

Project Summary Report

Olympia Oyster Restoration



Project Reporting Period: October 2024-September 2025

Grant number: SEANWS-2023-JeCoWS-00006

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Jefferson County
**Marine
Resources
Committee**



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1. Project Overview

Discovery Bay has a natural Olympia oyster population near the southwest portion of the bay (Maynard Beach area) as well as scattered occurrences throughout the bay. In partnership with the Jamestown S’Klallam Tribe, WA Department of Fish and Wildlife (WDFW), and the Puget Sound Restoration Fund (PSRF), the MRC has been working to expand the extant population by increasing the availability of substrate (i.e., clean Pacific oyster cultch) in nearby areas to facilitate natural recruitment. In 2014, the MRC began monitoring the Olympia oyster population and spreading clean cultch within a half-acre area in the center of the bay (“Powerlines Site”). In 2018, the MRC added another restoration site nearby (“Lagoon Site”), and in 2022, the MRC expanded the original Powerlines Site (now referred to as the “North Powerlines Site”) to include a parcel (now referred to as the “South Powerlines Site”) located adjacent and just south of the original site. In 2023, the MRC organized population surveys and a large shell spread event (~40 cubic yards) at the Powerlines Site (both North and South). In 2024 2 yards of unseeded cultch was spread in the lagoons in March. A visual assessment of this batch of cultch in September 2024 showed that some had collected oyster spat (baby oysters).

During this reporting period, there were two oyster shell spread events at the South Powerlines site in Discovery Bay – 1500 bags in December 2024, and 1000 bags in April 2025. In July 2025, the MRC conducted a population survey on the shell placed in 2023 at the Powerlines site, and found based on size classification of settled Olympia oysters, recruitment has occurred in 2023, 2024, and 2025. We expect that the 2026 population survey will continue to show additional recruitment.

2. Project Goals

The goals were to expand Olympia oyster populations in East Jefferson County by taking actions to form dense, natural, sustainable native oyster beds that provide complex marine habitat and that benefit a variety of marine species that live, feed or migrate through the lower intertidal zone.

For this fiscal year the goals were to:

1. Spread more shell substrate at the South Powerlines site in Discovery Bay
2. Conduct restoration effectiveness monitoring by monitoring the shell substrate placed in 2023
3. Prepare for reapplying for the necessary permits this up coming year.

3. Project Engagement

3.1. Partners/Organizations

Partners include the Jamestown S’Klallam Tribe, WA Dept of Fish and Wildlife, Taylor Shellfish and Puget Sound Restoration Fund. Jamestown S’Klallam Tribe contributed staff time and the expertise of one of their biologists, as well as a crew to distribute oyster shell out of bags and onto the tidelflat. WDFW contribute staff expertise and guidance, crew to distribute shell and assistance with shellfish transfer permits. In addition WDFW was able to buy and have delivered 1000 bags of shell to site. Taylor Shellfish contributes discounted or free cultch, transportation logistics, and staff time. Puget Sound Restoration Fund managed a shell-stack larval monitoring program throughout Puget Sound and supplies shell stacks and data analysis for MRC sites.

3.2. Participants

Event	Participants		
	MRC Members	MRC Volunteers	Total
12/15/25 Shell Delivery	3	0	3
4/1/25 Shell Spread	3	12	15
5/13/25 Pt. Ludlow visit	2	0	2
5/27/25 Shell Spread	2	5	7
6/14/25 Eelgrass survey	3	0	3
7/12/25 Population survey	3	4	7

4. Project Methods/Actions

Project Activity Summary	Date or Period	Location(s)
Transported 1500 bags of oyster shell to the restoration site via oyster barge. Hired Hood Canal Oyster Company for shell and delivery. Three MRC volunteers helped throw bags off the side of the barge at high tide over the site.	December 15, 2024	Discovery Bay, south powerlines site
Emptied bags onto the mudflat w/ volunteers. About 80% of removed bags were repurposed with WDFW handing.	April 1	Discovery Bay, south powerlines site
Olympia oyster lead Neil Harrington and MRC member Tim Cross scouted potential future restoration sites in Port Ludlow	May 13th	Port Ludlow
Volunteers spread 1000 bags of shell brought in by barge (paid for by WDFW)	May 27th	Discovery Bay- powerlines south
MRC member Bryan DeCatarina and other volunteers completed an eelgrass survey of the North and South Powerlines site in anticipation of renewing permits in the Spring of 2026	June 14th	Discovery Bay
Population survey of shell placed in 2023	July 12th	Discovery Bay- powerlines south

5. Results

5.1. Data Summary

The Jefferson MRC conducted an oyster population survey on the portion of the south Powerlines parcel that received shell in 2023 on July 12th, 2025, with the help of the Project Lead (Neil), MRC Coordinator, 2 MRC members, and 4 MRC volunteers. Volunteers counted each Olympia oyster individual and measured their size (mm) within a sample area of 8 m² representing a total plot area of 1,078 m². Volunteers counted and measured a total of 722 Olympia oysters within the sample area, resulting in an approximated 97326 Olympia oysters settled within the project site (see Table 1). The average size of Olympia oysters was determined to be 17 mm and the average number of Olympia oyster individuals per square meter was 90.25. This relatively small size represents the fact that these oysters had all settled since July 2023.

5.2. Outcomes

Table 1. 2025 survey results of the shell placed in 2023

Data Collected	2025
# of ¼m ² quadrats	32
Total # of Olys	722
Total area sampled (m ²)	8
Average size of Olys (mm)	17
Average # of Olys/m ²	90.25
Total # of Olys in plot	97326

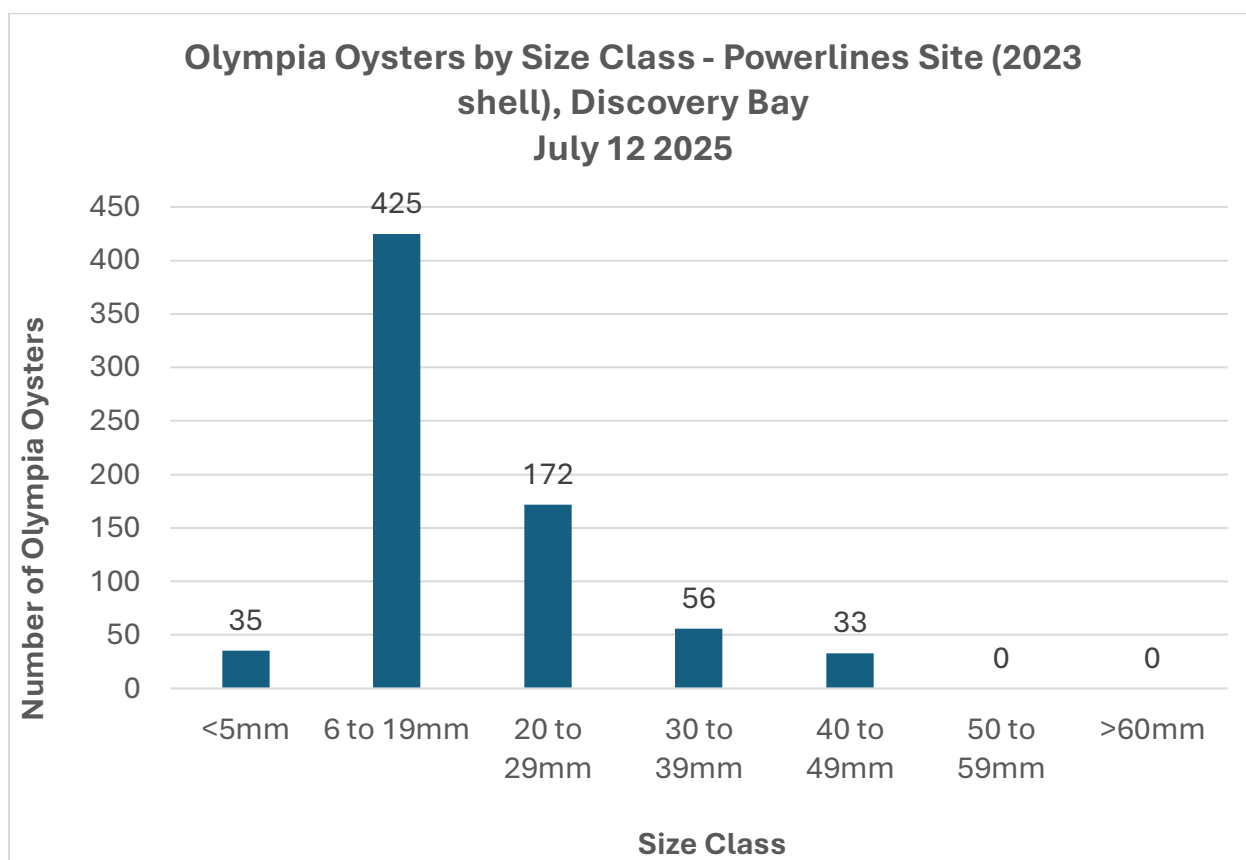


Figure 1. Size class distribution for oyster measured on the shell placed in 2023

The size histogram shows some recruitment in 2023 (likely most of the oysters greater than 30mm), strong recruitment in 2024 (roughly 6mm to 29mm) and some recruitment in 2025. It is likely that some of the 2025 recruitment was missed due to the small size of the oysters making them difficult to see and that in July there is still active reproduction going on. This

result is very encouraging in that the shell we placed did what it was intended to do: create a place for larval oysters to settle and grow.

5.3. Outputs

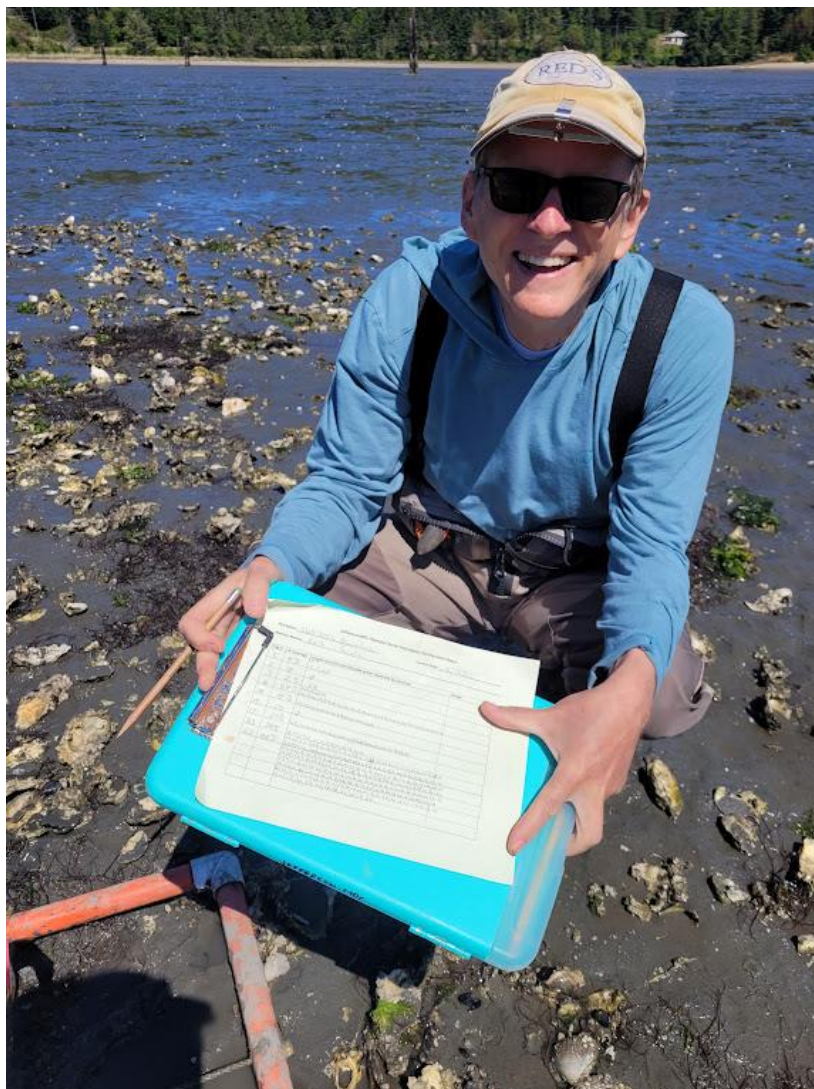
- 1500 bags of shell delivered and spread on the Powerlines south parcel
- 1000 bags of shell delivered by WDFW that MRC volunteers then spread
- Approximately 97,000 Olympia oysters set on the 1200 bags of shell spread in 2023
- Successful natural recruitment- larval set from 2023, 2024 and 2025 on the 2023 shell
- 37 total volunteers participated in 6 events

5.4. Results in context

These results bode well for our Discovery Bay Olympia oyster restoration project. While we were unable to do a survey of our existing powerlines plot, the addition of nearly 100,000 oysters to a population that was already over 100,000, based on previous population surveys shows that our efforts have lead to a much larger population of these animals in Discovery Bay. The strong recruitment that we saw in 2024 and the signs of at least some recruitment in 2025 indicate that this population of Olympia oysters is producing large amounts of larva and that our strategy of providing a place for them to settle is working.

6. Project Highlights, Innovations & Stories

A highlight was Gordon and Keith finding 211 Olympia oysters in one quarter meter plot during the population survey. Honestly, the whole population survey was a whole series of “wow- look at these Olys!” and “what we are doing is working!”. It was all very encouraging to see all of these oysters after all of our hard work getting the bags delivered and then emptying them out of the tide flats. The MRC has a lot of love for these little critters and it is great to bring them back. We are really starting to see the fruits of our labor.



Keith showing off his clipboard with 211 oysters measured in one sample!



An example of all the young oysters on one of the shells placed in 2023



Emily Buckner (MRC Member) and Renee Baribault (Volunteer) measure and note down a sample during the survey

7. Lessons Learned

The Jefferson County MRC learned that it pays to get help with large tasks- over the course of this project period we had 1500 bags of shell delivered by a shellfish company using a barge and WDFW had another 1000 bags delivered. MRC volunteers were then able to spread the shell out of the bags and onto the tide flat. This was in addition to the 1200 bags delivered in 2023. This has taken this project from a small restoration project to a much bigger project that will have more impact. Our survey in the summer of 2025 of that 2023 shell showed that it had about 97,000 Olympia oysters on it from three distinct cohorts- 2023, 2024 and really small ones from 2025.

We may explore bulk shell delivery using a barge and hosing the shell off of the deck- the permitting for this is more difficult but it would be good way to get a lot of shell on the tide flat and avoid the extra effort of emptying the bags once they are delivered.

8. Next Steps

In this next year Jefferson MRC has to renew its various permits to do work in Discovery Bay (Army Corp of Engineers, WDFW and Jefferson County) and provide a comprehensive QAPP update. We will also be investigating parcels in Kilisut Harbor and Port Ludlow for access for future Olympia oyster restoration. Both of these new sites will likely need broodstock hatchery produced seed since the populations are low in these areas and we hope to start the planning and permitting process for these areas.

Appendix A: Olympia Oyster QAPP

Quality Assurance Project Plan Addendum 4: Discovery Bay Olympia Oyster Restoration Project

January 2024



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Prepared for: WA Department of Ecology



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Complete document available upon request, please email jeff.co.mrc@gmail.com.

Monitor Names: _____

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