TNC Final Report Oly Conservation

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Contractor Name: Sound Fresh Clams and Oysters

Contract Number: TNC\_JA\_072021\_02

Project Award Activity #: P120673-f106758-110375

**Project**

This project, initiated and funded by The Nature Conservancy, brought 3 oyster growers together to locate, transplant and consolidate 4,305 natural set Olympia Oysters, *Ostrea lurida,* to a site within Little Skookum Inlet. The purpose of this operation was to permanently preserve wild native oysters within their estuary of origin. The location of the restoration plot is on the farm of Sound Fresh Clams and Oysters (Adams) 47.154382, -123.017559. The Olys have been transplanted into a complex reef habitat (provides shading and moisture retention) of oyster shell and existing Olys attached to those oyster shells.  This complex beach structure has captured *Ulva*macroalgae with provided additional shading to the transplanted Olys.

Brenner Oyster Company:

Bruce Brenner

These 790 oysters were deployed between the (minus) -1.75 tide level and the (minus) -2.0 tide level at roughly 5 oysters per foot in a 13' by 13' square.

790 Olys collected

790 Olys harvested by Bruce

0 Olys less than 1 inch

563 Olys between 1.0 and 1.5"

227 Olys greater than 2"

Wallins Oysters and Clams, LLC

Mary Bennett

Bennett:  These 3,595 oysters were deployed between the (minus) -1.5 tide level and the (minus) -2.0 tide level at roughly 10 oysters per foot in a 20' by 20' square.

3595 Olys collected

75 Olys harvested by Benito (Mary's crew boss)

3520 Olys harvested by Adams family

395 Olys less than 1 inch

3168 Olys between 1.0 and 1.5"

240 Olys greater than 2"

**Outcome**

Sampling conducted during available low tides revealed an overall mortality of 2%. A PVC one meter square was used in the beginning distribution of the Olys and in the final counting. Sizes of the Olys were essentially unchanged over the year

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Source | Start | End | Mortality |
| Plot 1 | Brenner | 790 | 775 | 15 |
| Plot 2 | Bennett | 3595 | 3524 | 71 |
| Totals |  | 4305 | 4299 | 86 |

Factors contributing to the survival of the oysters is placement within their desired tidal zone, low density, placement in an area free of disturbance.

**Summary**

As of 10 August 2022, within the oyster reef habitat, 4.299 Olympia Oysters, *Ostrea lurida,* are living and conducting their biological activities. They have been successfully transplanted from their original Little   
Skookum Inlet locations into their current home and have completed two spawn cycles (2021 and 2022). All Olympia oysters involved in this project are wild Olympia oysters originating from natural set.

**Notes and Environmental Data:**

August 2021

Temperature: 16.5C

Salinity 28.7 psu, seasonal mean

Dissolved Oxygen: 11.7 mg/L

September 2021

Temperature: 15 C

Salinity 28.8 psu, seasonal mean

Dissolved Oxygen: 8.2 mg/L

October 2021

Temperature: 13.5 C

Salinity 29.7 psu, seasonal mean

Dissolved Oxygen: 7.1 mg/L

November 2021

Temperature: 11.7 C

Salinity 29.8 psu, seasonal mean

Dissolved Oxygen: 6.8 mg/L

December 2021

Temperature: 10 C

Salinity 29.5 psu, seasonal mean

Dissolved Oxygen: 6.8 mg/L

January 2022

Temperature: 8.4 C, 0.4 below mean

Salinity 29 psu

Dissolved Oxygen: 7.3

February 2022

Temperature: 8.4 C, mean

Salinity 28 psu , 1 psu below seasonal mean

Dissolved Oxygen: 9 mg/L, 1.0 mg/L above seasonal mean

March 2022

Temperature: 8.6 C, mean

Salinity 27.5 psu, 1 psu below seasonal mean

Dissolved Oxygen: 10.5 mg/L, 1.5 mg/L above seasonal mean

April 2022

Temperature: 9.0 C, 1 below mean

Salinity 28.0 psu, seasonal mean

Dissolved Oxygen: 11 mg/L, seasonal mean

May 2022

Temperature: 10.5 C, 1.30 below mean

Salinity 28.5 psu, 0.2 above seasonal mean

Dissolved Oxygen: 11.2 mg/L, 0.8 mg/L below seasonal mean

June 2022

Temperature: 12.2 C, 0.8 below mean

Salinity 28.5 psu, 0.1 above seasonal mean

Dissolved Oxygen: 11 mg/L, 0.3 mg/L below seasonal mean

July 2022

Temperature: 14.7 C, mean

Salinity 28.7 psu, seasonal mean

Dissolved Oxygen: 12.5 mg/L, 1.2 mg/L above seasonal mean