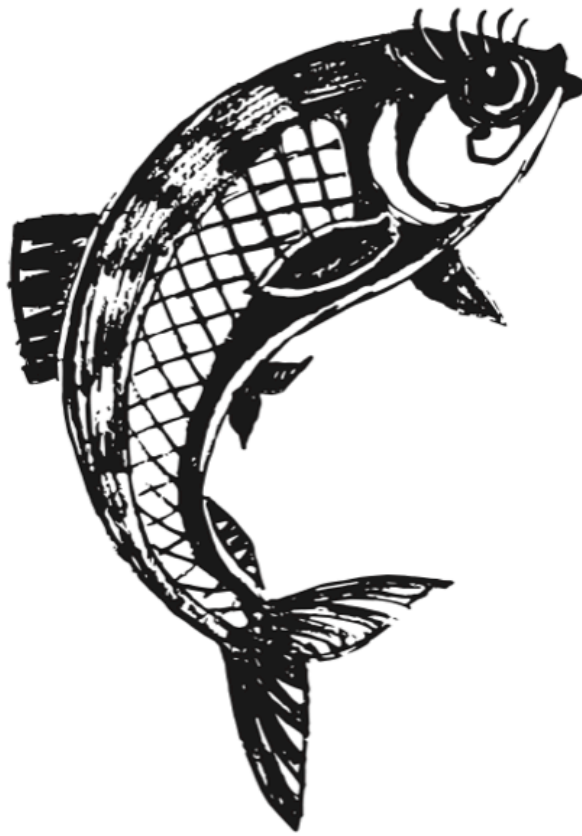


Searching for Shawt' / Herring Survey Protocol

Tem Lhawt' / Time of the Herring 2025

Volunteer Manual



"Harriet the Herring"

Preface

This document outlines survey details for our 2025 herring spawn survey volunteers focused around the Squamish Estuary. Should you be interested in more details about the program, please [see our website](#) and/or [read the 2024 Searching for Slhawt' / Herring Program report](#). This Volunteer Manual assumes that the reader understands some basic background information about the program.

Easy access to links (survey form, waiver, etc.) and resources for volunteers are on our website:

<https://howesoundguide.ca/herring-volunteers>

Volunteers must [complete a waiver](#) before beginning their in-field surveys:

Please email a signed copy of this waiver to Ellika (marinestewardshipinitiative@gmail.com)

Reach out with any questions or concerns to:

Matthew Van Oostdam, MSI Herring Program Coordinator

herring.survey.msi@gmail.com

Ellika Cairns, MSI Project Director

marinestewardshipinitiative@gmail.com

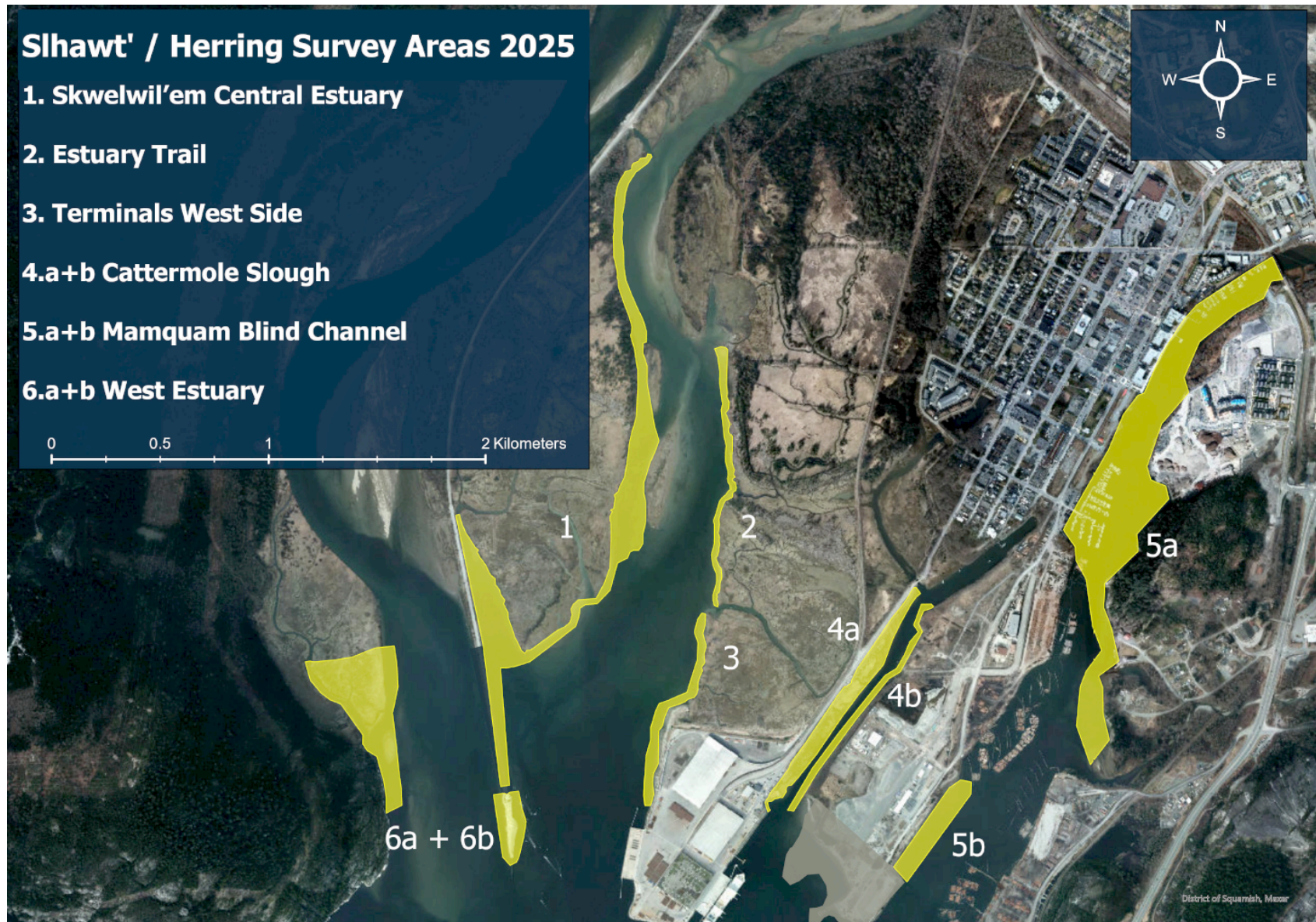
Survey objectives

The Searching for Slhawt' / Herring Spawn Survey Program aims to:

1. Map, monitor, and document Pacific herring (*Clupea pallasii*) spawn in northern Átl'ka7tsem from late winter to spring, on an annual basis.
2. Establish and maintain an adaptive program structure that is sustainable, shares capacity within the community, and contributes to the understanding that herring are a keystone species.
3. Collect data that will be useful and credible for informing decision-making processes in the region.

In collecting this information annually we aim to establish a long-term dataset that tracks the status and trends of herring spawn distribution, abundance, and timing in northern Átl'ka7tsem. These data will be useful for future studies of herring in the region and provide a baseline to understand ecosystem responses to human impacts (e.g., development, resource extraction, and climate change).

Squamish Estuary Survey Sites



Squamish Estuary Survey Sites

Site name	Survey method
1. Skwelwil'em Central Estuary	Canoe / kayak
2. Estuary Trail	Walking
3. Terminals West Side	Walking
4. a. Cattermole Slough West	Walking
4. b. Cattermole Slough East	Walking
5. a. Mamquam Blind Channel	Canoe / kayak
5. b. Mamquam Blind Channel	Walking
6. a. West Estuary	Canoe / kayak
6. b. West Estuary	Walking

The MSI has two structured survey programs to collect herring spawn data:

1. Walking and canoe/kayak surveys throughout Skwelwil'em (the Squamish Estuary)
2. Boat-based snorkel surveys along more remote shorelines of northern Átl'ka7tsem

For the purpose of this document, we will only discuss #1, which is the part of the program that we have volunteers support.

Should you want to learn more about the other components of this program, please visit www.howesoundguide.ca/search-for-slhawt-herring or reach out to MSI staff with questions.

Volunteers are to attend the Volunteer Information Session in January where they are signed up for one of the above sites. Following this event, volunteers are emailed information about their in-field training session where MSI staff / lead volunteers will provide site-specific training. Attendance at both of these training sessions is required for new volunteers.

Volunteer Survey Protocol

Timeline & key dates in 2025:

January 29 - Volunteer Information Session at the Squamish Library

February 7 to February 21 - Volunteer in-field site-specific training sessions

February 7 to April 30 - Volunteer surveys conducted

Schedule:

Volunteers will survey their assigned site at least once every 2 weeks throughout this timeline. You can survey more often if you desire.

Methods:

Surveys are conducted by walking or paddling the shoreline during a mid to low tide. Most sites are ideally accessed at below 2m tide level, but you will learn the ideal conditions for checking your site throughout the season.

Check the tide charts online:

<https://www.tide-forecast.com/locations/Squamish-British-Columbia/tides/latest>

We ask that you survey in minimum a group of 2 for safety reasons. MSI staff will provide contact information for the other volunteers assigned to your site. Volunteers are responsible for communicating within their site groups to coordinate survey partners, and also to ensure everyone doesn't end up going out to survey on the same day (we don't need 5-10 people checking the site at the same time!). Volunteers can communicate together via email, What's App, text, etc. as they prefer.

During your in-field site-specific training with MSI staff or lead volunteers, you will learn how to conduct a survey. The shoreline is visually inspected for signs of herring spawn (eggs). Tip - get close and look carefully! Eggs are very small and easy to miss.



Examples of herring spawn.

Herring like to spawn on hard surfaces such as grasses, rock, rock weed, wood, or other aquatic vegetation. Eggs will not be found on soft mud, sand, or small loose rocks.

Please ensure you also read the safety and habitat protection protocols in the section below.

Data Entry:

It is important that surveys are recorded in our Survey123 data collection form, regardless of whether you found spawn or not.

Survey form: <https://arcg.is/1yWOzL2>

(tip - bookmark this page for easy access)



How to fill out the form:

Ideally the form is filled out on-site, when you have completed your survey walk/paddle. If you are too cold / wet, it can also be done when you're back in your car or at home.

- Select your survey team as Volunteer (Squamish Estuary)
- Select your site (forget what it's called? check out the map above)
- Ensure the date is correct
- Select the name(s) of surveyors, and/or write your name in 'other' if it's not listed
- Set the survey start and end times
- Take water temperature and record it
- If you did not observe herring spawn (eggs), select 'no' spawn observed, upload an optional picture, any comments, and click 'submit'

- If you did observe spawn, select 'yes' and more questions will appear
- Enter the location of the spawn:
 - Allow the form to use your location, or manually find your location on the map
 - Click the line tool (note that on mobile devices, this might be hidden in one of the corners of the map!)
 - Click the starting location of where you found spawn
 - Click along the length of shoreline where you found spawn
 - Made a mistake? Click the cancel button and start over.

- When you're done mapping the spawn line, *you must click the check mark to save your line*
 - NOTE - the form only allows for 1 continuous line to be drawn per form entry. If you find (for example) 5m of spawn on the shoreline, then there's a break in the spawn, and then it continues in another part of the shoreline *you will need to complete another form entry*.
- Enter the density of the average spawn found (examples of spawn density can be found [here](#))
 - Select the substrate (surfaces) that you found eggs on. You can select multiple.
 - Add any additional details about the spawn.
 - Upload a photo. The form only allows for 1 photo, but we highly encourage more photos to be emailed to us.
 - Add any final comments.
 - Click 'submit'.

If you find herring spawn, we very much appreciate you taking photos (you can upload them to the survey form, or email/text them to us).

If you find spawn in multiple locations, please submit multiple survey forms (so that you can enter the second location on a second map).

If you are unsure about the data entry process please let Matthew or Ellika know.

More photos and resources are available on our Herring Volunteer webpage:

<https://howesoundguide.ca/herring-volunteers>

Survey Safety Guidelines

Overall, do not complete a survey if you feel it is unsafe to do so. The areas we survey are often slippery terrain and are around moving water, so walk / paddle with care. Your personal safety is ultimately your responsibility. Any safety concerns are to be communicated to Ellika and Matthew. In case of emergency, call 911.

- Surveys must be done in pairs of 2 at a minimum for safety around water.
- Wear appropriate clothing for the weather and terrain
 - Rain gear
 - Rain boots or hiking boots
 - Warm jackets and pants
 - Waders

- If you are paddling you must wear a lifejacket, have appropriate knowledge of safe boat operation, and have boat safety gear.
- Use a check in or safety person if you are going somewhere unfamiliar or new. This can be Ellika or Matthew if you need.
 - Let them know when you are in the field, where you are, and when you will return.
 - Establish what to do if you do not return and are not reachable (911 - SAR)
 - Please notify Matthew or Ellika if an emergency situation arises.
- Wear a high visibility vest when surveying. These are supplied by MSI.
- Impacts on the land
 - Be mindful where you step. Try and avoid creating new trails or drawing attention to routes you might use to access parts of the estuary. (Don't clear new trails).
 - Don't bring dogs when survey (even if they are on leash). We are often surveying in areas that there are not trails and birds may be nesting. Let's minimize our impact and leave our furry friends home.
- Wildlife / animal interactions:
 - Stay aware when conducting surveys. Keep an eye out for wildlife or off-leash dogs, and minimize disturbances to animals whenever possible.
 - Leave the survey site if you feel unsafe in any way.
- Kindly educate people when they ask what you are doing. Point them to look at the [MSI website](#) to learn about the Search for Slhawl' project. If they have questions or concerns please provide Ellika or Matthew's email.
- If you are questioned about what you are doing or your authority to be surveying, please kindly let people know that you are conducting visual herring surveys on behalf of the Marine Stewardship Initiative and direct them to Ellika if they want further information or have questions (marinestewardshipinitiative@gmail.com).
 - Note - we do not require a scientific license for the program this year, as it is a visual survey and we are not removing any herring / spawn.

Walking mindfully

When doing this work we are on the territory of the Skwxwú7mesh Úxwumixw / Squamish Nation. From Whistler to Vancouver and from Gibsons to the Pitt River - this is their territory. They have been stewards of these lands and waters for thousands of years. We do this work because we know that we have a responsibility and obligation to take care of the world we are a part of.

Please conduct yourself with respect and honor the work you are doing. This is a collaborative program between the Marine Stewardship Initiative and the Squamish Nation. The MSI is grounded in guidance from local knowledge holders including Elder Bob Baker, several Skwxwú7mesh families and elders, John Buchanan, and many others from the Salish Sea community, human and non-human.

This work would not be possible without the generous support from our partners and contributions from our sponsors. Please view a [full list of our partners on our website](#).

Contact information

Please reach out to us with any questions, concerns, or comments.
We welcome your feedback and stories!

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herring.survey.msi@gmail.com

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marinestewardshipinitiative@gmail.com

In case of emergency while surveying, call 911