

Project Summary Report

Forage Fish



Project Reporting Period (October 2025 – September 2026)

Grant number: SEANWS-2025-JeCoWS-00013

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Jefferson County
**Marine
Resources
Committee**



PUGET SOUND
PARTNERSHIP



**Northwest
Straits**
INITIATIVE

1. Abstract

Forage fish are a vital link in the marine food web, and the monitoring of their status is important for informing recovery efforts of the Salish Sea. Sampling to identify spawning of forage fish, specifically surf smelt (*Hypomesus pretiosus*) and Pacific sand lance (*Ammodytes hexapterus*), is conducted by the MRC and other community volunteers who have received training, following WDFW protocols.

2. Project Goals

This survey is designed to establish continuity with existing WDFW data in an effort to measure seasonal and temporal trends of spawning and to develop an understanding of the conditions and processes affecting each monitoring site over time. Volunteers collect data through the iForm app and send beach samples to WDFW to identify and count presence of eggs. To date, the Jefferson MRC has been monitoring forage fish spawning at the Siri's Cove site in Dabob Bay for six years (since June 2020). The MRC added an additional forage fish site in January 2025 at the Quilcene Yacht Club/Marina, a planned future restoration site.

3. Project Engagement

3.1. Partners/Organizations

Project partners include WDFW, who provides annual sampling training, and processes all forage fish samples and data. The Quilcene Yacht Club site is sampled with support of the Port of Port Townsend's nearshore restoration of the yacht club beach at the Quilcene Marina.

3.2. Participants

Project Lead: Sarah Fiskén

Subcommittee Members: Sarah Fiskén, Troy McKelvey, Tim Cross

Additional Volunteers: Aubrey Rollins, Odhran Waggoner

4. Project Methods/Actions

During this period, Jefferson County MRC member Sarah Fiskén continued project lead responsibilities, organizing sampling days, filling out data sheets and volunteer

reporting forms, and overseeing delivery of samples to our WDFW partners who process the beach samples. Throughout the season, five MRC members (Sarah, Troy, Tim and Odran) and one community volunteer (Aubrey-Quilcene only) participated in monitoring.

5. Results

During the 2025–2026 forage fish monitoring season, 11 samples were collected at Siri's Cove, and 11 samples were collected at the Quilcene Yacht Club. At the time of this report, (11 of 22) samples have been analyzed by WDFW. Data results are shown in Table 1 and 2 below.

Table 1. Quilcene Yacht Club Forage Fish data, Oct 2025 - Sep 2026

Location	Survey Date	Surf Smelt	Sand Lance
Quilcene Yacht Club	10/22/2025	0	0
	11/24/2025	0	0
	1/21/2026	0	0
	2/24/2026	0	0
	3/26/2026	0	0
	4/30/2026	Sample at Olympia lab, not yet resulted	
	5/29/2026		
	6/11/2026		
	7/24/2026	Sample is at Port Townsend office	
	8/18/2026		
	9/15/2026		

Jefferson County, WA
Marine Resources Committee

Table 2. Dabob Bay Forage Fish data, Oct 2025 - Sep 2026

Location	Survey Date	Surf Smelt	Sand Lance
Dabob Bay (Siri Cove)	10/20/2025	1	0
	11/24/2025	4	328
	1/21/2026	0	3
	2/24/2026	0	0
	3/26/2026	0	0
	4/30/2026	0	0
	5/29/2026	Sample at Olympia lab, not yet resulted	
	6/11/2026		
	7/24/2026	Sample is at Port Townsend office	
	8/18/2026		
	9/15/2026		

5.1. Data Summary

Late fall continues to be an active spawning season at Dabob Bay, where the 11/24/2025 sampling event found 4 surf smelt and 328 sand lance eggs. No eggs of either species were found at the Quilcene Yacht Club site.

5.2. Outcomes

We successfully achieved our goal of continuing to add to our long-term observations of the forage fish spawning presence at the Dabob Bay and Quilcene Marina sites.

5.3. Outputs

- # of Volunteers/Participants (in survey) – 5
- # of Survey events – 22
- # of sites surveyed – 2

5.4. Results in context

Winter 2025 saw the highest recorded number of sand lance eggs at the Dabob Bay site since sampling began in 2020, with an almost 10 fold increase from the previous year. It is unclear why there was such a high number of eggs. Possible explanations include random chance, where a spawning event had occurred recently prior to sampling. There were also several large storms during this time period, which may have impacted where the forage fish chose to spawn and led to a higher than usual concentration of sand lance in the area, however this is just conjecture.

Table 3. Number of Surf smelt and Sand lance eggs found at the Dabob Bay sampling site between Nov-Jan, 2021-2025.

Location	Survey Date	# samples	Surf Smelt eggs	Sand Lance eggs
Dabob Bay (Siri Cove)	Nov 2020 – Jan 2021	2	1	15
	Nov 2021 – Jan 2022	2	0	25
	Nov 2022 – Jan 2023	2	0	1
	Nov 2023 – Jan 2024	3	0	15
	Nov 2024 – Jan 2025	3	3	39

	Nov 2025 - Jan 2026	2	4	331
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6. Project Highlights, Innovations & Stories

The MRC's forage fish sampling presence at the Quilcene Yacht Club provides support for the Port of Port Townsend's future restoration goals at that site. The goal is that these samples will act as pre-restoration samples, and once restoration occurs at the site (removal of hard armoring and beach nourishment), the MRC will continue to take post-restoration samples, and hopefully see a return of forage fish spawning on the beach.

7. Lessons Learned

Advanced scheduling is helpful in ensuring adequate volunteer support, especially from MRC members who would like to participate but have limited availability.

8. Next Steps

Sampling will continue monthly at both sites for the next year.

Images



March 22, 2025, Siri's Cove, Dabob Bay, WA

MRC members and Sarah Fisker discuss sampling procedure (left) and then work together to sieve the sample, separating sand and debris from any eggs present in the sample collected (right).

Photo Credit: Troy McKelvey

May 28, 2025, Siri's Cove, Dabob Bay, WA

Example of a completed sample label.

Photo credit: Sarah Fiskén



May 28, 2025, Siri's Cove, Dabob Bay, WA

MRC members Akeyla Behrenfeld, Troy McKelvey, and Tim Cross sieve a sediment sample.

Photo credit: Sarah Fiskén

Appendix A – 2026 Forage Fish QAPP

QUALITY ASSURANCE PROJECT PLAN: Marine Resources Committee Intertidal Forage Fish Spawning Survey (Version 1.2)

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Prepared for: Washington Department of Ecology

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