

COUNTY: Clallam

Grant Number: SEANWS-2021-ClCoCD-00006

PROJECT TITLE: Forage Fish Summary Report

TASK NUMBER: 3.14

PERIOD COVERED: October 1, 2022 – September 30, 2023

DATE SUBMITTED: October 3, 2023



This project has been funded wholly or in part by the United States Environmental Protection Agency. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency under Assistance Agreement [CE-01J65401]. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

Forage Fish Surveys

Introduction

In 2016 Clallam MRC joined the Northwest Straits Commission's forage fish monitoring efforts. Three Clallam MRC members and the project coordinator participated in a day long training provided by Washington Department of Fish and Wildlife (WDFW). Between October 2016 and March 2018 Clallam MRC conducted monthly surveys at two locations - Pitship Point adjacent to John Wayne Marina and at a public beach near Old Town east of Dungeness River. In April 2018 the sampling efforts were discontinued at these two sites and sampling was initiated at Cline Spit. Since then monthly sampling has taken place at Cline Spit with one exception in April 2020 which was caused by the Covid-19 Stay-at-Home order. These three sites are considered index sites by WDFW (Figure 1).



Figure 1. Locations of the current index site, Cline Spit, and the two old index sites, Old Town and Pitship. Yellow site is active and green sites are inactive.

In April 2017 the sampling effort was expanded to include monthly sampling at two sites on Ediz Hook. The sites were selected by the Lower Elwha Tribe in an effort to document forage fish spawning in the

newly restored area along the inside of the spit. Since sampling commenced the sediment along the inside of the spit has coarsened and as a result the sampling locations have been moved progressively further to the west (Figure 2). During the 2018 fall and winter months (October through March) the sampling effort on Ediz Hook was discontinued because of Lower Elwha tribe staffing limitation. The effort was restarted in April 2019 and sampling was carried out at the West Rowing Club and Tesoro Beach sites monthly except for October 2019 and April 2020. Sampling was not conducted in October because of Lower Elwha tribe staff limitation and in April 2020 because of Covid-19 Stay-at-Home order. In January of 2021 sampling was started back up on Ediz hook both the West Rowing Club and Tesoro beaches. In July of 2021 West Rowing Club site was discontinued due to proximity of Tesoro Beach.

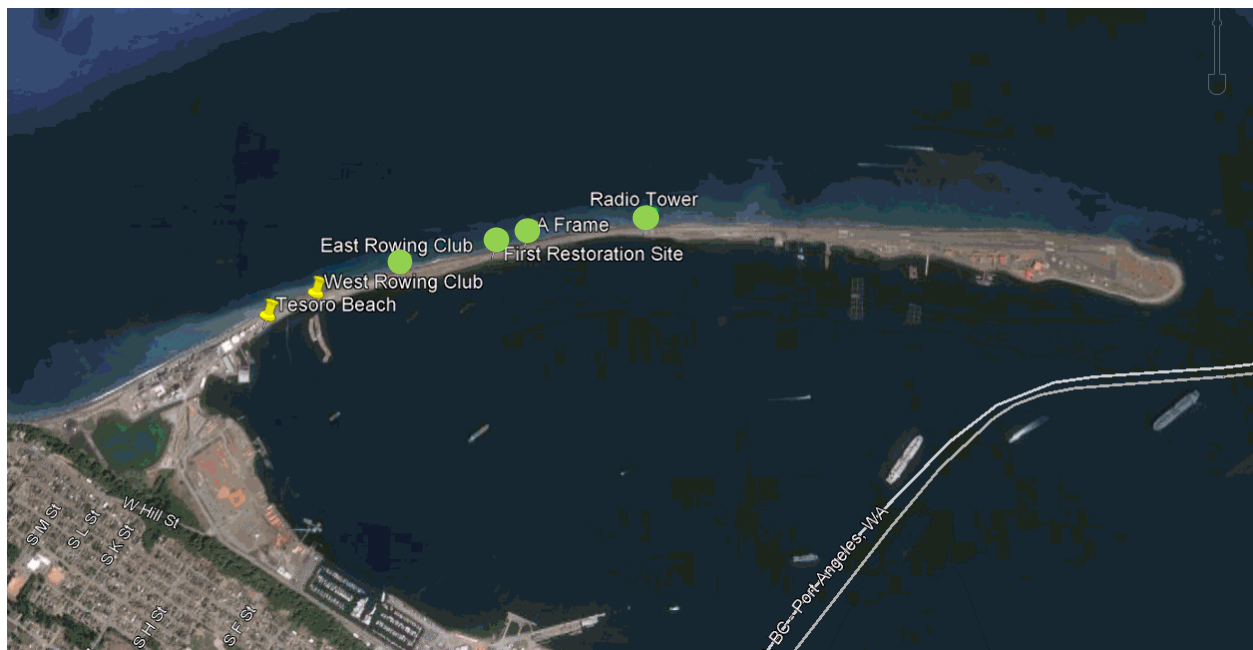


Figure 2. Sampling locations on Ediz Hook, 2017-20. Yellow sites are active (West Rowing site discontinued 7/21) and green sites are inactive (Google Earth map).

In previous years forage fish sampling has been conducted at two sites on the beach east of the Elwha River mouth. Due to staff limited staff time one site has been initiated again on newly restored Elwha beach east of the Elwha River mouth starting in July 2021. Due to one rock fish egg found in 2022 and the shifting beach substrate, this site was no longer sampled after May 2023.

In the Summer of 2021, we chose to also sample west of the Elwha River's mouth. In years past this beach was sampled for forage fish by WDFW and eggs were found. WDFW no longer samples there so it was a good opportunity to sample both beaches at the Elwha's mouth.



Figure 2A: Approximate forage fish sites at the mouth of the Elwha River.

The samples are analyzed for fish eggs at the WDFW laboratory. Because the samples are preserved in Stockard solution they cannot be shipped directly to the laboratory in Olympia. Instead, the samples are hand delivered to the WDFW office in Port Townsend (only open during workdays between 8 am and 4 pm) and WDFW staff delivers the samples to the Olympia laboratory.

Results

The WDFW conducts the laboratory analysis of most of the samples collected by all the participating MRCs. Clallam MRC collected 48 samples in October 2022 – September 2023. Table 1 summarizes the results of these samples. A high number of surf smelt eggs were found in the samples collected at Cline Spit in the September and October 2023 samples but as of this writing those samples have not been enumerated and identified. We have listed those months as eggs present. One Rock Sole egg was identified in each of the Elwha Beach (October 2022), Ediz Hook (January 2023), and Cline Spit (November 2022) samples. Photos taken during the sampling days at the sites are shown in Figure 3.

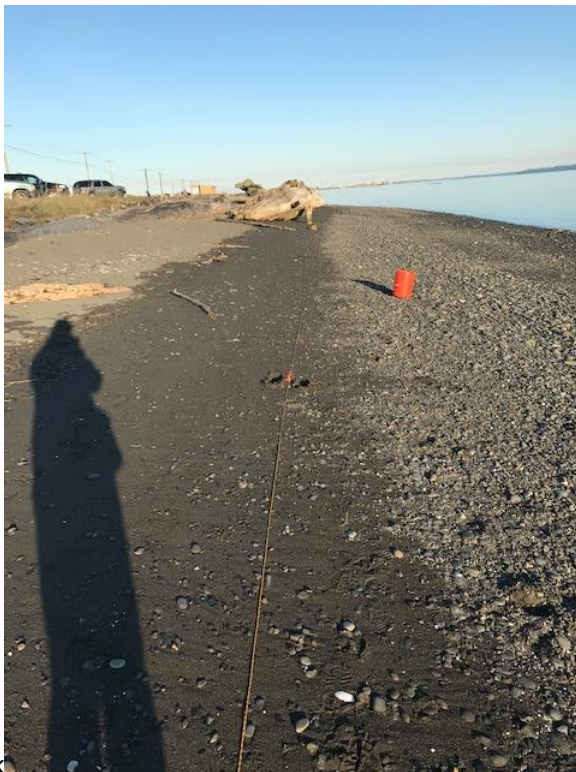
Figure 3. Photos taken on the sampling days at the index site and the two restoration sites.



October 11, 2019 Index Site: Cline Spit.



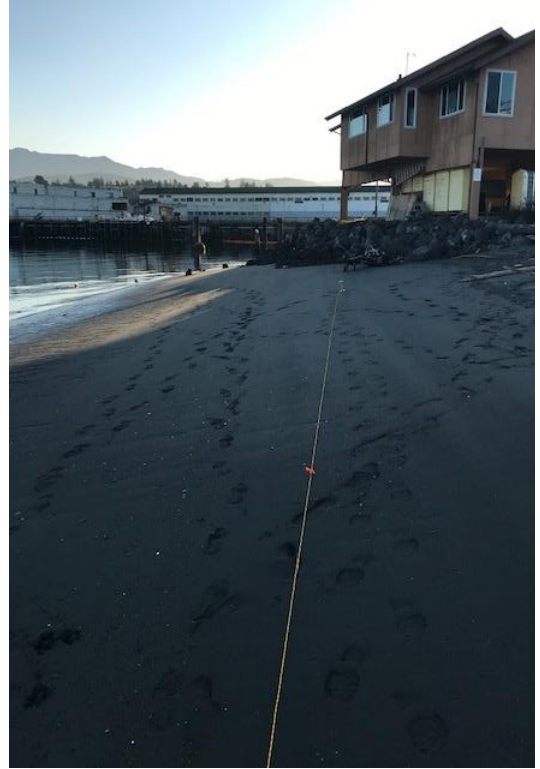
Elwha Beach looking West Sept. 21 2021.



k



February 2, 2020 Restoration Site: Ediz Hook West of Rowing Club



February 2, 2020 Restoration Site: Ediz Hook at Tesoro Beach

Table 1. Summary of WDFW laboratory analysis and database information on samples collected by Clallam MRC members and volunteers

Survey Date	Location	Beach Station	Sample	Field Sheet	Lab Sheet Sample	Photos	WDFW QAQC	Surf Smelt	Sand Lance	Rock Sole	Comments
10/26/2022	Cline Spit	1	1	Y	Y	Y	Y	47	0	0	
10/25/2022	Elwha LEKT	1	1	Y	Y	Y	Y	0	0	1	
10/25/2022	Ediz Hook	1	1	Y	Y	Y	Y	2	0	0	Tesoro Beach
11/20/2022	Cline Spit	1	1	Y	Y	Y	Y	9	0	1	
11/21/2022	Ediz Hook	1	1	Y	Y	Y	Y	0	0	0	Tesoro Beach
12/7/2022	Ediz Hook	1	1	Y	Y	Y	Y	0	0	0	Tesoro Beach
12/6/2022	Cline Spit	1	1	Y	Y	Y		24	0	0	
1/16/2023	Cline Spit	1	1	Y	Y	Y		2	0	0	
1/17/2023	Ediz Hook	1	1	Y	Y	Y		0	0	1	Tesoro Beach
1/17/2023	Elwha LEKT	1	1	Y	Y	Y		0	0	0	
1/17/2023	Elwha West	1	1	Y	Y	Y		0	0	0	
2/14/2023	Ediz Hook	1	1	Y	Y	Y		2	0	0	Tesoro Beach
2/14/2023	Elwha West	1	1	Y	Y	Y		0	0	0	
2/13/2023	Cline Spit	1	1	Y	Y	Y		2	0	0	
3/24/2023	Elwha LEKT	1	1	Y	Y	Y		0	0	0	
3/24/2023	Elwha West	1	1	Y	Y	Y		0	0	0	
3/24/2023	Ediz Hook	1	1	Y	Y	Y		0	0	0	
4/19/2023	Cline Spit	1	1	Y	Y	Y		0	0	0	
4/18/2023	Ediz Hook	1	1	Y	Y	Y		0	0	0	Tesoro Beach
4/18/2023	Elwha LEKT	1	1	Y	Y	Y		0	0	0	
4/18/2023	Elwha West	1	1	Y	Y	Y		0	0	0	
5/24/2023	Cline Spit	1	1	Y	Y	Y		Pending			
5/23/2023	Ediz Hook	1	1	Y	Y	Y					Tesoro Beach
5/23/2023	Elwha LEKT	1	1	Y	Y	Y					
5/23/2023	Elwha West	1	1	Y	Y	Y					
6/21/2023	Cline Spit	1	1	Y	Y	Y					

Table 1. Summary of WDFW laboratory analysis and database information on samples collected by Clallam MRC members and volunteers

Survey Date	Location	Beach Station	Sample	Field Sheet	Lab Sheet Sample	Photos	WDFW QAQC	Surf Smelt	Sand Lance	Rock Sole	Comments
6/21/2023	Ediz Hook	1	1	Y	Y	Y					Tesoro Beach
7/18/2023	Cline Spit	1	1	Y	Y	Y					
7/18/2023	Elwha West	1	1	Y	Y	Y					
7/18/2023	Ediz Hook	1	1	Y	Y	Y					Tesoro Beach
8/16/2023	Cline Spit	1	1	Y	Y	Y					
8/14/2023	Elwha West	1	1	Y	Y	Y					
8/14/2023	Ediz Hook	1	1	Y	Y	Y					Tesoro Beach

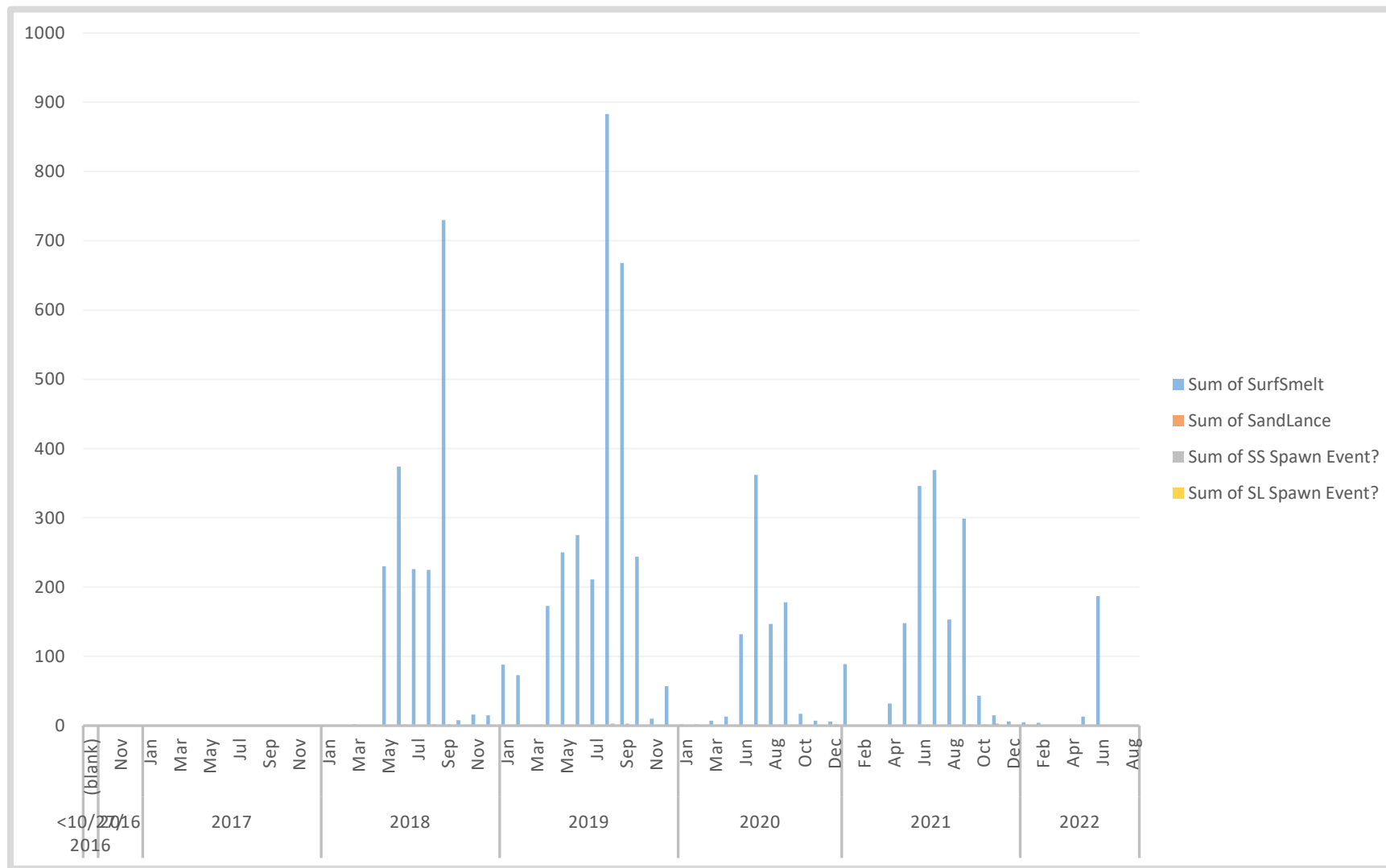


Figure 4. Plot of forage fish eggs found on Clallam beaches.