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- Engineers/Scientists, LLC (a BioScape Technologies Affiliate)

Port of Bandon Boat Basin and Launch Ramp Areas

Submerged Aquatic Vegetation Mitigation Plan

12/30/14

Introduction

On Friday, June 13th, 2014, Tyler Krug of the USACE contacted the Port of Bandon via email, advising the Port, in order to avoid delays in its permitting efforts, to assess submerged aquatic vegetation (SAV) within areas previously identified and permitted to be used for vessel traffic and moorage. Further, Tyler informed the Port there could be a potential for SAV to be located in the Port's dredge prisms, and acknowledged that any SAV growing is expected to be lost (destroyed) through the action of maintenance dredging. The Port engaged EMC Engineers/Scientists on June 13th to assist in developing a remedy for the eelgrass issue.

The Tier-1 survey is devised to provide qualitative assessment of SAV resources within the vicinity of a proposed project and is generally applicable to small-scale activities, such as single-family docks and piers, small-scale aquaculture projects, boat moorings and ramps, and small-scale activities associated with transmission cables and pipelines. A Tier-1 survey may be considered a reconnaissance level survey that captures basic information such as presence/absence, identification of SAV bed spatial distribution, approximation of the total area of the SAV bed, qualitative assessment of SAV density, and maximum and minimum depth distribution.

SAV Survey

On Thursday morning, June 19th, 2014, at about 8:45, Jack Akin, MS, PE of EMC Engineers/Scientists, LLC, accompanied by Dan Hoover, Port of Brookings staff and underwater video camera operator, met on site with Gina Dearth, Port of Bandon General Manager and Bob Shamnot, Port of Bandon staff and boat operator. The purpose of the meeting was to develop a strategy to conduct a submerged aquatic vegetation (SAV) survey within the Port of Bandon launch ramp and boat basin areas, focusing particularly in the delineation of SAV in previously permitted dredged zones. At about 9:30A, after the meeting, Jack, Bob and Dan (crew) conducted a video survey of the Boat Basin.

The Boat Basin video traverse began at a point close to the basin southwest corner, and thence counterclockwise along the shoreline, following the pattern as shown in the attached scaled, contoured drawing with aerialphotographic overlay, entitled **SAV Video Traverse**. The Launch Ramp area is shallow enough to observe all floors, with the exception of a narrow strip along the Crab Dock. The video traverse conducted in the Launch Ramp area is also shown on the SAV Video Traverse drawing.



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It was estimated that the traverse would be completed in time to visually survey the Launch Ramp area to coincide with low tide, expected to occur that day at about 11:57A. In addition to the visual survey a video pass was conducted alongside the Crab Dock as shown in the drawing.

Observations

As a result of the SAV Survey, the following observations and data are recorded.

Data Table – June 19th SAV Survey

Zone	Boat Basin	Launch Ramp A ¹	Launch Ramp B
Start	9:30 A	11:55 A	1:15P
Finish	11:15A	12:40P	3P
Depth	See Mapped Contours ²	See Mapped Contours	See Mapped Contours
General Sediment Type	69.1 – 90.1% silt and clay, 0.55 – 6.79% organic, remaining assumed fine sands ³	69.1 – 90.1% silt and clay, 0.55 – 6.79% organic, remaining assumed fine sands	69.1 – 90.1% silt and clay, 0.55 – 6.79% organic, remaining assumed fine sands
% Eelgrass Cover	Very barren, sparse (> 1% cover)	Low (11-25%)	Moderate (26-50%), and high (> 50%)
% Rockweed Cover	Very barren, sparse (> 1% cover)	Very barren, sparse (> 1% cover)	Very barren, sparse (> 1% cover)
Notable Biological Observations	One eelgrass plant as shown on map, and a few Dungeness crabs	Gradually declining eelgrass shoot density from north edge of beds observed in Zone A, and a few Dungeness crabs	Thick eelgrass beds with well defined, distinct edges, and a few Dungeness crabs

1: Launch Ramp A Zone includes the previously permitted dredging area accessing the Launch Ramp.

2: See map entitled SAV Distribution Map – June 19th, 2014 Survey

3: Provided from April 2012 SEF Report, USACE, Portland District

Mapping

Using appropriate plotting software (AutoCad, recent aerial photograph) and the known GPS coordinates, EMC produced a map of Eelgrass and Rockweed distribution and approximate size of the overall bed(s). This map is entitled **SAV Distribution Map – June 19th, 2014 Survey**. Relative density of the bed and other information contained in the Data Table on Page 3 of this Report are shown on this map.

This information was projected on the site plan of the proposed dredging project. In addition, calculations of total project acreage, estimated SAV acreage, and total SAV habitat acreage is provided on the map.



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Looking westward at the Launch Ramp area from a shoreline midpoint, extents of eelgrass beds are clearly visible.



Looking eastward at the Launch Ramp area from a shoreline point adjacent and south of the Launch Ramp, extents of eelgrass beds are clearly visible.