

Kelp Projects of the Northwest Straits Initiative



Photo: Florian Graner

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**Northwest
Straits**
INITIATIVE



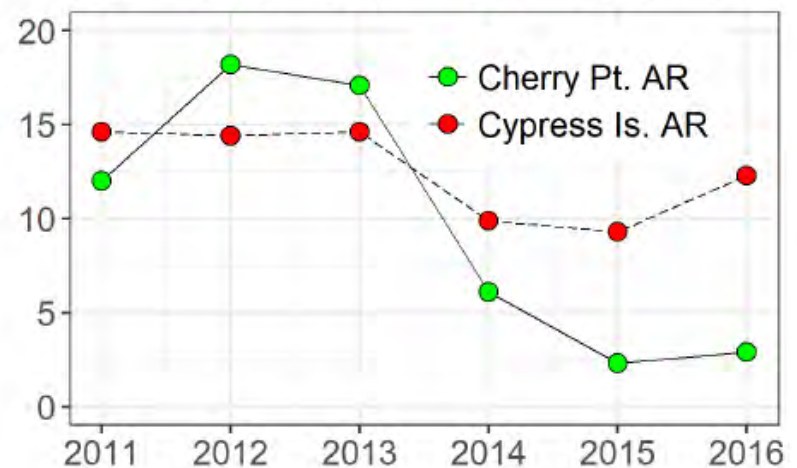
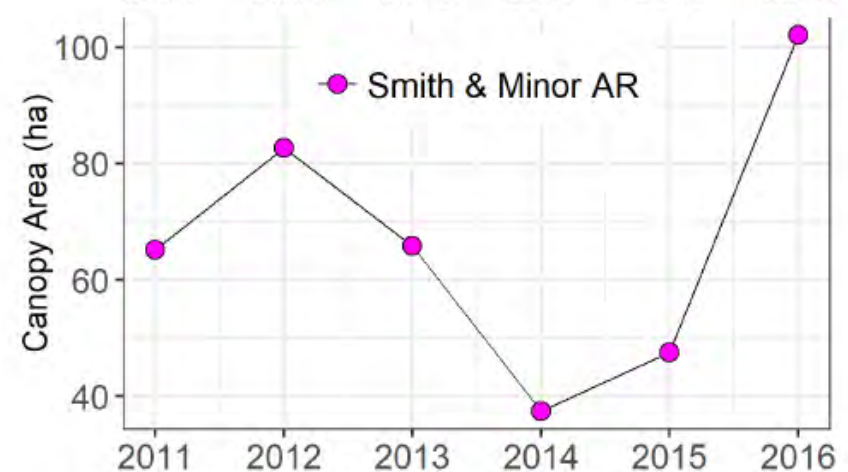
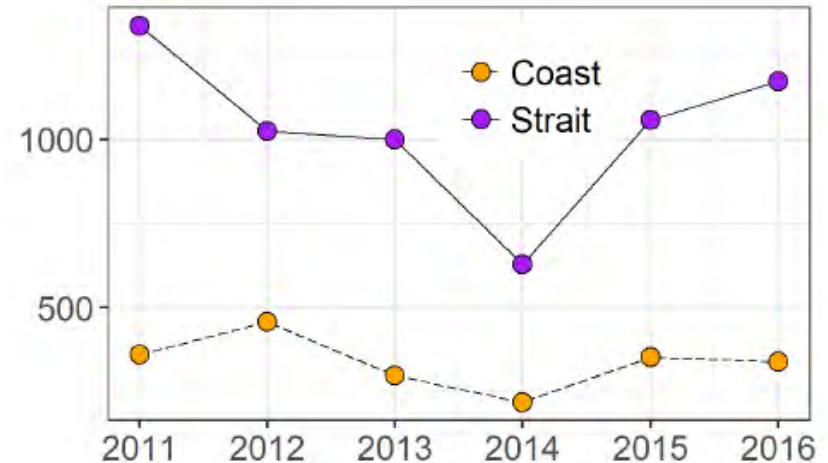
Acknowledgements

- Caroline Gibson
- Emily Bishop
- Suzanne Shull
- Zoe Zilz, Brittany Jones
- Tom Mumford
- Helen Berry
- Marine Resources Committees
- Northwest Straits Initiative

Canopy Area 2011-2016



- Interannual variability
- Large region-wide declines in 2014
- Recovery stronger and sooner at well-mixed sites





A kayak-based survey protocol for Bull Kelp in Puget Sound

Prepared for the Northwest
Straits Commission

Emily Bishop
NOAA Hollings Scholar

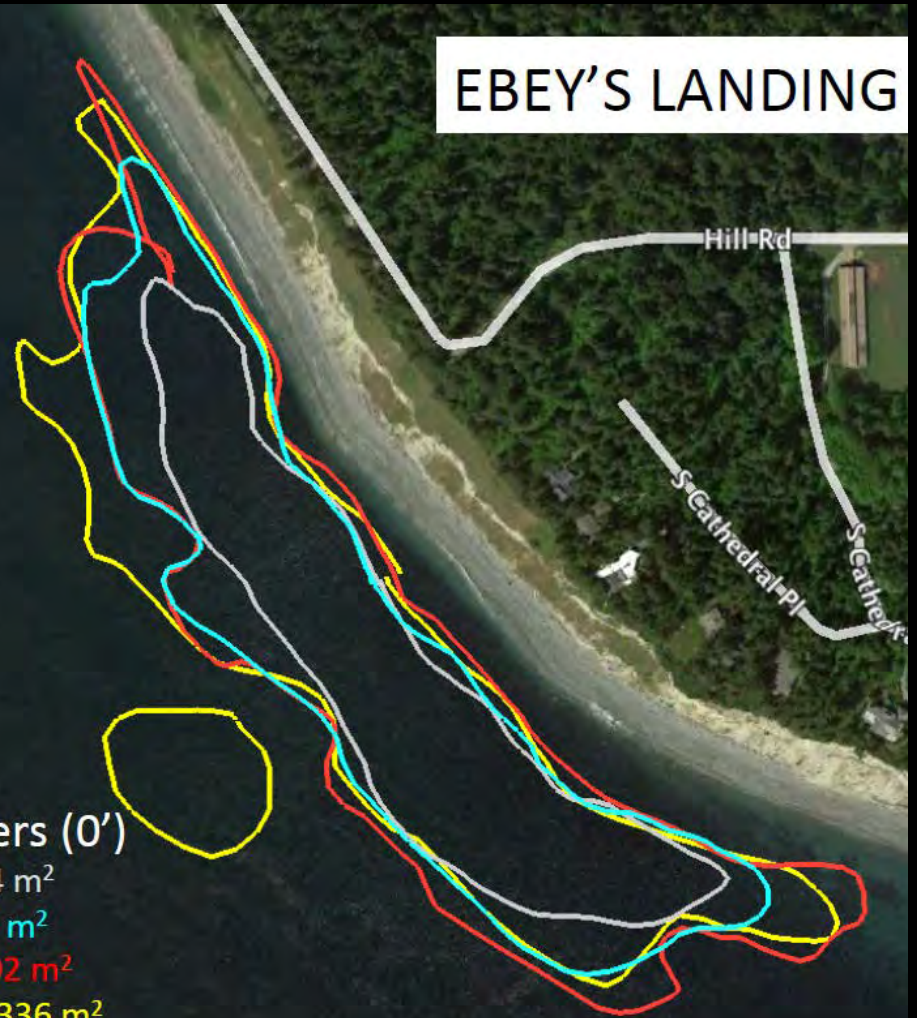


This report was funded in part through a cooperative agreement
with the National Oceanic and Atmospheric Administration.

October 2014

Updated May 2016

GPS perimeter tracking



Tide Perimeters (0')

June: 38,384 m²

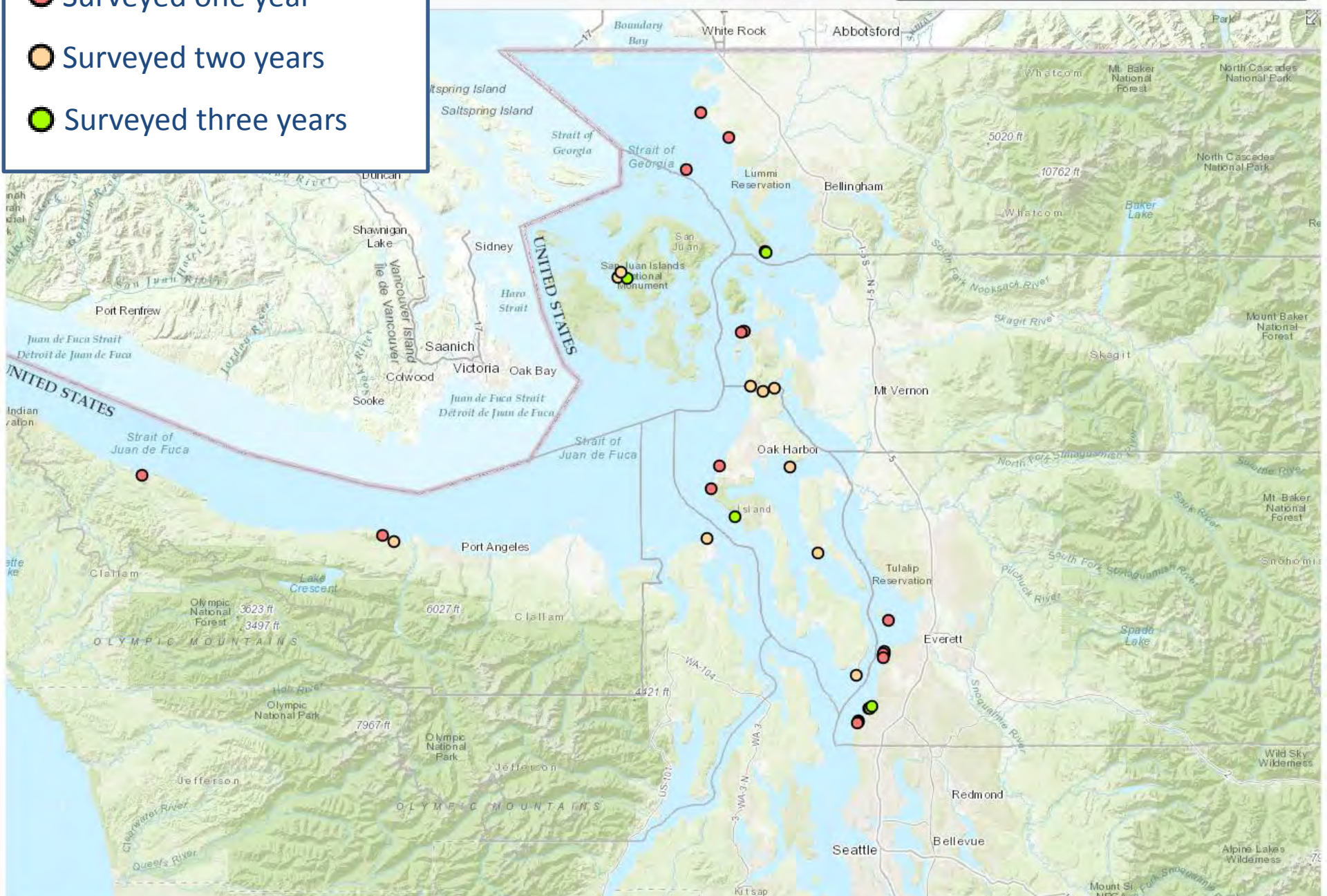
July: 59,151 m²

August: 74,302 m²




September: 72,336 m²

- Surveyed one year
- Surveyed two years
- Surveyed three years

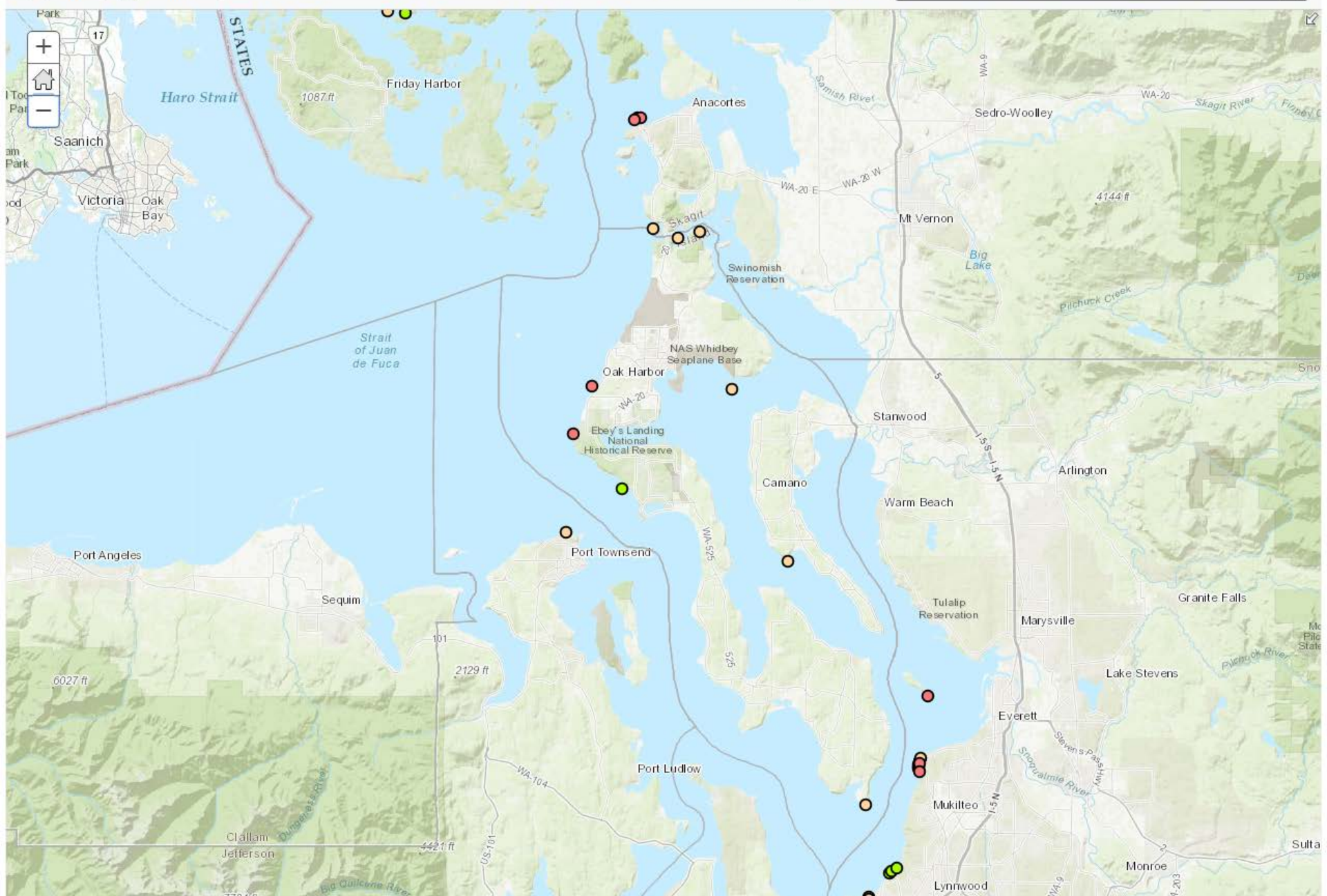
Share Print Measure



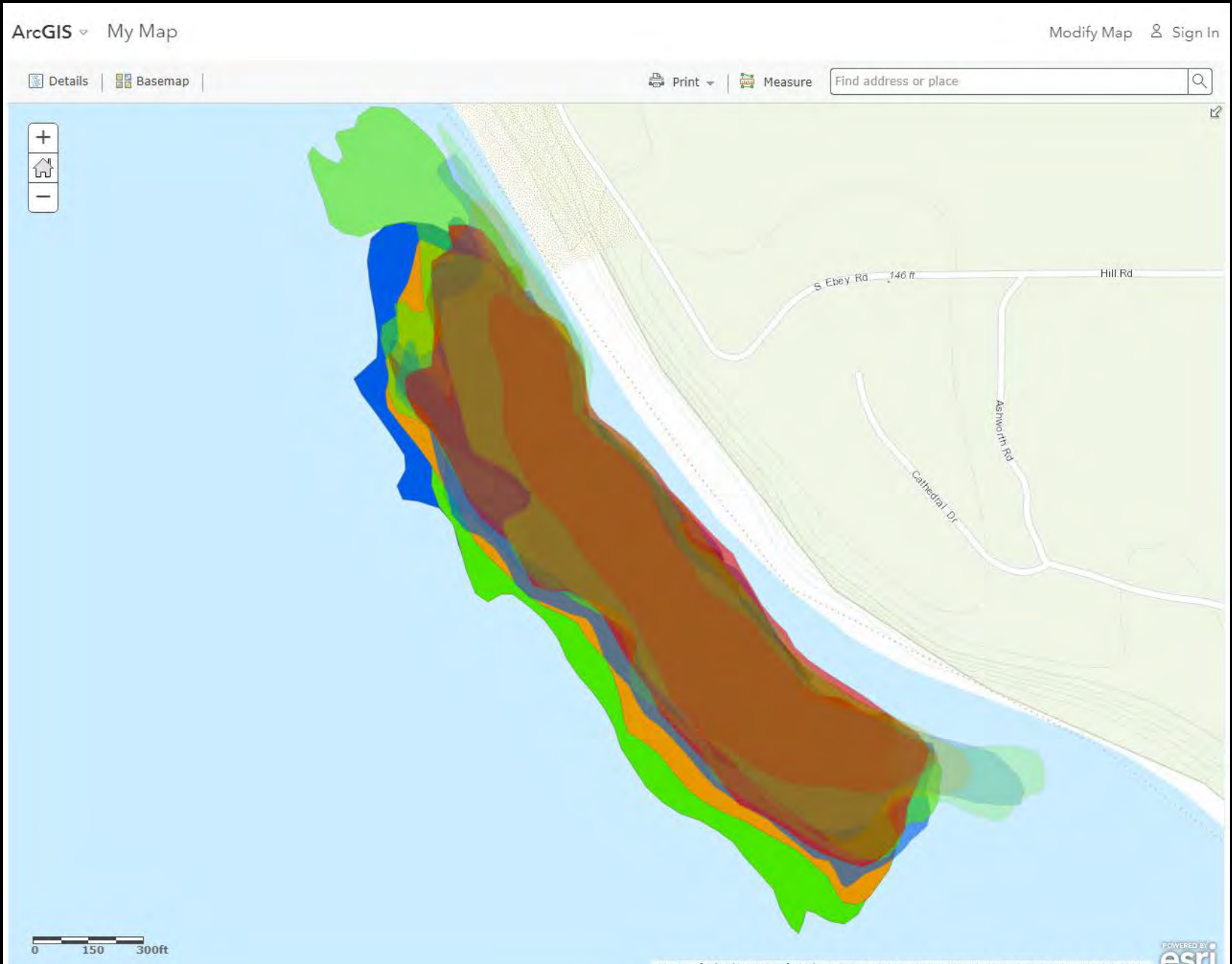
 Details |  Basemap

 Share  Print  Measure

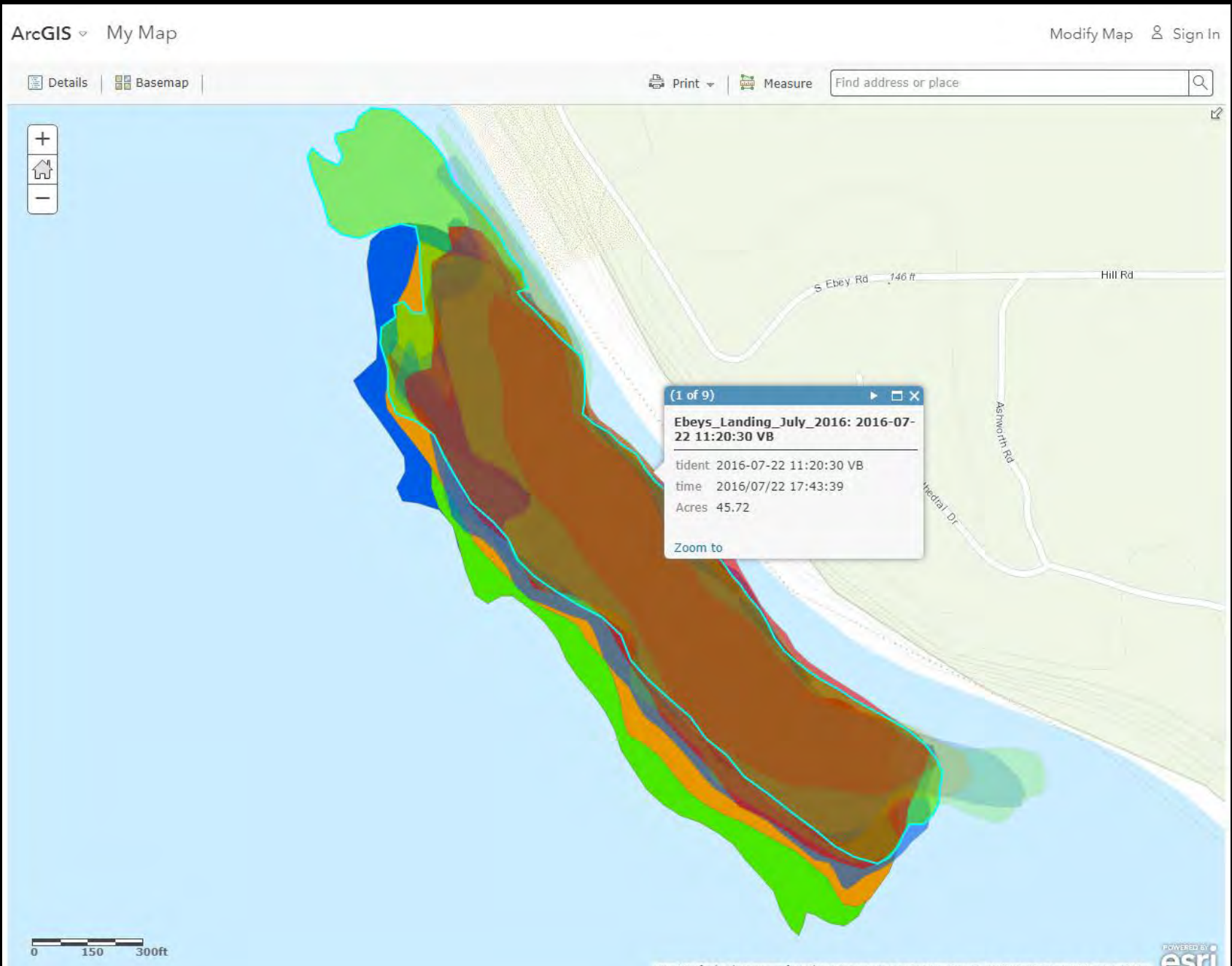
Find address or place 



Mapping MRC monitoring events



Mapping MRC monitoring events



June

July

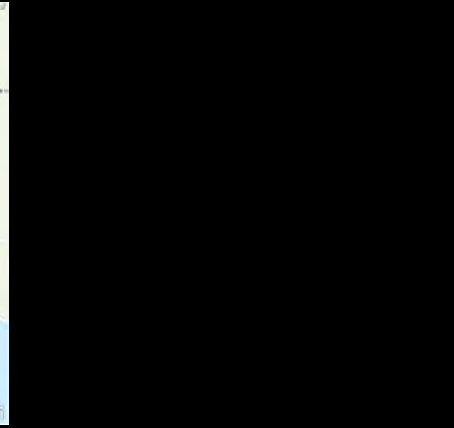
August

September

2015



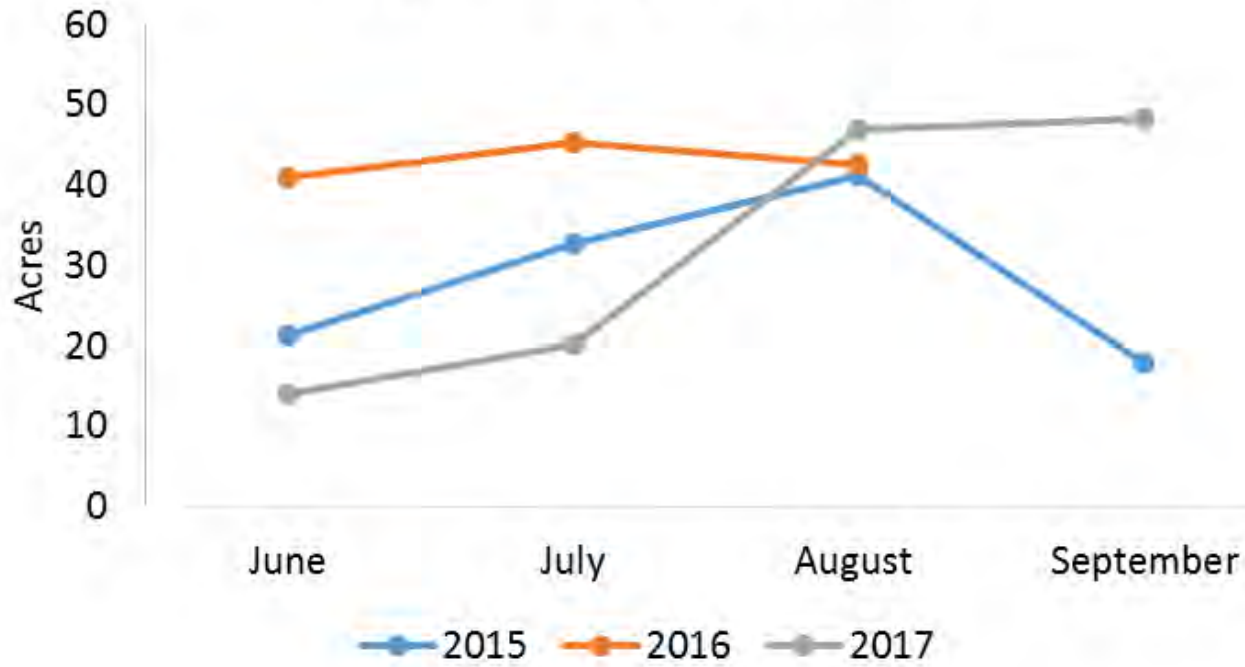
2016



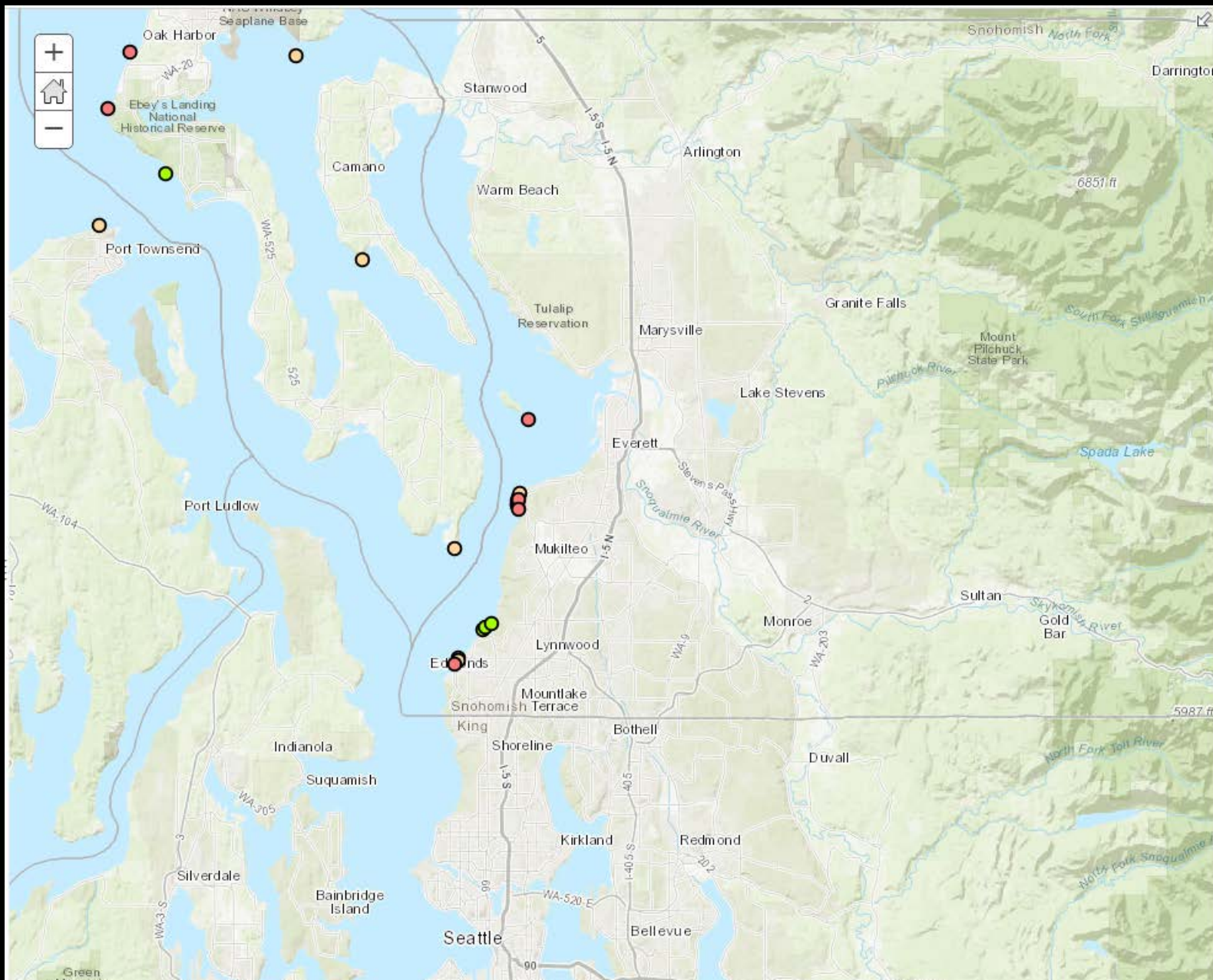
2017



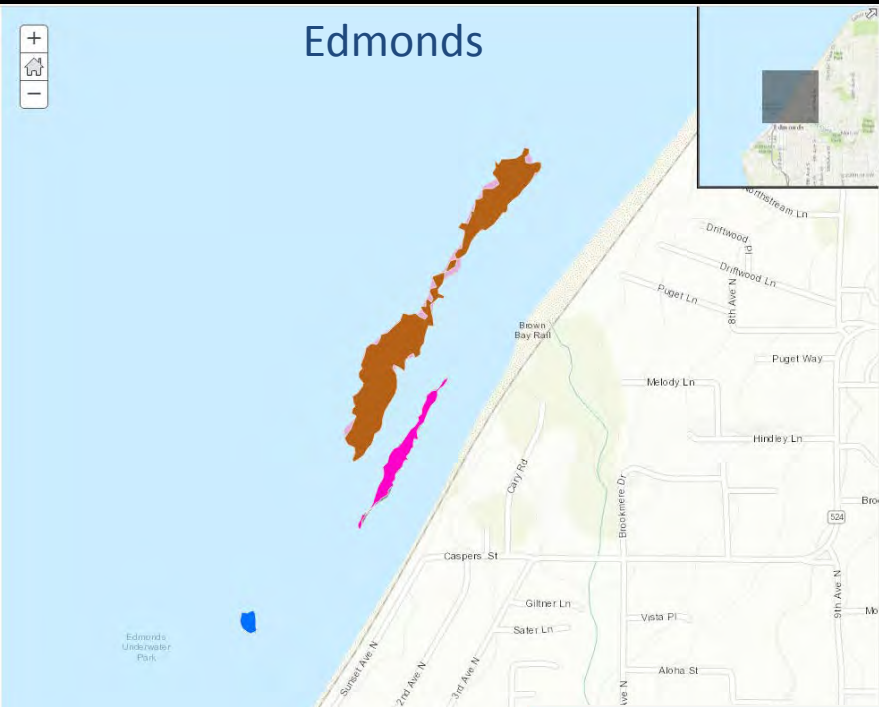
Ebey's Landing Kelp Bed Area



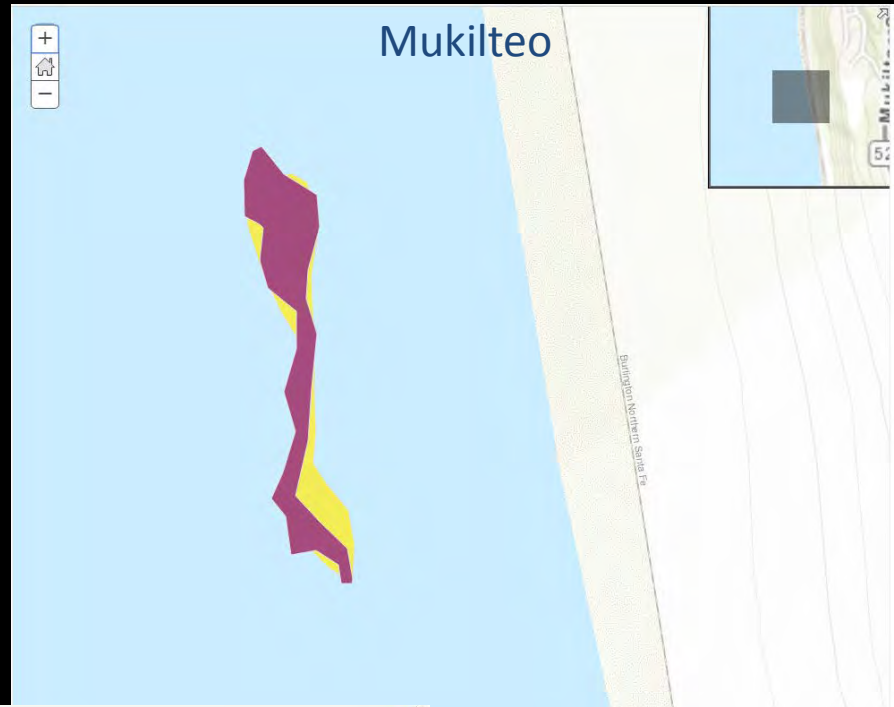
Snohomish MRC



Edmonds



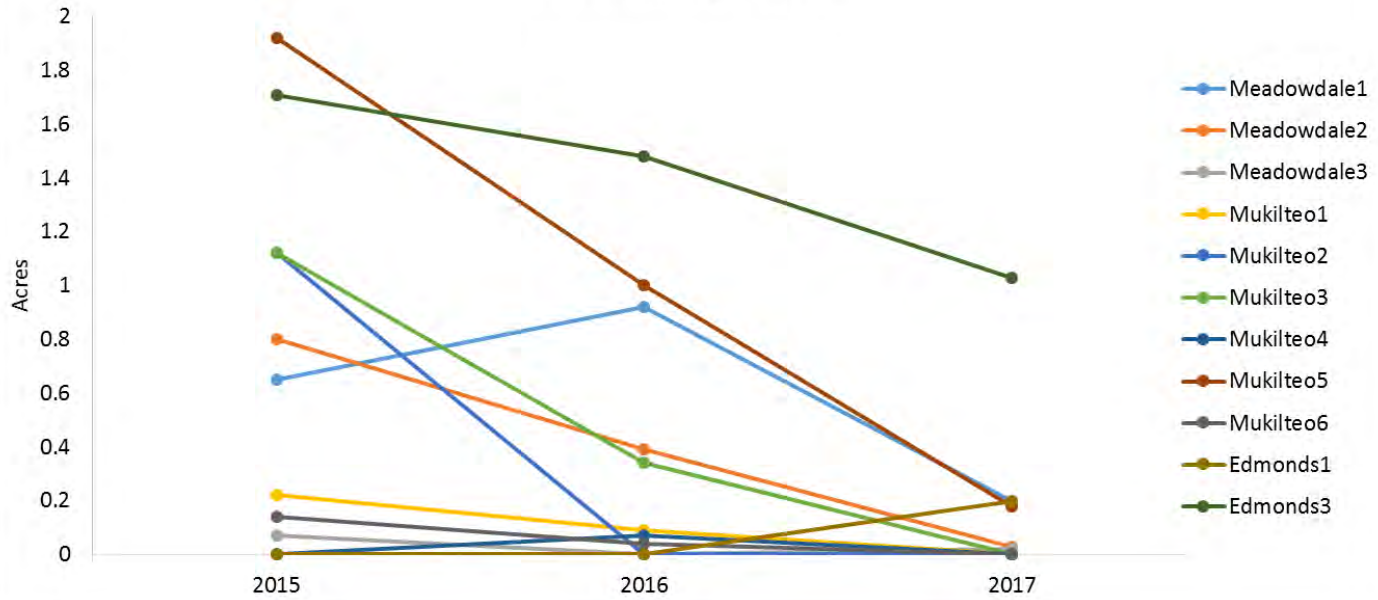
Mukilteo



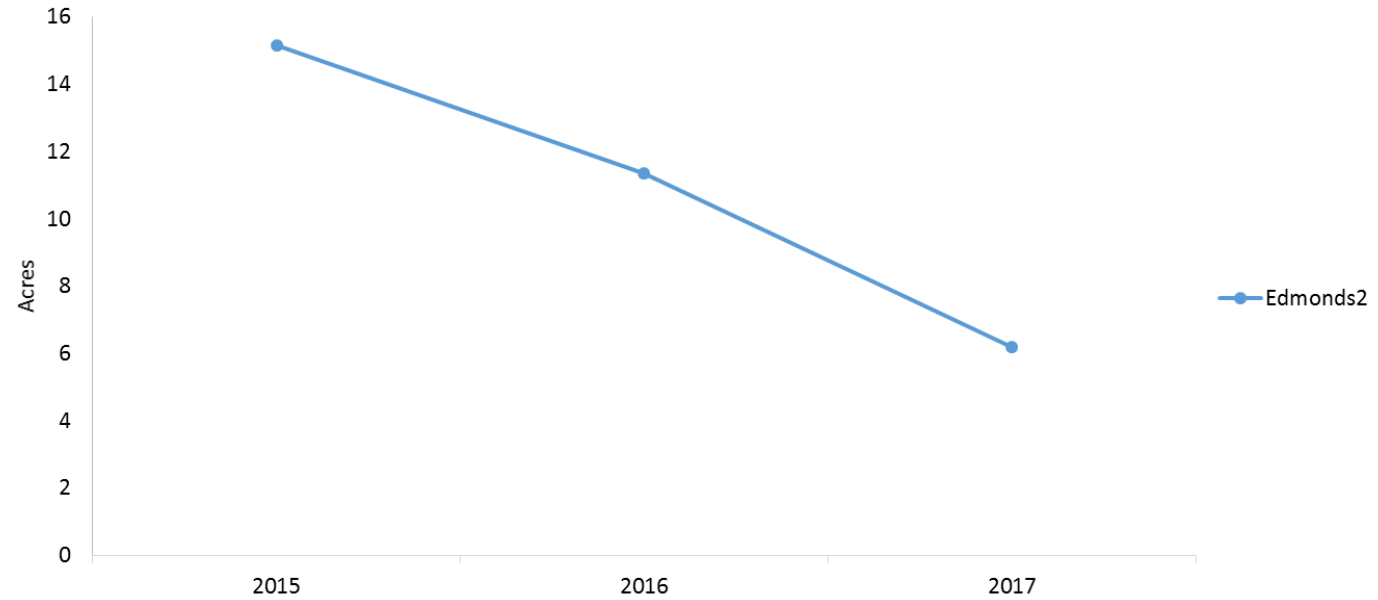
Meadowdale



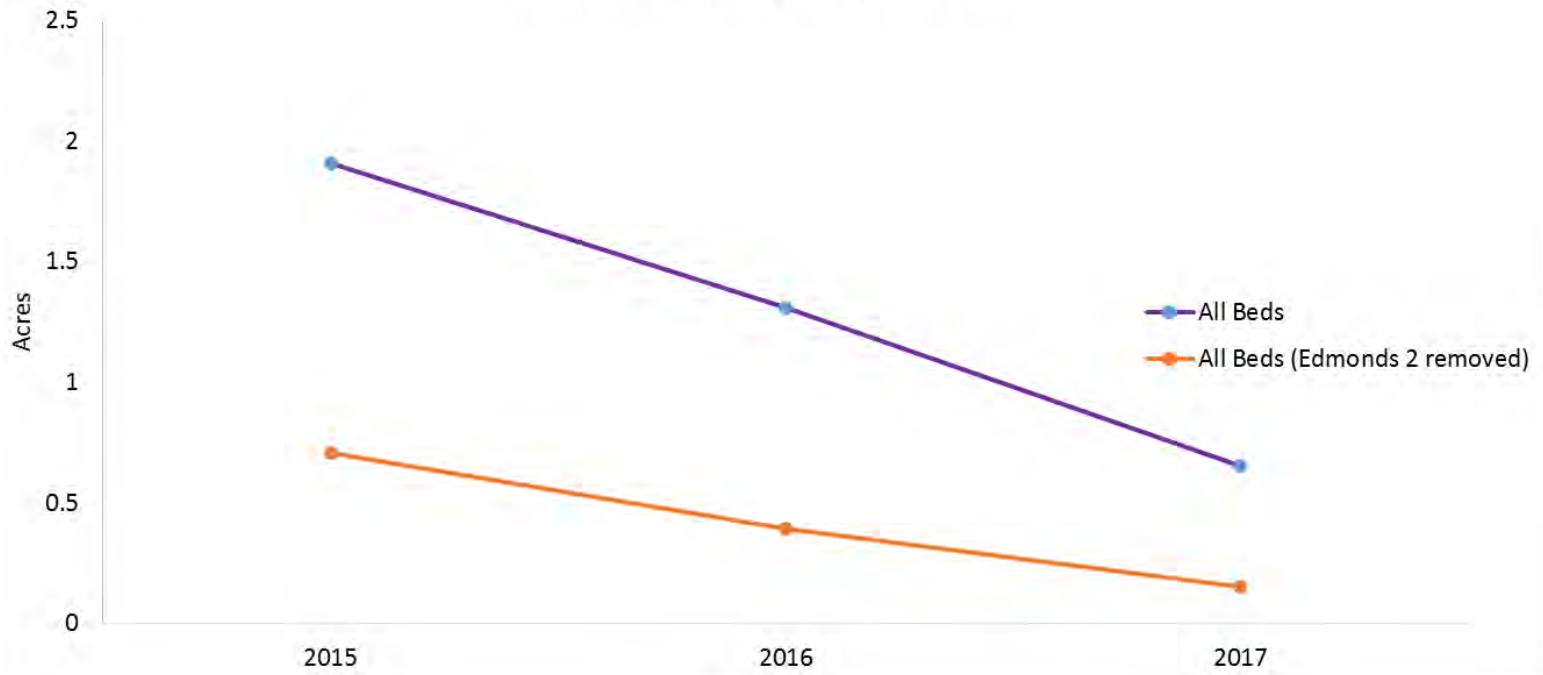
Snohomish Kelp Bed Area



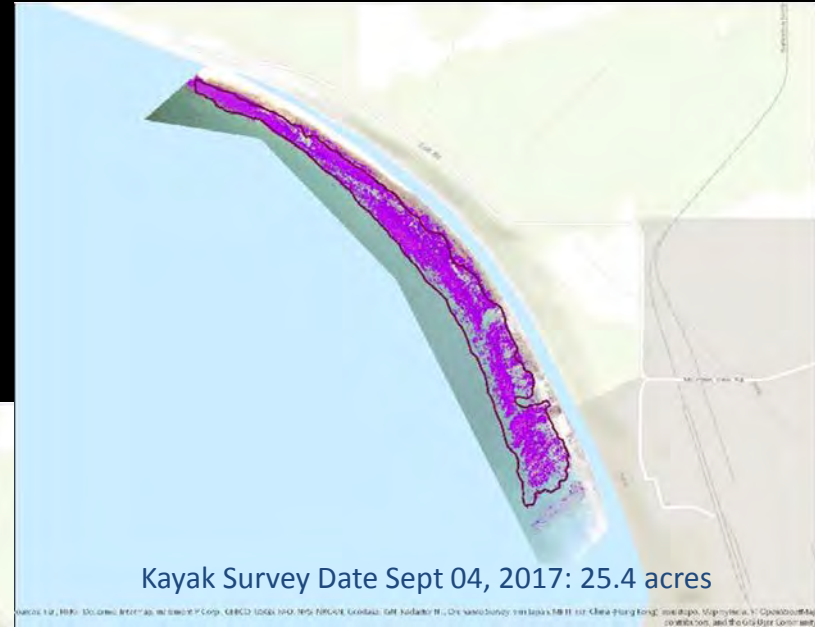
Snohomish Kelp Bed Area



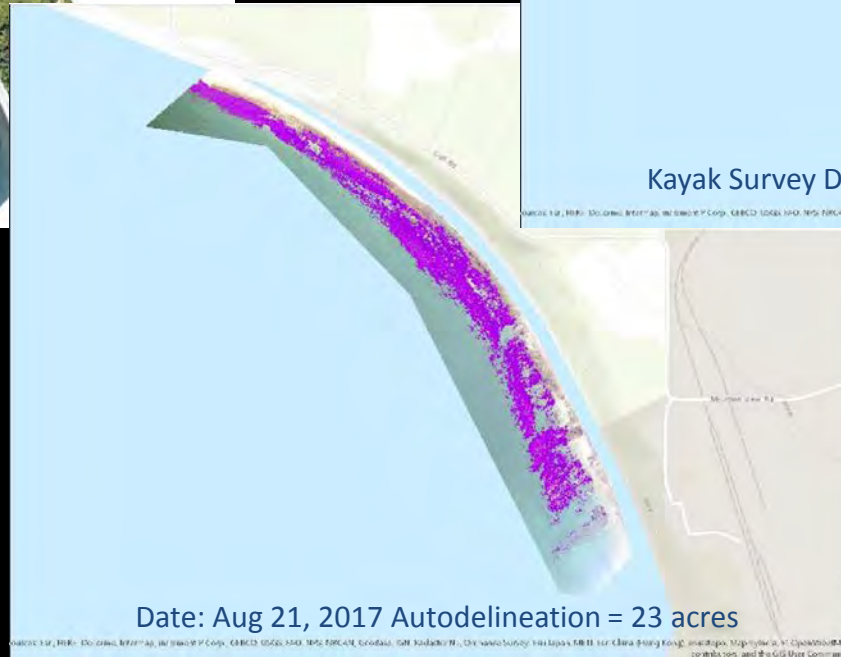
Snohomish Average Kelp Bed Area



Wider world of kelp: GROUND TRUTHING AERIAL IMAGERY

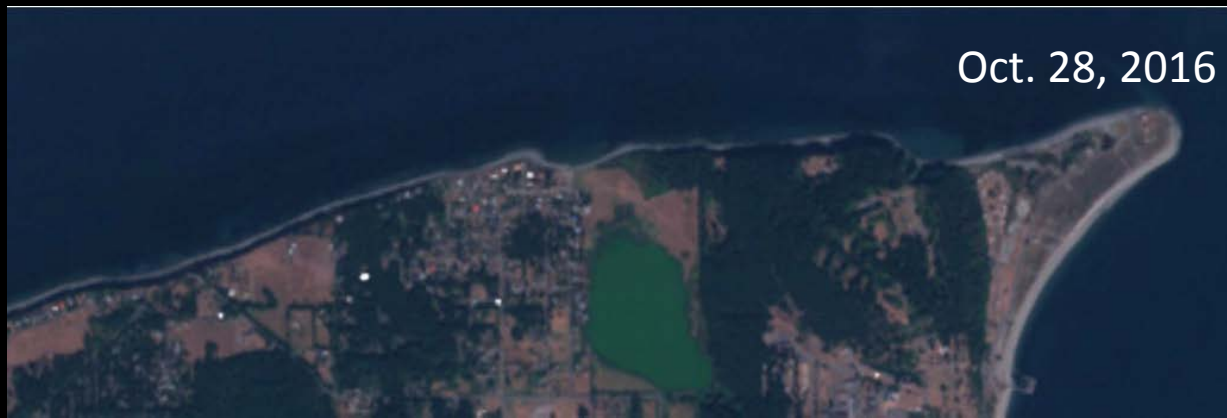


Kayak Survey Date Sept 04, 2017: 25.4 acres



Date: Aug 21, 2017 Autodelineation = 23 acres

Wider world of kelp: SATELLITE IMAGERY



Wider world of kelp: TO BE CONTINUED

Kelp recovery plan

Infrared imaging

Survey 1,2,3 and Google Docs



