

	North American Commission <i>North American Commission Annual Report (Tabled by the United States)</i>	NAC(21)05
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North American Commission Annual Report
(Tabled by the United States)

United States, 2020 Activities
Submitted by: National Marine Fisheries Service
Date: March 29, 2021

1. Summary of Salmonid disease incidences

In 2020, 221 sea run adult Atlantic salmon were captured at the Milford Trap on the Penobscot River as part of an ongoing smolt production program using mature fish collected from the wild. These fish were transported to Craig Brook National Fish Hatchery where each fish is tested for pathogens of concern. Two of these fish tested positive for the non-pathogenic variant of the ISAv (a.k.a. HPRO) through PCR analysis. Another fish tested positive for an unknown variant of the pathogenic strain of ISAv [HPR-deleted]. This individual was culled from the population. The two non-pathogenic HPRO fish were released back to the Penobscot River at the South Orrington boat launch on 7/31/2020 as per protocols established by the United States Fish and Wildlife Service (USFWS). Transmission of this pathogen to other fish was highly unlikely because these fish were non-pathogenic and had no clinical signs of disease. The USFWS does not spawn HPRO positive fish in the hatchery because it may increase the prevalence of the virus, which is believed to be vertically transmitted and would be passed on to the next generation and be integrated with the natural population.

U.S. Point of Contact on Disease:

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2. Summary of breaches of containment of salmonids from net cages

There were no reportable escapes in 2020.

Species (Strain, if applicable)	Number ¹	Average size of fish ²	Location ³	Result ⁴	Cause of the breach	Date

There were no reported escapes, and as such, this table has intentionally been left blank.

1. This should be the best estimate possible, though it is recognized that exact numbers may be difficult to obtain.
2. Based on the codes of containment, it was agreed that average size is a more accurate measurement than lifestage.
3. The more specific the information the better, however Bay level is considered sufficient.
4. This refers to using recapture methods as detailed in the relevant code of containment and summarizing the results of the recapture attempt.

Notes:

For commercial aquaculture permits in Maine (the location of all Atlantic salmon aquaculture in the U.S.), a “reportable escape” is defined as any escapes greater than 50 fish at sites where individual fish weigh more than 2 kg. For sites where the individual fish weigh less than 2 kg, operators must report any escape that exceeds 25% of cage biomass.

3. Summary of Salmonid introductions from outside the Commission Area

Listed below is information on salmonids brought into the Commission Area in 2020. No salmonids that originate from outside the NAC area are stocked directly into salmon rivers in Maine. The vast majority of fish brought in from outside the Commission area are stocked in inland ponds and lakes (e.g., private “farm ponds”) and, thus, pose no identifiable risk to Atlantic salmon in the wild as there are no connections between the water bodies where these fish are stocked and waters where Atlantic salmon occur. Any potential risks are further minimized by strict fish health regulations (both state and federal) as well as distance from salmon rivers in Maine.

Species (strain, if applicable)	Number	Life Stage	Origin ¹	Destination ²	Purpose ³	Date
Rainbow Trout	42,000	Eyed Eggs	Trout Lodge, WA	Maine	Private Ponds, Recreational Fisheries	2020
Rainbow Trout	200,000	Eyed Eggs	Trout Lodge, WA	Rhode Island	Private Ponds, Recreational Fisheries	2020
Rainbow Trout	20,418	Eyed Eggs	Trout Lodge, WA	Connecticut	Private ponds and Recreational Fisheries	2020

1. This would be the province or state for introductions from the west coast; or country for international introductions. It was decided that introductions between Canada and the US that are within the Commission Area (between Maine and NB, for example) would not be included here as those introductions would be captured in other avenues (ICES WGITMO, for example) and because these are not as relevant.

2. The more specific the information the better, however Bay level is considered sufficient.

3. This refers to the intention for the introduction – aquaculture, research, stock enhancement, etc.

Land-based Aquaculture

Two land-based facilities (both proposing to use recirculating aquaculture systems (RAS)) are currently proposed in the State of Maine. One site is located along the Penobscot River estuary in Bucksport, Maine (Whole Oceans). The other proposed site is located in Belfast, Maine (Nordic Aquafarms). These facilities propose to rear Atlantic salmon from egg to harvest size in large tanks, entirely indoors. These facilities require a number of state, local and/or federal permits; these permitting processes include reviews of the design of each facility, including containment management system plans, disinfection of discharge, and influent and effluent pipeline outfalls. Nordic Aquafarms and Whole Oceans have received state permits but local and federal (U.S. Army Corps of Engineers) permits, if required, remain pending as of March 2021. While both facilities are considering importing non-North American origin eggs for production in 2021, to date, no eggs or fish have been imported into the State of Maine or

transferred to a facility, and at this time it is unlikely that production will begin before 2022. All permits must be in place, and final approvals from state and federal agencies are required prior to importing any eggs or fish into either facility.

4. Summary of Transgenic activities within the Country Annex 1 of NAC(10)6

In 2018, the U.S. Food and Drug Administration (FDA) approved a supplemental New Animal Drug Application (NADA) to rear genetically engineered (GE) salmon (AquaAdvantage) at an FDA approved land based facility in Indiana (*see NAC(20)06 for details*). The first harvest of market size genetically engineered fish from the facility was planned for the fourth quarter of 2020 but is now more likely to happen in 2021. However, ongoing legal challenges related to the FDA approval process may delay the sale of the GE products in the U.S. It should be noted that these facilities are not proximate to the salmon rivers in Maine and that state and federal regulations are in place prohibiting the use of transgenic salmon for grow-out in marine net pens in Maine. More information on AquaAdvantage GE salmon can be found at: <https://www.fda.gov/animal-veterinary/animals-intentional-genomic-alterations/aquadvantage-salmon-fact-sheet>