



RE: Proposed Lower Snake River Dam Breaching

Date: July 10, 2022

To: Lower Snake River Dams Breaching Committee

Dear Committee members,

This letter is from the Yakima/Klickitat County Farm Bureau (Y/KCFB). Y/KCFB is a grass roots organization with 2700 members consisting of farmers and ranchers with operations both large and small as well as other folks with interest in agriculture affairs in Yakima and Klickitat Counties.

Fundamentally, the YCFB is very opposed to removing or breaching the Lower Snake River Dams (LSRD). The YCFB believes that these dams should remain in operation for their entire physical life span and that they are much more valuable intact than breached for a number of reasons. First and foremost, established hydropower is zero carbon Zero carbon!

It is also a matter of necessity that our region and nation maintain a robust electrical production capability. Western societies desire to become less dependent on fossil fuels due to the goal to reduce our carbon foot print and where nuclear energy has been sidelined due to perceived safety concerns. This leaves hydropower, solar and wind generation as our exclusive electrical generating base in the near future.

While there have been advancements in solar and wind generating technologies the YCFB believes that by the very nature of the natural resources they draw upon they are not “trust worthy” as a stand-alone energy source. The net result is that when we have the most need, they produce little or no electricity. This circumstance occurs during long stretches of low temperature, stagnant air and solid cloud cover and/or fog and the condition can last for weeks during most winters in the served area. Making matters most dire, electrical needs are also at their annual peaks due to heating and lighting needs during these periods of least wind and solar resources.

It is a fact that the total generating capability of wind and solar is far from substantial enough to satisfy our electric needs even when they are operating at full capacity. It is also understood that a variable and intermittent power source requires a “large battery” to help it through resource shortages (periods of no wind or sun). Manufactured battery technology such as Lithium Ion (Li-ion) has been advancing but there are still considerable hurdles with respect to creating ones large enough for a wind or solar farm. These new batteries require a considerable investment of money and natural resources to manufacture and are largely built

overseas due to environmental and labor and safety regulations in the United States and are still expensive enough that they are currently used only up to the size required to power compact automobiles. When their lifespan expires they present both an environmental challenge and are expensive to safely dispose of. Expensive replacement batteries would be required as the older ones fail. Traditional batteries containing lead which costs less would surely be a non-starter in the current legal environment.

Hydropower on the other hand is a perfect battery. A dam's lifespan is not measured in years or even decades but in centuries. They represent not just a "battery" but also a complete large scale power generating installation which is (unlike solar and wind) always able to generate power. More importantly the public does not have to purchase them. As wind and sun energy wanes due to conditions, hydropower is the only zero carbon energy source that is flexible enough to compensate for times of short electricity or increased immediate demand.

There is an argument that our region does not need more power or even as much generation capacity as it presently has. The YCFB strongly disagrees with that assertion. It is obvious that there will be continued long term economic growth in Washington and neighboring States which will demand more electricity. The recent leveling off in electrical demand has been created largely through conservation but one can only conserve to a point. Soon our regional load will increase due to economic and population growth.

Further, our electric demand will increase due to a continued move towards mobile electric transportation in order to reduce carbon emissions. While autos have led the way going electric, heavy and light rail transportation and city buses have somewhat of a history of utilizing electricity getting their power from the rails they run upon or through a network of overhead power wires and there are companies testing the feasibility of producing large and small battery powered electric freight and utility trucks.

Recently the Washington State building code has been modified to begin phasing out carbon based energy forms from new construction of commercial and industrial buildings. Homes will likely be next and the YCFB understands that the goal is to cause retrofitting of existing buildings in the longer term. The move to electrify all forms transportation and buildings will certainly produce a vastly increased load on electric generation and ignoring the impact is extremely foolish and dangerous.

Our nation has arguably the one of the most reliable electric grids in the world (Norway and Paraguay excepted due to their vast hydropower capability as a percentage of usage). It is most distressing to witness recently occurring brown outs and black outs in portions of the United States though. If we fritter away our electric security through faulty decision making the Pacific Northwest residents will suffer for decades. Governor Inslee recently predicted brownouts this summer, if those come to occur it will be a first but if reckless decision making occurs, it will become common place.

Another reason the YCFB believes our LSRD must be retained is because they are fitted with locks. This allows millions of bushels and tons of agricultural commodities to pass down stream and other freight to be transported back up by barge rather than truck or rail. Simply put, barging saves money and reduces carbon emissions. A single barge replaces many rail

cars and countless trucks on our roads and rail lines in a more fuel and labor efficient manner, while subjecting our roads and rail lines to much less wear and tear. Most important, fewer trains and trucks on our roads directly enhance public safety.

After all, when was the last time that a car collided with a barge?

The YCFB can not overstate this: The dramatically increased truck and rail traffic will cause a big increase in carbon emissions over the much less carbon intense barge traffic. The affected areas roads will have to be significantly upgraded and public safety will be degraded.

Finally, there are 40,000+ acres irrigated because of the LSRD. The loss of agricultural production caused by breaching would be unacceptable. The YCFB believes that the promises offered to make the farm families “whole” due to a loss of their irrigation are hollow. Even if their loss were to be fully compensated, simple money does not reimburse for the loss of one’s way of life. Also, the true cost of compensation would be staggering. Dramatically lower water levels, a greater reliance on already declining ground water, increased energy for pumping on an electric grid already under increased strain are all consequences of breaching the LSRD.

The dams on the Columbia and Snake Rivers also provide increased safety from flooding. There have been several historic floods prior the creation of the dams but one flood stands out as an example of what can happen if even a few dams are removed and what that could well mean for human and property safety. In 1948, the Vanport flood wiped out a settlement near Portland, Oregon named Vanport. There is a great uncertainty as to the number of lives lost but the official count is 50 people lost but the actual count was likely more. Vanport was a community of African-Americans who lived there during and after the wind down to WWII. It is speculated that less concerned people were callous towards the Davenport residents who were missing and so the losses were not counted as diligently as them might otherwise been. It is significant to note that by 1948, several dams of great note were already constructed along the Columbia River, much less the upper Snake River by that time and yet, an historic flood still occurred.

While loses due to breaching with regards to power and carbon releases can be relatively predicted, the gain to migratory fish due to breaching is less certain. There is an issue as to what the effect of sudden, large releases of silt and mud built up behind the dams will have upon the river below each dam. The YCFB understands that a twenty year window before the conditions below each breached dam becomes palatable are expected. That is shameful.

Furthermore, while the issue of breaching has been debated, all during that time there has been much improvement to the technology to mitigate the fish issues around dams. Fish passage percentages now run from the mid to upper 90 percentage range. Study of the other elements of the migratory fish environment has also been advancing such as survival from going through the turbines. The generating efficiency of those turbines has actually increased as well --- a win, win!

It is finally being recognized that issues such as predation and over fishing (both domestically and internationally) are very important factors. The hypocrisy of humans eating an endangered species (fish) out of a can (often bought on sale) from any given grocery store while this issue remains unsettled is epic. The YCFB believes that addressing the issue of aggregate predation would far outweigh losses due to dam passage (post mitigation).

Another issue that has surfaced recently is that of a declining population of the Southern Resident Orcas. Advocates for breaching the LRSD blame a reduced salmon population due to losses because of them. The facts and history are illustrative because the Orca population is the same as it was before large scale fish hatchery operations began. The Orca count was about 66 individuals in the area of concern. Millions of salmon were reared and released from hatcheries for many years and the Orca's numbers rose to 99. The hatcheries were closed or scaled back considerably and the Orcas now number 78.

The YCFB believes that the Orca's rise in numbers and then their subsequent decline is directly correlated to the rise and fall of artificial releases of the hatchery fish. It is a proven fact that salmon reared in the wild are faster and more elusive swimmers than hatchery fish. Orcas, as predators caught the slower hatchery fish which artificially boosted their numbers. As the releases of hatchery salmon declined, the Orcas finding fewer easy meals had to turn back to the wild salmon which then also declined. If we need more Orcas, then it is pretty obvious that we need to resume rearing and releasing the hatchery fish to feed them.

Understanding where the Southern Resident Orcas reside is also important since they range within the Puget Sound and the Salish Sea for more than half of the year. The EPA has been closely monitoring pollution levels in the Sound and adjoining Salish Sea for decades and they have been finding alarming levels of PCB's and PBDE's in the marine life there.

The primary animals the agency is monitoring are the Pacific Herring and the Harbor Seal. Less often, the agency has pulled samples from Orcas and one individual, a "transient" (mammal eating) Orca was found to have alarmingly high levels of these harmful pollutants. The resident (Salmon eating) Orcas tested have shown heightened levels of the pollutant in question. Lately, salmon in the Sound are found by researchers to have enough estrogen (synthetic form prescribed to humans) washed out through waste treatment facilities to cause some of the male salmon to be physiologically feminized and traces of cocaine has also been found in live salmon.

The EPA banned PCB's in the 1980's and PBDE's by 2003. Continued monitoring has shown that PCB levels are declining and PBDE concentrations are leveling off. Unfortunately these pollutants are very persistent in the environment and have been shown to bio-accumulate with marine animals higher in the food chain such as with Orcas. It is to be noted that PCB's and PBDE's have been implicated with interfering with many critical life functions in animals. We also find it interesting that the highest levels anywhere of these onerous pollutants in the test area and on an order of magnitude (a few hundred units vs. nearly 4000) are right in the vicinity of Olympia.

The YCFB believes that transposing a Puget Sound pollution issue into an advocacy to breach the Lower Snake River Dams is scapegoating, at best. The fact is the population of Salmon in the Sound is moribund. While passage survival percentages range from mid to upper 90 percentile on the LRSD, the percentage of salmon in the Sound run in the single digits low single digits. Too many municipalities for too many years have been diverting money away from salmon mitigation towards other priorities.

There are other factors impairing the Orcas while in the Sound and that is water traffic and associated activities. The conflict ranges from general ship traffic, to the military and even includes (ironically) the tour boat traffic carrying people to see the Orcas. Fishing tops it all off but all together, the use of sonar which confuses the Orcas because they operate on natural sonar, to navigate but also to communicate with other Orcas (particularly their young). Tour boats have even been known to strike and injure the very Orcas they seek for their clients by getting too close.

Since the resident Orcas are in the Puget Sound a significant part of each year, expecting ocean bound Columbia River Salmon to range into there is complete folly. In the open ocean Orcas running from Monterey Bay, California to South Eastern Alaska during the winter and spring would feed throughout their range and on the Columbia River Salmon only while they passed through their area of dispersal. This reduces the effect that Columbia River Salmon population variations would influence the well-being of the Orcas.

Towards the end of the Obama Administration, researchers with NOAA Fisheries made a startling discovery. They had placed tags on Spring Chinook that are tracked by satellites and found that the fish from the Snake River and Upper Columbia River venture farther out into the ocean before they turn to migrate north than the fish from the lower reaches of the Columbia River. When the upper river fish travels were compared to the Orcas path they found that the Snake River and Upper Columbia fish were not migrating in the Orcas range. Simply put, the Orcas find lower Columbia River fish in the spring runs, not those from the Snake River (or Upper Columbia). The Snake River Spring Chinook are fed upon by the Orcas only during the narrow times when those fish are exiting or re-entering the mouth of the Columbia River.

The YCFB is most opposed to the manner that Governor Inslee and US Senator Patty Murray have approached breaching the Lower Snake River Dams. This time the initiative is aimed at breaching being a foregone conclusion and the question asked is only "how to pay for it". The YCFB believes this sort of "reverse engineered" decision making process is most egregious.

Our hydroelectric generating dams economically provide reliable power and irrigation water as well as serving as an assist in flood mitigation. Further, our dams form an important transportation system along with great recreational opportunities. Trading this "sure bet" system that is the envy of the world for two less reliable generating systems that have serious shortcomings is nonsensical. The supposed environmental gains related to breaching are dubious. The argument that dam breaching would save the Southern Resident Orcas is fallacious when the facts speak otherwise. New technology is already boosting fish survival around the dams with the promise of more innovations in the future without breaching.

The YCFB urge that Committee consider the whole picture and include all options in addressing the migratory fish and Orca issue in your findings. Further, we believe the facts show that breaching the Lower Snake River Dams would negatively affect our carbon foot print as well as being a poor tool to save these fish. There are many other options that have been or are already about to be implemented to improve their survival without damaging our electric generation capacity and transportation system or becoming more carbon dependent.

Thank you,

Mark Herke

President, Yakima/Klickitat County Farm Bureau