



February 28th, 2019

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Water Quality Program
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Comments submitted electronically

RE: Draft Environmental Impact Statement for Short-Term Modification to Adjust Total Dissolved Gas Levels in the Columbia and Snake Rivers.

Dear Director Bartlett,

Thank you for the opportunity to provide comments to the Department of Ecology (Ecology) about the proposed short-term modifications to the state's total dissolved gas (TDG) standards. **We strongly support alternative 3 to increase the state's TDG standards to 125%.** Increasing these standards will allow for more water to be spilled over dams on the Columbia and Snake rivers, both of which support critical salmon runs that Southern Resident orcas rely on. Increasing spill is one of the most effective near-term actions the state can take to provide more salmon for orcas.

The Orca Salmon Alliance, a coalition of 17 local, state, and national organizations, is working to save Southern Resident orcas by recovering their primary food, Chinook salmon. The single greatest change to the Southern Residents' diet is the collapse of salmon runs in the Columbia Basin. Without bold and immediate actions, the Southern Residents are likely to go extinct within our lifetime.

Historically, swift river currents in the Columbia and Snake river basins quickly carried smolts (recently hatched salmon) to the ocean, where they matured and migrated further out to sea. After European colonization and years of industrial development, salmon runs declined and disappeared throughout the Northwest. Large dams on the Columbia and Snake rivers created warm, slack reservoirs, making the salmon's journey much more difficult, and in some cases impossible. Juvenile salmon rely on natural, cold, free-flowing rivers to carry them safely to the ocean. As dams slowed the rivers, salmon populations in the basin crashed, severely reducing one of the orcas' most critical and abundant sources of food.

Slackwater created by dams has significantly increased the amount of time it takes for smolts to safely migrate to the ocean and increased their exposure to lethally warm water and predators (particularly invasive piscivorous fish). Spilling water over the dam spillways (instead of through turbines to produce energy) more closely mimics the natural flow of big rivers, like the Columbia and Snake, and delivers smolts more quickly and safely to the ocean. The more fish that are 'spilled', the more fish that return to the river as adults to spawn. Scientific research collected annually since the mid-1990s demonstrates conclusively that additional spill significantly increases juvenile salmon survival and subsequent adult returns.

Washington's current TDG standards are outdated, restrictive, and no longer reflect the best available science. Recent increases in spill show that we have been overly conservative with our standards. **The**

Comparative Survival Study suggests that increasing TDG standards to 125 percent would result in 2 - 2.5 times more adult Chinook salmon returning than current levels. The majority of the studies cited in the EIS also suggest that spill up to 125% is safe for most native aquatic species, particularly salmonids.

The species that would be negatively impacted by increased TDG are non-native species, such as northern pikeminnow, largemouth bass, and smallmouth bass. These three species are predators of juvenile salmon, and the state is actively encouraging efforts to reduce populations of these fish. Ecology should note the added benefit of increased spill in helping reduce non-native salmonid predators.

Increasing salmon runs in the Columbia Basin is essential to preventing the extinction of the Southern Resident orcas. During the winter and early spring, these orcas forage on Chinook salmon from Cape Flattery to Monterey Bay. Historically, the Columbia Basin produced the most Chinook salmon on the west coast, providing a large and critical source of food for the orcas over winter. Increasing spill over the Lower Snake and Lower Columbia dams would benefit seven of the fifteen most important salmon runs in the orcas' current diet.

Several recent studies have shown that management of freshwater systems can affect smolt-to-adult returns, even when taking ocean conditions into account. Because the state cannot manage or change ocean conditions, the most effective tool managers have to increase adult returns (particularly in the near-term) is to increase spill.

We greatly appreciate your leadership to recover both salmon and orcas. Increasing spill in the Columbia Basin will further mitigate the impact these dams have had on endangered salmon runs and provide more food to orcas in the near-term. **We strongly support alternative 3 to increase TDG standards to 125% in 2019.** We look forward to working with you and your staff further to prevent the extinction of orcas and salmon.

Sincerely,

Member Groups of the Orca Salmon Alliance:

Center for Biological Diversity
Defenders of Wildlife
Earthjustice
Endangered Species Coalition
Friends of the San Juans
Natural Resources Defense Council
Oceana
Orca Network
Puget Soundkeeper Alliance

Save Our Wild Salmon
Seattle Aquarium
Sierra Club
Toxic Free Future
Washington Environmental Council
Whale and Dolphin Conservation
Whale Scout
Wild Orca