A CALMED DOWN ESTUARY

1. The Columbia Rivers Natural Wind Tunnel. Man made by design with Dredging Necessary. Dredging spoils taken out of the main channel. Then placed in the shallows from the rivers edge out. Made into the form of a peninsula. Angled down river say about 3 degrees. Built up to a height of 30 feet, with a tapered angle of about 30 degrees. So when the wind hits the angled peninsula it will drive the wind that is blowing from the ocean inland. Upward and away from the water. Adding in a quarter moon roof concrete structure on top of the peninsula. Forces the wind to blow in a horizontal wind shear, above the calm water estuary. Multiple peninsulas placed the desired distance apart all the way up the rivers estuary. All built the same with colored concrete caps made to look like a natural rock face. Slanted 30 degrees on the down river wind side. With a shier vertical rock face cliff on the up river side, with trees planted on the up river side. Under the peninsula a modular concrete membrane to seal in polluted dredging spoils, floated in place, then dropped in place with multiple culverts placed parallel with the river. To allow for tidal and river water flow. Made out of concrete made to look like natural rock. Alternating strips of river rock and sand placed side-by-side, parallel with the river between the estuary peninsulas. With a shallow under water sandy berm perimeter around the outskirts of the estuary. So when the wind blows during the day an under water sand storm will churn up along the narrow sandy perimeter berm area, to keep the big fish out. When the wind stops at night, it will let the small fish swim over the shallow sandy berm area, into the natural estuary. No more wave wind current flow churning up the water, into a watery sand storm, all over the entire estuary, Killing Smolts. It can’t be that tough to do.

Working Solutions
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Low Environmental Impact Dredging
Dredging allows for Shipping Commerce from Portland Oregon to all over the World. And CLEANS UP the bottom of the river polluted by man's past stupidity. Suggested Dredging Solution. Design build a water wall fish fence turbine water tornado. By putting a round half moon metal pipe in a 360-degree circle on the river bottom, half moon facing up. Inner edge attached with chain or metal bands up to another half moon metal 360-degree pipe. Facing down, of a larger diameter than the bottom ring, with pressurized water hoses attached at an angle to the top ring, which has a water turbine blade inside of the top ring. Pressurized water drives the turbine, spinning the pressurized water wall down into the bottom smaller ring at an angle. Reflecting the spinning water off of the bottom ring out and away from the spinning water tornado. Keeping fish away from the dredging going on inside of the water tornado. Dredging done by another smaller water tornado being man made inside of the outer water wall tornado. The second inner water tornado will have no base metal ring on the river bottom. Allowing river bottom sediment of the river to be dug up at a cone angle in. A third smaller reverse water flow tornado inside of the two outer water tornadoes sucks up off of the bottom mud sand and silt off the river bottom, by using a reverse water flow tornado. The river bottom mud sand, and silt is then collected by a water hose suction method, filtering the water before its put back into the river. Dredging above the Dams also allows for more water storage capacity. Dredging along the riverbank allows for a cleaner water supply. By stopping wave wind current flow from churning up the bottom of the river into a sand silt sand storm in the water along the rivers shallow edge. Which is currently now the natural limiting factor for the Columbia River estuary smolt rearing capacity. You will never get a large increase in smolt rearing capacity in the Columbia River Estuary, until you solve this wave wind current flow shallow water sand storm problem. The Columbia River has always been a natural wind tunnel. An environmentalist never looks at the environment to make it better for all species including man. They just want nature to take its own course, it always changes, and sometimes it kills indiscriminately. Controlling it to survive is key!

Solutions For Survival
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FLOAT YOUR BOAT

Design build and install an air-compressor system on board ship. That pumps air bubbles under the outside of the
under the hull. With lateral air tubes spaced evenly along the under side of the boat, from front to back. With air
exit holes along the entire length of each tube. Each tube built into the hull of the boat, ship, or barge. In this way a
cushion of air bubbles will always be between the boat’s hull in the water and the water itself. Creating a greater speed
with less horsepower required. Along with an improved boat fuel economy. And when the boat, ship, or barge is up
on plain and moving it will require less depth of the hull in the water. Because its floating on a cushion of air.
Enhancing the fish’s watery environment. Provided the system is designed not to pump too much nitrogen super
saturation into the water. To meet the gas super saturation and temperature standards under the clean water act.

SAVE A WILD SMOLT THROUGH TECHNOLOGICAL INOVATION.

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FISH, JOBS, MONEY, ECONOMIC IMPROVEMENT
SIMPLE SOLUTIONS

By redesigning and combining the water wall fish fence and the Salmon Steelhead spawning shelf system. One should be able to build these section by section in a module form. One section at a time, use the railway system to move the sections along the Columbia River. Then lift them out into the river by a crane. Which would also be on a rail car. Set them in place by a crane and or float them, and tow them in place by boat. If you don’t want to support the water wall by driving pylons into the bottom of the river bottom. Float the water wall under a modular sectioned together floating dock. Two parallel floating docks, side by side a chosen distance apart. With the water wall fish fence attached to the parallel docks suspended underneath the docks. Also to simplify matters interconnect each module section by installing two water pipes horizontally above the water to each vertical end post. Install a platform between the horizontal pipes for each pump station. And a fishing boat tie up, camping platform. Made of lightweight artificial man made foam rock, matching the natural surroundings of the river. All buildings should be made the same way in the Columbia River Gorge. Like looking at a natural rock cliff outcropping, made out of artificial foam rock. Cold water pumped from the bottom of the impoundment lake in the river. To feed the water wall all the way up the Columbia River between the Dams, guiding the fish up to and through the Dams fish ladders. With an artificial Salmon, Steelhead, Spawning shelf system attached to the water wall fish fence. Man made round river rock gravel can be designed with a foam center. For lighter weight, to be put into the spawning bed shelf system. Put the unemployed to work, put the out of work Aluminum workers back to work. Put UNION LABOR to WORK Building this system now, WE NEED THE WORK! The pay back might just be in the billions of dollars put back into the economy. With the massive fish runs that should return with this system. Two-year cycle return for Steelhead, Three year, and five-year cycle return for Salmon. Guide the Fish to the fish ladder at the Dams with a water wall fish fence. AMERICA WORKS! Start at the mouth of the Columbia River, installing this modular system, the water wall, with spawning beads.
Working your way up the river seeding the spawning beds with wild fish eggs as you go. Problem Solved Economically and Ecologically Correct. Water pumps powered by electrical generators and or gravity feed water pumps.

AMERICA is in a constant state of WORK, not in a constant state of war.

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