

SAVING SEAFOOD

MINIMIZING ENVIRONMENTAL IMPACT

Best Practices in Atlantic Salmon Farming

Atlantic salmon farmers in the U.S. and Canada **minimize environmental impacts by minimizing organic waste** from farms.

DESIGNING FARMS TO MINIMIZE IMPACT

- Salmon farmers choose farm sites that are **least likely to lead to nutrient buildup** in the surrounding areas. Choosing a location with the right water temperature, depth, and prevailing currents all help to significantly reduce organic waste.¹
- Active salmon farm sites are **regularly rotated** to keep the ocean bottom healthy, and sites that are not in production are **left fallow** — unused — for a period just like land-based farms. Proper water currents also help the natural process of nutrient absorption.
- When a salmon farm is properly sited, there are **no measurable impacts on the surrounding waters** beyond 30 meters.²



MANAGING SITES FOR ENVIRONMENTAL PROTECTION

- The industry works closely with world-renowned scientists from academia, government, and the private sector to **develop rigorous standards and implement best practices** for fish health and environmental protection.
- To monitor benthic quality, salmon farmers **regularly inspect the seafloor** surrounding the farms to ensure there is not any wasted feed or nutrient buildup. Site monitoring includes sampling of seafloor sediment to measure sulphide levels and inspecting for the presence of bacteria.³

- Salmon farms use **feeding systems with underwater cameras** to minimize any feed loss.
- In British Columbia, the Department of Fisheries and Oceans (DFO) requires farmers to **regularly submit reports** on the state of the benthic environment surrounding their farms and **conducts regular audits** of salmon farms.

o According to DFO, 80-90% of inspected fish farms have waste levels below DFO's limits. Farms that exceed the limits are not allowed to restock until action is taken to improve conditions.⁴

- U.S. fish farmers must **monitor discharges from their farms**, in accordance with the Clean Water Act. Data collected from these farms have shown few long-lasting environmental issues.⁵



STRICT ENVIRONMENTAL LAWS

- All North American salmon farms must **comply with stringent environmental regulations** to build and maintain salmon farms.
- In the United States, salmon farmers comply with rules set by NOAA, the U.S. Army Corps of Engineers, and state and local regulators, as well as standards set out in laws such as the Endangered Species Act, National Environmental Policy Act, Coastal Zone Management Act, and Clean Water Act.
- In Canada, salmon farmers comply with numerous regulatory requirements set by both federal and provincial governments. These include the Aquaculture Activities Regulations, Species at Risk Act, Canadian Environmental Assessment Act, Environmental Impact Assessment, and the Clean Water Act, to name just a few.
- Salmon farmers **participate in third-party certification programs**, such as Best Aquaculture Practices and GLOBALG.A.P., that include additional high environmental standards and site audits.



SAFE FROM CONTAMINANTS

- Farm-raised salmon have **lower PCB levels** than other common foods like beef, chicken, eggs, and butter, as well as most species of wild salmon. Importantly, only trace amounts of PCBs have been found in both wild and farm-raised Atlantic salmon.
- According to a 2007 study that examined Canadian aquaculture, PCB presence in farm-raised salmon is **below 2 parts per million** — well below limits on PCB consumption set by the U.S. FDA. The study concluded that “regular consumption of these fish would not cause tolerable [PCB] daily intakes to be exceeded.”⁶
- Because salmon is a fast-growing fish, the presence of other potential contaminants, like mercury, is also low.

1 <https://waves-vagues.dfo-mpo.gc.ca/Library/40653109.pdf>

2 <https://afspubs.onlinelibrary.wiley.com/doi/full/10.1080/03632415.2014.966818>

3 <https://waves-vagues.dfo-mpo.gc.ca/Library/40762440.pdf>

4 Ibid.

5 <https://afspubs.onlinelibrary.wiley.com/doi/full/10.1080/03632415.2014.966818>

6 <https://www.sciencedirect.com/science/article/abs/pii/S0278691507000403?via%3Dihub>