



March 1, 2023

Submitted via the portal at pcouncil.org

Mr. Marc Gorelnik, Chair Pacific Fishery Management Council

7700 NE Ambassador Place, Suite 101 Portland, OR 97220

Mr. Scott Rumsey, Ph.D., Regional Administrator (Acting) NOAA Fisheries West Coast Region

1201 NE Lloyd Blvd., Suite 1100 Portland, OR 97232

Dear Chair Gorelnik and Council Members, Administrator Rumsey,
RE: March 2023 Council Meeting, Agenda Item D: Salmon Management Measures.

Thank you for the opportunity to comment.

Sadly, it is with great concern that I repeat my opening statement from last year. With three deaths and the addition of only one new calf in the Southern Resident killer whale (SRKW) population over the previous 12 months, their population still stands at 73—the lowest in my professional career working on behalf of this community over the last two decades.

A number of females have been known pregnant over the last three years since the Council adopted Amendment 21, but have not been seen with newborns. It remains imperative that sufficient Chinook salmon are available to support healthy pregnancies, as fecal studies show a 69% pregnancy failure rate when seasonal Chinook salmon abundance is low.

We appreciate the efforts that went into the SRKW workgroup and the additional management measures to be applied in years when the pre-season forecast falls below the threshold set in Amendment 21. Yet despite the whales' urgent need—

measured in too few births and too many premature deaths—the threshold is yet to be breached, so these life-saving measures are withheld.

In addition, while this process concluded in 2020, the Council did not utilize any of the annual Chinook salmon abundance data after 2016. A recent [study](#) using these data for 40 years up to 2020 showed the SRKW had insufficient Chinook salmon to meet their daily prey energetic requirement in 2108, 2019, and 2020. Given this data, we expected to see more of the Southern Residents in poor condition. Sadly, our expectations were met. In June, 2022, WDFW issued an emergency order to boaters due to 13 whales being listed as vulnerable. It would seem prudent to update the models with the most recent data and best available science and assess whether the threshold methodology remains relevant in the face of a changing climate and the very obvious population stagnation of the SRKWs, with an unsustainably low birth rate.

The most up-to-date science shows the accelerating impacts of climate change on Pacific salmon—both on the high seas and in-river. Last year, NOAA Fisheries scientist Laurie Weitkamp reported that salmon models are increasingly unpredictable due to the climate crisis. Yet PFMC continues to rely on such models to produce pre-season estimates, often shown to be overestimated.

A new SRKW [population viability model](#) has been developed since Amendment 21 was adopted, showing a more rapid path to biological extinction. Little wonder when a [recent study](#) out of University of British Columbia (UBC) study shows the impact of *forever chemical* contaminants on lowering birth rates in humans, and these same contaminants have recently been shown—for the first time—to be present in the tissues of these whales. When malnourished, these chemicals otherwise stored in their blubber become *mobile*, entering the bloodstream, and for pregnant or nursing females, they are transferred to the calf. This new study found the first evidence of contaminant transfer in utero. The calf of Southern Resident killer whale J32, Rhapsody, was found to have a higher contaminant load than her mom, who also died during labor. Fifteen contaminants had passed from mom to calf in utero, with the most prevalent being one that is known to cause difficulties in the birthing process in humans.

A paper published last month by scientists at UBC analyzed the [lipid content](#) of multiple Chinook salmon runs in the Fraser. They found that the Chinook salmon populations with the highest energy density migrate the furthest and spawn at higher elevations. Sadly, as is the case in U.S. waters, these are the ESUs most threatened with extinction. This forces the whales to expend more energy,

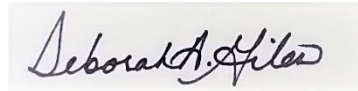
foraging more frequently to locate and capture higher quantities of lower-quality Chinook salmon, including hatchery-raised. The study estimates this could require an additional 80,000 Chinook salmon.

It does not appear that the Council or NMFS considers prey quality when considering the quantity available to the SRKW. Nor, in fact, the energetic needs of these whales at all, despite multiple studies that have made such calculations.

We ask that you apply additional measures to all west coast fisheries this year to reduce the overall Chinook salmon catch outside terminal areas to increase foraging opportunities available to the Southern Resident killer whales this season.

Thank you.

Deborah A. Giles, PhD.

A handwritten signature in cursive script that reads "Deborah A. Giles". The signature is written in black ink on a light-colored, slightly textured background.

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