

Washington Department of Fish and Wildlife

KEY POINTS

Atlantic salmon net-pen failure

Revised 11 a.m. September 5, 2017

Overview

On August 19, 2017, a large number of Atlantic salmon [escaped](#) into Puget Sound when one or more commercial net pens collapsed at a fish farm at Cypress Island, located across Rosario Strait from the San Juan Islands. Cooke Aquaculture, the net pen operator, informed the Washington Department of Fish and Wildlife (WDFW) that the collapsed pen held 305,000 Atlantic salmon. The company initially believed 4,000 to 5,000 fish escaped, but initial estimates proved inaccurate.

One week later, Cooke reported 119,266 salmon had been recovered from the damaged cage structure. By August 30, Cooke reported it had removed a total of 142,176 fish from the site. Additionally, local media reported that the Lummi Nation had caught about 20,000 escaped salmon as of August 28, while recreational anglers self-reported catching about 1,680 escaped salmon by the morning of September 5. Commercial fishers reported catching about 1,750 fish.

Between recreational, commercial, and tribal fishers and Cooke's own recovery efforts, at least 165,104 Atlantic salmon had been reported captured by September 5.

The exact number of escaped salmon was still undetermined as of September 5. The net pen site was reportedly free of fish by August 31.

Escaped Atlantic salmon have been reported over at least a 120-mile diameter, impacting tribal, state, and international fisheries management.

Cooke is conducting daily water quality tests. The company continues to remove its damaged infrastructure from the water. The cause of the net pen failure was being investigated by the company and state agencies, but had not been determined as of September 5.

Company, government, and tribal responses

Initial responses by Cooke Aquaculture, Puget Sound area tribes, and several state agencies that regulate and oversee aquaculture operations focused on preventing further fish escapes and recovering as many of the escaped salmon as possible.

On Friday, August 25, Governor Inslee directed the Washington Department of Ecology (ECY) to put on hold any new or pending permits for net pen aquaculture locations until an investigation into the incident on Cypress Island has been completed. The three agencies with regulatory authority over net pen operations – Washington Department of Fish and Wildlife (WDFW), ECY and the Washington Department of Natural Resources (DNR) – established an incident command in Anacortes to efficiently coordinate their response. A public information officer stationed in Anacortes will serve as the single point of contact for media inquiries.

On August 28, the U.S. Coast Guard and WDFW, in consultation with tribes, established a 100-yard safety zone near the collapsed net pens to keep fishers and divers from coming too close to the wreckage.

Efforts to remove Atlantic salmon from marine areas and rivers

Local media reported that the Lummi Nation had caught about 20,000 escaped salmon as of August 28.

Sources reported more than 100 recreational fishing boats were on the water August 26-27 in Puget Sound, the Strait of Juan de Fuca, and in several Puget Sound rivers where escaped fish were observed. WDFW had boats on the Sound to assess the effectiveness of recovery efforts and examining possible interactions with other fish species.

WDFW has established a website for anglers to record their catches. The tribes are also logging theirs. The public can see where Atlantic salmon are being caught at this webpage:

http://wdfw.wa.gov/fishing/salmon/atlantic_catch_map.php.

Anglers are encouraged to catch as many escaped fish as possible, with no limit on size or quantity. However, anglers may only fish for Atlantic salmon in marine waters that are already open to fishing for Pacific salmon or freshwater areas open to fishing for trout or Pacific salmon. The escaped salmon are safe to eat.

Anglers looking to land Atlantic salmon must have a current fishing license and must also observe gear regulations identified in the 2017-18 sport fishing rules pamphlet, which is available from fishing license dealers and through the WDFW website: <http://wdfw.wa.gov/fishing/regulations/>.

Background on Atlantic salmon

- Atlantic salmon are not native to Washington, but are being raised in enclosed pens at several commercial fish farms on marine waters, where the fish are raised for the seafood market.
- Occasionally, some of these fish escape from their holding pens and may be caught by anglers and commercial and tribal fishers.
- [Atlantic salmon are considered an aquatic invasive species](#), but there is no evidence to date that Atlantic salmon pose a threat to native fish stocks through crossbreeding or disease.

Anglers are not required to record Atlantic salmon on their catch cards, but WDFW encourages anglers to report where the fish are being caught using [an online form](#).

State agency roles and responsibilities

Permitting and oversight of aquaculture operations in Washington waters involve multiple state agencies. These relationships include WDFW's co-management of salmon and other species with the state's treaty tribes. Here is a summary of key state agency roles:

Department of Ecology

ECY manages the state [water quality permits](#) required for commercial net pen operations that protect water quality.

Department of Fish and Wildlife

WDFW reviews [permit requirements](#), fish escape prevention and response plans, and monitors the health of farm-raised fish in collaboration with other agencies. WDFW also requires fish transport permits, which mandate disease testing when fish are moved to ensure they are healthy and not likely to introduce or spread disease.

Department of Natural Resources

DNR owns aquatic lands on which aquaculture operations take place. DNR has a tenant contract with Cooke Aquaculture at several sites around Puget Sound. DNR is the lead agency on contract compliance in collaboration with other agencies, to ensure compliance with lease terms.

How will this escape affect native salmon stocks?

- There is no evidence that escaped Atlantic salmon are able to establish themselves in the Pacific Northwest. Historically, even intentional efforts to introduce and establish Atlantic salmon outside the Atlantic Ocean have failed.
- Farmed Atlantic salmon are ill-suited for survival in the wild, and unlikely to compete with native fish. A 1999 WDFW study noted that recaptured Atlantic salmon were all found to have empty stomachs.
- The same study concluded that Atlantic salmon are unlikely to cross-breed with Pacific salmon, and unlikely to spread any foreign infectious diseases to native stocks.
- Five hundred recovered fish sampled by Cooke in the most recent incident were all reported to have empty stomachs.
- On September 1, the *Seattle Times* reported that the Swinomish tribal chairman, Brian Cladoosby, had said tribal fishermen were catching Atlantic salmon with Pacific salmon fingerlings in their stomachs. As of September 5, no physical or photographic evidence had been provided to substantiate the assertion.

Historical background

This is not the first time a large number of Atlantic salmon have spilled into Washington waters; large escapes also occurred in 1996, 1997, and 1999. Research into these releases and their impacts was described in this WDFW report: <http://wdfw.wa.gov/publications/pub.php?id=00922>. Previous releases include:

- In 1996, an anchor line failed on a pen system operated by Scan Am Fish Farms near Cypress Island. An estimated 107,000 fish escaped. The cause of the failure was determined to be [high tidal flows](#).
- In 1997, operator Global Aqua USA was towing a net pen near Bainbridge Island in an effort to avoid toxic algae blooms. The pen failed during the tow, releasing an estimated 369,000 fish into Puget Sound.
- In 1999, An “extreme tidal exchange” caused the collapse of a net pen operated by Northwest Sea Farms, Global Aqua’s successor. An estimated 115,000 fish escaped.

The 1996 spill led to a review by the state Pollution Control Hearings Board (Board). Though the Board [determined in May 1997](#) that escaped Atlantic salmon constituted a pollutant, the Board's "[final findings of fact](#)" in November 1998 said that "Atlantic salmon that inadvertently or accidentally escape from Permittees' farms, absent large regular releases in the future, do not cause or tend to cause 'pollution' ... nor do they constitute a 'man made change to the biological integrity' of state waters."

Following the 1997 release, the ECY issued an administrative order requiring Global Aqua to develop a "fish release prevention plan" and an "accidental fish release response plan." Following the 1999 release, ECY issued a notice of violation.

In response to the large fish escapes in the late 1990s, the Legislature enacted Chapter 86, Laws of 2001, codified in [Chapter 77.125 RCW](#). The law [references accidental Atlantic salmon releases](#) and indicates the legislation is "necessary to minimize escapes through the implementation of statewide prevention measures." The law authorized and required the Director of Fish and Wildlife to [cooperate with marine finfish aquatic farmers to develop rules](#) that would require, among other things, an aquaculture operator to develop a fish escape prevention plan and an escape reporting and recapture plan. To carry out this new legal authority, WDFW enacted new rules in 2002 with an effective date of July 2003. The rules are codified at [WAC 220-370-110](#) and [WAC 220-370-120](#).

Atlantic salmon are not the only non-native species cultivated in Washington waters; many of the clams and oysters cultivated in Puget Sound are also considered non-native.

Relevant links

- Atlantic salmon catch reporting page: http://wdfw.wa.gov/fishing/salmon/atlantic_salmon_catch.php
- Where Atlantic salmon are being caught: http://wdfw.wa.gov/fishing/salmon/atlantic_catch_map.php
- DNR webpage on Atlantic salmon: <http://www.dnr.wa.gov/atlanticsalmon>
- WDFW webpage on Atlantic salmon: <http://wdfw.wa.gov/fishing/salmon/atlantic.html>
- WDFW invasive species page on Atlantic salmon: http://wdfw.wa.gov/ais/salmo_salar/