

March 19, 2013

Agriculture and Environment Committee

Statement in support of House Bill 2530



Rogue Riverkeeper is a non-profit organization that works to protect and restore water quality and fish populations in the Rogue River Basin of southwest Oregon. Many of our local fish populations are wild anadromous salmon that would be threatened by the introduction of farmed and genetically engineered salmon in the state.

Rogue Riverkeeper supports the passage of HB 2530 as we believe it would prevent a number of threats that farmed and genetically engineered salmon can have on wild fish stocks, which are important both ecologically and economically for southern Oregon.

A Global Assessment of Salmon Aquaculture Impacts on Wild Salmonids by Ford & Myers states "... we show a reduction in survival or abundance of Atlantic salmon; sea trout; and pink, chum, and coho salmon in association with increased production of farmed salmon. In many cases, these reductions in survival or abundance are greater than 50%."

Escapement and breeding

In salmon farming operations, some amount of escapement is unavoidable. Farmed Atlantic salmon have been found to establish breeding populations in the Pacific, competing for resources and food with our native and often imperiled salmonid populations.

Genetically engineered salmon while in theory sterile, are only found to be 95-99% sterile. It is again likely that escapement from farms would occur, introducing genetically altered salmon populations into the wild breed and impact wild stocks.

Viral and bacterial diseases

Research shows a global correlation between the regional existence of net-pen Atlantic salmon farms and the decline of wild salmon, a claim that has been supported by numerous other studies.

Net-pens not only create an ecologically novel niche for vast blooms of parasitic sea lice that can harm or kill out-migrating salmon smolts, they also provide concentrated biomass that can amplify endemic or imported viral and bacterial pathogen loads in coastal waters.

Disease outbreaks include *Aeromonas salmonicida* infection (linked to furunculosis) and *Renibacterium salmoninarum* infection (linked to BKD, bacterial kidney disease), Infectious Hematopoietic Necrosis Virus (IHNV), Infectious Salmon Anemia Virus (ISAV) and Piscine Reovirus (PRV) at salmon farming pens. The matter of net-pen Atlantic salmon farms as unnatural ecological niches that can breed devastating pathogen blooms is a very serious one.

Chemical feeds

Farmed salmon are fed astaxanthin, a synthetic petrochemical dye delivered to the salmon via their pellet feed. This is not the only chemical additive they ingest, nor the most harmful. In the densely packed, static net-pens—restraining a fish that is migratory by nature—in order to rid their salmon of the sea-lice that mass on them, their feed also contains “Slice,” emamectin benzoate. This is a crustacean-killing chemical that diffuses into the bloodstream and flesh of the fish, to be ingested by the sea-lice on their scales. It is toxic to crustaceans such as shrimp, crabs and lobster. Studies of farmed salmon in Europe and eastern Canada show that sea-lice are developing a resistance to this product, provoking use of more toxic substances including azamethiphos and deltamethrin (classified as "super-toxic").

Sea-floor pollution


The ocean is vast, but does not render pollutants harmless by dilution. Fish farms produce an astounding quantity of waste, which has similar impacts to those of municipal sewage. In a single year, one fish farm can dump untreated wastes equivalent to between 2,250 and 5,580 people. Fish farm waste consists of fish feces, uneaten food pellets, drugs and drug residues, pesticides, fungicides, and feed additives, including toxic metals. This untreated waste spills through the cages and smothers the ocean floor. As this layer breaks down, it consumes oxygen vital to shellfish and other bottom-dwelling sea creatures, rendering the sea-bed unlivable and creating a niche for bacterial pathogens.

Conclusion

Why risk Oregon’s economically, ecologically and culturally valuable wild salmon? Aside from the incalculable value for our quality of life and value to the ecosystem, recreational fishing alone provides over \$400 million per year income to the state of Oregon.

Should farmed Atlantic and genetically engineered salmon be introduced in Oregon’s waters, we will never be able to remove them, placing our important these iconic fish species in even greater peril than they already are.

Thank you very much for the opportunity to comment on this bill. Rogue Riverkeeper hopes that you will pass this bill and keep genetically engineered and farmed salmon out of Oregon.

A handwritten signature in black ink, appearing to read "Forrest English", written over a faint, dotted background.

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