



This licence and/or permit is issued under the authority of SECTION 52 OF THE FISHERY (GENERAL) REGULATIONS.

This licence and/or permit authorizes the person(s) listed below, subject to the following terms and conditions, to collect the species and quantity of fish identified below for: Scientific purposes. Non-compliance with any condition of this licence and/or permit may result in the cancellation of this licence and/or permit.

Licence/Permit Activity Description:

Visual survey of pacific herring to monitor and document presence in Atl'ka7tsem and Skwelwil'em Estuaries in Squamish, BC. (Note: further details are provided under "Additional Information" section of this licence).

Licence Holder:

FIN: 148358
 400-163 WEST HASTINGS STREET
 VANCOUVER BC V6B 1H5

MARINE STEWARDSHIP INITIATIVE

Contact Number: 604-880-5490

Contact Party:

FIN: 152133 CAIRNS, ELLIKA

Contact Number: 604-880-5490

Individuals or groups assisting with the authorized activity:

This is a joint project led between the Atl'kat7sem/Howe Sound Marine Stewardship Initiative, the Squamish Nation, and Squamish Streamkeepers.

Species, Quantity of Fish, Area(s) and Gear:

Species: PACIFIC HERRING (*Clupea pallasii*)

Life Stage: Larval

Gear: Visual survey by foot
 Snorkel surveys by boat provided by Sea Dog Expeditions

Licence Area: PFMA's 28-4, 28-5; Atl'ka7tsem and Skwelwil'em Estuary, Squamish

Additional Descriptions: • Non-retention. No species to be targeted or retained.

Vessel name: Coastal Cowboy, VRN: 845541

Master Name: Addison Errol Grant Farr.

Volunteers will be asked to conduct visual herring surveys by canoe and/or foot (if safe to do so), two times per week, in areas of the estuary around the Blind Channel (Eastside), Catermole Slough, Estuary Trail, and Crescent Slough. Boat snorkel surveys will be conducted along southern parts of Howe Sound, along the shoreline.

Visual surveys conducted, will collect the following information in accordance to methods developed by J. Buchanan:

- location of herring spawn (tracked via GPS points),
- density of herring spawn (low, medium, high), and
- water temperature (degrees).

No specimens will be retained as part of this study.



Reporting Requirements:

XR 15 2024

Due Date 14-Mar-2025

Submit report to: DFO.FIALicense-LicenseSFI.MPO@dfo-mpo.gc.ca

Additional Information:

Objectives of the study:

1. Document the spatial extent of slhawt' (C. pallasii) spawning in the North end of Atl'kat7sem/Howe Sound.
2. Determine the timing of C. pallasii spawning and peak spawning in the region.

Our goal with this data is to establish a long term dataset to track trends in herring spawn distribution, abundance, and timing. Such a dataset will be useful for future studies of herring in this region and provide a baseline to understand ecosystem responses to human impacts (e.g., climate change).

This information will be made publicly accessible through the Marine Stewardship Initiative's Marine Reference Guide.

Terms and Conditions:

Species at Risk: Section 32 (1) of the federal Species at Risk Act prohibits killing, harming, harassing, capturing or taking an individual of a wildlife species which is listed on Schedule 1 as an extirpated species, an endangered species or a threatened species. Refer to the SARA Public Registry at <http://www.sararegistry.gc.ca> to determine if species at risk may be in your research area and to apply for a permit if required.

Non-Salmon Species: Contact the [BC Ministry of Forests, Lands, Natural Resources and Rural Development](#) for a scientific licence to collect non-salmon species including Steelhead, Rainbow trout and Cutthroat trout.

Collections within marine parks, within ecological reserves, on intertidal lands fronting First Nations reserves, or on aquaculture tenures under the authority of the Province of BC, require the consent of the administrative authority or lease holder for the tenure.

All gear left unattended must be clearly labelled with the Licence Number and must not interfere with the public right of navigation.

Release of fish: All specimens must be released unharmed into the water body or course from which they originated and as near as possible to the location from which they were captured.

Prior to sampling, and upon completion of any fishing activities, the local Fishery Officers of the Department of Fisheries and Oceans must be informed of the exact time, location and samplers. All fish mortalities resulting from fishing activities must be reported.

Notification shall occur by telephone during normal business hours. If you are unable to notify the local office on evenings or weekends, advise the DFO Radio Room at 1-800-465-4336 prior to sampling.

For Fraser River (Pacific Fishery Management Areas 28, 29) area please contact the Steveston office at 604-664-9250 and provide the following information:

- Name on the licence and names of samplers



- Licence number
- Dates and times when sampling will occur
- Specific location where sampling will occur
- Locations of any unattended gear and how long that gear will remain there

This licence may be amended or revoked by the Department prior to the expiry date if deemed necessary.

Copies of this licence must accompany the collecting personnel, be on board any collecting vessel and be carried with the transport vehicle at all times during collection and transport of samples. It is the responsibility of the licence holder to ensure that samplers are experienced and competent in the fish collection methods authorized in this licence.

This licence authorizes collections to be made by the licensee and employees, volunteers and students of the licensee provided that all persons (other than minors who are engaged in activities under the authority of this licence) are carrying suitable photo identification to be produced upon request of a Fishery Officer or Guardian. The licence must be produced upon the request of a Fishery Officer or Guardian.

See attached documents.

Reports:

A report will be required by DFO at the end of the project. The report must contain at minimum:

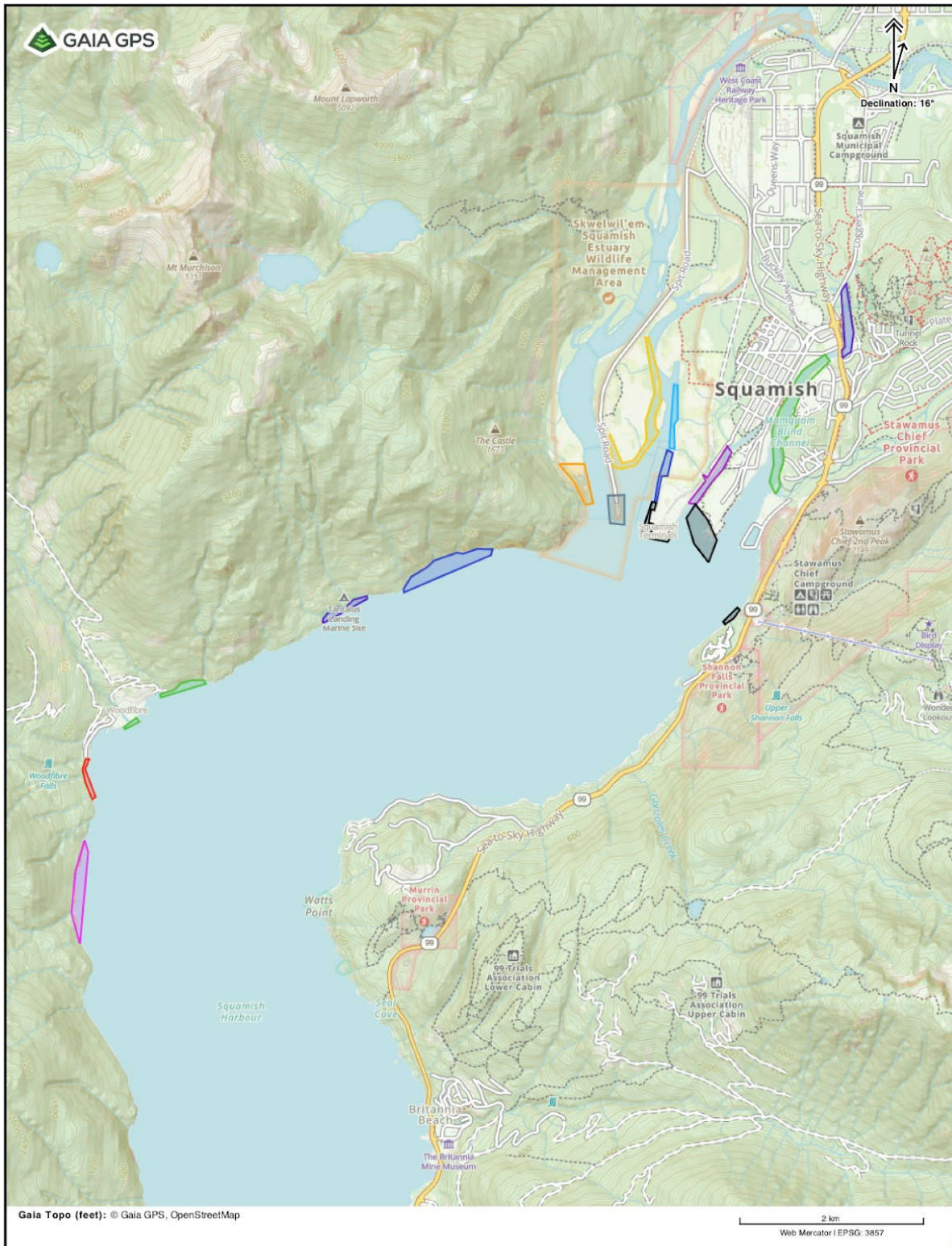
- (a) License number
- (b) Sampling date, time, crew, stream name, watershed name;
- (c) GPS position of site (s);
- (d) Number of captured aquatic organisms by species including number of mortalities; and
- (e) If conducted, bio-sampling data (lengths, weights).

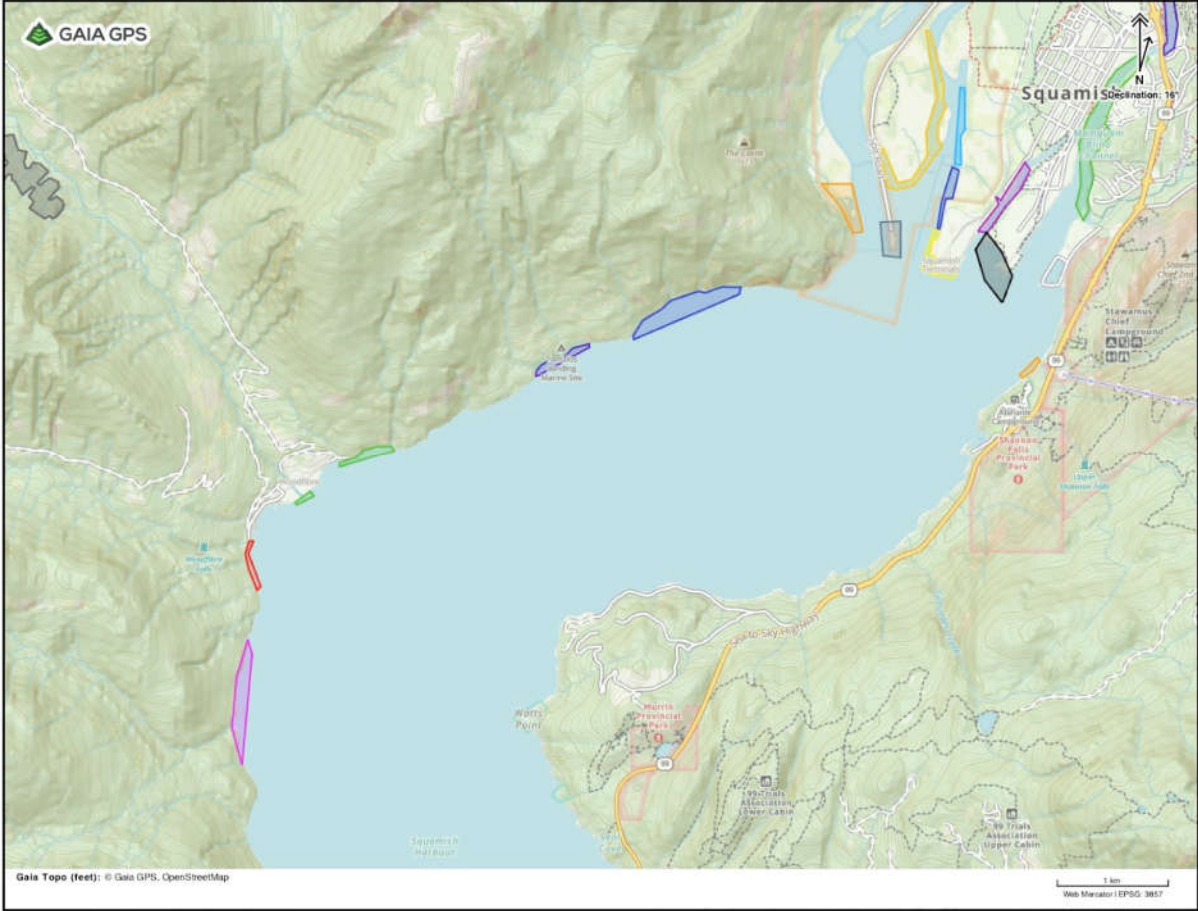
Licence Issued: 22 January 2024

Licence Printed: 22 January 2024

Licence Issued By: HONG TJHIE, Fisheries and Oceans Canada

General Survey Area: Atl'ka7sem and Skwelwil'em Estuary





Gaia Topo (feet): © Gaia GPS, OpenStreetMap

1 km
Web Mercator | EPSG: 3857