

The Delta Science Program, Ecosystem Restoration Program & Surface Water Ambient Monitoring Program Jointly Present a Brown Bag Seminar Series

Native Pondweed Habitat in Suisun Bay and the Delta: Current Status and Trends



Dr. Katharyn Boyer

**Professor of Biology
San Francisco State University**

Monday, April 27, 2015

12:00 – 1:00 p.m.

**Location: Park Tower Building
2nd Floor Conference Room
980 Ninth St.
Sacramento, CA 95814**

Native Pondweeds in the San Francisco Estuary Ecosystem

More than 1,200 acres of native pondweeds (*Stuckenia* spp.) support high abundances of invertebrates along the migratory path of fish species in Suisun Bay and the western Delta. Dr. Boyer and her students have measured distribution patterns of these aquatic plants and have been assessing the factors influencing their current and potential future distribution and abundance through field surveys and mesocosm experiments (an experimental tool that brings a small part of the natural environment under controlled conditions). They are also conducting experiments to determine how flow and other environmental factors influence the morphology of closely related pondweed species and genetic analysis to determine whether these species have hybridized. They have measured abundance and species composition of invertebrates in the native pondweed (*Stuckenia*) and invasive Brazilian waterweed (*Egeria*) beds and assessed the use of these plants as a food source for invertebrates.

Submerged aquatic vegetation has gotten a bad rap in this region of the San Francisco Estuary due to the negative effects of invasive Brazilian waterweeds. Instead, increases in the native pondweed through management of invasive species, an eastward distribution shift with increasing salinity, or active restoration, might enhance the desirable ecosystem functions provided by these native pondweeds. Results from this study will inform future actions to protect, restore, and enhance the Delta ecosystem.