

Debra Ellers

I live in Port Townsend, WA, and have seen the Southern Resident Orcas in the wild; a magnificent and unforgettable experience, an opportunity which every Washington resident should have. Orca scientists have made it clear that our SROs are in a starvation crisis. See attached letter dated October 15, 2018 from Dr. Deborah Giles and other distinguished orca scientists.

Because SROs' diet consists of at least 80% chinook salmon, having an ample chinook salmon population is key for their survival, as well as that of many other species, and indeed, the entire PNW ecosystem. The Columbia/Snake chinook population is crashing this year, with fewer than 50,000 expected to return, about 1/10 of the 10 year average. Accordingly, I urge you to exercise Washington's authority under Clean Water Act section 401 to help ensure the Columbia Basin's federal dam operators take action to reduce rising water temperatures, protect salmon, and help save the Southern Resident orcas from extinction.

When river temperatures exceed 70F for several days at a time as happens with increasing frequency due to climate change salmon have difficulty migrating upstream and begin succumbing to stress and disease. According to the Fish Passage Center, an independent government agency, "under a climate change scenario, the long-recognized and largely unaddressed problem of high water temperatures in the [Columbia and Snake rivers] becomes an ever-increasing threat to the survival of salmon."

On the Columbia and Snake Rivers, hydroelectric dams make the heat pollution even worse. Federal dams on the Columbia and Snake rivers have never obtained water quality certifications under Section 401 of the Clean Water Act leaving Washington without authority to protect its own water quality and fisheries. Until now.

According to EPA's own draft analysis, summer temperatures in portions of the Columbia and Snake rivers are up by 1.5 degrees Celsius since 1960 because of the combined effects of climate change and dams. Temperatures are so high, sometimes exceeding 70 degrees, that they kill migrating salmon, such as in the sustained hot summer of 2015.

The EPA's own analysis also shows that removing the 4 Lower Snake River dams (LSRDs) would have the most impact on reducing temperatures to the salmon survival range. Removing the 4 LSRDs would also assist with lowering the temperatures at the 4 mainstem Columbia dams. The 4 LSRDs are no longer needed for hydropower, as they generate only about 3% of the system's power, which is at about 16% surplus. Nor do they provide any flood control. The irrigation provided at Ice Harbor Reservoir to about 37,000 acres can still be provided post dam breaching via lengthened pipes and additional pumps. It is imperative for the sake of having our SROs and salmon survive that the 4 LSRDs are breached as soon as possible, commencing in 2019.

I therefore request that DOE enact water temperature standards that will provide incentives for the federal operator, USACE, to breach them to come into compliance with the Clean Water Act and Endangered Species Act. Lower water temperatures will help save salmon, orcas, the Columbia/Snake watershed and the entire PNW. We in WA state must be leaders, where the federal government is failing to protect our irreplaceable environment and wildlife.

October 15, 2018

Governor Jay Inslee
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Ms. Stephanie Solien, Co-Chair
Mr. Thomas (Les) Purce, Co-Chair
Southern Resident Killer Whale Task Force
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Delivered via e-mail and regular mail

Dear Governor Inslee, Co-Chairs Solien and Purce, and Southern Resident Orca Recovery Task Force Members,

We are writing as scientists and researchers with many decades of collective experience and a deep familiarity with the life history and current status of the Southern Resident Killer Whales. We have also been particularly attentive to, and in certain instances directly involved in, the urgent conversations regarding orca protection and recovery strategies and programs. We offer our expertise and insights as the Southern Resident Orca Task Force compiles its initial list of recommendations this Fall.

While we do not specialize in fisheries biology, we know from studying the Southern Resident Killer Whales that increasing the abundance of spring, summer, and fall populations of Chinook salmon in Northwest marine waters is vital to ensure orca survival. We write to emphasize several critical details about Chinook abundance that at this time may be underappreciated by Task Force members but are nevertheless essential to the success of its work.

Because the Southern Residents need access to abundant chinook salmon on a year-round basis, increasing a wide variety of chinook salmon as quickly as possible must be the top priority for the Task Force and regional policymakers. Vessel-related interference and food chain toxins -- threats in and of themselves -- are intensified by the current prey shortage. While both of these threats also demand immediate action, ensuring an abundant supply of prey will help to minimize and mitigate these other recognized causes of decline. For example, when orcas are forced to metabolize their blubber in times of prey scarcity, they mobilize toxins stored in these fats. This increases rates of reproductive failure, compromising the population's ability to grow. While abundant prey does not eliminate these stored toxins, it does help ensure that they remain stored in the orcas' fat reserves. In fact, that may be why transient killer whales are doing so well compared to southern residents. The transient's rich prey source appears to buffer them from toxin impacts, despite having markedly higher toxin loads relative to southern residents.

Put simply, Orca need more Chinook salmon available on a year-round basis, as quickly as possible. Lack of prey has caused a steady increase in mortality and orca pregnancy failure. These two factors in combination have led to the recent decline in the Southern Resident Orca population which today stands at just 74 individual whales – a 35-year low. The low number of reproductive-age females left – 27 – with less than half of these successfully reproducing in the last ten years, underscores just how little time we have to turn this trajectory around with urgent and effective action.

The Orca Task Force may not yet fully appreciate the important role spring Chinook in particular play in the life history of the Southern Resident orcas. Spring Chinook populations in Northwest watersheds have played a critical role in diet and range of Southern Resident orca due to their historically large numbers, large size, high fat content, and the timing of their return in the winter and early spring months when other Chinook populations are unavailable. These are foremost among the salmon that Southern Residents leave the Salish Sea to hunt for along the west coast in the winter and spring months.

Because spring Chinook require cold, clear, tributary streams to spawn, these salmon have been particularly hard-hit by habitat destruction from human activities like dams, culverts, logging, mining, and urbanization. There are very few watersheds left in the Northwest that support healthy (or potentially healthy) populations of these salmon.

Spring chinook from the Columbia Basin warrant special attention. Once among the largest spring Chinook salmon producing watersheds on earth, the Columbia Basin's spring Chinook have suffered steep declines over the past century from damming and habitat destruction. Despite these impacts, this vast watershed still supports—and has the demonstrated potential to support far more – spring Chinook. Even with the diminished numbers of spring Chinook compared to historic levels, multiple studies demonstrate that the Southern Resident orcas still gather along the Washington State coast and at the mouth of the Columbia River between January and April. Prey event sampling and scat surveys have demonstrated that the orcas are there to feed on the large, fatty adult spring Chinook staging in this area before they return to the Columbia river in search of their natal spawning beds. Rebuilding the spring Chinook population in the Columbia Basin – a fish that we know the Southern Residents depend upon in the winter months – should be a top priority for the Orca Task Force and orca conservation efforts generally. The early spring run also replenishes the whales after a long winter and sustains them until the Fraser River Chinook peak in mid-August.

We recommend two key measures to increase Chinook abundance from the Columbia/Snake system. These measures are described more fully in a recent letter to the Task Force from more than thirty salmon biologists: (1) an immediate increase in spill levels at the federal dams on the Snake and Columbia Rivers to 125% total dissolved gas and (2) permanently restoring the Snake River by removing the lower Snake River dams. These measures will reduce heavy dam-

caused salmon mortality for fish throughout the basin and re-establish productive access for Chinook and other salmonids to more than 5,000 miles of upstream stream habitat in the Snake River basin.

Though spring Chinook once inhabited the Columbia River deep into Canada, the Snake River Basin historically produced nearly one-half of all the spring Chinook in the entire Columbia Basin. Unlike many other parts of the Columbia Basin today where habitat restoration is badly needed, the majority of the habitat that supported this abundance – high elevation, cold water streams deep in protected wilderness in central Idaho – remains intact and fully functioning.

In short, the Snake River basin offers the best potential for large-scale spring Chinook restoration in our region. Protecting and restoring salmon access to and from this habitat will have a significant benefit for spring Chinook and should be a top regional priority for addressing orca prey needs.

Of course, Chinook restoration is needed throughout the orcas' year-round range, but based on what we know about the Southern Resident's historic and current reliance on spring and other Chinook salmon in the Columbia Basin, we believe that restoration measures in this watershed are an essential piece of a larger orca conservation strategy. Indeed, we believe that Southern Resident orca survival and recovery may be impossible to achieve without it.

Based on the science and the urgency of the current threats confronting the Southern Residents, we urge the Task Force to recommend to Governor Inslee that he take appropriate steps to change Washington's water quality standards to allow increased spill to 125% of saturation and also convene a process to recommend steps for lower Snake River dam removal as soon as possible as top priorities for orca protection.

We thank you for the opportunity to submit this letter and for your consideration. If you have questions or we can be of assistance, please contact Deborah Giles, giles7@gmail.com / 916-531-1516.

Sincerely,

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CC:

Northwest Governors
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Resources:

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