



Your Questions – Answered Lower Snake River Dam Removal Trout Unlimited

Trout Unlimited is a non-partisan organization, made up of members from across the ideological spectrum. Because of our local grassroots, we are deeply rooted in the communities where we work. That local, non-partisan spirit is what makes our work unique and often puts us in the role of bridge-building, both literally and figuratively. We are not afraid of opposing viewpoints. In fact, we do our best work when we start with opposing viewpoints and work to plot a collaborative path forward.

Last week, when we hosted public events in Spokane and in Boise, we took questions from the audience, because we want to hear from you and because we aren't afraid of the questions. That doesn't mean that we have all the answers -- because we do not. It does mean that we are committed to hearing the questions, to finding the answers, and to building a sustainable path forward for healthy rivers, abundant salmon, and healthy communities.

Below are the questions from Spokane and Boise, and if you have a question, you can always write to us and ask.

Who are the key decision makers who can make removal happen and how do we press them for action? Congress must act to remove the lower four Snake River dams and save Snake River salmon and steelhead. The senators from Washington, Idaho and Oregon have influence and are well positioned to move this issue forward. Those decision-makers are Sen. Patty Murray, D-WA, Sen. Maria Cantwell, D-WA, Sen. James Risch, R-ID, Sen. Mike Crapo, R-ID, Sen. Ron Wyden, D-OR, and Sen. Merkley, D-OR.

Currently, Sen. Murray and Washington Gov. Jay Inslee are leading a public process to determine what services are needed to replace the lower four Snake River dams. The other senators mentioned on this list have not yet taken a public position on the fate of Snake River salmon.

The Murray-Inslee process was initiated in response to a bold plan put forward by Rep. Mike Simpson, R-ID, last year to remove the lower four Snake River dams and invest in replacement services to save salmon and move the Pacific Northwest forward. Rep. Simpson's approach was supported by Oregon Gov. Kate Brown and Rep. Earl Blumenauer, D-OR .

[You can urge Congress \(including the above decision-makers\) to remove the lower four Snake River dams by utilizing the Trout Unlimited action alert.](#)

Can the Biden Administration take action to save salmon? The Administration is leaning in on this effort, but they can do more, starting with directing BPA, the Army Corps of Engineers, NOAA, USFWS and other federal agencies to begin planning immediately for the removal of the lower four Snake River dams. Currently, the White House Council on Environmental Quality (CEQ) is leading the Administration's evaluation and planning on Snake River salmon and the

lower four Snake River dams. It's up to us to restore healthy populations of wild salmon and steelhead. [You can contact CEQ and let them know it's time for action here.](#)

If the Snake River dams are removed, how would communities located near the river be impacted? How can negative impacts be minimized? Local communities will be impacted in several ways including: hydro-system commodity transportation, irrigation needs, and waterfront revitalization. Resolving these future needs will require infrastructure investments to ensure that they can use the removal of the lower four to move forward with new, updated infrastructure. When Congressman Mike Simpson, R-ID, released his proposal for dam removal, he proposed aggressive infrastructure investment for local communities to improve services for residents.

Are there fish ladders on the dams? Yes, all the lower four Snake River dams have fish ladders. The ladders help adults go up and over the dams. Unfortunately, it is the downstream journey through the 140-mile-long reservoir system that crushes anadromous populations, killing the vast majority of smolts before they ever reach the ocean.

How can we offset the greenhouse gases that would result from loss of barging? The removal of the lower four is going to require upgrades to our power generation as well as transportation systems. This is good news for the Pacific Northwest. The lower four are an anchor, tying us to the technology of the last century. Dredging, barging, and dam operations are not green activities. [The EPA compared rail and barging and showed that barging is slightly less carbon intensive than rail shipping, however, the EPA study did not account for dredging operations.](#)

"Rail and barge shipping also create significant opportunities for carbon reduction in the supply chain. An intermodal train can haul the equivalent of approximately 280 truckloads of freight, with each ton traveling an average of 473 miles on one gallon of fuel. The relative energy efficiency of rail is estimated at 1.5 to five times that of trucking and the ratio for greenhouse gas (GHG) emissions is similar. Class I railway operations on average emit about 22 grams of CO₂ per ton-mile compared to truck operations which emit approximately 65 grams per ton-mile. Similarly an inland barge can transport a ton of freight approximately 576 miles on a gallon of fuel, corresponding to about 18 grams of CO₂ per ton-mile. Therefore, depending upon the additional truck drayage required, rail and barge modes can offer substantial CO₂ efficiency improvements relative to over the road freight."

Finally, it is important to recognize that there's a lot of investment into train efficiency, including using hydrogen or electricity to take away all emissions. Similar investment just isn't happening in barges, so rail shipping is likely to be even more efficient in the future.

How can we lift the voices of the groups that have historically been left out of the decision-making process on the Snake River? While advocating on behalf of the salmon and steelhead, it is important to recognize the roll they have in the culture and life of Columbia Basin tribes. Dam removal is the first step toward environmental justice for the tribes of the Northwest. Because the dams on the Snake River have obliterated the runs of salmon and steelhead that these tribes depend on, we are failing to meet our congressionally-mandated obligations laid out in our tribal treaties. Learn more and hear from the tribes on this issue: <https://www.salmonorcaproject.com>

Are there any members of congress outside the Northwest interested in this issue? Yes, there are other members of Congress interested in this issue, but it is essential that the Northwest delegation leads on Snake River dam removal.

My congressman has heard from me, but does not care or believe in the same science that I do. Rather, he doubles down on the status quo. In this political environment where yelling louder does not produce results, what else can I do? As Trout Unlimited CEO and President, Chris Wood mentioned, Congress is a reactionary body. For some in the Pacific Northwest, it will take a lot more pressure from the American public to begin to move them. Take the action alert, then call his office. Then ask your friends and neighbors to do the same.

What is the effect of releasing the toxic debris and sediments that have built up behind the dams? Dam removal is not a new idea and luckily, we have experience removing aging dams across the country, including on the Elwa. There is certainly sediment built up behind the lower four and upon breaching, that sediment will move downstream. However, as in previous breaching efforts, it is a manageable problem. With a slow drawdown of the reservoirs, it is possible for much of the sediment to be naturally stabilize, while a natural river regains its hold on the lower Snake we will inevitably see a redistribution of some of that sediment.

How much will it cost to remove the dams? Currently, Sen. Murray and Gov. Inslee are leading a process to determine exactly what services would be required to replace the lower four. That report is expected to be out for public review in mid-May and will hopefully give us a picture of what dam removal may entail.

Additionally, last year, Idaho congressman Mike Simpson, R-ID, suggested a figure of \$33 billion to replace the services of the lower four, remove the dams, restore the river and lift up local economies. While it is likely that this number is high, it is important to note that the cost of salmon mitigation is creeping up to \$18 billion spent so far with very poor results. In the future, necessary upgrades and maintenance to the dams, plus associated costs like dredging, in addition continued salmon mitigation costs could easily exceed the figure proposed by Simpson. For example the replacement of a single turbine at Ice Harbor dam was estimated to be \$50 million, that number has already risen to \$78 million. There are three to six turbines in each of the four dams. The annual operations and maintenance of the four lower Snake River dams costs approximately \$50 million annually. <https://simpson.house.gov/salmon>

How do you replace the barges? Most of the grain shipped in the United States is shipped by rail. 65% of grain produced in the Palouse and Camas Prairie region of NW Washington and Central Idaho is shipped via the hydro system. It bears reminding that prior to the development of the lower Snake River commodities were shipped via rail. There is an existing rail line to Lewiston currently, with modest upgrades the region could shift to rail transport.

While trains are the most straightforward solution, it is likely that a comprehensive solution will also involve some shippers trucking grain to downstream ports like Pasco. The port of Pasco will not be affected by the removal of the lower four. It is located near the confluence of the Snake and Columbia Rivers, about 130 miles from the port of Lewiston via highway.

Who else is working on this issue? Northwest Tribes are leading on Snake River dam removal. Dozens of other conservation groups are committed to removing the lower four and recovering salmon. You can read more about this work here: <https://www.nwopportunity.org/> / <https://www.salmonorcaproject.com>

How would you physically go about removing the dams? Ice Harbor, Lower Monumental, Little Goose and Lower Granite dam are all concrete, run-of-river dams. Run of river means they hold back a set amount of water. The good news is that all four dams have earthen berms. By

simply removing the earthen portion of each of the four lower Snake River dams we could achieve a free-flowing river. This design feature was developed during the infancy of these projects, with the mindset that each dam would have a lifespan and need to be removed in the future.

What other habitat benefits would come from a free-flowing river? Recovering 140 miles of the Snake River would have far-reaching benefits. It would create a new, unpermitted whitewater section of the Snake River that historically contained over 60 named rapids. Additionally, it would uncover about 14,000 acres of prime riparian habitat that would benefit hundreds of species of wildlife ranging from big game to upland birds to amphibians and waterfowl.

Why only the lower four Snake River dams? Aren't there eight dams? There are four dams on the lower Snake and an additional four on the Columbia. The lower four Snake River dams are the most important for removal because they operate as a system, connecting 140 miles of habitat into one, extended, hot, slow water death trap for salmon and steelhead smolt.

Another important consideration is the limited benefits of the lower four. Collectively, the lower four generate less than 1,000 megawatts of electricity annually, this equates to roughly 4% of the Columbia System Operations System, which already produces a 20% surplus of electricity.

How much does ocean conditions impact the numbers of fish? Ocean conditions do impact salmon and steelhead numbers. Salmon and steelhead have managed to adapt to changing ocean conditions in the past. In places where they have access to high quality habitat, we see salmon thriving, even when ocean conditions are more challenging. It is important to recognize that river systems lower in the Columbia River have much higher survival when compared to those populations in the Snake River Basin. Each of these populations encounters the same predators and utilizes the same ocean under existing conditions. Learn more on our blog: <https://www.tu.org/magazine/conservation/debunking-the-its-the-ocean-excuse/>

Will dam removal be enough? We can compare salmon returns on the Yakima and John Day rivers which navigate 4 and 3 dams respectively, we know that salmon and steelhead can do well when faced with only the mainstem Columbia dams. Because the Snake River basin is so vast, so cold and so pristine, we are absolutely confident that Snake River salmon will thrive if the lower four are removed. Learn more: <https://www.tu.org/magazine/snake-river-dams/guaranteed-they-will-come-back/>

Why have previous solutions to help salmon and steelhead not worked? Ladders, trucking, barging, spill, hatcheries, etc. didn't work. Why should we believe that this will? Fish ladders do work to get adults upstream, but they do not work to move smolt safely downstream. Hatcheries, barging, and trucking smolts and spill are all Band-Aids that do not solve the root cause. Simply put, salmon are born in the gravel of clear, high county watersheds. They are destined for the ocean, but they need a river to get there. There is no man-made solution that can replicate a river. You cannot barge a salmon downriver any more than you can teach a barn swallow to fly an airplane.

What else needs to happen besides dam removal to recover Snake River salmon and steelhead? Removal of the lower four is the single most important action we can take for salmon recovery in the lower 48. If these dams come out, Snake River salmon and steelhead will have access to a vast area of pristine, high elevation cold water habitat. We must give them a chance.

What is the plan for replacing the sustainable energy provided by the dams?

Sen. Murray and Gov. Inslee are expected to release a plan for replacement services in the coming weeks. You can read more about that process here: <https://www.lsrdoptions.org>

What is the biggest compromise that might be needed to gain support for removing the dams? Congressman Simpson proposed extending the life of the other hydroelectric dams in the Snake/Columbia system by 35 years, as well as a moratorium on ESA litigation for salmon. That would be a tough compromise for many in the conservation community, but it can lead us to a compromise that saves salmon and moves the Northwest forward.

Sea lions have a major impact on salmon, would allowing more sea lion harvest help salmon? The impacts of sea lions are extremely specific to spring Chinook. Unfortunately, the earliest arriving runs are those of the Snake River Basin. To address this increasing mortality factor in 2018, Sen. Jim Risch sponsored a bill to modify the Marine Mammal Protection Act. This modification allows for the lethal removal of 540 California sea lions or more than 176 Steller sea lions over the 5-year period.

Think of it this way; if a teacher brings a truckload of candy to a kindergarten class, there is plenty to go around. It's likely the class would share this bounty with the rest of the school. They might even take some home to their siblings and parents. However, if the truck is robbed en route to the school and the teacher shows up with a single bag of candy, there will not be enough to go around, leading to arguing and finger pointing.

We used to have a truckload of salmon, millions that were enough to feed countless sea lions, bears, humans and still leave enough carcasses to fertilize the entire high country of Idaho. Now, we have so few that we must begrudge the sea lions. The issue is not how we share, it is the lack of abundance.

Why does breach require congressional action given the protections for Endangered Species under existing statute? The court could likely rule that BPA and the Army Corps of Engineers must change their operations, but it is unlikely that the court would consider its own standing sufficient to demand dam removal. There are rulings that the courts can make that will impact the lower four, but it is essential that congress take action to get meaningful results for salmon and for local communities.

What is the cost to retrofit and operate the dams for the next 50 years as opposed to the cost to remove them? Over the next two decades Bonneville Power Administration has confirmed that only routine maintenance is planned for the lower Snake River dams at an estimated cost of \$300 million. Considering that we have spent \$18 billion already in salmon mitigation alone and the only public proposal so far has pegged the cost for removal and replacement of services at \$34 billion, removal is the cheapest option by far.

Why does BPA oppose dam removal when they know how much the dams cost to operate? BPA, like many other federal agencies and like many of us as individuals, is resistant to change. It is easier to stick with what we know than it is to reach for something new. The lower four Snake River dams are a bad investment, but until the agency sees full-fledged public support and a congress ready to act, they will stick with the status quo.

Is it too late? Salmon and steelhead are resilient, adaptable creatures. They have persisted through the eons, adapted to ice ages and drought. Even though the most important salmon

habitat in the Lower 48 is upstream of eight dams, they have still managed to survive. It is not too late. We can still save wild Snake River salmon and steelhead, but we must act now. Learn more: <https://www.tu.org/magazine/snake-river-dams/guaranteed-they-will-come-back/>

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