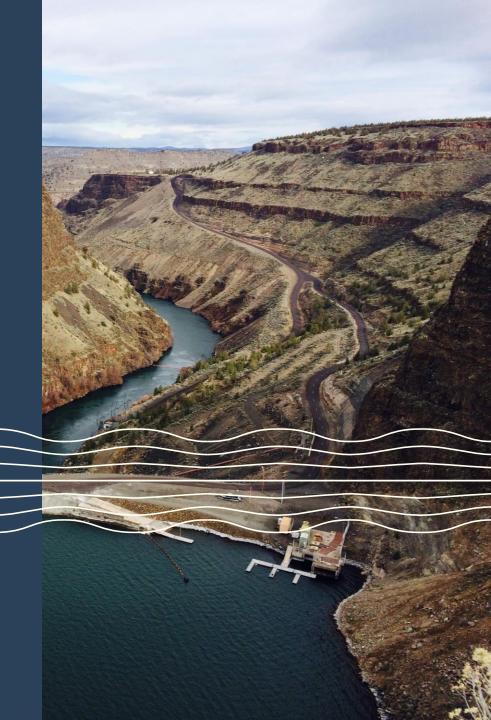
2021 Pelton Round Butte Update

JIM MANION
WARM SPRINGS POWER ENTERPRISES

MEGAN HILL
PORTLAND GENERAL ELECTRIC





Project Goals



Ron Suppah (Confederated Tribes of Warm Springs Tribal Council Chairman), Peggy Fowler (CEO of Portland General Electric) and Gail Norton (Secretary of the Department of the Interior) at the signing ceremony for the Settlement Agreement, a 22-party agreement reached in 2004. This collaborative agreement formed the basis for the FERC License issued in 2005.

- Generate clean renewable power for Oregon
- Provide recreational opportunities
- Return sustainable harvestable salmon and steelhead to the Upper Deschutes basin
- Restore the Deschutes watershed to a more natural state



Generate Emissions Free Electricity



- Capacity: ~500 MW
- **Serves:** ~150,000 homes
- Dam Facts:
 - Round Butte
 - Earthen Fill
 - 1,382 ft long, 440 ft high
 - Pelton
 - Concrete Arch
 - 636 ft long, 204 ft high
 - Reregulating
 - Run-of-river operations
 - 1,067 ft long, 88 ft high
- Employees: 46
- Certified by the Low Impact Hydro Institute

Recreation Opportunities



























Returning adult Chinook, steelhead and sockeye







- Adults have been documented spawning in all upstream tributaries.
- 147 Chinook are currently spawning in their historic habitat.



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Interactive. Click for...

- Description
- Anticipated Outcome
- Evaluation Method
- Timeline
- Lead organization or agency
- Fish Committee role
- Relevant studies, actions, decisions

Legend



GOAL: SELF-SUSTAINING AND HARVESTABLE RUNS OF CHINOOK, SOCKEYE, AND STEELHEAD



OBJECTIVE 1: Improve SWW Capture Efficiency



OBJECTIVE 2: Increase Adult Returns



OBJECTIVE 3:
Increase Natural Production

A: Install SWW guidance net

B: Modify Round Butte operations C: Increase smolt release numbers

D: Improve water quality

> E: Increase stream flow

> F: Improve flow management and timing for fish

G: Modify release strategies in the lower river

H:
Reduce stress
of smolts
released in the
lower river

Direct release of upper basinacclimated smolts in the lower river

J: Reduce handling stress at the selective water withdrawal (SWW) K: Modify hatchery practices

L: Acclimate smolts in tributaries

M: Incorporate wild fish into broodstock N: Remove Fish Passage Barriers

O: Improve fish habitat

P: Direct release of excess hatchery broodstock into spawning habitat

Q: Direct release of returning upper basin adults into spawning habitat











Collaboration and Adaptation



- 2017: Pilot study shows that acclimated fish as much as 2.5 times more likely to enter the SWW
- **2018:** 16% of fish acclimated
- 2019: 30% acclimated (record snow delays)
- **2020:** 87% of fish acclimated
- **2021:** 100% of fish acclimated
- 2022: First acclimated adult returns from major acclimation program







Following the Science- Water Quality Study









sites sampled in the Lower Deschutes River

11 tributaries sampled



6 sites sampled in

the reservoirs



23
parameters measured



226 days spent sampling



645
rocks scraped for periphyton samples



1997
year historical water quality study was conducted



models developed and tested



11 scenarios modeled



9,500+
water quality data points
measured in a lab



13
PGE staff involved in



Improving Fish Habitat-Pelton Fund



Fish passage barriers removed and/or modified





Miles of riparian area livestock fences built or restored



Miles of rivers and streams protected





- \$13,000,000
- 16 organization
- 48 projects



2020

- \$4,500,000
- 7 organizations
- 13 projects



2021 (in progress)

- \$1,300,000
- Focus on Crooked River where need is greatest





For more information:



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