

INTRODUCTION

San Diego Gas & Electric (SDG&E), in consultation with RECON Environmental, developed an Adaptive Weed Control Strategy (AWCS) as mitigation for the Sunrise Powerlink Energy Project that focuses on enhancement of large, biologically significant parcels of land as opposed to traditional weed control specifically within the powerline right-of-way. SDG&E created this strategy with the purpose of using allocated funding for the betterment of native flora and fauna with a target of restoring land that has the potential to reconnect disturbed areas with adjacent native habitat. Using a series of key variables, including fire potential, non-native abundance/Cal-IPC rating, connectivity to undisturbed land, and presence of sensitive biological resources, as a means to determine appropriate areas for treatment; SDG&E, in coordination with landowners, is able to address weed control at the source. This strategy allows stakeholders to focus funding at the most appropriate location or the source of the issue. The AWCS strategy allows regulatory agencies, land managers/owners, and other stakeholders a formalized mechanism to address key weed and habitat restoration issues on their lands. For the duration of the Sunrise Powerlink Project, approximately 50 years, SDG&E and these groups will have a program and allocated funding to target critical weed issues surrounding the project area.

This poster summarizes activities that were performed during Year 2 (October 2013 through September 2014) on the properties of Lakeside Ranch, Eichenlaub Ranch, and Suncrest. Habitat enhancement efforts included weed removal and seeding. Weed control within AWCS sites targets all non-native and invasive annual and perennial plant species, including the following priority species: saltcedar (*Tamarix* spp.), tree tobacco (*Nicotiana glauca*), Russian thistle (*Salsola tragus*), castor bean (*Ricinus communis*), mustards (*Brassica* spp.), and non-native grasses. Weeds are controlled through manual (hand or machine) and/or chemical means.

GOALS AND OBJECTIVES

- Treat all weed species present in a selected treatment area regardless of their designated status.
- Expand weed control treatment areas to include entire weed infestations, including locations outside of the project right-of-way.
- Exclusion of invasive species through habitat enhancement (i.e., broadcast seeding of native species).
- Eradication of yellow starthistle (*Centaurea solstitialis*) populations in approved locations throughout San Diego County.

LAKESIDE RANCH (project area = 150 acres / treatment area = 18.12 acres)

- Selection of treatment area based on ability to restore and enhance sensitive wildlife habitat (i.e., coastal California gnatcatcher and Quino checkerspot butterfly habitat), the reduction of wildfire-promoting non-native species in high-risk burn areas, and its close proximity to an existing SDG&E mitigation site.
- Dominant weed species included tocalote, black mustard, and non-native grasses.
- Hand-seeding of 1,786 pounds of native plant species.



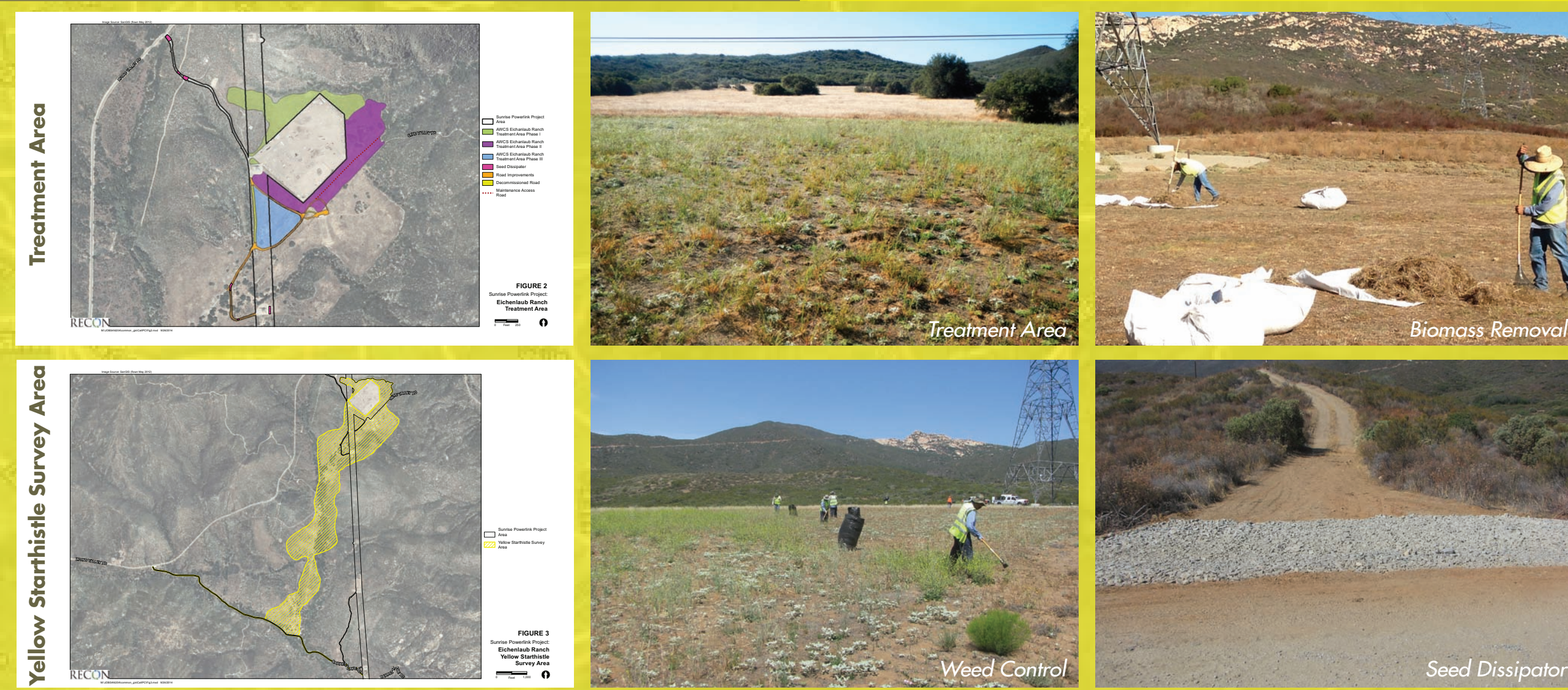
SUNCREST (project area = 697 acres / treatment area = 50.3 acres)

- Selection of treatment area based on ability to expand enhancement activities adjacent to active restoration areas and restoration / enhancement of sensitive habitat including Engelmann oak (*Quercus engelmannii*) woodland (a sensitive community in San Diego County), as well as host plants for the Hermes copper butterfly.
- Primary weed treated was tocalote which included the species and a 10-foot buffer around treatment areas.
- Enhancement included hand-seeding of 3,180 pounds of native plant species and protection of Engelmann oak saplings that were found growing in areas where 10 pounds of acorns had been installed.



EICHENLAUB RANCH (project area = 195 acres) Treatment area = 23.10 acres

- Treatment area dethatched using line-trimmers and biomass raked and removed from site.
- Dominant weed species included tocalote, black mustard, and non-native grasses.
- Yellow starthistle survey area**
- Selection of treatment area based on high density of yellow star thistle (YST) and ability to expand habitat enhancement activities adjacent to restoration areas.
- Treatment of YST initiated by the County of San Diego in 2011.
- Year 2 monitoring found 9 YST individuals.
- Improvements to access road (grading, smoothing and installation of seed dissipaters) to prevent the spread of YST into adjacent areas.



SUNRISE POWERLINK RIGHT OF WAY

FUTURE ACTIVITIES

- Goldspotted oak borer treatment. Treatment will include treating oak trees with an insecticide to suppress GSOB proliferation on select properties within San Diego County.
- U.S. Forest Service Sites. Treatment will include removal of salt cedar (*Tamarix* spp.) from waterways.

Treatment Area	Acreage	NNIS Treatment Methods	Predominant Weed Treated
Eichenlaub Ranch (Phases I-III)	23.10	Dethatching, herbicide application	<i>Avena fatua</i> ; <i>Bromus</i> spp.; <i>Centaurea solstitialis</i> ; <i>Erodium cicutarium</i>
Suncrest	50.30	Dethatching, herbicide application	<i>Avena fatua</i> ; <i>Brassica nigra</i> ; <i>Bromus</i> spp.; <i>Centaurea melitensis</i> ; <i>Erodium cicutarium</i>
Lakeside Ranch	18.12	Dethatching, herbicide application	<i>Bromus</i> spp.; <i>Centaurea melitensis</i> ; <i>Erodium cicutarium</i> ; <i>Hirschfeldia incana</i>
TOTAL	91.52	--	--