



Connecting Whales and People
in the Pacific Northwest

January 20th, 2020

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Ross Strategic, White Bluffs Consulting, and Anchor QEA

Attn: Lower Snake River Dams Stakeholder Report

Consulting Firms Overseeing the Lower Snake River Dams Stakeholder Report,

Thank you for providing an opportunity to publicly comment on the draft report regarding the Lower Snake River Dams Stakeholder Assessments.

Orca Network is a non-profit organization dedicated to raising awareness of all the whales of the Pacific Northwest, and the importance of providing them safe and healthy habitats. We provide learning opportunities and advocacy through our educational programs, the Langley Whale Center, and outreach opportunities in classrooms and festivals. Our Whale Sightings Network, which was started on behalf of the Southern Resident orcas, currently consists of over 15,000 subscribed e-members and roughly 160,000 Facebook users. On behalf of our staff and Board of Directors, we would like to take this opportunity to voice our concerns regarding some missing and misleading information surrounding the “salmon/steelhead/orca/ecological” section of the draft report.

As was noted throughout the draft report by many stakeholders, debates surrounding the dams have been going on for decades and each issue is complex. By speaking on behalf of the wild salmon and Southern Resident orcas—which create our iconic uniqueness in the Pacific Northwest—we want to be clear that we are intentional in aiming to increase awareness and understanding. This theme of “increasing understanding” was mentioned throughout the draft, and is critical. Clearing up missing or misinformation is not meant to be disrespectful, nor should it serve to be received as a dictation to those potentially impacted by any decisions made, moving forward.

It is important to note that the Lower Snake River Dams Stakeholder Report is a result of Governor Inslee’s Executive Order mandating the creation of the Southern Resident Killer Whale Recovery Task Force. Their Year One 2018 Final Report contains Recommendation #9 which reads: “Establish a stakeholder process to discuss potential breaching or removal of the Lower Snake River Dams for the benefit of Southern Resident orcas.” While this citation was included on page 92 of the draft report, the written directives within this recommendation were omitted. These are important to notate:

- “In conjunction with the states of Idaho and Oregon, Washington should act quickly to hire a neutral third party to establish a tribal and stakeholder process...”
- “...the purpose [of this process] is to address...the potential breaching or removal of the lower Snake River dams and associated economic and social impacts and mitigation costs. ...This collaborative effort should work in conjunction with the states of Washington, Idaho, and Oregon to support a technically sound process.”

- “This process will include engagement from local, state, tribal, federal governments, along with interested stakeholders, to begin developing a regional understanding and potential recommendations for the lower Snake River dams.”

We highlight these points because this report does not fully encompass Idaho and Oregon state, as the recommendation originally intended. This report also omits putting forth any recommendations, and in the final paragraph entitled “Opportunities to Increase Understanding” at the closing of Section 9: Economics, it is stated that “to determine the full economic impacts of retaining or breaching the LSRD, more detailed analyses are required to determine (1) the viability and costs of retaining the LSRD (and viability and costs of LSRD breaching); (2) viability and costs of implementing needed infrastructure improvements; and (3) identifying potential funding sources, if the LSRD are breached.” We feel that this short paragraph fails to mention the need to increase understanding of the value of survival and abundance of Snake River watershed salmon and the value of survival of Southern Resident orcas, which was the purpose of the Governor’s Executive Order in creating the Recovery Task Force and this stakeholder study. In order to successfully encompass the directives outlined in the Year One 2018 Recommendation, these items are critical. We feel that this report misses the recommendation mark, for this reason. There is also no timeline asserted for when these outlined actions should take place, nor motion to encourage such a process as next steps, if this stakeholder process was just to serve as a foundation to lead into further evaluation and mitigation processes.

We also feel it is important to point out the purpose of this report’s creation because we feel there is a lack of Southern Resident science and weight in this draft. Roughly one dozen pages of the 70-page document touches, in part, on salmon and the ecological issues, and of those only a couple pages serve to inform about Southern Residents. What is further concerning, is that there is only one citation within the orca information that was not provided by WDFW, NOAA, or BPA. There are many dedicated fish biologists and orca scientists familiar with Columbia Basin salmon stocks and Southern Resident orcas that were not given equal weight or fair representation within this report, which does not align with the report’s goal “for people to feel confident their perspectives are represented, whether they themselves were interviewed, or not.” Instead, the agencies and organizations with a vested interest in maintaining the dams were relied upon almost exclusively for the studies, opinions, and substance of this report.

The draft report mentions that some interviewees divulged a lack of trust in the Columbia Basin Caucus agencies, including NOAA, noting that “...NOAA may be overly influenced by political forces that are in favor of retaining the LSRD.” This makes it all the more imperative to include data and statements by dedicated orca scientists, fisheries and research scientists, who are arriving at differing conclusions than those that were imparted by NOAA. We are including some highly relevant quotes pulled from distinguished scientists’ letters that did not make the draft report:

- *October 22, 2019* - ...on behalf of 55 fisheries and natural resource scientists: "Restoring the lower Snake River by removing its four federal dams will significantly reduce mainstem water temperatures on a long-term basis, and is likely the only action that can do so, substantially lowering the risk of extinction for salmon and steelhead here." (<http://www.orcanetwork.org/Main/PDF/55-Scientists-Snake-River-Letter.pdf>).
- *October 15, 2018* – 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: “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 ... convene a process to recommend steps for lower Snake River dam removal as soon as possible as top priorities for orca protection.”

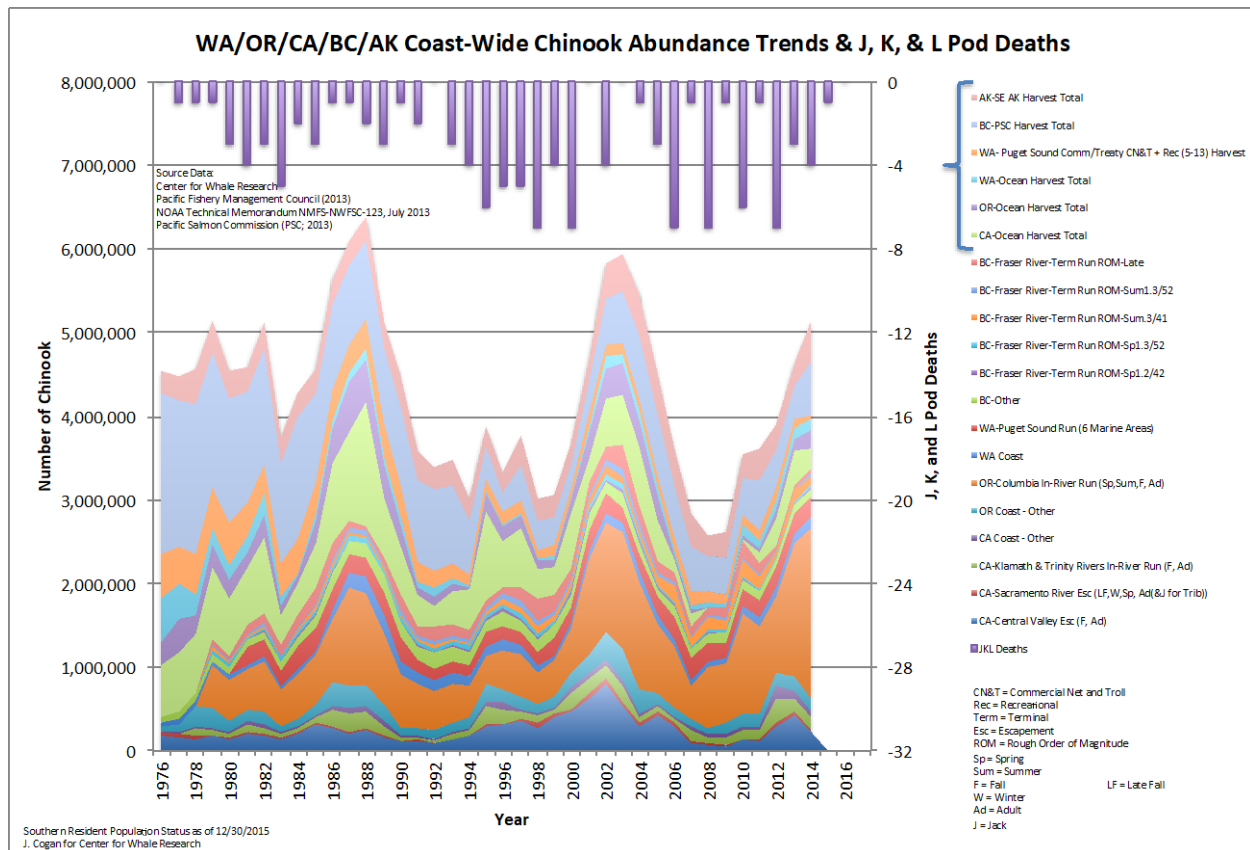
<http://www.orcanetwork.org/Main/PDF/Scientists%20letter%20to%20Inslee%20101518.pdf>.

- *August 27, 2018* - Salmon scientists with decades of experience and considerable familiarity with the science concerning the protection and restoration of healthy, self-sustaining wild salmon populations in the Columbia and Snake River Basins: "...the most effective measure we know of to permanently increase the sustained abundance of Chinook salmon from the Snake and Columbia Rivers: removing the four federal dams on the lower Snake River and restoring the ecological health of that river corridor." (<http://www.orcanetwork.org/Main/PDF/2018.Scientist.Ltr.Orca.TF.Aug.27.pdf>).
- Ken Balcomb, founder and chief scientist of the Center for Whale Research, a veteran orca population biologist who has conducted demographic field studies on Southern Resident orcas since 1976, told KNKX radio: "Biological extinction – lack of reproduction – is almost there now. If we go at this rate, we have at most, what's left of this reproductive generation," Balcomb said. "Ten or twelve years and then [they'll] be biologically extinct." ([Orca task force adds 13 recommendations at final meeting as 'biological extinction' looms, By Bellamy Pailthorp, Oct 8, 2019](#)).

It is worth mentioning that while NOAA prioritizes Columbia and Snake salmon as lesser than Salish Sea salmon, in its 2008 Recovery Plan for Southern Resident Killer Whales, NOAA underscored the importance of the Columbia Basin to the orcas, stating that, "[p]erhaps the single greatest change in food availability for resident killer whales since the late 1800s has been the decline of salmon from the Columbia River basin."

Regarding a Southern Resident orca's dietary needs on a day-to-day basis, the third paragraph on page 33 paints a quantity picture and not a quality picture. It is not correct to continue saying, "an average adult orca must consume between 28 and 34 adult salmon daily... and 15-17 daily as juveniles." Instead, the report should reference poundage or caloric needs for Southern Resident sustenance. Chinook salmon, historically, have weighed upwards of 120 pounds and could be over four and half feet long; today, mature fish average 30 pounds and are roughly three feet in length (NOAA Fisheries). Since salmon have become smaller and leaner fish, it is misleading to place a quantity on the number of fish, and not the poundage required by Southern Resident orcas. The draft report completely omits that Southern Residents prey-share, not consuming whole fish, themselves; that juveniles must learn to be successful hunters not solely reliant upon others' contributions; that nursing female orcas require more calories daily than a female that is not. Sharing the natural history and culture of these orcas is an important step to helping those unfamiliar with them understand why wild salmon are of the utmost importance when looking at the factors necessary to recover their population.

We are dismayed and disheartened at the continual redirection away from getting Southern Residents more of their prey resources. While there are other factors that impede the recovery of this population, if these orcas were staying well fed, the impacts from toxicants and boat noise would not play such a compounding role in overall Southern Resident health or hinder this population's reproductive success and recovery. What is worth mentioning in the draft report is the correlation between Southern Resident decline and their prey decline, especially juxtaposed with Bigg's (transient) killer whale abundance and their prey abundance. Before moving into the differences between these two culturally distinct communities, we've included a graph created by the Center for Whale Research, which by quick scan, illustrates the correlation notated between Chinook abundance, by year, and Southern Resident deaths, by year. The years where less fish were present in the system, more Southern Resident mortality occurred.

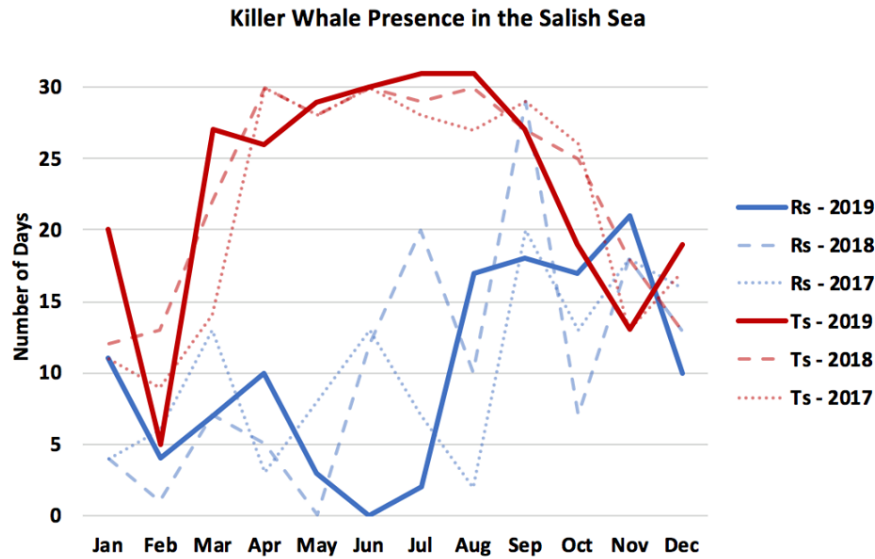


Getting back to these two culturally distinct communities, which do not breed with each other, communicate with each other, and have very different prey resources, foraging strategies, and pod structures, both communities utilize overlapping areas around the Salish Sea and off the coast to hunt. This means they are exposed to similar vessel stressors and contaminants. The difference is one population is teetering on the edge of functional extinction, while the other population continues to increase by roughly 4% each year.

To render the prey abundance correlation further, Bigg's killer whales have held more of a consistent presence within the Salish Sea, and the number of encounters and days present increases every year, most notably over the last five years, as reported by Orca Behavior Institute (in conjunction with data from The Pacific Whale Watch Association, and us, Orca Network). Predating upon seals, sea lions, and porpoise, there are abundant and stable prey populations that support Bigg's orcas' dietary needs. In turn, Bigg's killer whales are encountered more regularly by whale watching boats, private boaters, commercial vessels, tankers, etc., yet their overall health remains stable and their population continues to increase.

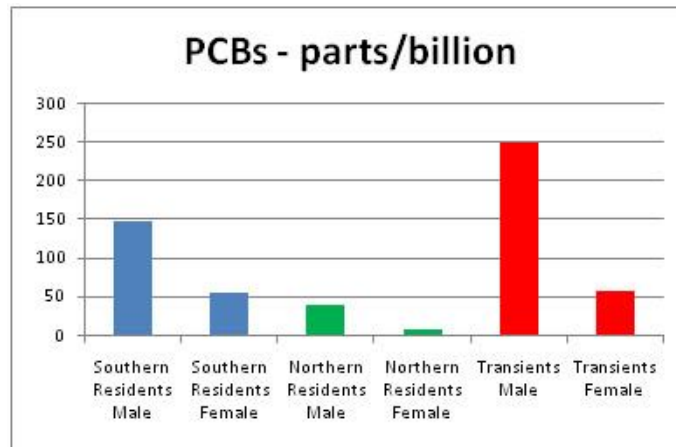
In early November 2019, a post by Orca Behavior Institute was made, graph included: "Our official field season ended on October 31...It's hard to believe that this was already our fifth field season. Every year we've managed to have more than 70 research encounters where we are able to collect behavioral data, but as you can see, the percent of those encounters made up by Southern Residents versus Bigg's/Transients has varied widely! In 2015 we had 70 encounters with Southern Residents alone! This year, that number was 20, a record low. If you look at number of hours spent in the field with Southern Residents, it was less than half our previous low. Meanwhile, this was the second highest year for us for number of hours spent observing Ts.

We only had one encounter this year where members of all three pods (Js, Ks, and Ls) were present, and 75% of our encounters were made up of J-Pod whales only, reflecting how rare visits were from Ks and Ls all year long. It's hard to believe that in 2015 we had more encounters with all three pods together (22) than we had total with any Southern Residents this year (20). I'm thankful we started when we did, so we can continue to track the ongoing changes of habitat usage by Rs and Ts in the Salish Sea."



Data compiled by the Orca Behavior Institute from sightings reported to the Pacific Whale Watch Association and Orca Network

With Bigg's killer whales eating a step higher on the food chain (seals, sea lions, and porpoise), Bigg's carry a higher contaminate load than salmon-eating Southern Resident orcas. The difference is



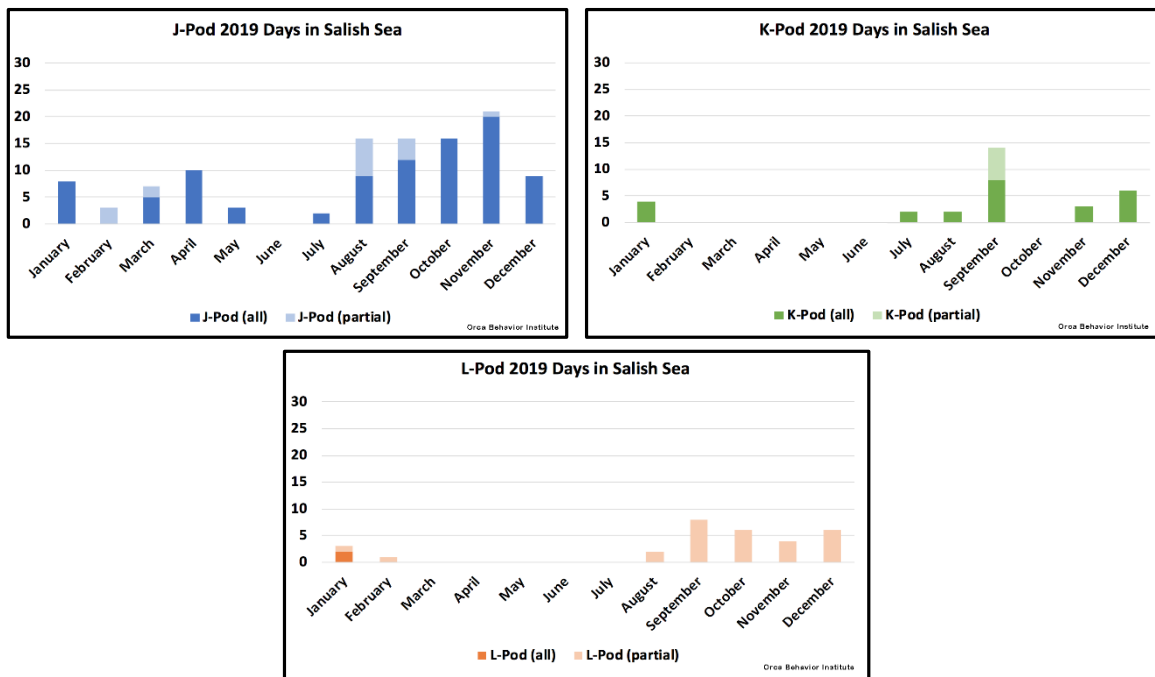
*Graph provided by Canadian Department of Fisheries and Oceans (DFO)

that Bigg's killer whales maintain peak body condition, consuming the necessary amount of food daily, and those toxicants remain stored in their blubber, not impairing health, or reproductive ability. It is only when blubber is metabolized in times of food shortage that those toxicants flood the animals' systems, inflicting the complications these toxicants cause. Southern Residents have been experiencing more recurrent lean times and are traveling farther to find quality prey resources, and so cyclically experience toxicants metabolizing in their systems. This has led to a 70% miscarriage rate in their

population. Even if a female produces a viable calf, she continues to offload these stored toxicants while nursing, making the first two years of a calf’s life rigorous. 50% of the calves born are likely to die within the first two years due to this nutritional stressor placed upon them, but nursing mothers are also at risk of mortality due to the lack of caloric intake necessary to produce milk for her calf while sustaining herself. In 2016 this population lost an orca mother and calf pair due to this nutritional stress placed on both animals; the mother died in very poor body condition, and the calf, not yet weaned and unable to eat fish, perished from starvation.

Another misconception noted in the report is how often Southern Residents are feeding off the coast near the mouth of the Columbia River. It is important to note that while January through April may be considered peak months for Southern Residents at the Columbia, it is more probable that members of this community are utilizing this area to forage year-round. J Pod penetrates the Salish Sea and Puget Sound with far more frequency than K Pod and L Pod do, and while all collectively utilize areas like Swiftsure Bank on the southwestern side of Vancouver Island, K Pod and L Pod spend substantial time off the coast of Washington and Oregon, waiting for adult Chinook and Coho that are making their way back to the Columbia River system to spawn.

To help illustrate what was recorded this year, and is becoming the increased norm, here is a data set of Southern Residents present by pod in 2019, compiled by Orca Behavior Institute:



This lack of Southern Resident presence in the Salish Sea points to increased time spent off the coast. With specific runs of Chinook and Coho making their way back to the Columbia River system to spawn during different seasons, Southern Residents will maintain presence when this prey resource is available. It is worth mentioning that when NOAA was satellite tagging orcas (2011-2016), specifically when related to K Pod and L Pod, consistent clusters were recorded around the mouth of the Columbia January-May, and also in some years in July. No longer satellite tagging these animals due to the mortality of an adult male from satellite tag site infection, sightings are now the only way to confirm presence.

Some other points we would have liked to see in the report concerning Southern Residents:

- Chinook salmon comprise over 80% of Southern Resident diet. Historically the largest portion were and still are from the Snake River. So. Residents typically forage for Chinook at the mouth of the Columbia River, with K Pod and L Pod relying on this salmon consistently.
- Southern Residents have not found enough salmon consistently since the mid-1990s, leading to reproductive failures, illnesses, and early mortalities.

There is skepticism and ambiguity surrounding the salmon/steelhead/orca/ecological section, suggesting uncertainty in the dams' role of Southern Residents' decline, pointing toward other complexities. We want to take a moment to reiterate a quote we've pulled directly from the draft: "all species of salmon that use the Snake River are currently listed as threatened or endangered under the Endangered Species Act. The LSRD, along with four other federal dams on the lower Columbia River, are the biggest human-constructed obstacles Snake River fish and other aquatic species encounter on their migration from the Pacific Ocean... on a cultural and spiritual scale, the impact of the loss of salmon on tribes cannot be overstated"—and we feel that this cultural and dietary loss to the Southern Resident orcas can also not be overstated.

Almost \$17 billion has been spent on salmon recovery efforts. We do not agree that current efforts are working. We do not think that continuing forward with the same strategy for salmon recovery is enough. Continuing to study and spend money on studies when we're in a time-is-of-the-essence situation is detrimental to the success of any recovery efforts; wild salmon and Southern Residents are running out of time. Five federal court decisions over 20 years have ruled that the previously chosen options to help the salmon have failed, and that their survival is not improving. The last federal decision had all but mandated the federal agencies to consider lower Snake River dam breaching as the only viable option to avoid the extinction of endangered salmon. Washington Department of Fish and Wildlife has explained that the Snake River watershed has the most abundant remaining natural habitat anywhere, and that the dams are less valuable with their benefits more replaceable, than other dams located within the Columbia River. The Fish Passage Center confirmed that adult salmon would increase substantially in orca habitat in the second year after breaching occurs. The FPC has predicted a fourfold increase in juvenile salmon survival with breaching the four LSR dams and increasing spill over the four lower Columbia dams. (2017 CSS).

We notate this while also being very aware of the differing livelihoods, ways of life, personal histories, family histories, human habits, and the risks and adjustments that would need mitigation if breaching the Lower Snake River Dams were to occur. While we understand that the breaching of these dams begets livelihoods in jeopardy, risk of job loss, fear of changing processes and procedures, an impact on economics and ways of life, the creation of unknowns around financial availability and stability to ensure the loss is minimized, this process serves to help shape what efforts could be implemented by asking those directly impacted to think critically and contribute in a manner that is meaningful. When these dams were constructed, there were people and wildlife that were left behind without the same considerations extended to them. Over the course of the last forty years, tribal people have been displaced, wild salmon have disappeared, coastal communities have experienced life-altering hardships, and we are fast approaching the extinction of certain wild fish runs, along with a unique community of orcas that are not found anywhere else in the world, in part, to these dams. As these engineering feats have proven beneficial for some, even generations since their creation, the recognition or sympathy for those that have lost everything, or are in the process of losing what little is left, for that prosperity, does not ring throughout the draft report. What was found, instead, in the closing "An Increase in Respect and Understanding is Needed" on page 69 of the report, is an

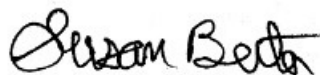
inflammatory summation of perceived disrespect and a cyclical pitting of Western Washington against Eastern Washington, all over again. It is unfair to ask for respect and understanding while little weight is given to the hardships inflicted at the gain of prosperity to others. It's been forgotten that there were fish biologists and scientists that warned against the dams and predicted what we are seeing today. Dr. Deborah Giles summed up her opinion on progress at the end of the Vancouver, Washington workshop on January 9th succinctly when she said she doesn't foresee conclusions, moving forward, if not everyone sitting at the table cares about Southern Resident orcas.

Economics, energy, environmentalism, agriculture, jobs, fishing, and the tribes seem positioned against one another, suggesting that only one sector should successfully progress, and not all. We need to move away from this mindset and strive for solutions that work for all, but we must do it quickly. To be successful, all mentioned will have to compromise, think critically, and contribute. We, too, would like to see an increase in understanding and respect on both sides, but we also share in the wariness of the potential for progress.

This stakeholder process convened as a result to recover Southern Resident orcas. In doing so, it has helped to open communication pathways, increase understanding, spell out the complexities, aim to dissolve hostilities, and then pave the way toward solutions for everyone, not just some. But we are on the precipice of losing wild salmon and Southern Residents, and because these things don't impact every Washingtonian, they seem to hold less weight in the conversation. Circling back to all the different interests being pitted against each other, we wonder why, with all our human intelligence and capabilities, we cannot aim for, and achieve, solutions that work for each piece of this complex puzzle, moving forward? Why is this just a Western Washington problem and not a Washingtonian problem?

To conclude, we like to see an emphasis on creating a plan of action, moving forward, detailing the items outlined in the closing of Section 9: Economics. We would like to see the Southern Residents as a bigger part of the picture, as was the Orca Recovery Task Force's intention. We appreciate you taking the time to consider our concerns and look forward to working with all involved on this important recovery effort in the seasons to come.

Sincerely,



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