

COUNTY: Island

Grant Number: SEANWS-2019-IsCoPH-00005

PROJECT TITLE: Island County Marine Resources Committee Operations and Projects

TASK NUMBER: 2.2 Summary report on year one forage fish activities

PERIOD COVERED: Oct 2019-Sep 2020

DATE SUBMITTED: 9/30/2020



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 Spawning Survey 2019-2020: Island County Marine Resources Committee

Goal

Forage fish are a vital part of the Puget Sound ecosystem, and the monitoring of their status is an important component to the recovery of Puget Sound and the Salish Sea. This project of the Island County Marine Resources Committee (MRC) focuses on forage fish spawning at nearshore restoration sites and index sites. Index sites are locations identified by Washington Department of Fish and Wildlife (WDFW) which have public access and have previous documentation of forage fish spawning.

The goals of the intertidal forage fish spawning surveys in Island County are to:

- Monitor forage fish spawning at selected sites in conjunction with completed, planned, and proposed shoreline restoration work.
- Expand regional knowledge of location of forage fish spawning through index site surveys.

This survey is designed to establish continuity with existing WDFW and Washington State Department of Natural Resources (WDNR) data in an effort to define trends and develop an understanding of the conditions and processes affecting the study areas over time. To achieve this, all surveys use established standards and sampling methodologies developed and made available by WDFW. As the planned monitoring program is implemented over succeeding years, it will generate data that can be used to establish baseline conditions, define trends, document changes, track restoration projects, and identify potential new restoration opportunities.

Site Selection

The MRC conducts several intertidal and subtidal surveys, to better understand marine habitats and species, such as forage fish, juvenile salmon, eelgrass, and kelp. In addition, the MRC participates in shoreline restoration projects in the County. In an effort to create a deeper knowledge base of the health of our shoreline, the MRC chose monitoring sites at which survey and/or restoration projects are being conducted. Restoration projects at the selected forage fish monitoring sites are in feasibility, in-progress, or post-project phases. In addition, in collaboration with WDFW, volunteers conducted surveys at one index site.

Sites are shown on the map on the following page.

Restoration sites:

1. Cornet Bay

Project information: Bulkhead removal, fill removal, beach regraded in 2012. Removal of fill and beach regrading in section southwest of original restoration completed in Fall 2015. Forage fish surveys in conjunction with this restoration project have occurred here since 2009.

Location: North Whidbey Island.

Stations: 3: N 48.4019 W 122.6216, N 48.3997 W 122.6243, N 48.3986 W 122.6259

Samples/month: 3 (3 stations, 1 time/month)

Lead: Karen Scharer, Matt Colston

2. Ala Spit

Project information: Concrete bulkhead removed, beach nourishment to neck of the spit in 2015. Sampling scheduled to end Sep 2020.

Location: Northeast Whidbey Island.

Stations: 1: N 48.3924 W 122.5862

Samples/month: 1 (1 station, 1 time/month)

Lead: Karen Scharer, Matt Colston

3. Hidden Beach

Project information: Proposed restoration project to remove shoreline armor and debris over 750 linear feet of shoreline to improve intertidal and backshore beach habitat.

Location: Central Whidbey Island

Stations: 3. 2 samples/station

Samples/month: 6 (3 stations, 2 samples/station, 1 time/month)

Lead: Michael Stilwell

4. Seahorse Siesta

Project information: Removal of barge and bulkhead planned for fall 2020.

Location: Southeast Whidbey Island

Stations: 2. 2 samples/station.

Samples/month: 4 (2 stations, 2 samples/station, 1 time/month)

Lead: Rachel Nostrom, Kristin Galbreath

Index site:

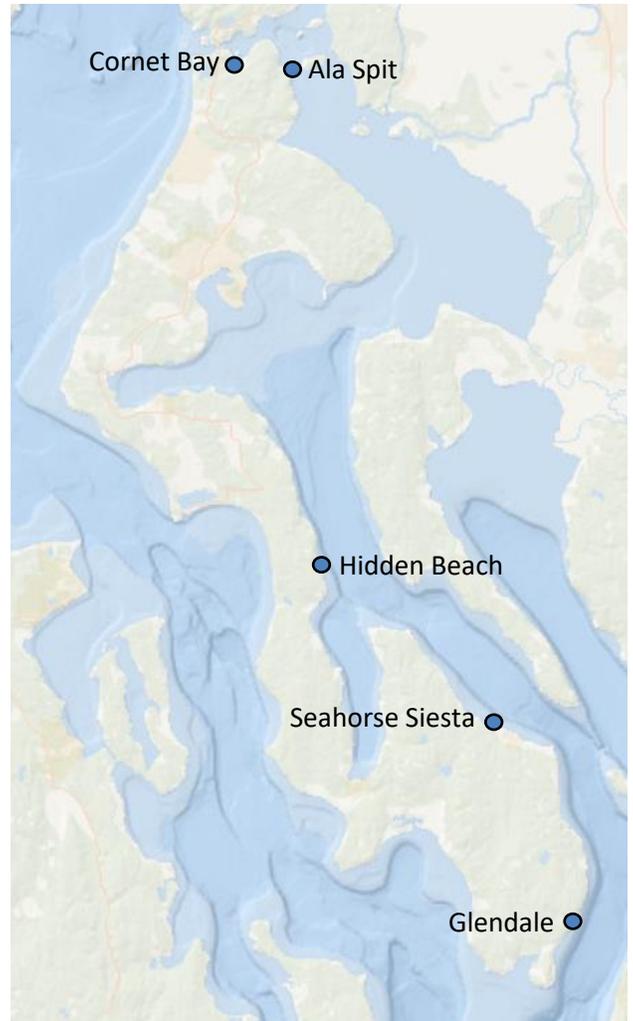
5. Glendale

Location: Southeast Whidbey Island.

Station: 1: N 47.93822 W 122.35850

Samples/month: 1 (1 station, 1 time/month)

Lead: Robert Warren



Project Leads and Volunteers

The 2019-2020 season (Oct 2019-Sep 2020) started strong with several new volunteers who had been trained in summer 2019. Due to restrictions that arose because of the COVID-19 epidemic, volunteer activity was put on hold in March-May. Sampling resumed in summer 2020, with additional volunteers interested in assisting the program. Volunteers have been invited to join existing survey teams where the survey leads have already received training from WDFW. New volunteers will be able to expand their capacity to lead surveys at new sites once they receive training from WDFW.

This work would not be possible without the hard work and dedication of many volunteers. The MRC would like to extend its thanks to the volunteers who help make this program possible. Collectively, volunteers put 225 hours of invaluable service into this project during the 2019-2020 season.

Volunteer	Role	Survey Locations
Matt Kukuk	Project Co-Lead	South Whidbey
Barbara Bennett	Project Co-Lead	Outreach Lead
Karen Scharer	Survey Co-Lead	Cornet Bay, Ala Spit
Matt Colston	Survey Co-Lead	Cornet Bay, Ala Spit
Michael Stilwell	Survey Lead	Hidden Beach
Deborah Stilwell	Volunteer	Hidden Beach
Paul Belanger	Volunteer	Hidden Beach
Leigh Bloom	Volunteer	Hidden Beach
Michele Sakaguchi	Volunteer	Hidden Beach
Kristin Galbreath	Survey Co-Lead	Seahorse Siesta
Rachel Nostrom	Survey Co-Lead	Seahorse Siesta
Robert Warren	Survey Lead	Glendale
<i>Staff: Anna Toledo</i>	<i>MRC Coordinator</i>	
<i>Staff: Ann Prusha</i>	<i>Forage Fish Monitoring Coordinator</i>	

Protocol

The sampling design follows the WDFW Intertidal Forage Fish Spawning Habitat Survey Protocols, Procedures for Obtaining Bulk Beach Substrate Samples (Philip Dionne WDFW) based on earlier protocols developed by Dan Penttila (Penttila, 2011). See Appendix A.

Training

There were no volunteer trainings hosted by WDFW this survey year. New volunteers received on-site training from existing survey leads, and conducted surveys under the guidance of survey leads trained by WDFW. Staff member, Ann Prusha, attended a training conducted by WDFW in September 2020. This will allow her to provide increased capacity and assistance to survey teams in the upcoming year.

Data and Results

Survey samples, beach survey sheets, and photographs were shared regularly with WDFW – the lead agency on data analysis. Due to limited resources within WDFW and additional constraints due to COVID-19, most survey samples from this year have not yet been analyzed. As such, the data summary table below is incomplete. To check for updated results, please contact Anna Toledo or Ann Prusha.

Survey sheets are included in Appendix B. The tracking sheet provided by WDFW is included in Appendix C. The summary map of results provided by WDFW is included in Appendix D.

Data Summary

The table below summarizes when and where spawn presence was recorded at survey sites.

Site Type	Site	Station	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
Restoration	Ala Spit	1												
	Cornet Bay	1												
	Cornet Bay	4												
	Cornet Bay	6												
	Hidden Beach	1											*	
	Hidden Beach	2												
	Hidden Beach	3												
	Hidden Beach	4												
	Seahorse Siesta	1												
	Seahorse Siesta	2												
Index	Glendale	1												

Legend
Not sampled
No egg presence
Pending analysis

* Hidden Beach was sampled in August 2020, but the samples were not preserved and could not be submitted for analysis.

Lessons Learned

- The response to the COVID-19 pandemic presented several challenges this year. In Island County, volunteer field work was suspended from mid-March through May. As restrictions were eased, volunteers were eager to return to field work. Sampling is

carried out in small teams, so volunteers were able to return to sampling while abiding by regulations limiting gatherings. Unfortunately, due to state furloughs and limited capacity, WDFW has not been able to analyze most MRC samples from this year. Delayed analysis can make it hard for volunteers to feel actively engaged in meaningful work.

- Some volunteers have found it helpful to have two teams assigned to each site, so that teams can rotate sampling months. This provides volunteers greater flexibility in scheduling, and reduces the potential for burnout.
- In partnership with Sound Water Stewards, several new volunteers expressed interest in joining the forage fish survey team. Three of these volunteers were able to join the existing team at Hidden Beach, under the supervision of volunteer leads who have received training through WDFW. The MRC would like to expand sampling opportunities through additional sites and additional teams at existing sites. However, the ability to offer expanded opportunities is dependent on a sufficient number of volunteers trained through WDFW. To help meet this need, staff member Ann Prusha completed forage fish survey training through WDFW in September, and will be able to provide added capacity at multiple sites. WDFW training is still needed for the several new volunteers who are interested in assisting this project.