

Public Law 78-534 - December 22, 1944

(See bluefish.org/answers/question7.htm and bluefish.org/answers/question5.htm#PL534)

It is hereby declared to be the policy of the Congress to recognize the interests and **rights of the States** in determining the development of the watersheds within their borders and likewise their interests and rights in water utilization and control,

...
The water areas of all such reservoirs shall be open to public use generally, without charge, for boating, swimming, bathing, fishing, and other recreational purposes, and ready access to and exit from such water areas along the shores of such reservoirs shall be maintained for general public use, when such use is determined by the Secretary of War not to be contrary to the public interest, all under such rules and regulations as the Secretary of War may deem necessary. No use of any area to which this section applies shall be permitted which is inconsistent with the laws for the **protection of fish** and game of the State in which such area is situated.

Contrary to what AgInfo's "[Washington State Farm Bureau Report](#)" radio/podcast host Bob Larson would have his listeners believe, Public Law 78-534 clearly asserts State's rights as superior to "development of the watersheds" by the US Army Corps of Engineers (USACE). Under the current unprecedented and abysmal situation, a State Governor need only contact the Chief of Engineers USACE, state this right, and direct the Chief to follow direction as Public Law 78-534 clearly obliges the USACE Chief to follow. It's that simple.

-- Listen to Bob Larson at aginfo.net/index.cfm/event/report/id/Washington-State-Farm-Bureau-Report-42044

I'm Bob Larson. In Washington Governor Jay Inslee's \$1.1-billion Orca recovery budget, he asks for \$750,000 just to STUDY dam removal on the lower Snake River. But, given (that) the dams are federal property, and the governor really has no authority, why the investment?

Representative Mary Dye spoke recently with KONA radio and talked about the governor's plan ...

DYE ... "This is just part of the disconnect that this governor has when on one hand he says that he wants to tear down the Snake River dams to save Orca, and then on the other hand we have multiple pieces of legislation, and even in his budget, he wants to move to electrify the transportation fleet. Where's he going to get the electricity? Is he going to put a solar panel on every car or what? I mean, it's just, to me, it's ridiculous to think that you can have it all without any generation potential, or I don't know, it just doesn't make any sense to me."

Dye was asked if there was too much outside influence from lobbyists in Inslee's decision making ...

DYE ... "Science is not a consensus. It should be completely outside of political influence and it should let the data direct you to the truth. It's a truth-finding mission and it's an unveiling of the truth and it takes, often times, more time than political process, obviously, and, you know, in terms of these fish, my opinion, you take down the (four LSR) dams in order to save the Orca, what if you are wrong?"

That Washington's Governor Inslee might assert that Public Law 78-534 right to "take down the (Lower Snake River) dams to save the Orca" is beyond question of wheat farmer, turned State Legislator Mary Dye. Her concern is primarily a voice of caution: "What if you are wrong?" The remainder of this comment will be in consideration of that important and noteworthy question.

If the earthen berms adjacent to the four LSR dams are breached, three primary user groups will be impacted: Shippers, Irrigators and Ratepayers. These three groups have been the central voices in this long, drawn-out debate, for twenty-five years now. Importantly, over that great length of time, the most powerful interest has vanished. Following their widespread buyout that ended the "California Energy Crisis" at the millennia's turn, the aluminum industry interests have evaporated.

With new pumps and pipes to deliver irrigation water -- a pipe/canal system is currently being considered by the Columbia River System Operations (CRSO) process -- the irrigator interest have similarly subsided.

The electric ratepayers' interest, largely from Washington State and to a lesser degree the neighboring states, had previously benefitted from "surplus electricity sales" from the Federal Columbia River Power System (FCRPS). Primarily to California, "surplus sales" have long subsidized Washingtonians electric power rates. More recently, however, widespread development of fracking natural gas has placed a price cap on the wholesale market, shrinking the profits of those "surplus sales". (See Section 3-6 of Seventh Power Plan [midterm update](#), "Natural gas prices exert a strong influence on the region's wholesale electricity prices.")

Yet still in the fight to keep the otherwise valueless LSR dams, are the wheat growers of the Palouse, where the richest wheat growing soil in the world (average yield > 60 bushels / acre) is apparently not satisfaction enough. Wheat grower Mary Dye, now a re-elected state legislator, has long been a leader of the "Save Our Dams" movement. To AgInfo's Bob Larson, she has posed a reasonable question, "What if you are wrong?"

If we choose poorly for the ecology, the ecosystem collapse that is now underway -- evidenced by the starvation of the Salish Sea Orcas and by a nutrient-starved Idaho forest as well -- will continue unabated.

Consider the plight of an Idaho salmonid, born in nearly pristine lakes and streams of Central Idaho. I say "nearly pristine" because climate change has already shown its effects in the high mountain lakes of the largest Wilderness Area of the lower forty-eight states.

Only Alaska holds more designated Wilderness Areas, yet Alaskan fishermen know well, and wonder in amazement, of Idaho's sockeye salmon. Returning as adults from the Pacific Ocean, Idaho's famous sockeye swim nearly one thousand miles, climbing an astounding 6000-feet in elevation to reach their natal beds of Redfish Lake, Petit Lake, Alturas Lake and Stanley Lake, nestled in the "Alps of the Americas."

In 1992, a solitary Lonesome Larry returned to spawn with the sockeye of Redfish Lake. But he was alone.

Big deal. Who cares about Idaho?

In 1990, no sockeye returned. A year later, "endangered species" status was obtained. (There's nothing quite like waiting until the last minute). In the next five years, the rest of Idaho's wild salmon and steelhead would garner "threatened" status for Endangered Species Act (ESA) protection. Throughout the 1990s, a total of 23 sockeye returned to Idaho (see bluefish.org/countfpc.htm). Lonesome Larry was among them. Within a dozen years, salmonid sub-species from Washington and Oregon would also gain ESA protection.

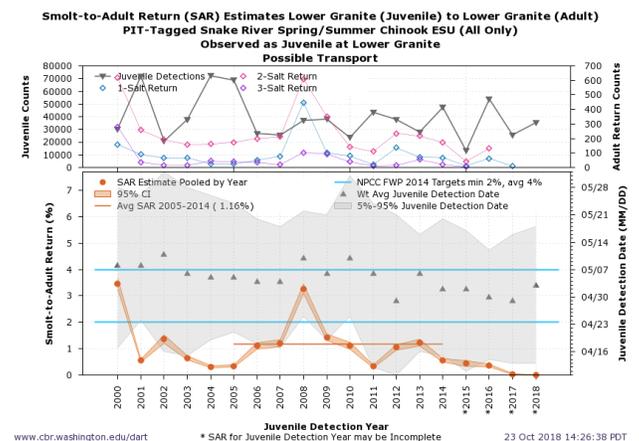
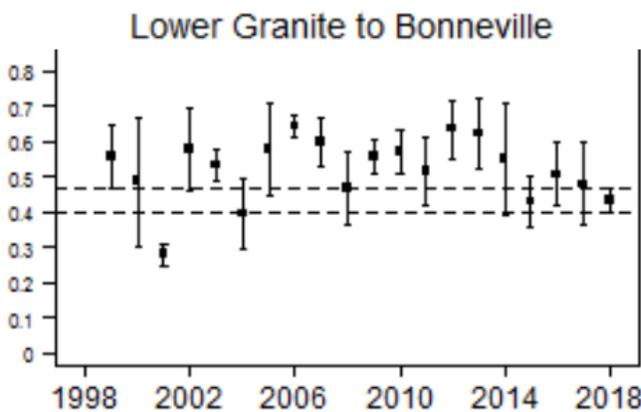
While within Idaho, a natural-origin juvenile salmon experiences a very natural life, indeed. A human traveller of Idaho's Wild and Scenic River sees this readily. Launching near Dagger Falls, a river expedition will take seven days to arrive at Cache Bar before their first sighting of a road. For those with more time to spare, another seven days travel will take them westward across the state to the next road that greets them. Then leaving "designated" wilderness, the travellers might choose another seven days on the Salmon River, now with roads alongside part of the way, before meeting the Snake River and its confluence with the Clearwater River yet further downstream. Many find that journey to be their "trip of a lifetime".

At the Washington border, the salmon's natural environment comes to an abrupt end as the Lower Snake River (LSR) slack water reservoirs begin. Detectable to the sharp-smelling senses of the salmon is the arrival of Clearwater Paper's effluent, piped several miles downstream to the Clearwater River's confluence with the Snake. Nearly two decades ago, the paper mill's management sought economic shrewdness by avoiding Idaho's more stringent water quality criterion, and dumped its waste in Washington State instead. Granted, the pulp mill has greatly improved its toxic papermaking process, but residual toxins and dioxins remain in the reservoir sediment from the earlier days (see bluefish.org/popermit.htm). Noteworthy is that Idaho and Washington see "clean water" differently. By contrast, the salmon have no concept of a state's boundaries; they undoubtedly notice something different about the "clean waters" of Washington State.

Whereas for millennia the juvenile salmonids would ride the rushing spring current to the Pacific Ocean, the LSR slack water halts their journey suddenly when the state borderline is crossed. No doubt confused, their evolutionary history has left them unprepared for what lies ahead. The juveniles must now determine which way to travel and then actively swim in the proper direction. Power generation operations that meet power demands rise and fall with humans daily habits, sometimes create a sloshing "bathtub effect" where the subtle currents move upstream before returning again downstream towards the ocean. Unnatural though it is, the juvenile salmon must solve this puzzle in order to complete the journey.

It's a forty-mile swim to the first concrete monolith, Lower Granite Dam. To pass this obstacle, a path by way of spinning turbines or over a one hundred foot waterfall makes a difference. Then comes another forty-mile swim, and either another 100-foot drop or a spin through the Little Goose hydropower turbines. These Wheel of Fortune, chance of a lifetime events, are encountered four times along the LSR, with 40-mile slow moving reservoirs impounded behind each, and the salmon must actively swim. If they could reach the Mighty Columbia River, that would be a blessing. That fate rests in the hands of your Governor.

Until last year's decision to increase spill, and the consequent increase in the river's allowable percentage of Total Dissolved Gas (%TDG), the Columbia River had been a comparative relief for Idaho's juvenile salmonids. At least in this big river, the fourth largest river by volume in the USA, its current will guide and assist the fish downstream. But last year, spill was increased by court order at Columbia River dams that Idaho's juvenile migrants must also encounter. The hope was that the roulette odds of downstream survival would improve. With increased spill, more salmon would likely pass over spillways, reducing the chance of more fatal turbine passage. But what does the data say of last year's experiment? Juvenile survival was among the worst of twenty years! (See [Fish Passage Center's graphic](#) at left below.)



Promoters of increased %TDG allowances would ask us to consider only the best results of recent times (2006-2013) when Smolt-to-Adult Ratios (SARs) averaged 1.1%. In doing so, we are asked to ignore the facts obtained using all available data that shows actual SARs of 0.81% for Idaho's Chinook salmon. (See Table B.1 [CSS 2018 Annual Report](#) and graphic at right above). The simplistic linear regression, one that leaves out the effects of %TDG because of insufficient data to allow a good linear regression fit, pointed to the possibility of doubling salmonid SARs by shifting the roulette wheel towards more spill. Doubling of 1.1% SAR would lead to improvement if SARs surpassed the important, population-sustaining level of 2% SAR. But doubling a 0.81% SAR will fall well short. Never mind that using the same linear regression model, a tripling of Idaho salmonid SARs is to be expected following LSR dam breaching. Proponents of spill are asking us, and Idaho's salmon, to take the lesser option -- the insufficient option -- rather than what is best for the fish. Idaho's salmon, and the ecosystem that they support, will continue to fall in a spiral.

Why has Washington State been supporting of the federal LSR dams? That too is an imposing question, but space does not allow development of that peculiarity. The suggestion that federal dams should be allowed

greater leniency for their warming of "clean waters" is equally absurd. Importantly we ask, "Will Governor Inslee follow in his predecessors tracks of protecting deadly reservoirs?" That question is paramount.

One half of Idaho's juveniles perish in the FCRPS. Considering what has been described above, that fact should not be all too surprising. But the mortality associated with the hydrosystem "migration corridor" does not end there. Scientific research reveals that three quarters of the survivors will subsequently perish due to their FCRPS ordeal ([Schaller et al.](#) Table 6). Combined mathematically, we see that only one of eight juveniles survive their two-month hydrosystem ordeal unscathed. Hear that? Only 1 of 8 survives!

It should be no wonder that Lonesome Larry was nearly the end of his line. No wonder that Snake River Steelhead runs are now no better than when they first received ESA protection (see [Early Warning](#)). In the past, Washington State wouldn't give a damn to benefit Idaho's fish. With our prayers, maybe Governor Inslee, upon now seeing this comment, will steer his ship towards a better tomorrow.

If climate change were truly Governor Inslee's concern, not just lip service and "green-washing" of a tarnished Washington State past, then recovering of Idaho's salmon would be the prudent choice. Not only will his citizens electricity rates drop with the shuttering of LSR Compensation Plan hatcheries that now produce Idaho adult fish at \$250 a piece, but Idaho's forest will once again receive the marine nutrients which they have been stripped of for decades.

Consider that Alaskan forest [research](#) reveals trees growing three times faster when salmon carcasses are present. The carbon sequestration potential of Idaho's forest is substantial. The trees have plenty of carbon dioxide for fuel, but Idaho's granitic soils [need nutrients](#). Idaho salmon once provided copious quantities of carbon, nitrogen and phosphorous. Without four LSR dams and reservoirs, salmon SARs would again surpass the important 2% level, populations would rebuild and the starving forests would recover alongside.

It is that easy. The linear regression model reveals it and logic supports it. Travel time to the ocean is the most important variable that effects salmon survival through the FCRPS. Increasing spill does nothing to help travel time; it only affects the roulette wheel of dam passage. LSR dam breaching does both.

Consider the mathematics of removing half the dams and reservoirs that Idaho's juvenile salmonids must navigate. If instead of 50% mortality measured for decades in the hydrosystem migration corridor, half of that mortality would allow three out of four to survive the journey. Likewise, if half of the 75% "delayed mortality" (estimated by [Schaller et al.](#) and others) were cut in half, then five of eight "direct mortality" survivors would survive. Five-eighths of three-quarters is four times better than one-quarter of one half.

Quadrupling current SAR levels of 0.8% brings Idaho SARs to 3.2 and well within the 2% to 4% level necessary for recovery, as affirmed by being Northwest Power & Conservation Council's primary objective. This stated goal of 2% to 4% SAR, has remained out of reach under the past that lacked of care. Nothing else does the trick. Salmon scientists have been [telling us](#) LSR dams need to go, for two decades now.

What if we are wrong? What if Idaho's salmon don't recover and electricity is needed for Gov. Inslee's transportation electrification future? Well, the free market would be relied upon to provide that electricity. Believing in the free market may be hard for long-subsidized wheat shippers, such as Mary Dye, to trust. Placing refurbishment dollars in the initial budget is an option that should assuage Ms. Dye's legitimate concerns. The concrete powerhouse and related facilities could be kept functional, then just fill in the dirt.

Sincerely,

Scott Levy
bluefish.org

promoting an open and honest dialogue concerning the plight of Idaho's wild Salmon and Steelhead.