



## San Pablo Bay National Wildlife Refuge Volunteer Opportunities

Audubon California and the US Fish & Wildlife Service seek volunteers to assist with ecological restoration and monitoring at the Tubbs Island Enhancement Project in the San Pablo Bay National Wildlife Refuge. Volunteers will have opportunities to learn ecological monitoring and restoration techniques and species identification. Monitoring will occur on limited access parcels, presenting a great opportunity to experience the San Pablo Bay National Wildlife Refuge.

Volunteer requirements vary by activity. Most activities require traversing rugged tidal marsh terrain. All activities take place within sensitive endangered species habitats. Depending on the season, volunteers are needed for:

- **Tidal marsh vegetation monitoring (weeks of July 20-Aug 10)**
- **Small mammal monitoring (late July-early August)**
- **Native plant revegetation (Fall months)**
- **Mosquito larvae monitoring**
- **Shorebird & waterfowl counts (monthly Fall-Spring)**



The Refuge will provide most supplies; however, volunteers should bring rubber boots, sunscreen and sun-protective clothing, water, and snacks. Binoculars are required for shorebird counts. A 20 power spotting scope and field guides are useful for shorebird counts but can also be provided by the Refuge.

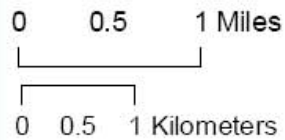
**To RSVP, please contact Mike Perlmutter, Audubon California: 510-601-1866 ext. 231 or [MPerlmutter@audubon.org](mailto:MPerlmutter@audubon.org). Please indicate your interest and experience activities of interest as your availability. The meeting place for all events is the San Pablo Bay National Wildlife Refuge Headquarters located on the eastbound side of Hwy 37 between Lakeville Hwy and Hwy 121 in Petaluma. Thanks for your participation and see you in the field!**

### Project background

Tubbs Island and Tolay Creek are located at the west end of the San Pablo Bay National Wildlife Refuge. These tidal wetlands were enclosed by levees in the late 1800s and converted to agricultural use. Subsequently they were managed as a duck club. In the 1970s Tubbs Island and Tolay Creek were purchased by The Nature Conservancy and transferred to the US Fish & Wildlife Service for inclusion in the San Pablo Bay National Wildlife Refuge.



Audubon California and the San Pablo Bay National Wildlife Refuge have partnered to enhance and restore 757 acres of tidal marsh, sub-tidal, and marsh-upland transition environments at Tubbs Island and Tolay Creek. Internal levees and sills, which form barriers to tidal flow and circulation, will be breached or removed and new channels that re-connect marsh areas to existing drainages will be excavated. Construction will occur in Fall 2009. These actions will return tidal circulation to the site, resulting in development of a functioning tidal marsh/tidal slough complex, enlarged area of shallow channel habitat, and increased tidal prism and deep channels. Improved hydrologic conditions will enhance the re-establishment of native vegetation, improve estuarine-dependent wildlife habitats, and reduce or eliminate future mosquito population management issues.

To measure the effectiveness of project actions, surveys will be conducted before and after construction. Control sites will also be surveyed to allow for comparisons among similar landscape types (e.g., tidal marsh plain, muted tidal marsh, interior marsh ponds) before and after construction.



Map produced by Mike Perlmutter, Audubon California  
Projection and Datum: California Teale Albers NAD83  
Data Source: San Pablo Bay National Wildlife Refuge  
Map created: January 6, 2009

## Key

-  Enhancement Area
-  Construction Area