Atlantic Salmon Federation Fédération du Saumon Atlantique

*A backgrounder from ASF*

# Aquaculture escapes

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## ESCAPES HAPPEN… ALL THE TIME

So far, in 2023, more than 50,000 aquaculture Atlantic salmon have escaped in Maine and New Brunswick.[i]

Fisheries and Oceans Canada estimates that more than 750,000 aquaculture salmon have escaped from sea-cages and hatcheries in Newfoundland and Labrador since the industry began there in the 1990s.[ii]

Researchers have estimated that two million aquaculture Atlantic salmon escape from hatcheries and sea-cages around the North Atlantic each year, travelling to rivers up to 300 kilometres away from the nearest site.[iii]

In every single year since 1992, ASF researchers have recovered escaped aquaculture salmon from the Magaguadavic River fishway. Very few of the recovered escapees can be connected to a known or reported escape event. This supports the conclusion of multiple researchers that escapes are often unreported or underreported.

## AQUACULTURE AND WILD SALMON ARE NOT EQUAL… BUT THEY CAN STILL INTERBREED

Aquaculture Atlantic salmon are one of the most recently domesticated animals on the planet. They differ in many ways from wild Atlantic salmon, including growth, behaviour, and genetics.[iv]

For example, food aggression is a positive trait for aquaculture salmon chasing pellets in a protected environment. For salmon in the wild, food aggression could result in increased exposure and predation.

Despite these differences, interbreeding between wild and escaped aquaculture salmon has been documented throughout the North Atlantic in places like Iceland, Norway, the Republic of Ireland, the United Kingdom, Canada, and the United States. [iii]

A study following the 2013 escape of 20,000 aquaculture salmon in southern Newfoundland found hybrid offspring salmon in 17 of 18 rivers within 100 kilometres of the escape site.[v]

**INTERBREEDING LEADS TO POPULATION DECLINE AND COLLAPSE**

In Norway, researchers have classified aquaculture salmon escapes as the greatest threat to wild Atlantic salmon; one that can cause wild populations to become critically endangered or lost and which current mitigation measures are incapable of preventing.[vi]

A recent study from Newfoundland determined that negative effects could occur to wild populations when 10 percent of adult salmon in a river are escapees.[vii] This is critical considering that many rivers in the Bay of Fundy and Gulf of Maine may have remnant populations of just a few dozen wild salmon.

When interbreeding occurs, hybridized offspring are less fit for survival in the wild and exhibit much lower survival rates, reducing the fitness and abundance of entire populations.[viii]

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