

Supplemental Environmental Project (SEP) Report Card		Invasive Control, Restoration, Monitoring and Education at Audubon Starr Ranch Sanctuary
Regional Water Board	Region 9 - San Diego	<b>OUTCOMES:</b> <input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory
Total Project Cost	Ongoing	
SEP Funding	\$140,000	
Approval Date	9/19/2011	
Project Category	Restoration	

### Summary

The overarching goal of the Santa Margarita Water District's SEP was the removal of invasive species and restoration of two rare habitats, coastal sage scrub and native grassland, along Bell Canyon Creek within the Audubon Starr Ranch Sanctuary.

This SEP funded implementation of one year of invasive control (by volunteers, not pesticides) and restoration of riparian and stream habitat within the Bell Canyon Creek area. 388 Weed Warrior Volunteers were recruited for invasive (mostly Periwinkle) removal within 5.91 linear acres of the Bell Creek riparian corridor.

Additionally, upland habitat along the Bell Canyon watershed was restored to coastal sage and scrub habitat by the removal of the invasive artichoke thistle. Monitoring of weed removal work showed that crews reduced artichoke thistle cover by 95% per site after one year of treatment. Work at the Starr ranch is ongoing (as it's funded by multiple sources), but it is projected that the restoration sites will reach a mean of 60% or more total native cover within 1 – 4 years of restoration activities.

A portion of this SEP also funded training of volunteers in stream bioassessment protocols, as well as collection/analysis of samples to evaluate water quality within Bell Creek.

### Location Map



### Periwinkle Dominated Site



### Weed Warriors' Periwinkle Removal



### Water Quality Outcomes

- Restoration of disturbed riparian and upland habitat to native habitat is part of Audubon Starr Ranch's mission. Because this SEP funded a portion of ongoing work, training, and studies, outcomes of the portions funded by it are difficult to tease-out.
- Detailed monitoring results for the overall invasive control, restoration, and benthic macroinvertebrate sampling are recorded in the final report:  
<https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/PublicReportPenaltyProjectServlet?inCommand=attachments&rmlidPoup=377796>
- For information on the overall project, please go to: <http://www.starranch.org/>