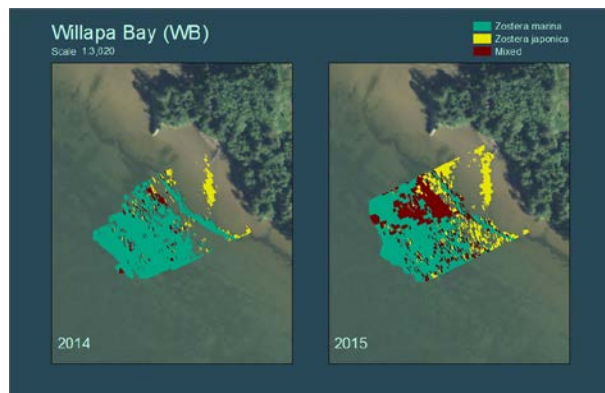




What impacts will rising sea levels have on the nearshore distribution of native and non-native seagrasses?



A single beam echosounder mounted to a boat was used to map native and non-native eelgrass on various shorelines. These images show two years of data collected in Willapa Bay from 2014 and 2015.



Eelgrass counts were conducted by field staff. The data is compared and evaluated with echosounder data collected at the same sample sites.

Rising sea levels have been recorded and are expected to occur with climate change. This means inundation levels of coastal areas in Washington will change. *Zostera marina*, and non-native eelgrass, *Zostera japonica* are distributed at differing elevations. *Z. japonica* tends to be found at higher intertidal areas than *Z. marina*. With rising sea levels, it is expected that areas of inundation and exposure will change and, with a change in these environmental conditions, seagrass distribution will be impacted.

Native eelgrass is a valuable resource that is protected under federal and Washington State regulations. AAMT has partnered with Central Washington University to explore the relationships between nearshore bathymetry, time period of exposure and inundation, substrate characteristics, and light availability with seagrass distribution. With an understanding of these relationships, climate change scenarios can be applied to estimate tidal inundation levels and predict changes seagrass distribution.

Using a single beam echosounder mounted to a boat, current eelgrass distribution and bathymetry were mapped at 14 sites in Puget Sound, the coastal estuaries, and Hood Canal. Light data was collected through the water column and over seasons. Sediment samples were taken at each site for grain size and organic content analysis. AAMT is working with Central Washington University to summarize the results of this research which will be posted here when they become available.