

Lookingglass Fish Hatchery Oregon Department of Fish & Wildlife



Oregon Department
of Fish and Wildlife





2025 - 2026 Lessons Learned from the new Fish Ladder Construction, and New Incubation Room Addition

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**Oregon Department
of Fish and Wildlife**





Section 1 - Planning Stage



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Old Fish Ladder and Trap

This project actually started over 10 years ago, beginning with meetings to discuss the planning stage.

Here is a picture of the old fish ladder and trap. You can see why it didn't meet fish passage criteria and requirements.

During the planning stage different options were discussed. Understanding these options for the project is important. When planning is at 35%, look the blueprints over carefully and do not be afraid to ask:

How, What, Why, Where, and When.



What Lessons were learned? Communication is important throughout a project

Here's good examples:

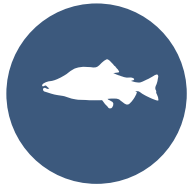


-There were personnel turnovers throughout the different departments during the time of planning to 35% and better, and then when actual construction began. Should we have taken the time to revisit this project? Stop and go back to the beginning and re-evaluate so all new personnel would have a better understanding what this project involved? This would have alleviated lack of knowledge/understanding if notes weren't passed down.

-Taking extra time to pre-plan different part of this project, I.E. maybe moving fish off-station as originally discussed instead of working around the fish. We understood time was precious, and funding was available right then, but could we have taken some more time to plan.



What's most important, is we have learned what to do or not to do with future projects.



If done differently:

- 1 – Pre-planning stage
- 2 – Different options or solutions available.
- 3 – What's the complexity of the facility? I.E. Five stocks put in four stocks place; Each facility is unique.
- 4 – Timeline; can we meet it? If not, what other options do we have?
- 5 – Today's technology – can we build an actual model?
- 6 – Unexpected challenges not thought of such as confined space entry, etc.



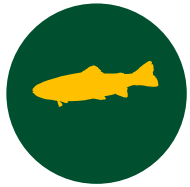


Section 2 Incubation Room Addition.



Incubation Room Addition

Why is this being done?

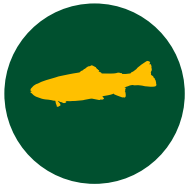


- More space
- Future; increase production
- Separates the incubation from the spawn area – biosecurity
- Eliminates using the Canadian Troughs for temporary incubation.

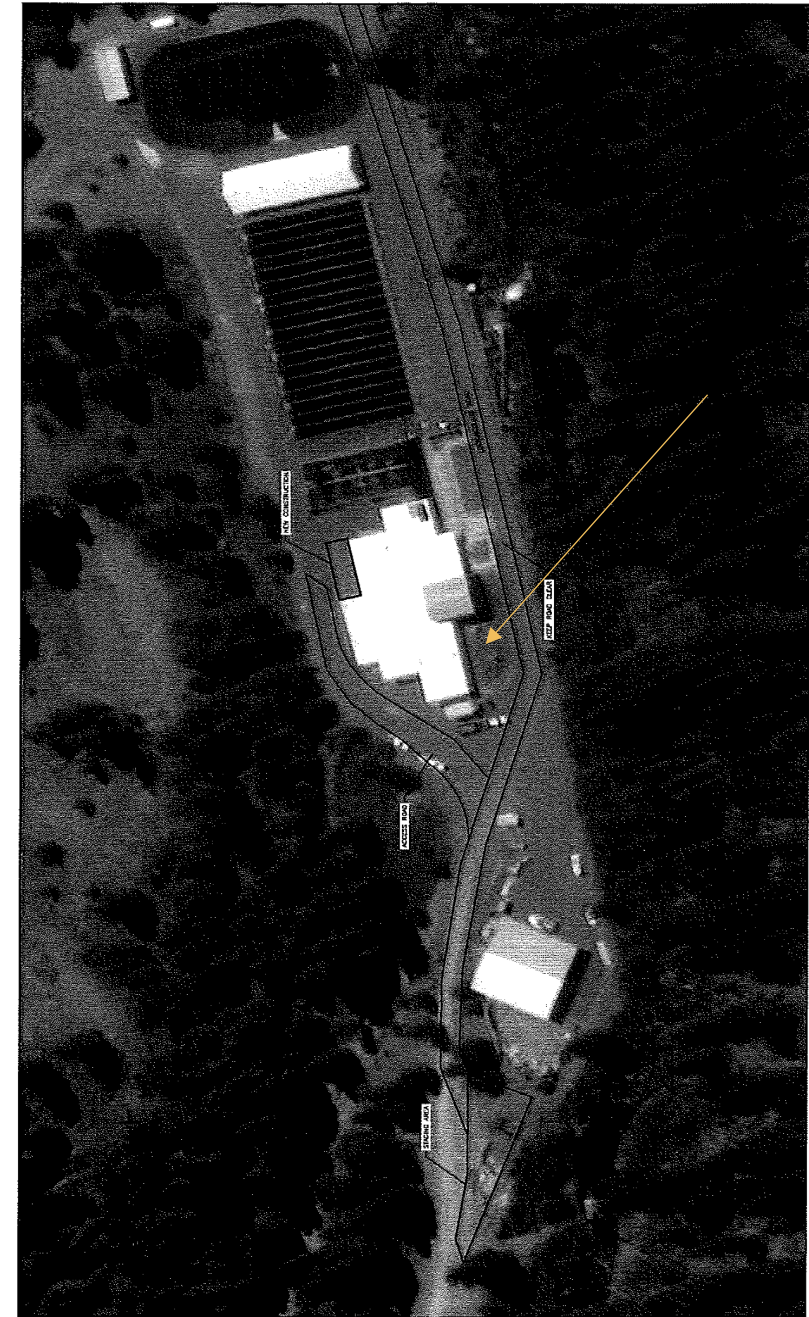


Where is this being built?

Behind the main hatchery building



- At one time it was considered installing double incubation stacks where the incubation area is located now inside the main building. Due to not enough head pressure, it would require pumps. LGH is at the end of the domestic power line and experiences a lot of power bumps and outages.
- This addition will be at a lower level so head pressure will be increased and no pumps needed.

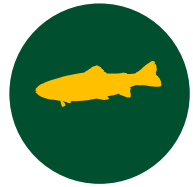




Another reason to move incubation. Each year these incubation stacks must be installed and removed, so fry can be ponded in the same double deep Canadian Troughs. It's difficult to do and labor intensive. LGH has experienced loss of eggs and fry as well.

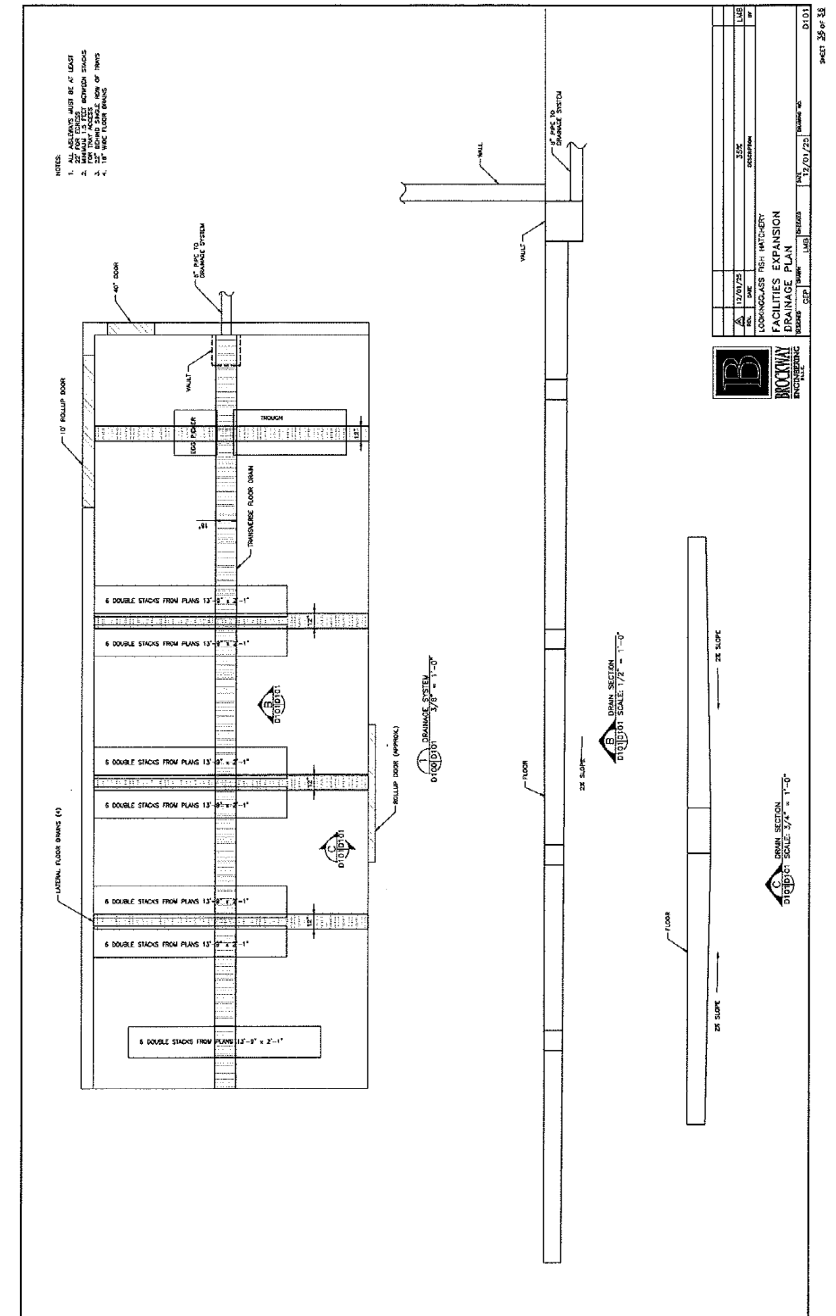


LSRCP/USFWS/ODFW additional planning



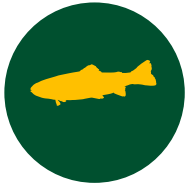
How are we going to install incubation?

- Here is one drawing of what the inside of how the building may be arranged.
- There are other hand drawings, as well as potential drawings in the planning stage.



What else is planned?

Other Items that need changed or thought through and planned:

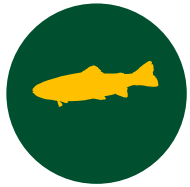


- Inside the building; this area in the building wall will need removed for access into the incubation area, including how eggs can be delivered to the incubation room.
- This area will also include the plumbing for water supply which will come off the hatch house mainline pipeline.



What else is planned, Cont.?

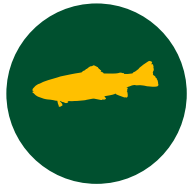
Unexpected Surprises???



- Additional egress inside and outside
- Biosecurity – maybe requiring an additional entrance and exit to avoid contaminated areas such as where pathology or fish research works up spawned carcasses.



Final completion of the Egg Incubation Room



More planning is needed but that's a good thing.

- What's the first item to start in this project?
- Discuss, pre-plan, communicate and move forward
- It's exciting to be able to show everyone a successful project next year at completion





Section 3

Final

completion of

both projects.



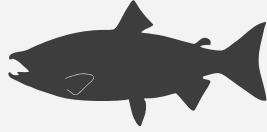
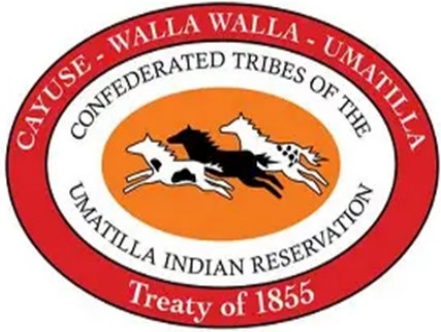
Completion of the New Ladder

**Contract tentatively completed
as of the end of April 2026**



There were a lot of challenges for this project; a lot was discovered; and more learning is coming in the near future with the incubation addition. Keep an open mind and willingness to learn and if there are corrections needed share for the next project.





Thank you to everyone involved!

**LSRCP
USFWS
ODFW**



**KPFF Engineering
EVOQUA**

Wickham Construction

Nez Perce Fisheries and Confederated Tribes of Umatilla



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