

Pacific Lamprey Translocation

Confederated Tribes of Grand Ronde



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Pacific Lamprey Status



Confederated Tribes
of Grand Ronde

○ Historic

- Willamette Basin



Pacific Lamprey Status



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○ Current

- Decades of decline
- Difficult to provide
- Harvest locations



Pacific Lamprey Translocation



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● Translocation Pilot Study

- Reintroduce adult lamprey to historic spawning habitat





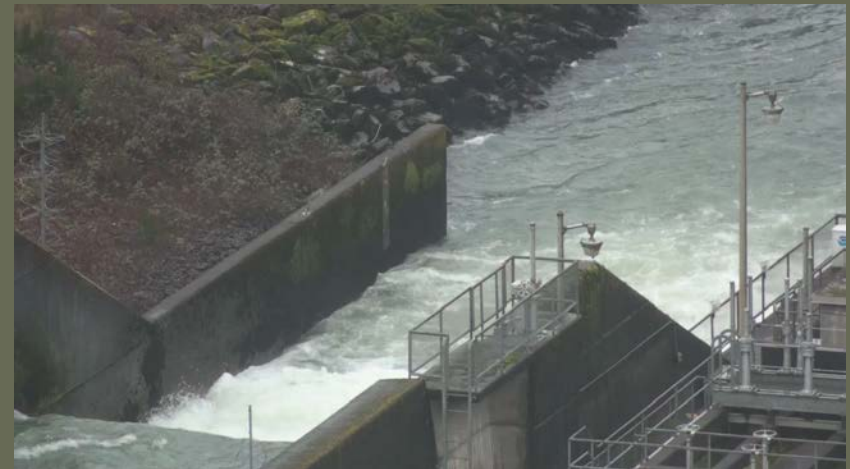
Initial Considerations

Pacific Lamprey Translocation Future Implications



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- **Fall Creek as case study**
 - **Ideal study area**
 - High quality, historic spawning habitat
 - Draw-down for juvenile outmigration
 - Likely adults already utilize area below dam
 - **Passage potentially low-cost**
 - Minimal modifications
 - Truck and haul
 - **Use applications elsewhere**
 - Other dams



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○ Considerations

- Brook known to exist both above/below
- Pacific likely to exist below /not above
- Pacific ammocoete surveys above/below

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Shocking Results



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- Sampled 8 Sites
 - 7 Above
 - 1 Below

Above 578 Brook

0 Pacific

Below 0 Brook

23 Pacific

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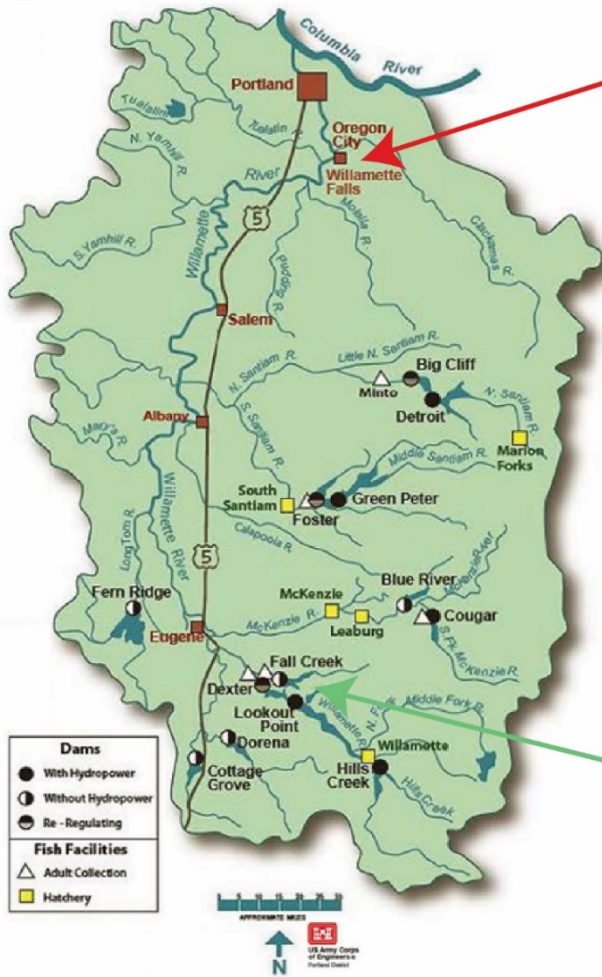


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● Translocation Project

- Capture adults from Willamette Falls
- Transport to Fall Creek via truck
- Release
 - Successful Pacific lamprey reproduction above dam
 - Determine if juvenile pheromone presence will cause adults to approach and attempt passage of dam

Pacific Lamprey Translocation Project Willamette Basin



Pacific lamprey are collected at Willamette Falls



They are transported by boat to Oregon City



They are trucked in an aeriated livewell



Eventually being released in Fall Creek

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Accessing Falls to
collect adult lamprey

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Accessing Falls to
collect adult lamprey



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Capturing lamprey from
Willamette Falls

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Live well transport
from Falls to truck

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Insulated tote with
aerator

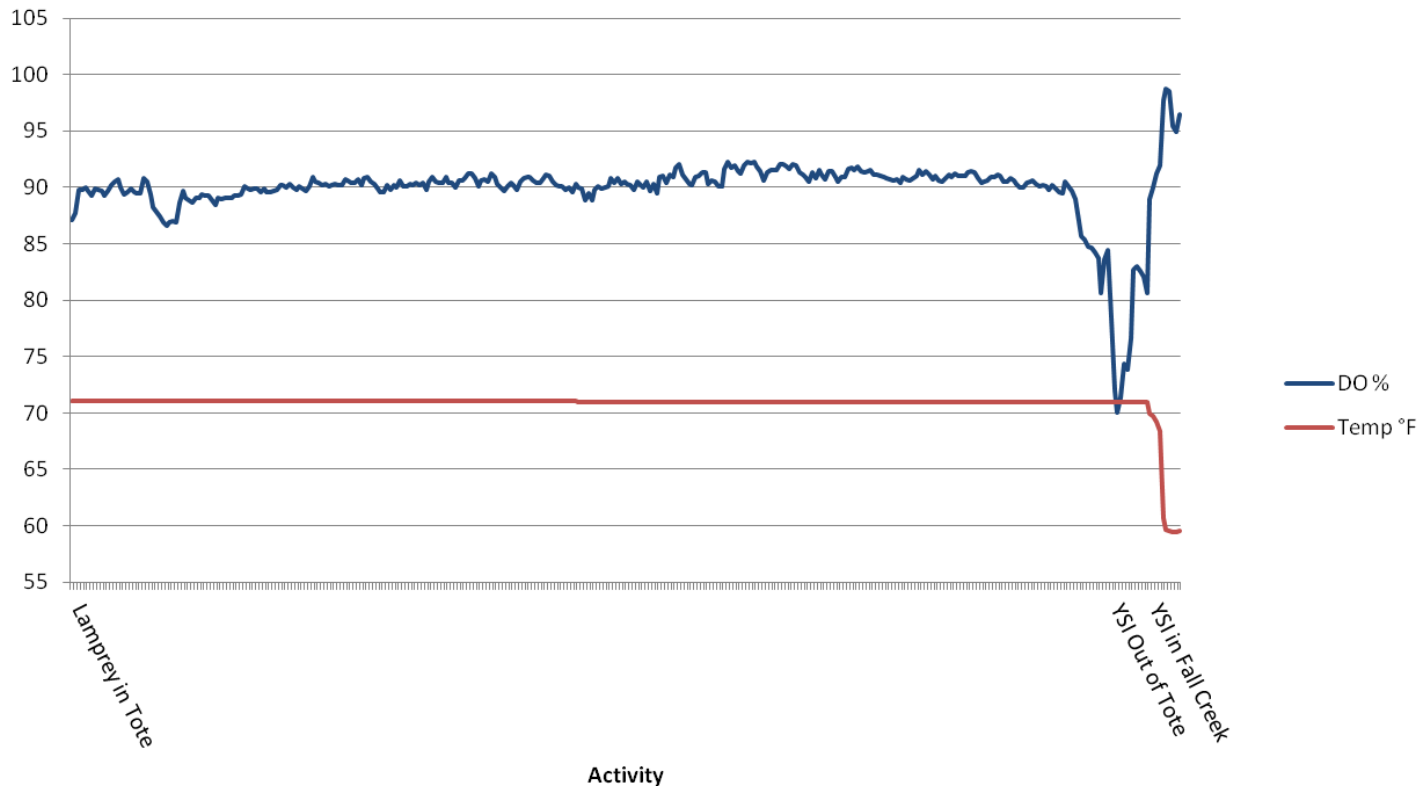
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Fall Creek Lamprey Translocation

Round 1 25 Fish



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Adult Pacific lamprey -
first arrival to Fall
Creek

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Pacific lamprey
release

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- Total 240 adults translocated
 - Five separate trips
 - August – September
 - None marked, tagged, or sampled



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● Pre-transport

- Brook known to exist both above/below
- Pacific likely to exist below /not above
- Pacific ammocoete surveys above/below

● Post-transport

- Brook ammocoetes present above dam
- Pacific ammocoete surveys
 - Above dam – still have opportunity to document
 - Below dam – document presence at lower flows



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Pacific Lamprey Research



Pacific Lamprey Translocation Future Goals/Objectives



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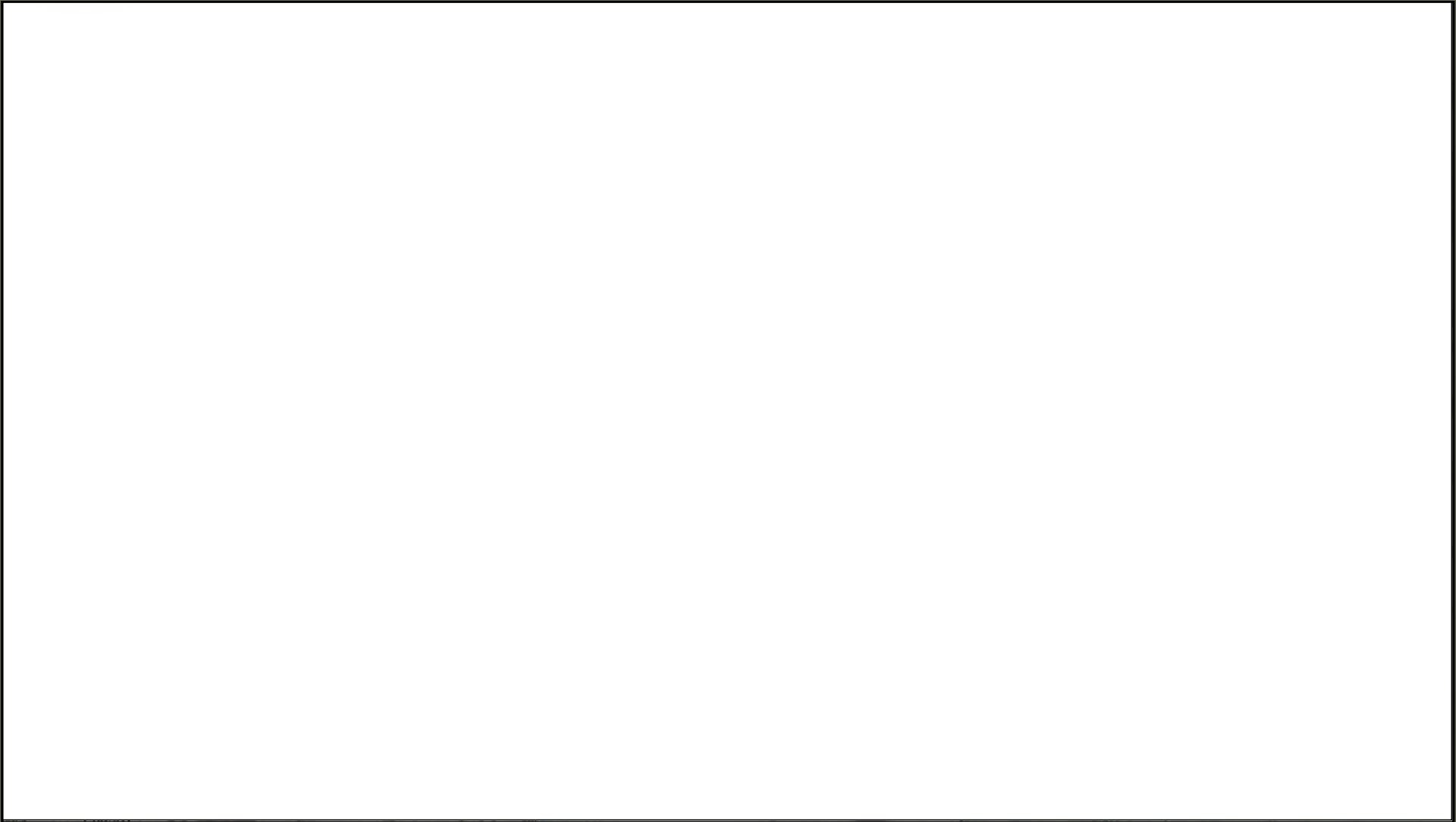
- 2014 plan to transport 240
 - Utilize radio-telemetry
 - Implant 40 adults
 - Establish fixed telemetry receiver sites
 - Compliment with mobile tracking
 - Pre-spawning mortality/areas of use
 - Collect genetics
 - Conduct spawning surveys
- Full study
 - One life cycle – 7 years
 - Continue translocation each year





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Distributions

Key

-  Individual
-  Group of 2
-  Group of 3
-  Group of 4

Pacific Lamprey Translocation Successes



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● Status / Successes

- Translocation 2015, 2016, & 2017
- Redds observed
- 2015 and 2017 adult Pacific lamprey at catch facility (2016 lamprey traps were not deployed due to high water levels)
- Pacific lamprey ammocoetes above dam
- Macrothalmia out-migrants

Pacific Lamprey Translocation 2017 Ammocoete survey



2017 Ammocoete Surveys

- First opportunity to electrofish.
- Jones fire restricted access to the area, but were able to survey two days
- 41 Pacific lamprey and 32 brook lamprey detected.

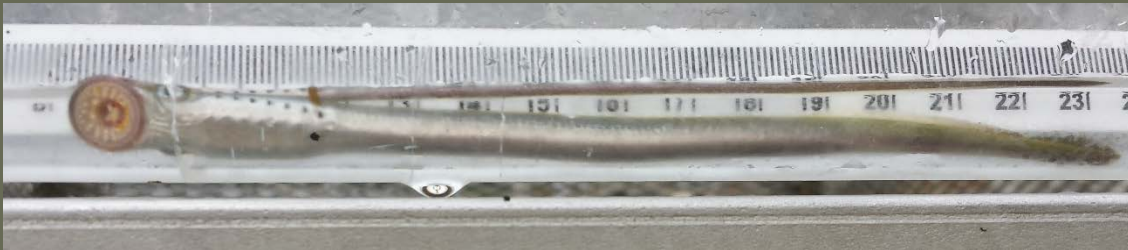


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2017 Macrothalmia





● Lessons Learned

- Logistically feasible to translocate
- Adults survived the translocation
- Successful spawning and rearing
- Passage allows out-migration of juveniles
- Catch facility can facilitate upstream migration of adults



Pacific Lamprey Translocation



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○ Future

- Translocation 2018, 2019 & 2020
- Annual Redd Surveys
- Electrofishing



Pacific Lamprey Translocation Future Implications



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Special Thanks To

Oregon State University

USACE

USFWS