



R & E Grant Application 13 Biennium

Project #:
13-076

South Santiam Adult Holding Pond Conversion

Project Information

R&E Project Request: \$33,631.00
Match Funding: \$9,480.00
Total Project: \$43,111.00
Start Date: 4/1/2015
End Date: 5/1/2015
Project Email: brett.h.boyd@state.or.us
Project Biennium: 13 Biennium
Organization: ODFW - South Santiam River Hatchery

Applicant Information

Name: Brett Boyd
Address: 43182 N River Drive
Sweet Home, OR 97386
Telephone: 541-367-3437 x2
Fax: 541-367-4399
Email: brett.h.boyd@state.or.us

Past Recommended or Completed Projects

This applicant has no previous projects that match criteria.

Project Summary

This project is NOT part of ODFW's 25 Year Angling Plan.

Activity Type: Hatchery Maintenance - ODFW
Summary: South Santiam Hatchery would like to request funding to convert our existing 70' x 160' oval adult holding pond into a rearing pond. The hatchery is funded with USACE/ODFW shared program, half the fish we release are funded with state dollars. Starting March of 2014 all of the current brood stock holding will take place at the new Foster Adult Fish Facility the USACE is building on the opposite side of the river. Our existing adult holding pond has been used for smolt acclimation in the past for short time periods and worked well. Currently the pond's incoming water supply is delivered through an up well located on the bottom of the pond, there is no bird protection, and the pond outlet screens cannot accommodate juvenile fish. ODFW and South Santiam staff will jump start this project by providing 160 hours of staff time and \$5,000 of supplies/materials to install the outlet screens and bird netting. The requested funding would pay for a

licensed contractor to fill in the up-well and install an above ground header pipe. Currently South Santiam can only rear 300k Chinook at one time. The remaining 700k are reared at Willamette Hatchery until space is available once our fish are released in the fall and spring. These modifications would utilize existing infrastructure, doubling our Chinook rearing capacity. This would allow South Santiam to rear our 300k spring release group almost full term instead of only three months and provide a three month acclimation to a 270k group that is normally released directly into the river. Having the space to transfer these fish to South Santiam at a smaller size would allow near full term rearing in their native water body, save \$7,500 in trucking costs annually, and free up rearing pond space at Willamette hatchery. This project is also currently listed as one of the top priorities on the hatchery R & E priority list.

Objectives: To convert the existing adult holding pond into an effective rearing pond by installing the following;

- * Fill in the existing pond water supply (up-well) and reconfigure the incoming water to enter the pond above the pond surface via header pipe. This will provide more oxygen and prevent juvenile salmon and fish waste from entering the up-well basin.
- * Install bird netting to protect the juvenile fish from avian predators.
- * Install new screen slots and construct new pond screens that will accommodate fingerling sized fish.

Fishery Benefits: This project would aid South Santiam in achieving its goal of sustaining and fostering opportunities for sport, commercial, and tribal fisheries in the Columbia basin by providing the flexibility for near in basin rearing. Having the capability of rearing 60% of our production almost full term and providing several months of acclimation for the remaining smolts versus a 3 week acclimation or direct release would give these fish more time to imprint on their native water body. Thus yielding a higher percentage of adult return to popular fisheries in the Columbia, Willamette, Santiam, and South Santiam rivers.

Watershed Benefits: Rearing these fish longer at South Santiam Hatchery would increase the juvenile salmon's ability to imprint to their natal river system. This would in turn lead to a better homing response, allowing us to capture and remove more hatchery fish at our adult trap. Reducing the hatchery stray rate would decrease potential hatchery/wild fish interactions on the spawning grounds which would aid in complying with existing and future management plans for the South Santiam sub basin.

Current Situation: Currently the pond is used for holding brood stock but as mentioned earlier that will take place at the new facility in March of 2014. The pond has also been used to

acclimate smolts when empty in the spring of the year. It worked well for short two to three week rearing periods but removing fish and debris from the up-well vault was labor intensive and great blue herons and ducks started preying upon the smolts prior to release.

Alternatives: Without these improvements the pond would not be suitable for long term fingerling to smolt rearing. Reduced dissolved oxygen in the water supply and additional fish waste in the up well would increase stress on the juvenile fish causing increased disease risk. Bird predation would be at an unacceptable level, resulting in increased mortality and disease transmission. If these problems are not resolved the pond would then sit empty, thus not utilizing 4000 gallons per minute of water and 26,500 cubic feet of rearing space.

Designer: ODFW and South Santiam Hatchery employees with the aid of a licensed contractor. The finished products will mimic approved and functional features already in operation at current ODFW facilities.

Methods: The netting system will be similar in construction to the design at Salmon River and Clackamas Hatcheries which have been in use since 2011 and are working very well. Before starting the project South Santiam staff will work with these facilities to benefit from their experiences and make possible improvements to their designs. The plans for these systems have been approved by ODFW engineering staff.

Hatchery staff will construct the framing and supports for juvenile fish screens as well as the screens themselves to accommodate fingerling sized fish.

A contractor will be hired to make the following improvements to the incoming water supply:

- * Fill in the up-well with compacted gravel and pour a 4" concrete slab to match the existing pond bottom grade.
- * Abate the section of water supply piping going to the upwell, install new coated steel piping and all necessary fittings/valves to extend and distribute the supply line above the surface of the pond. The contractor will use the same approved design specifications used at other ODFW facilities with existing large rearing ponds.
- * Restore the surrounding work site to its original condition when completed.

Inspector: ODFW

Funding Elements: R&E funds will be used to pay for the contractor and materials to fill the up-well and install a header pipe.

Partners: No

Existing Plan: Yes

This proposal addresses potential concerns over the percentage of hatchery fish on the spawning grounds (PHOS) which is written into the South Santiam Hatchery Genetic Plan (HGMP). Increasing the time our fish are reared at their place of origin will allow them to better imprint on the South Santiam sub basin and improve our ability to remove the returning adults at the Foster Dam Adult Collection Facility.

Affected Contacted: Yes

Affected Supportive: No

Affected Comments: Representatives from NMFS and the USACE have been informed of the project. The PHOS in the South Santiam below Foster Dam is currently higher than the level proposed in the HGMP and both agencies are pleased to see ODFW take action to address this issue.

Project Schedule/Participants/Funding

Activity	Date	Participants
Request for proposals for filling up-well and replace plumbing	9/1/2014	S. Santiam Hatchery staff
Complete fill in of up-well and new plumbing	5/15/2015	Contractor
Install bird net, and pond screens	5/15/2014	S Santiam Hatchery staff

Affected Species: Chinook Salmon
Steelhead

Project Permits

This project has no permits.

Project Monitoring

Organization	Address	Activity	Frequency
South Santiam Hatchery	43182 N River Drive Sweet Home , OR 97386	Monitor Progress	Daily

Project Maintenance

Organization	Address	Activity	Frequency
South Santiam Hatchery	43182 N River Drive Sweet Home, OR 97386	Inspect all plumbing for leaks or damage.	Daily
South Santiam Hatchery	43182 North River Drive Sweet Home, OR 97386	Inspect bird netting and incoming water piping for damage.	Daily

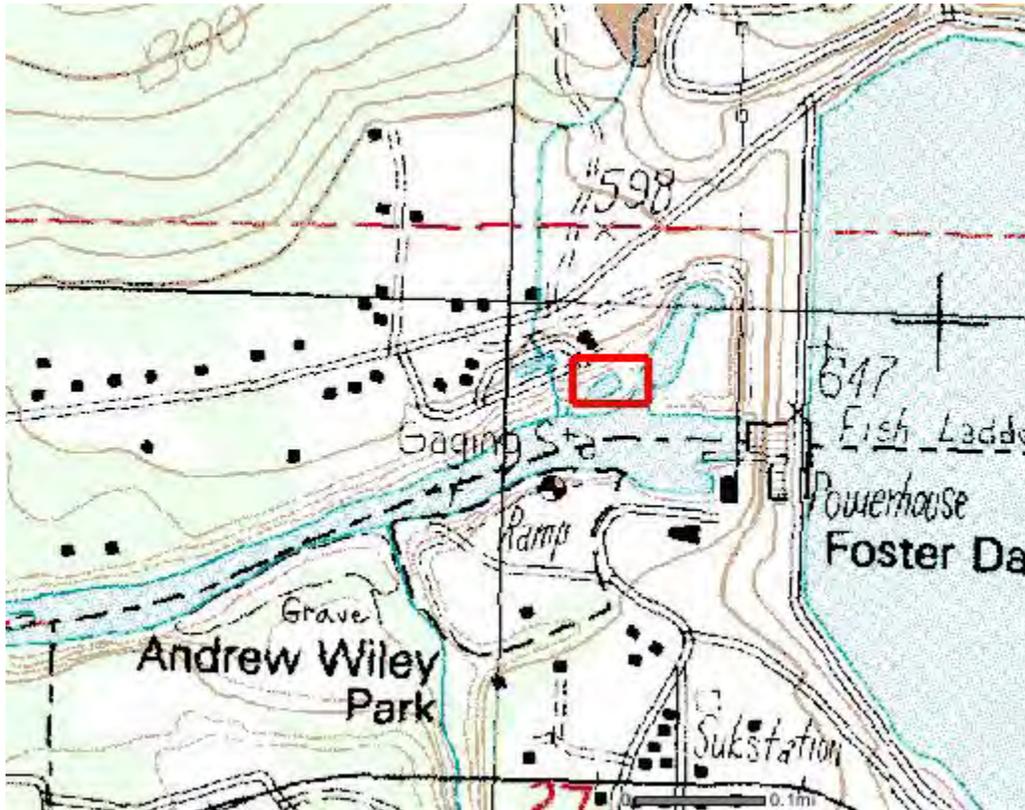
Project Match Funding

Funding Source	Cash	In-Kind	Other	Description	Total	Secured?	Conditions?	Comments
R&E Request	\$33,631.00	\$0.00	\$0.00		\$33,631.00	No	No	
South Santiam Hatchery/OD FW	\$5,000.00	\$4,480.00	\$0.00		\$9,480.00	Yes	No	
				Total Match Funding:	\$43,111.00			

Project Budget

Item	Item Type	Units	Unit Cost	R&E Funds	Match Funds	Total
ODFW Manager, Senior Tech, and 3 Technicians	Personnel	160	\$28.00	\$0.00	\$4,480.00	\$4,480.00
Header Pipe Installation & Fill Upwell	Supplies/Materials /Services	1	\$33,631.00	\$33,631.00	\$0.00	\$33,631.00
Supplies/Materials for bird netting	Supplies/Materials /Services	1	\$3,000.00	\$0.00	\$3,000.00	\$3,000.00
Supplies/Materials for outlet screens	Supplies/Materials /Services	1	\$2,000.00	\$0.00	\$2,000.00	\$2,000.00
					Total Budget:	\$43,111.00

Project Map



Additional Files

Click a link to view that particular file.

[Photos](#)

[Quote](#)

[schedule](#)

[signature page](#)

Applicant Signature Page
Fish Restoration and Enhancement Program
(Oregon Department of Fish and Wildlife Applicants)

I hereby make an application for financial assistance under the terms and conditions of the Fish Restoration and Enhancement Program as described in my project application. I acknowledge that:

- This proposal is an identified priority at the district, region, and/or state level and has been identified as such in the application (check box for appropriate level).
- This proposal is consistent with any applicable goals, policies, rules, species or basin management plans adopted by the F&W Commission and this has been explained in the application.
- This proposal will not be used to cover, back fill, or fund shift elements that have been cut or defunded as part of agency budget reductions. Approved deferred maintenance or projects with division approval are exceptions.

I understand that if my project proposal is approved for Restoration and Enhancement (R&E) Program funding, the following will apply:

- Applicants must sign an agreement containing the terms and conditions for the project implementation, release of funds, and documentation of completion. Non-compliance may impact future funding opportunities.
- The R&E Program will not pay for expenses which occur before the approved start date or after the end date.
- Funding is available one biennium only without prior authorization by the R&E Board.
- Applicant agrees to notify the R&E Program of all funds not needed for the project upon determination.
- Any inappropriate expenses using R&E funds will be corrected by the applicant immediately. By the close of the biennium any expenses exceeding, or not identified in, the grant approval will be reverted to a local cost code.
- Copies of all landowner, monitoring and maintenance agreements must be submitted to the R&E Program.
- Educational products resulting from projects are public domain.
- Information collected is subject to Oregon Public Records Law.
- As applicable, the project will be consistent with all federal, state, and local regulations, including the State Land Use Planning Goals & Local Land Use Plans, prior to any on the ground work.

By signing this application, I certify to the best of my knowledge that the information contained in the application are true, complete and accurate. If awarded funding the applicant agrees to follow all terms and conditions outlined in the agreement.

Project Title: South Santiam Adult Holding Pond Conversion

Applicant Name: Brett Boyd Title: FRW Manager I

Applicant Signature:  Date: 3/20/14

Manager Certification:

To be completed by Watershed Manger, Hatchery Coordinator, Program Manager, or higher level manager.

- I concur with the statements above and the applicant has permission to request these funds.

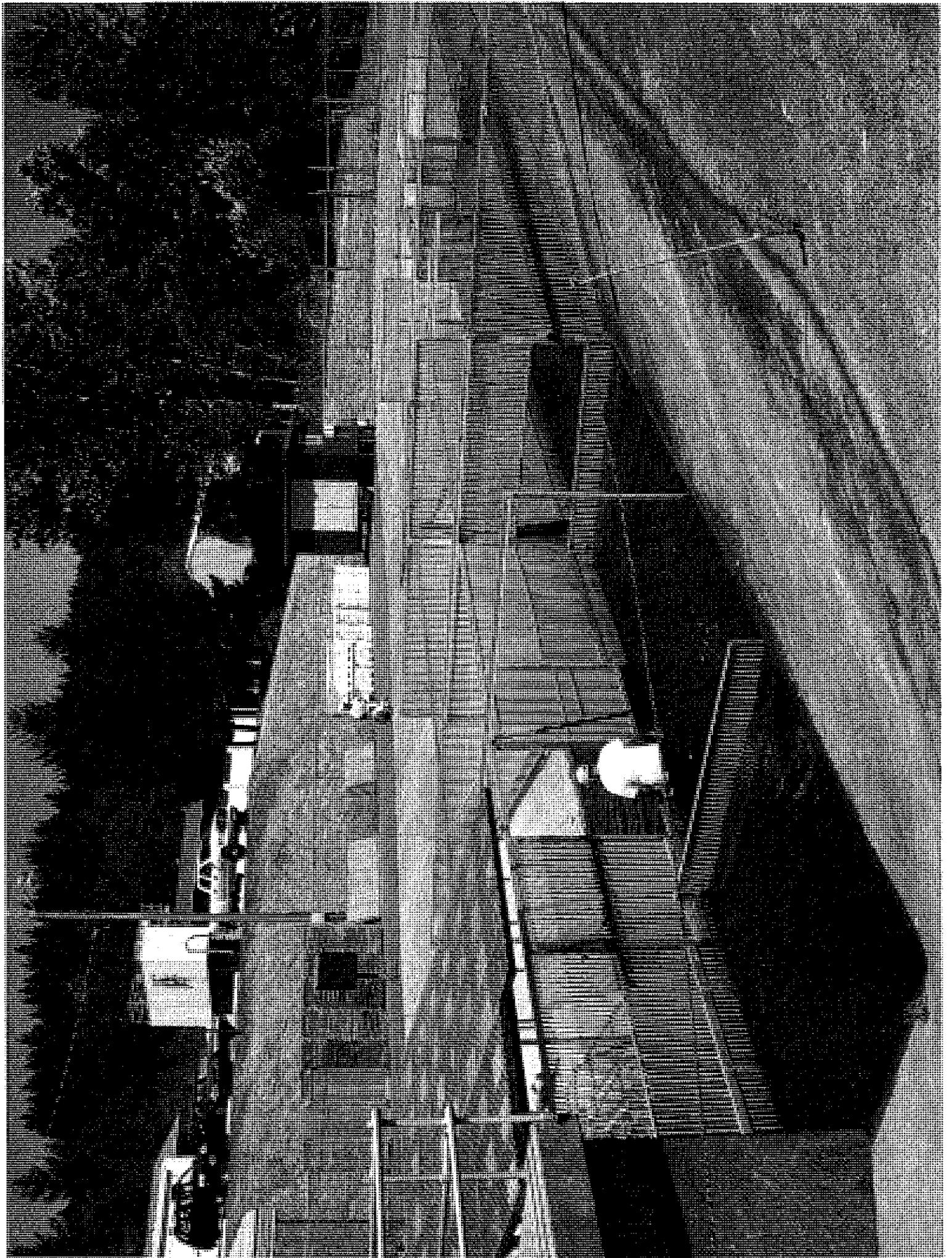
Manger Name: Scott D. Patton Title: 4/2/2014

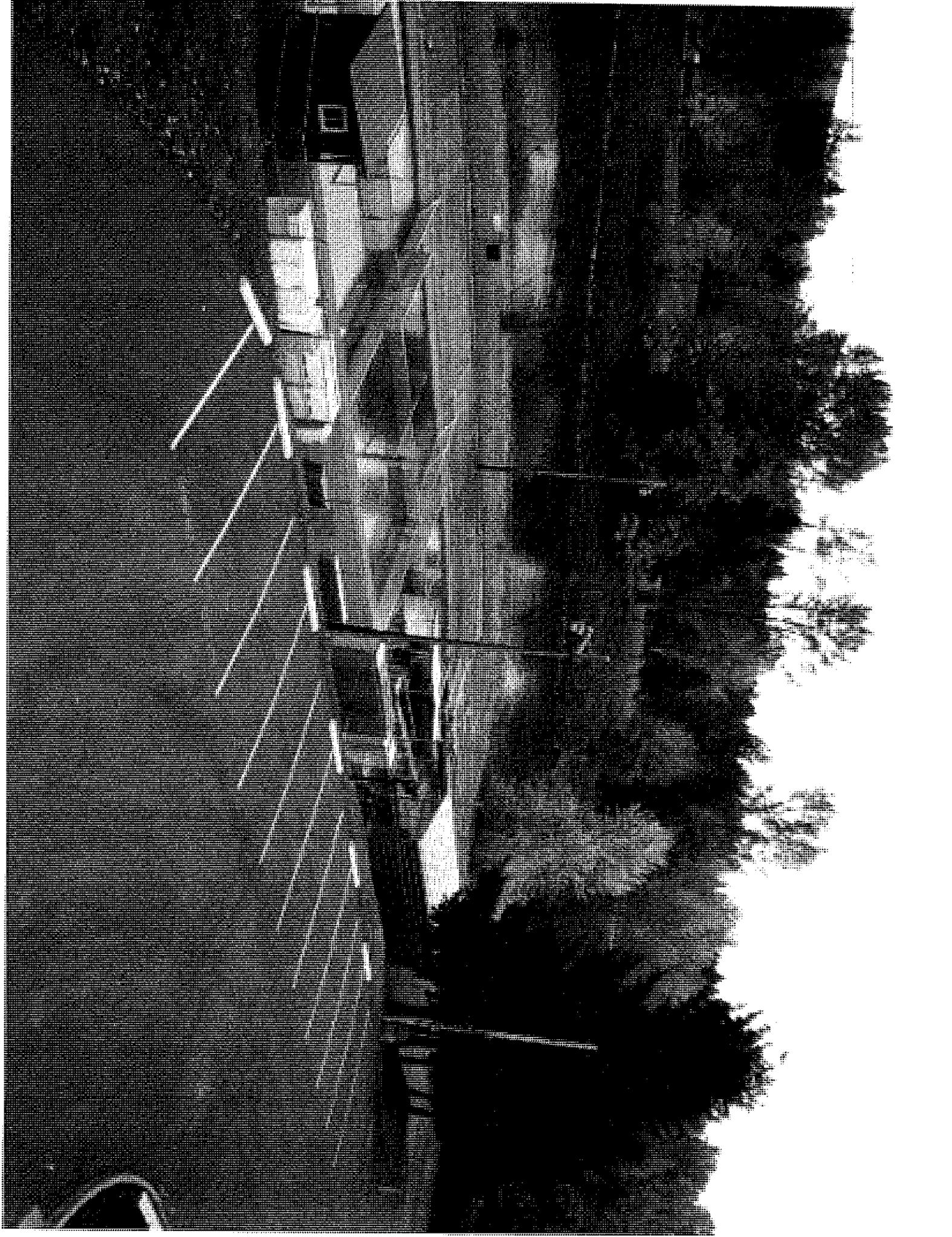
Manager Signature:  Date: 4/2/2014

SS AHP Upgrade Project Schedule

Activity

- Install bird netting system, modify pond screen slots, and construct new pond screens. Work will be completed by May 15, 2014. Start date = 04/07/2014. Participant = ODFW – South Santiam Hatchery Crew.
- A licensed contractor will be hired to fill in the existing up-well with gravel/concrete, abate the section of incoming water supply piping to the up-well, and install new plumbing which will extend and distribute the supply water above the surface of the pond. Work will be completed by May 15, 2015. Start date = 04/01/2015. Participant = licensed contractor.





- 3 - 21' x 40' panels
- 12 - 16' x 20' panels
- 1 - 20' x 17' panels
- 2 - 20' x 15' panels
- 2 - 16' x 17' panels

