

Alpha Marine Installations

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Aquatic Habitat Dive Survey for Mooring Buoy Installation

Customer: Rich Clark
Location: Burton
10040 SW Governors LN.
Vashon, WA 98070
Quartermaster Harbor

Date: July 10, 2025
Time: 11:30 AM
Tide Station: Burton, Quartermaster
Actual Water Depth: 27'

PROJECT DESCRIPTION:

Proposed recreational mooring for Rich Clark installed in Quarter Master Harbor, South East Vashon Island. Mooring will consist of a helical embedment anchor, 45' one inch nylon rope with midline float, 6 inch chain thru pass thru buoy topped with retrieval pear ring. MLLW 29'

INTRODUCTION:

The aquatic habitat survey was performed by Jim Arnold, Alpha Marine Installations on July 10, 2025 at 11:30 AM, weather cloudy and dry with calm wind. 8'-10' Visibility.

METHODS:

The dive survey area is located in Quarter Master Harbor, Vashon Island, Washington. Site location is 840 feet off high water mark at 47.38552 latitude / -122.464363 longitude as the proposed mooring location center point. A 60-foot radius was surveyed by diver around the proposed anchor site with no debris or obstructions observed.

SUBSTRATE:

Within the survey area substrate consisted of sand, mud and clay. Substrate site is suitable for an embedment anchor.

VEGETATION:

There was no vegetation of any kind observed within the project area surveyed.

CONCLUSION:

The proposed mooring as designed with a helical screw anchor with a 1 ¾ inch foot print and midline float to avoid drag circles and damage to aquatic vegetation will have a minimal environmental impact for this project.

WAC 220-660-380 (8) Buoy design:

(a) In water bodies where buoy systems might damage submerged aquatic vegetation, locate and design the buoy system to minimize damage.

(i) Whenever feasible, use an embedded anchor.

(A) A seagrass/macroalgae habitat survey is not required if an embedment-style mooring anchor is installed. The department will require the diver/installer to locate the anchor so the mooring buoy system will not damage seagrass and kelp beds, and in herring spawning beds other macroalgae used as spawning substrate.

Percentage of Vegetation

0-20%

21-39%

40-60%

61-100%



Shore



