

Here is an update on the Unit Outages at Bonneville Powerhouse 1.

WHO: Bonneville Lock & Dam Powerhouse 1

WHAT: Units 3, 4, 6, 9, and 10 are Forced Out of Service due to suspected oil leaks.

WHEN: On March 11, 2023, an oil sheen was first observed in the tail race of powerhouse 1 in the vicinity of Units 3 and 4. Units 3 and 4 were shut down and investigation began to determine the source of oil.

On January 3, 2024, an oil sheen was observed in the vicinity between Units 6 and 10 which were the only two units operating at the time. Both units were shut down. The sheen quickly dissipated after shutdown of those units.

On January 11, 2024, an oil sheen was observed in tailrace of PH1 while station service switching operations were being performed. Unit 9 was the only unit operating at the time. Unit 9 was taken out of service pending turbine inspection.

On January 23rd, 2024, Bonneville operations began to slow roll unit 10 to encourage fish to exit the unit prior to placing draft tube stoplogs for to prepare for a full turbine inspection. Upon unit shutdown very small string-like globs were noticed to be surfacing. The globs fanned out upon contacting the surface and dissipated within 30 seconds. Stoplog have been placed and Unit 10 and inspection has begun.

Unit 3 was scheduled to return to service on January 23rd, 2024. It was slowly brought under load after an oil leak investigation determined no loss. No indication of oil loss was observed in the tailrace during unit operation. As the unit was brought back down to remain in standby, it was observed that some sporadic strings of oil were surfacing. The globs fanned out upon contacting the surface and dissipated quickly. Unit 3 has been removed from service again for further investigation.

IMPACTS: There is a loss of generation capacity of approximately 259 MW (of a total facility capacity of about 1200 MW). With half of the Powerhouse 1 capacity forced out of service there is concern that we will exceed the spill cap of 150 KCFS during peak spill season. Over 150 KCFS spill will draw debris back up onto the spill apron where it will ball mill and damage the concrete apron.

Unit 10 is a priority unit per the fish Passage Plan. It provides attraction flow to the Bradford Island A-Branch Fish Ladder Entrance. With Unit 0 also forced out of service due to a turbine guide bearing failure, Units 9 & 10 provide some black start capability and could float the facility's electrical load while switching. With 9 & 10 out of service we lack the ability to reconfigure interties.

Finally, the Large Cap project to install digital governors may be delayed. Draft tube stoplogs are required to commission the digital governors. All in service stoplogs are in use in Unit 4 and Unit 10.