



[EPA Region 10 Dive Unit](#)

Survey of moorage buoys systems for potential impacts to aquatic reserve habitat

What: As manager and trustee for state-owned aquatic lands WDNR has designated Quartermaster Harbor, King County as part of an aquatic reserve around Maury Island. They are currently developing a recreational mooring buoy plan for Quartermaster Harbor in response to an increase of unauthorized buoys in recent years which may impact this aquatic habitat.

WDNR required documentation of the sea floor in two areas – Dockton and Burton Cove. They are concerned about anecdotal reports of debris in the vicinity of existing, unauthorized mooring buoys. WDNR has also evaluated 30 years' worth of Department of Fish and Wildlife herring spawn surveys that illustrate a substantial decline in eelgrass and other aquatic vegetation.

Why: EPA, as a WADNR Puget Sound Initiative partner, supported this work as eelgrass is a keystone species to overall Puget Sound Health.

Where/When: June 5 – 7, 2012, Quartermaster Harbor – Vashon and Maury Island, WA

How: [R10 Dive Unit](#) performed a visual & photographic survey of moorage buoys, buoy tether and anchor systems, impacts to marine substrate, substrate type and condition and, algal/eel grass presence for ongoing WDNR regulatory enforcement and management of moorage buoys in Burton and Dockton Coves of the aquatic reserve.

Results: Divers found little algal growth and no eelgrass. This is of concern as this area is known to have supported eelgrass in the past.

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Figures

Figure 1. Overview of the work areas.



Figure 2. Burton Cove, Green = 1st priority, Orange = 2nd priority, Yellow = 3rd priority.



Figure 3. Dockton Cove.

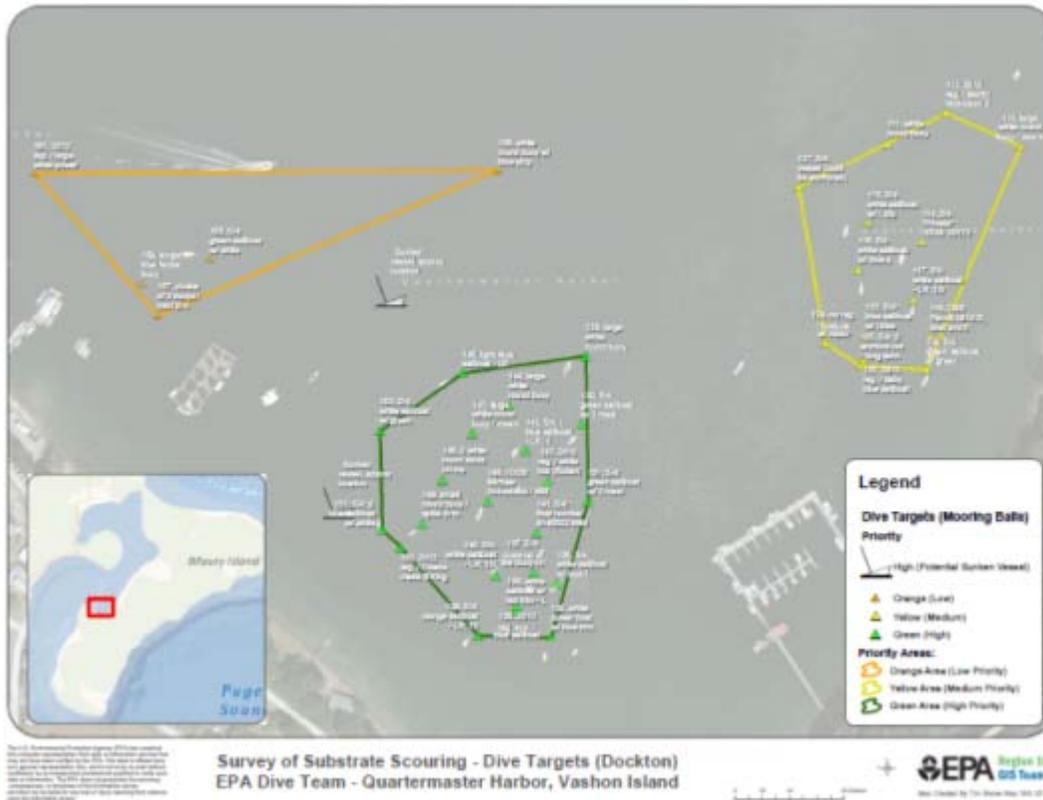


Figure 4: A buddy team keeping track of data collection station to station.



Figure 5: Marine life on shallow part of mooring line.



Figure 6: Mooring chain on an anchor.



Figure 7: Concrete filled 55 gal. drum – mooring anchor.



Figure 8: Burton Cove – boat and float with multiple mooring anchors.



Figure 9: Boats and mooring floats, Dockton Cove.



Figure 10: Neglected boat, Dockton Cove.

