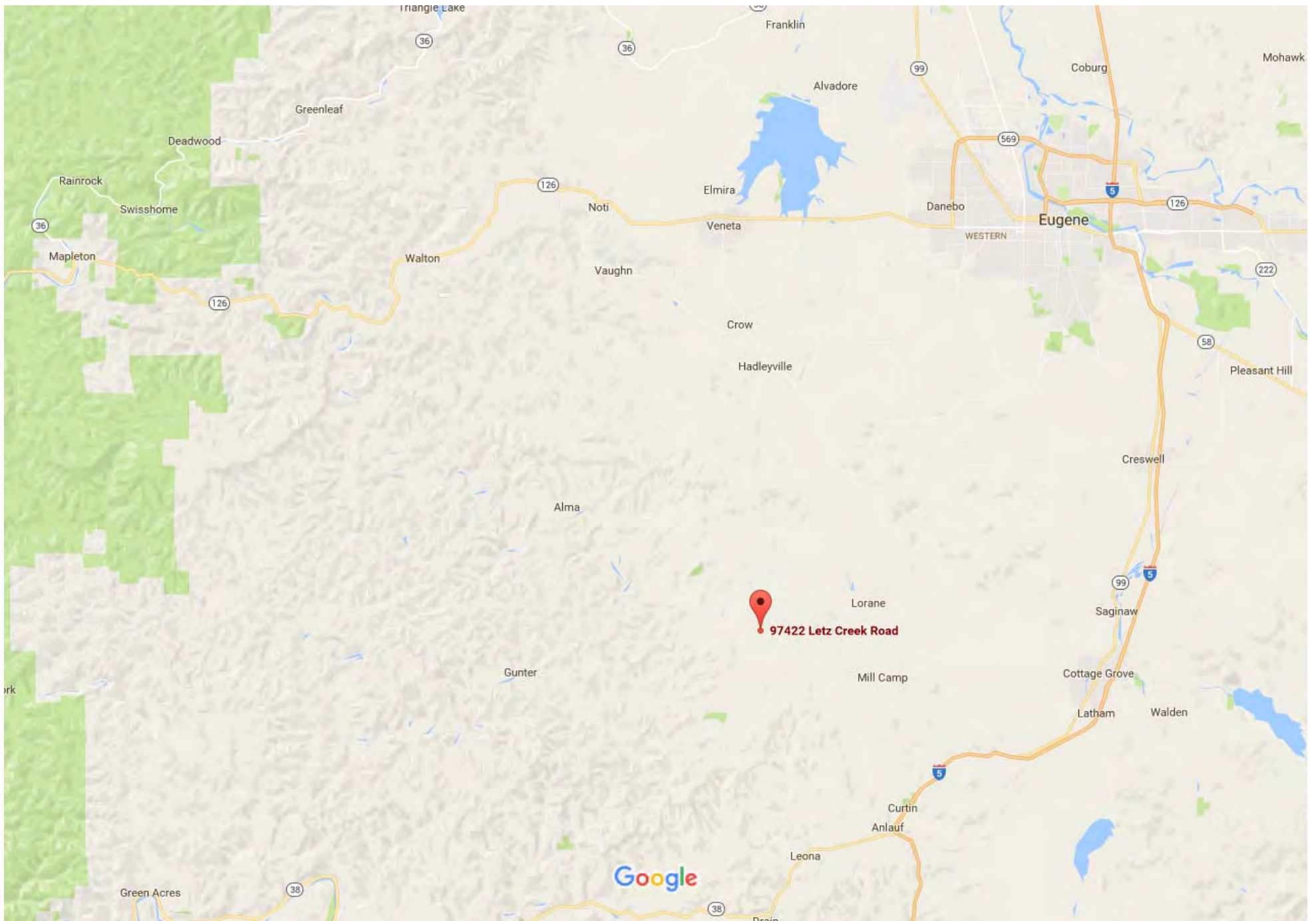
Please attach additional documents or provide information that details the project history, how the project may have evolved from the original design, or any changes / improvements that have been made to the operation.

In 2016 electric fencing was removed from around the rearing pond. It was ineffective in deterring predators and nearly impossible to maintain in the forest environment because of the moss, leaves, and fallen branches that would short the system.

In 2014 the Heath stacks were removed from the hatch house and three troughs were installed with baskets for incubation. Egg incubation has been successful using the troughs and baskets, and the new set-up is much easier for volunteers to manage (observations, picking dead eggs, etc.). Four unused circulars were also reactivated with new plumbing in 2014 to serve as settling tanks to remove silt from creek water supplying the circulars and hatch house. This has made a positive impact on the water quality and fry survival, especially during winter storms.

The Emerald Empire Chapter of the Northwest Steelheaders also installed a gang way with steel hand rails at the adult trap to improve safety while hand-spawning fish. This also provides added security during student field trips.

April 2000 was the first release of smolts directly from the Letz Creek facility. Prior to 2000, smolts were transported to Whittaker Creek for release.



Map data ©2016 Google 2 mi

Letz Creek Fish Rearing Facility
location overview map



TOPO U.S. 100K v5.01

© Courtesy of National Oceanic and Atmospheric Administration / National Ocean Service 2013

© Garmin Ltd. and Its Subsidiaries 2013

© Navteq 2010. All rights reserved

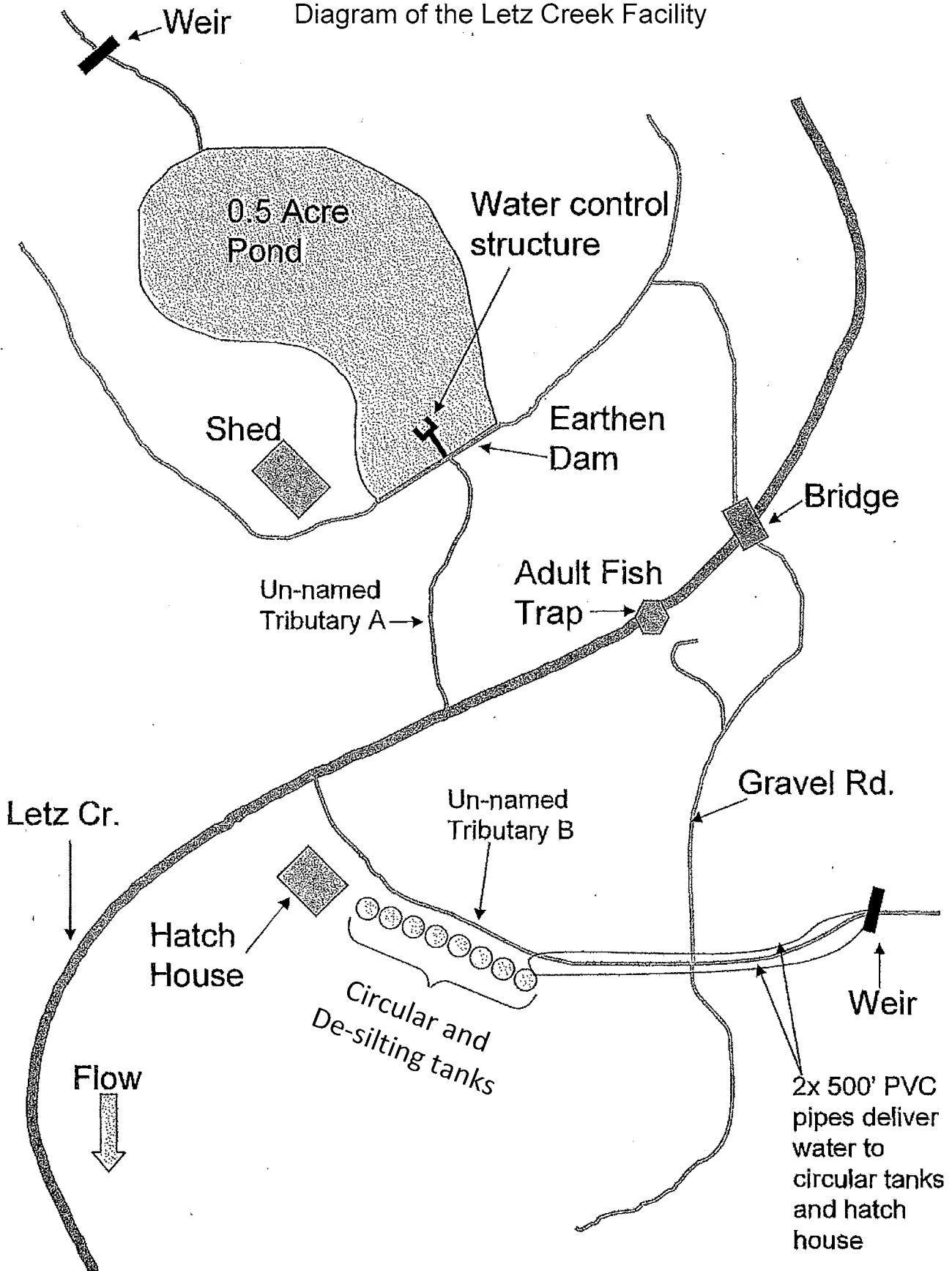
© Navteq All rights reserved. 2008



Letz Creek Fish Rearing Facility

Appendix A

Diagram of the Letz Creek Facility



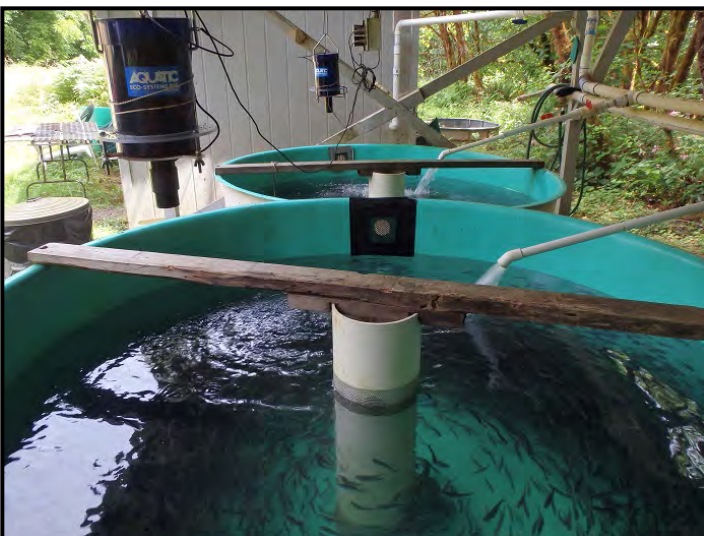
Appendix B



Letz Creek hatch house, circular rearing tanks, and de-silting tanks (from left to right).



Incubation troughs and baskets in the hatch house



Circular rearing tanks and automatic feeders.

Appendix B



Diversion dam in un-named tributary B that supplies water to the hatch house and circular tanks.



Diversion dam pools water and acts as a sediment trap. There are two water filters and pipelines that can transport water.



De-silting tanks

Appendix C



Empty rearing pond with predator deterrence flagging, about 3 months after draining.



Top screened portion of the water control structure and pond outlet as seen at full pond stage.



The water control structure is concrete on 3 sides with the fourth side designed to fit removable dam boards that control water depth. A culvert at the base of this structure runs below the earthen dam and out to Letz Creek.

Appendix C



Water intake to upper end of rearing pond.



Upper half of rearing pond looking downstream.



Lower end of rearing pond, pond shed and water control structure.

Appendix D



Adult fish trap during seasonal operation.



Adult fish trap and weir.



Adult fish trap during summer low flows.

Appendix E

Letz Creek Fish Rearing Facility 2012-2021 Operational History

Adult Trap and Spawning

| Year | Trapped | | Spawned | | Annual Estimated Egg Take | | |
|-------|-------------------------------------|------|-------------|---------------|---------------------------|-----------|-------|
| | Hatchery | Wild | Male (wild) | Female (wild) | Letz Creek | Whittaker | Total |
| 2012 | 70 | 3 | 44 (0) | 22 (1) | 35081 | 0 | 35081 |
| 2013 | 81 | 4 | 33 (4) | 29 (0) | 38689 | 0 | 38689 |
| 2014 | Hatchery closed due to storm damage | | | | | | |
| 2015 | 16 | 2 | 12 (1) | 3 (1) | 5673 | 13790 | 20313 |
| 2016 | 12 | 0 | 13 (0) | 9 (1) | 8923 | 11923 | 20846 |
| 2017 | 0 | 0 | 0 | 0 | 0 | 25793 | 25793 |
| 2018 | 3 | 0 | 2 (0) | 1 (0) | 1140 | 21012 | 22152 |
| 2019* | 27 | 0 | 0 (0) | 1 (0) | 1530 | 27663 | 29193 |
| 2020 | 100 | 5 | 20 (2) | 34 (2) | 24510 | 0 | 24510 |
| 2021 | 51 | 4 | 19 (0) | 20 (2) | 15338 | 0 | 15338 |

Winter Steelhead Propagation Summary

| Year | Estimated Egg Take [#] | Total Egg loss | Total Fry loss | Fish Transferred To Rearing Pond | Smolt Release Estimate \pm SE | Release Date |
|------|-------------------------------------|----------------|----------------|----------------------------------|---------------------------------|--------------|
| 2011 | 29,218 | 6,549 | 6,340 | 11,015 | 9,133 \pm 209 | 4/28/2012 |
| 2012 | 35,081 | 3,649 | 4,624 | 11,577 | 11,577 \pm 900 | 4/24/2013 |
| 2013 | 38,689 | 5,648 | 5,264 | 20,832 | ~12,000 | 5/14/2014 |
| 2014 | Hatchery closed due to storm damage | | | | | |
| 2015 | 20,313 | 5,185 | 61 | 11,470 | 5,922 \pm 323 | 4/22/2016 |
| 2016 | 20,846 | 2,657 | 69 | 14,870 | 12,973 | 4/1/2017 |
| 2017 | 25,793 | 3,999 | 3,764 | 18,030 | 14,730 | 3/31/2018 |
| 2018 | 22,152 | 7,646 | 657 | 13,152 | 11,402 | 4/1/2019 |
| 2019 | 29,193 | 14,282 | 1,622 | 13,289 | ~11900 | 4/9/2020 |
| 2020 | 24,510 | 613 | 5,681 | 13,850 | ~13200 | 4/10/2021 |
| 2021 | 15,338 | 745 | 1,130 | 11,340 | | |

*Fish trap entrance was narrowed in 2019 to prevent fish from escaping.

[#]Egg take is estimated volumetrically and is not very accurate. Number discrepancies are believed to be due at least in part to overestimation of egg takes.

**Oregon Department of Fish and Wildlife
Salmon and Trout Enhancement Program**

ACCESS AGREEMENT

This Agreement is entered into this 30th day of September 2021, by and between the Swanson Brothers Lumber Company, Inc., hereinafter called **Grantor** and the State of Oregon, acting by and through its Department of Fish and Wildlife, hereinafter called **Department**.

Whereas Grantor owns certain real property described in the attached Exhibit A and,

Whereas the Department wishes to authorize a Salmon and Trout Enhancement Program (STEP) project at a project site which is located on that property described in the attached Exhibit A. The STEP program is described at <http://www.dfw.state.or.us/STEP/>.

In consideration for this agreement, grantor shall be allowed to receive the benefits of the STEP project in exchange for the access conferred by this agreement.

Terms and Conditions of this Agreement

1. Grantor herein grants the Department and its representatives access to the project site, which is located on that property described in Exhibit A for the purposes of operating a STEP project.
2. Grantor reserves the right to use the property described in Exhibit A for any and all purposes which do not preclude, restrict, or interfere with the purpose of this Agreement. With prior notice, the Department will agree to access adjustments to accommodate the primary uses of the land (timber harvest, any other use as needed).
3. This Agreement is for the term of five (5) years beginning on the 1st day of November, 2021 and ending on the 1st day of November, 2026 or until such time as the STEP project is terminated by the Department, whichever occurs first. If the project is terminated prior to the expiration date, access for the Department and its representatives will remain in effect for as long as fish or eggs under artificial propagation remain on the project site. The Department will inform the Swanson Brothers, Inc. of its plan for removing fish, eggs, and all improvements at the time the project is cancelled.
4. The State of Oregon agrees to be responsible for any danger or third party liability which may arise from the installation, maintenance, and operation of the STEP facility subject to the limitations and conditions of the Oregon Tort Claims Act, ORS 30.260 and through 30.300 and the Oregon Constitution Article XI Section 7, to the extent of liability arising out of negligence of the State. Provided however, the State shall not be required to indemnify or defend the Grantor for any such liability arising out of wrongful acts of the Grantor, its employees, agents, invitees, or family.
5. Either party may terminate this Agreement by providing written notice 120 days in advance to the other party. Upon termination, all rights and obligations of the Department to use the Swanson Brothers, Inc. property will cease. If the project is terminated, access for the Department and its representatives will remain in effect for as long as fish or eggs under artificial propagation remain on the project site. The

Department will inform the Swanson Brothers, Inc. of its plan for removing fish, eggs, and all improvements at the time the project is cancelled.

6. This agreement does not provide access for the public to the facility area of other property of the Grantor.
7. The primary Department contact for the STEP project will be Christine Clapp, Mid Coast STEP biologist, (541) 961-6386.

Agreement Binding

This Agreement is binding on and inures to the benefit of the parties and their respective successors or assigns.

Grantor:
Derek Lee - Timber Manager

Derek Lee
NAME(S)

Date 9/27/21

Department:
Christine Clapp
NAME

Mid Coast STEP Biologist
POSITION

Date 9/27/2021

Attachment: Exhibit A – Property Description

FOR ASSESSMENT AND TAXATION ONLY

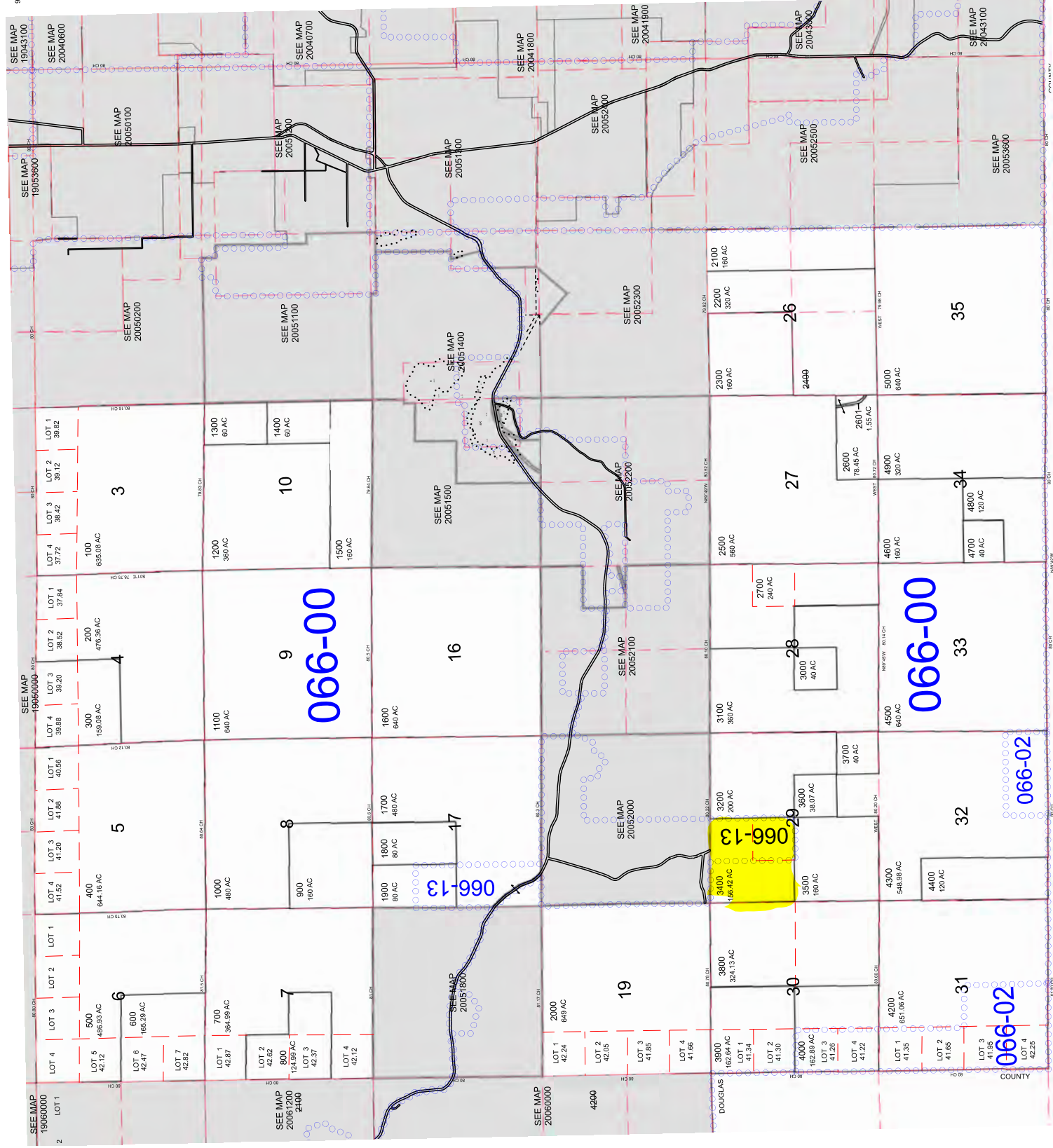
GIS DATA
9/14/2007 8:43:12 AM - lctbba

CANCELLED:
2000

T.20S. R.5W. W.M.
Lane County
1" = 2000'

Letz Creek Fish Rearing Facility

T20S, R5W, Sec 29, Lot 3400



066-02

066-00

066-13

066-02

066-02



**ASSOCIATION OF NORTHWEST STEELHEADERS
EMERALD EMPIRE CHAPTER
P.O. Box 338 Eugene, OR 97440**



October 12, 2021

Oregon Department of Fish and Wildlife
STAC Committee and to whom it may concern,

RE: Letz Creek STEP Hatchery

The Emerald Empire Chapter of the Association of Northwest Steelheaders remains dedicated to the continuation of the Winter Steelhead STEP hatchery on Letz Creek in the upper watershed of the Siuslaw River. It is a small hatchery located on a private tree farm in a rural location approximately 25 miles SW of Eugene in Lane County. It has a history of being well supported by the local community as well our members.

The continued operation of the hatchery supplements the winter steelhead population in the basin and provides increased opportunities for sport anglers. It also provides our members the opportunity to volunteer, be involved with the development and hands-on propagation process of raising fish for release in a very natural setting. It is a great hobby with positive results.

The Northwest Steelheaders stated mission is “anglers dedicated to enhancing and protecting fisheries and their habitats for today and tomorrow.” Our vision is “responsible and enjoyable fishing with good access to healthy, abundant and sustainable fisheries in Northwest’s healthy watersheds.”

We appreciate all of the support received from several dedicated ODFW employees and managers we have worked with. They include the STEP biologists, STAC staff and committee, and various hatchery folks; they have been a great resource and have contributed to the success of Letz Creek hatchery. We could not be more grateful to Swanson Bros Lumber Company for their continued support and allow the hatchery to continue to function on their property. It has been a long-time relationship with all of the above, and very much appreciated.

Sincerely,

Ken

Ken Johnson
President, Emerald Empire Chapter
Association of Northwest Steelheaders