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T6.6

Summary report on Discovery Bay sites

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Jefferson County
**Marine
Resources
Committee**



**Northwest
Straits**
INITIATIVE



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Olympia Oyster Restoration Summary Report – Discovery Bay

October 2020 – September 2021

This report contains general information about the Olympia oyster restoration and monitoring project at Discovery Bay, including a summary of actions, data collected, and photos.

Project Lead: Neil Harrington

Subcommittee Members: Gordon King, Sarah Fiskien, Brenda Johnson, Frank Handler, Heather Burns, Brent Vadopalas, Joanie Hendricks, Janette Mestre

Project Overview: Discovery Bay has a small 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 WDFW and the Jamestown S’Klallam Tribe, 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 spreading clean cultch and monitoring the Olympia oyster population within a half-acre area in the center of the bay (“Powerline Site”). In 2018, the MRC added another restoration site nearby (“Lagoon Site”).

Summary of Actions, October 2020 – September 2021

February 3 – The MRC Coordinator and 5 MRC members (Neil, Gordon, Frank, Brent, Brenda) met to discuss plans for spreading cultch and monitoring for the year.

February 22 – The MRC acquired a WDFW Shellfish Transfer Permit (#21-1152) to distribute clean Pacific oyster shells at both restoration sites (Lagoon & Powerlines) in Discovery Bay.

February 25 – The MRC Coordinator, Gordon and Neil met with WDFW Shellfish Biologist Brady Blake to discuss project updates and plans going forward.

April 16 – The MRC Coordinator, Neil Harrington (JSK biologist and MRC member), 6 MRC members (Gordon, Sarah, Frank, Brenda, Joanie, Heather) and 4 community volunteers (Ax, Susan, Anne, Emily) helped spread clean cultch at the Lagoon Site (80 cultch bags, or 2 cubic yards). Clean cultch was delivered from Taylor Shellfish and volunteers placed shell in the pond area, along the pond side of the lagoon, and along the beach facing side of the spit.

May 10 – The MRC Coordinator met with Gordon and Neil to discuss the project budget.

July 26 – The MRC Coordinator, Neil Harrington (JSK biologist and MRC member), and 11 volunteers – 4 MRC members (Gordon, Brenda, Janette, Sarah), 1 former MRC member (Ralph), 4 Clallam County MRC affiliates (Rebecca, McKenzie, Tim, Ann), and 2 community volunteers from the WSU Beach Naturalists program (Susan, Steve) – conducted a population survey of Olympia oysters at the Powerline site.

August 5 – The MRC Coordinator met with MRC members (Neil, Gordon) and a former MRC member (Ralph) to discuss restoration plans for the new parcel.

August 9 – Two MRC members (Neil and Bryan) along with the Jamestown S’Klallam Tribe Shellfish Biologist, Annie Raymond, conducted an eelgrass and macroalgae survey for

renewing permit applications to expand the Powerlines site to include another DNR parcel located just southwest and adjacent to the currently permitted project site.

Data Collected

The Jefferson MRC conducted its annual monitoring at the Powerlines site on July 26, 2021. The MRC Coordinator, Project Lead, and 11 volunteers completed a population survey of Olympia oysters at the Powerline site. Volunteers counted each Olympia oyster individual and measured their size (mm) within a sample area of 1,825.52 m² (see Figure 1).

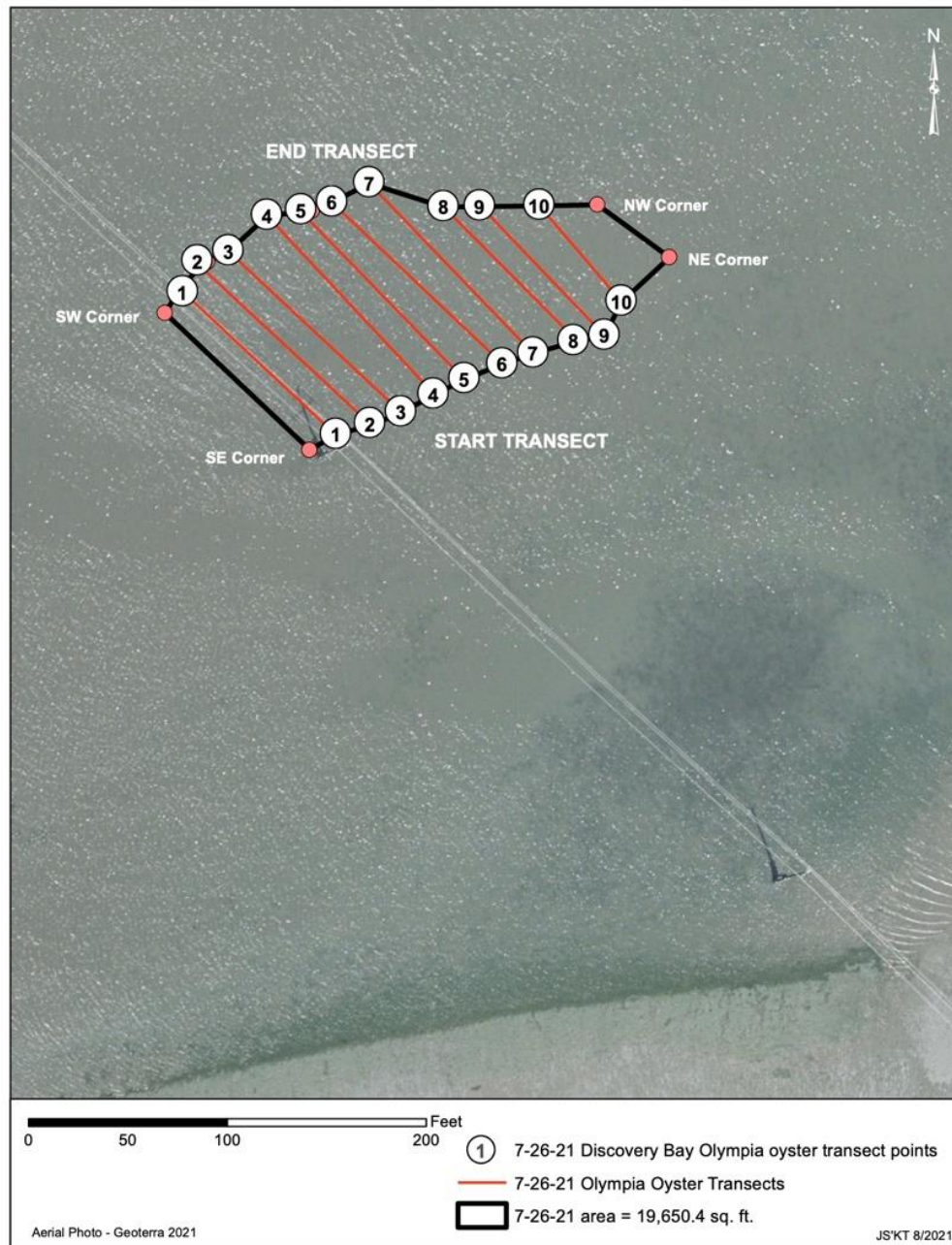


Figure 1: Map of sample area surveyed on July 26, 2021.

Volunteers counted and measured a total of 432 Olympia oysters within the sample area, resulting in an approximated 52,575 Olympia oysters settled within the project site (see Table 1). The average size of Olympia oysters here is determined to be 31.9 mm. Despite the [unprecedented heatwave](#) from June 26 to July 2, observations found that the Olympia oyster population here fared fairly well relative to other areas in the region, such as Sequim Bay.

Table 1: Summary of Discovery Bay Powerline Site Data Collected July 26, 2021

Olympia Oyster Restoration Project - Powerlines Site, Discovery Bay Station Name: DiscoBay 2014 Restoration Site Monitoring Date: August 2, 2020	
# of ¼m ² quadrats	60
Total # of Olys	432
Total area sampled (m ²)	15
Total area of plot (m ²)	1826
Average size of Olys (mm)	31.9
Average # of Olys/m ²	28.8
Total # of Olys in plot	52575

Observations at this site, supported by decreasing percent cultch cover over the years (note the increase in 2020 was a result of monitoring just a few weeks after spreading cultch), find that previously spread cultch with settled Olympia oysters continue to drift with currents and wave action to just south of the restoration site (see Table 2). Due to the displacement of cultch over time, we do not compare change in the total number of Olympia oysters settled within the restoration site across the years. Looking ahead, the Jefferson MRC is working on securing a Right of Entry for the parcel located just southwest and adjacent to the currently permitted Powerlines Site, to better assess and expand habitat enhancement efforts.

Table 2: Summary of Discovery Bay Powerline Site Data Collected 2017 - 2021

Olympia Oyster Restoration Project - Powerlines Site, Discovery Bay Station Name: DiscoBay 2014 Restoration Site					
Data Collected	2017	2018	2019	2020	2021
# of ¼m ² quadrats	48	77	69	85	60
Total # of Olys	592	732	398	375	432
Total area sampled (m ²)	12	19.25	17.25	21.3	15
Average size of Olys (mm)	38.9	34.0	41.3	40.7	31.9
Average % cultch cover/quadrat	11.7%	17.2%	8.2%	15.6%	6.9%
Average # of Olys/m ²	49	38	23.07	17.7	28.8

The wide range of multiple size (and age) classes continues to support that natural recruitment is occurring at this site (see Figure 2). This year, the sizes of Olympia oysters ranged from 5 to 68mm, with roughly half of the oysters counted measuring less than 32mm.

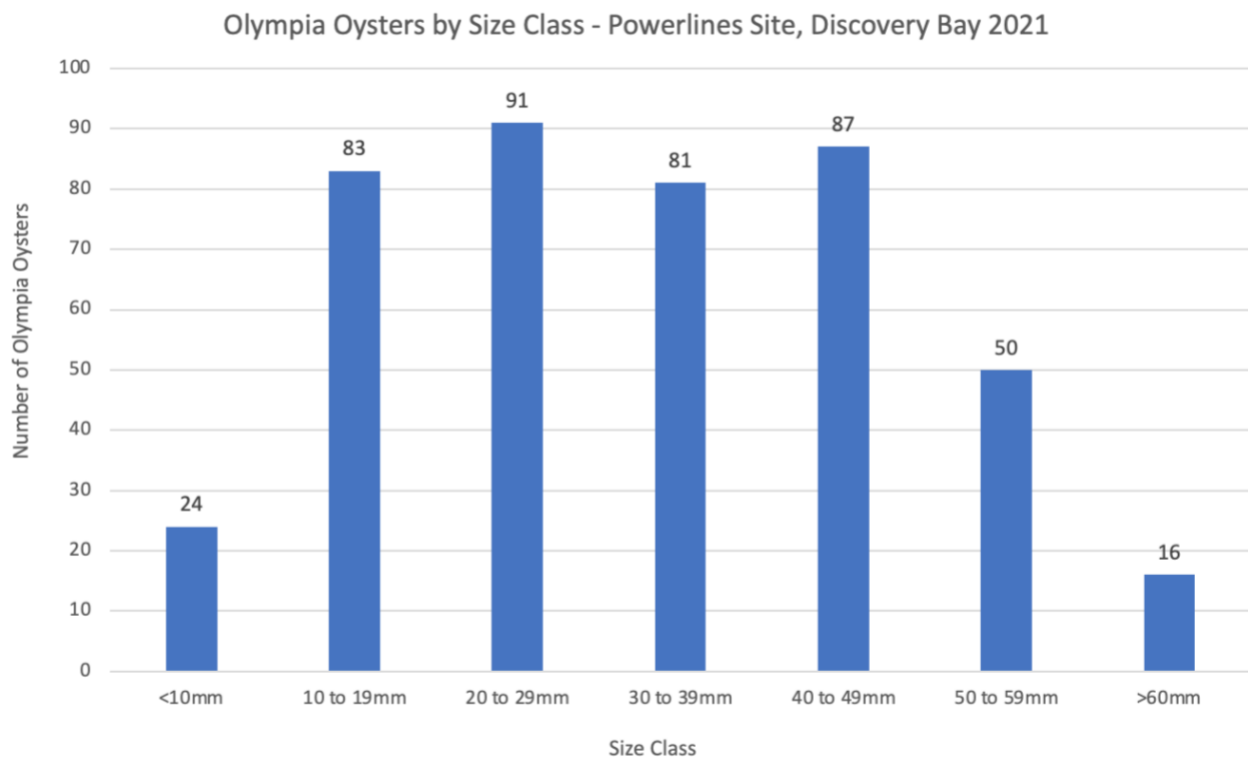


Figure 2: Size class distribution (mm) of Olympia oysters surveyed at the Powerline Site, Discovery Bay on July 26, 2021.

Observations of the Lagoon Site

The Lagoon Site houses the extant Olympia oyster population in Discovery Bay, yet the geography of the area, in its linear shape, makes it difficult to conduct a traditional population survey. However, recruitment is easily observed as settlement of new Olympia oysters on added substrate, which continues to be observed each year. The Jefferson MRC plans to continue to provide shell substrate in the small pond and along the spit here, as permitting allows.

Photos:

April 16 Oyster workday to spread clean cultch at the Lagoon Site













July 26 Olympia oyster monitoring day at the Powerlines Site

