

Multi-Benefit Weed Control: San Joaquin River Invasive Species Management and Jobs Creation Project



Jason Faridi
River Partners

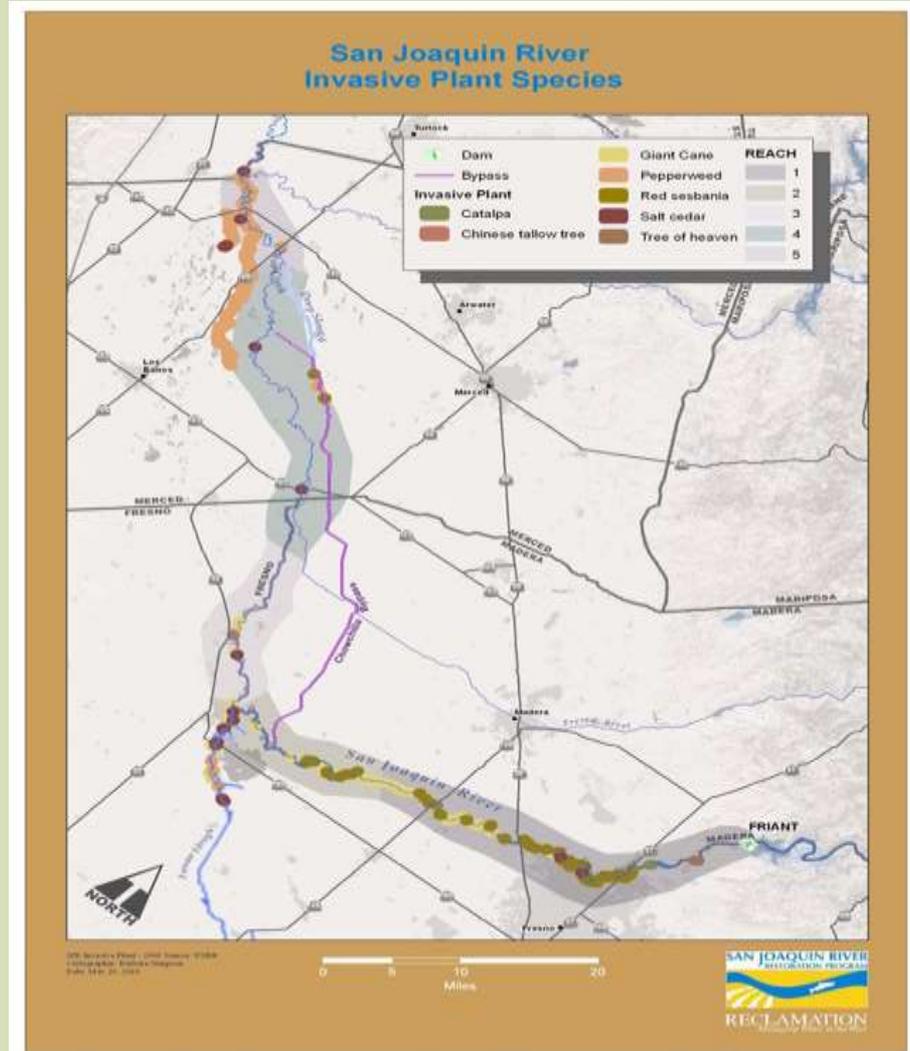
- Project Background
- Site Assessment
- Management
- Monitoring & Adaptive Management
- Restoration
- Jobs Creation



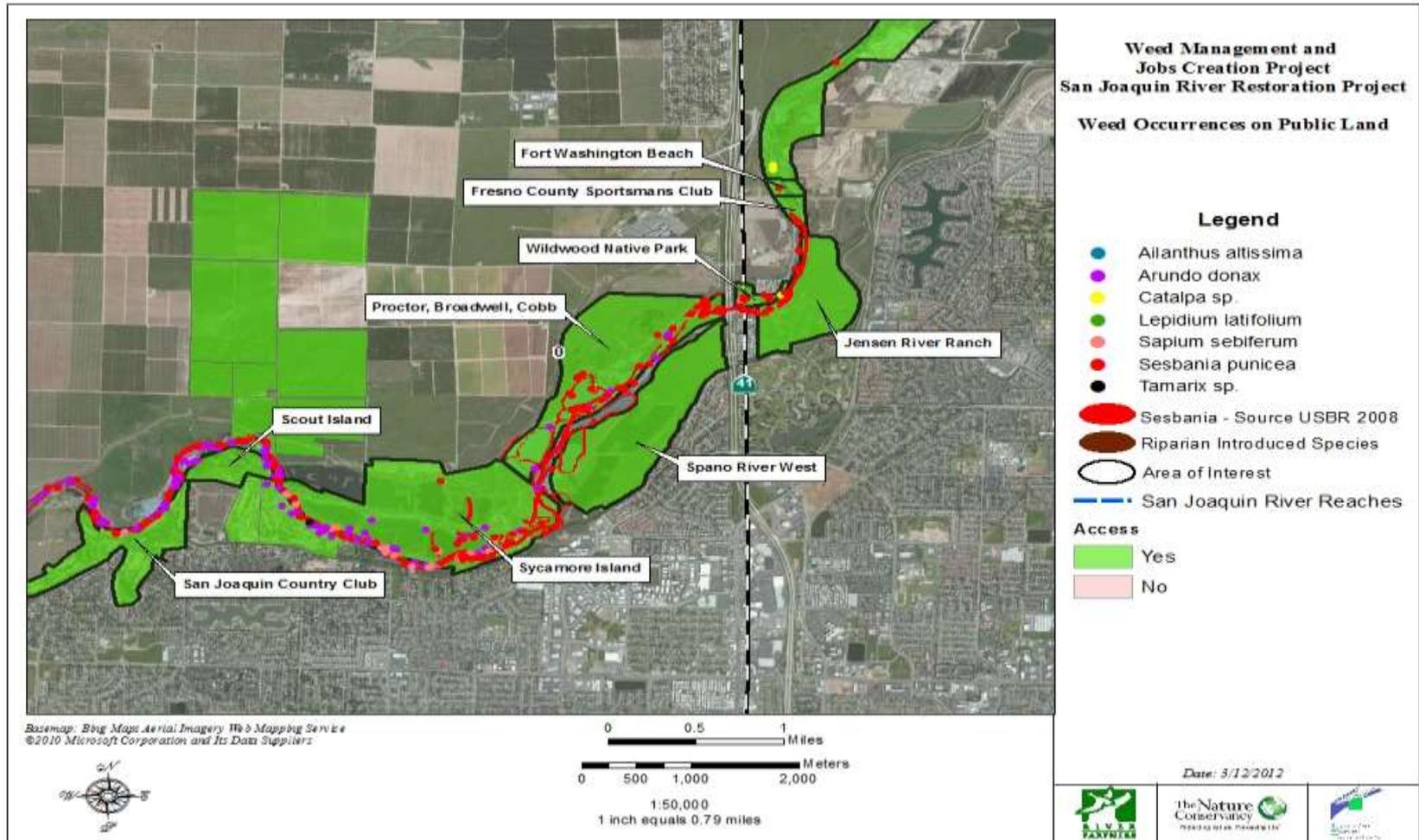
Project Background

Reaches and Extent

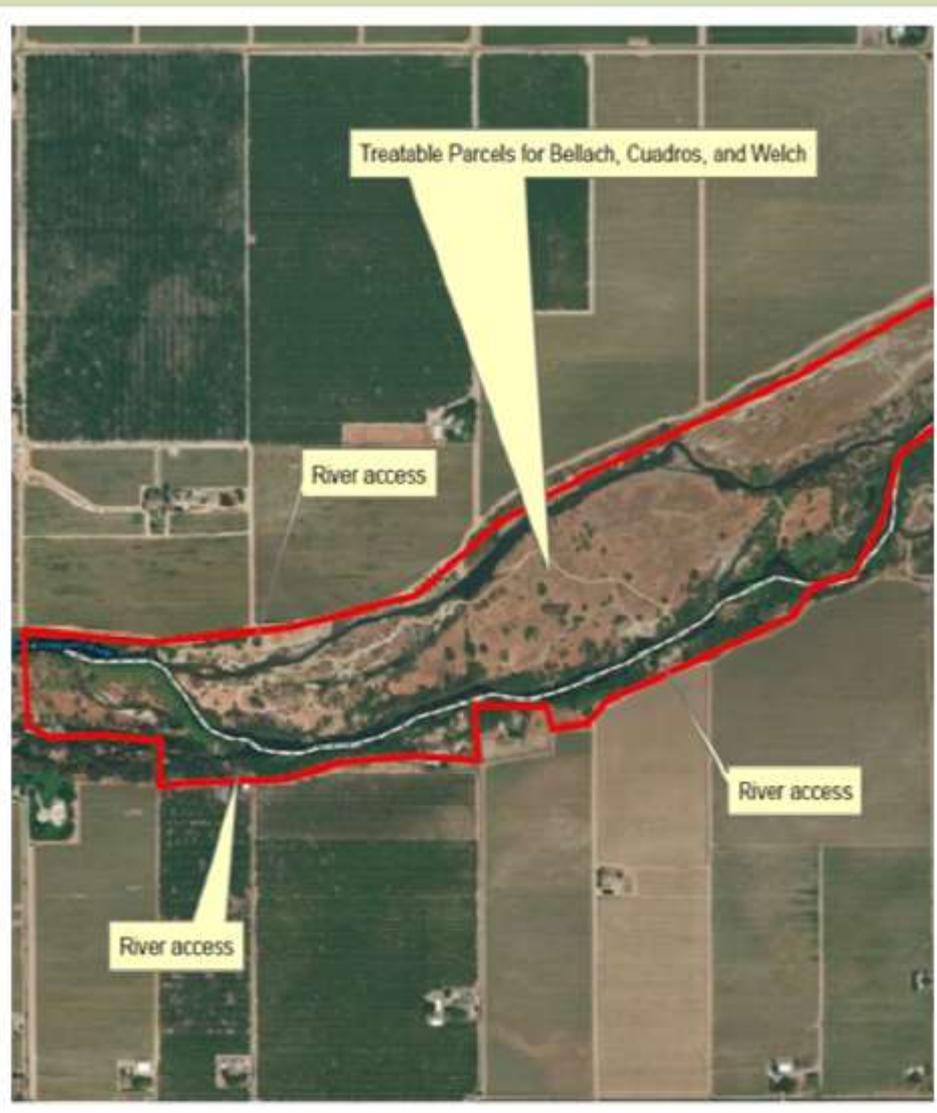
- Friant Dam to Merced River, including Mendota Pool, and the East Side and Mariposa bypasses
- Trust (Reach 1 Friant Dam to HWY 145)
- River Partners (Reaches 2-5 HWY 145 to Merced River confluence)



Site Assessment



Site Assessment



Take Advantage of **FREE** Invasive Weed Removal



River Partners, a local non-profit organization, is currently offering free invasive weed mapping, removal and treatment for property owners within project boundaries along the Eastside and Merced Bypasses and San Joaquin River corridor from Friant Dam to the confluence of the Merced River. Collaborating with the San Joaquin River Parkway Conservancy and Trust and the California Conservation Corps, we aim to protect and restore riparian and floodplain habitat, provide job opportunities for multiple disadvantaged communities, support the recovery goals of the San Joaquin River Restoration Program (SJRPP), improve flood conveyance, and reduce consumptive water use by invasive plants.

We are offering invasive weed removal services at absolutely no cost to you.

- Mapping infestation on property (arundo, red sesbania, pepperweed, salt cedar)
- Physical removal of biomass from property
- Chemical treatments based on River Partners' in-house Pesticide Control Advisor's recommendations
- Follow-up treatments
- Seeding treated areas with native herbaceous species.



For More Information
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Site Assessment

Reconnaissance



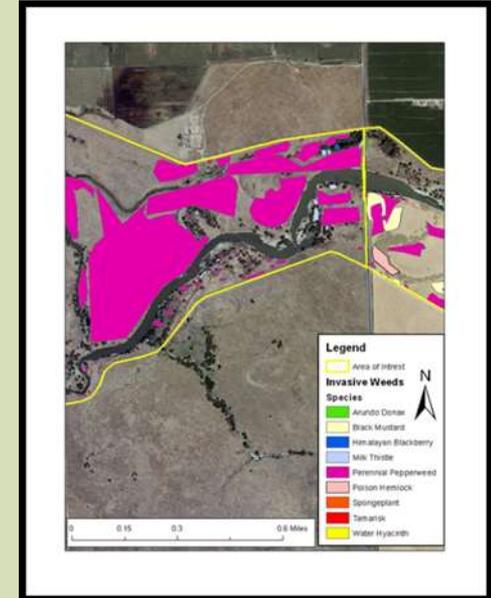
Site Assessment Reconnaissance



Site Assessment

Surveying

- Trimble
 - Data Dictionary
 - Aerial Maps
- Transects
 - Lower Floodplain
 - 10-15 m
 - Upper Floodplain
 - 50 m



Site Assessment

Surveying

Field	Description	Field Type	
Object ID	Auto generated		
Shape	Auto generated		
Occurrence No.	Auto generated	Unique key	
Date	Click on calendar icon	Date	
Location	Property description	Text	
Observer	Name of person recording	Text	
Plant Name	Common name of plant	Text	
Distribution	Of plants on the landscape	Text	
Percent cover	Estimated % of patch infested	Text	
Growth Stage	Phenology of plant	Text	
Stand Size	Estimated size – point features	Text	
Treatment	Preferred method	Text	
Site Access	How is site accessible	Text	
Comment		Text	this is a fill in field- 200 characters

Distribution – of plant on the landscape

Single Plant
Scattered Plants
Scattered Dense Patches
Dense Monoculture

Percent Cover – estimated % of patch infested

Trace <1%
Low 1-5%
Moderate 6-25%
High 26-50%
Majority 51-100%

Growth Stage – Phenology of Plant

Seed Dispersing
Dormant/Senesced
Bud/Flowering
Fruiting/setting seed
Mature Plant/Perennial
Seedling/Rosette
Leafing Out

Prioritization Species Selection

Successfully Treated		River Partners	San Joaquin Parkway and Conservation Trust
<i>Species</i>	<i>Scientific Name</i>	<i>Acres Treated</i>	<i>Acres Treated</i>
Arundo	<i>Arundo Donax</i>	25.3	9.62
Sesbania (Rattlebox)	<i>Sesbania punicea</i>	9.8	155.57
Himalayan Blackberry	<i>Rubus Armeniacus</i>	0.5	0
Perennial Pepperweed	<i>Lepidium Latifolium</i>	590.8	0
Salt Cedar	<i>Tamarix Chinesis</i>	0.2	0
Fig	<i>Ficus carica</i>	0.9	0
Tree Tobacco	<i>Nicotiana glauca</i>	0.03	0
Tree of Heaven	<i>Ailanthus altissima</i>	2.5	0
Eucalyptus	<i>Eucalyptus ssp.</i>	2	0
Total			797.22

Management

Mechanical

Physical removal of biomass

- Flail mower
- Masticator
- Chainsaws
- Hand tools



Management

Mechanical





Creating Wildlife Habitat for the Benefit of People and the Environment





Creating Wildlife Habitat for the Benefit of People and the Environment



Management Chemical

Types of chemical treatments

- Foliar spray
- Spot spray
- Cut stump
- Girdling
- Injection
- Scale to site

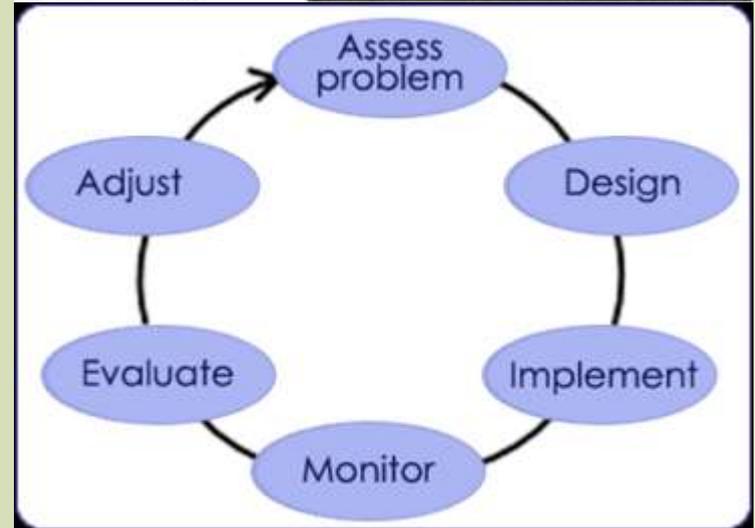
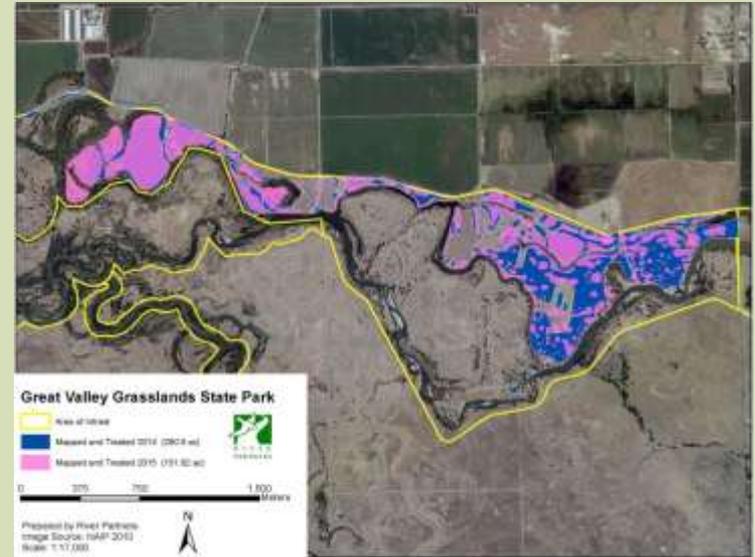


Management Chemical

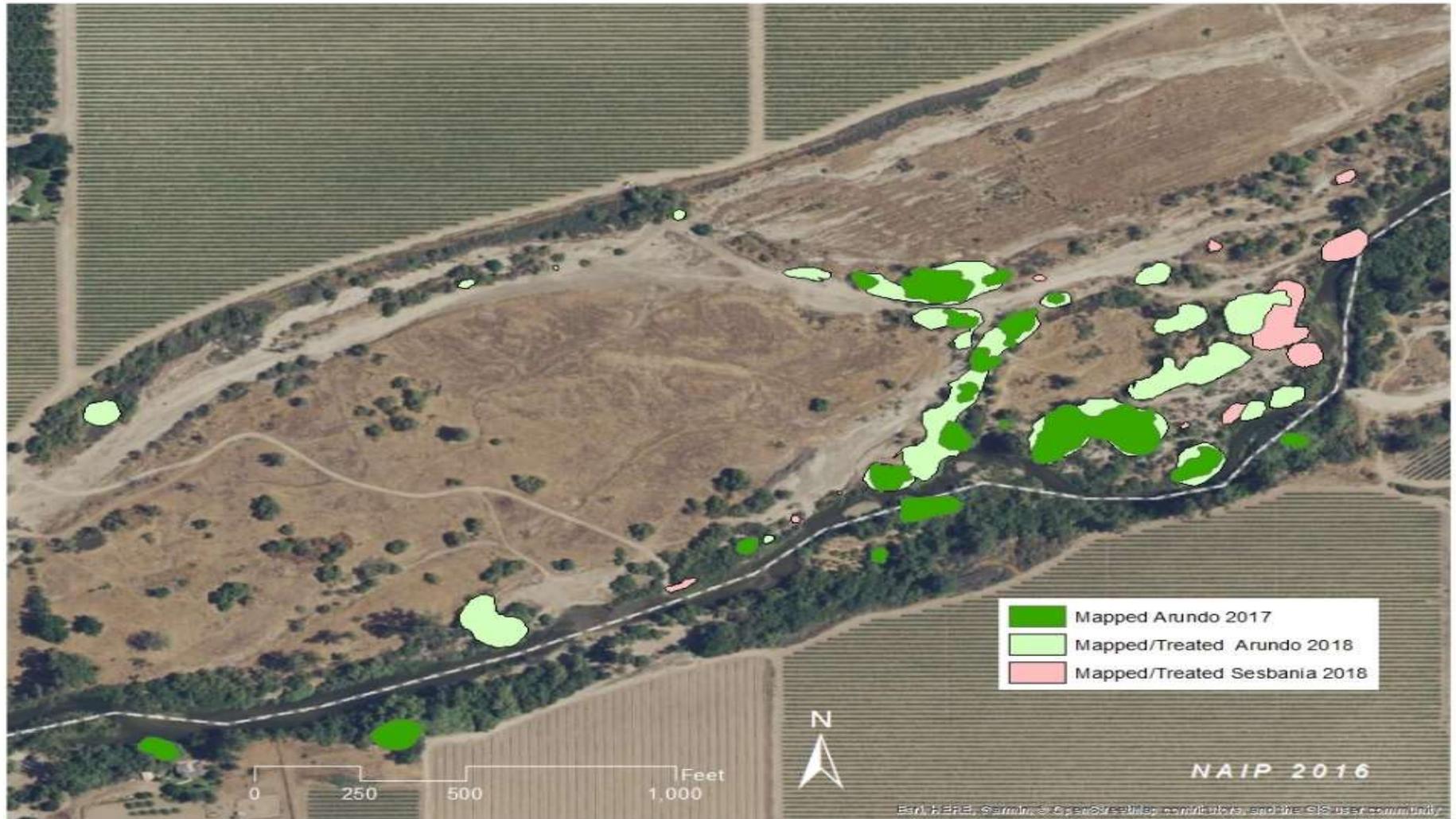


Monitoring & Adaptive Management

- Remap extent of area treated and control area
 - Assess effectiveness of treatments and site factors (comparison to control area)
 - % reduction in stand size and density
 - Survey surrounding areas to document spread, or new populations
- Revisit georeferenced photopoints
 - Visible reduction in stand size
 - Effects on non-target species?



Monitoring & Adaptive Management

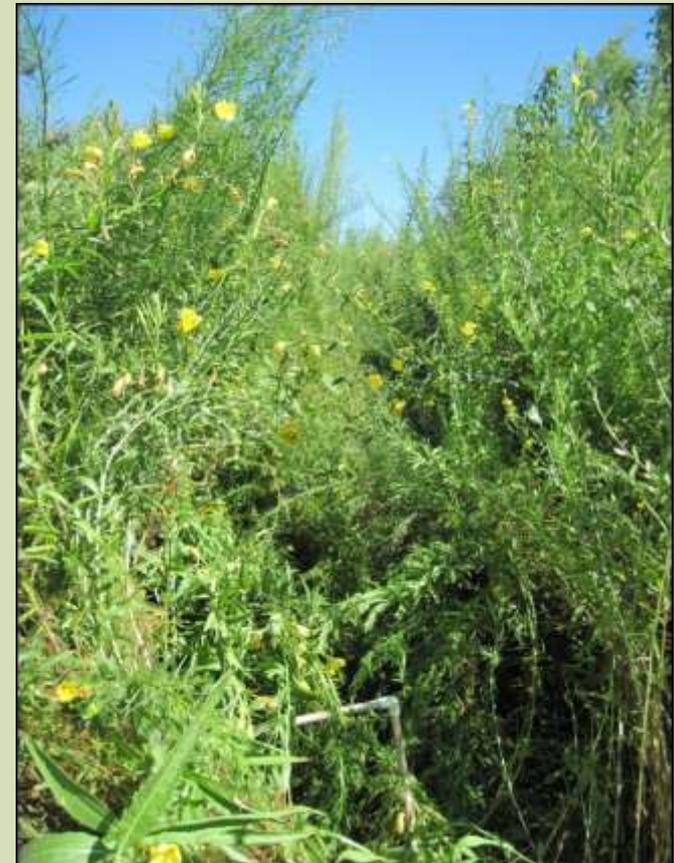
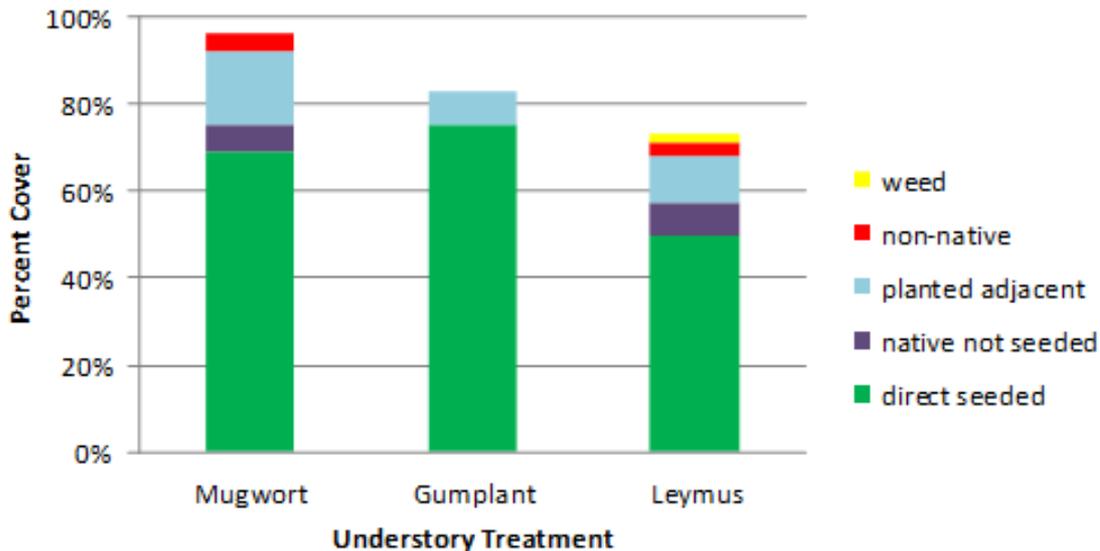


Restoration

Native Understory

- Use native plants to help prevent the re-infestation of weeds
- Perennial natives

Absolute Cover of Herbaceous Understory: Landside



Jobs Creation to Date

San Joaquin Parkway and Conservation Trust			River Partners		
Labor Source	# of Workers	Hours	Labor Source	# of Workers	Hours
Conservation Corps	250	25,000	Conservation Corps	155	24,000
Employees	6	23,735	Employees	66	20,000
Contract Labor	90	9,142	Total	567	>100,000



In addition to contracting with many local agencies

Allstate Sanitary Co.

Covanta

Colibri Ecological Consulting

Live Oak Associates

West Coast Waste Management

Kroeker Inc.

H.T. Harvey & Associates

Gallo Vineyards Compost Inc.

Questions?

