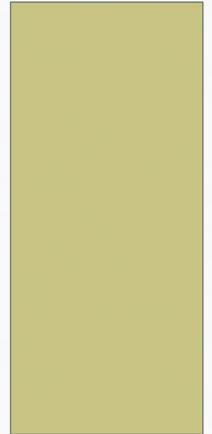




WATERSHED RESTORATION IN THE SAN DIEGO RIVER WATERSHED

CLEVELAND NATIONAL FOREST



RESTORATION PROJECTS

Proposition 84 Grant Funded Projects

OBJECTIVES

- Water quality improvement
- Habitat improvement and restoration
- Safety
- Reducing fire risks
- Outreach and education

MAIN COMPONENTS

- Basin-wide Invasive Weed Treatment
- Impacted Site Restoration
- Support for the Feral Pig Eradication effort
- Removal of invasive aquatic organisms

BASIN-WIDE INVASIVE WEED TREATMENT

El Capitan Reservoir Basin

- City of San Diego (El Cap. Res.)
- San Diego River Park Foundation
- Back Country Land Trust

Arundo Removal: Alpine Creek

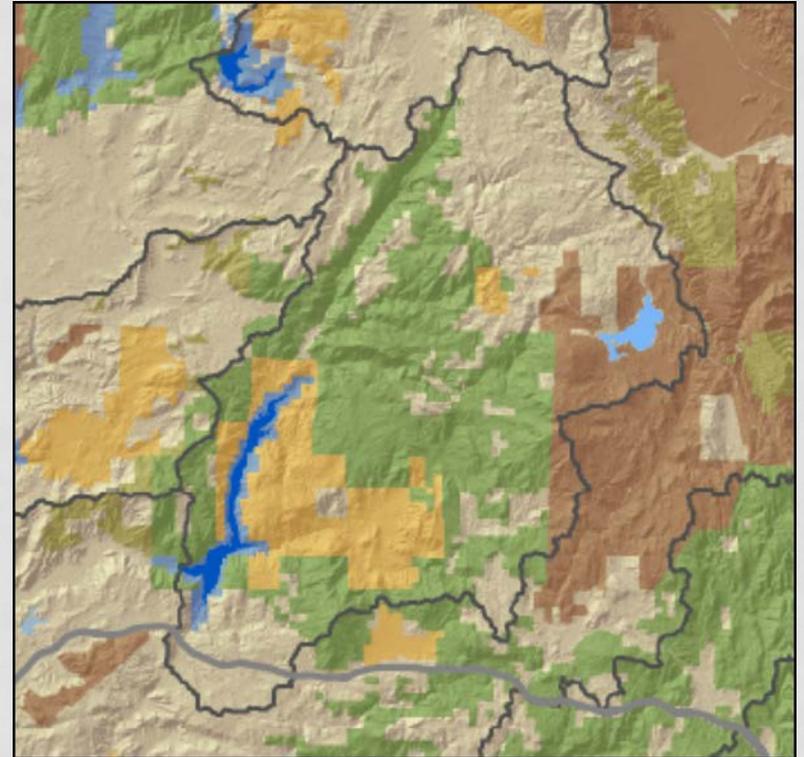
Before



After



A severe infestation of Arundo along the streambanks of this large apartment complex created a major fire hazard, until the property manager called BCLT to remove it.



- San Diego River Conservancy
- Tribal Lands

BASIN-WIDE INVASIVE WEED TREATMENT

Treatment on NFS Lands

Using ACE (Partner)

- ~50 miles of FS stream corridor
- Existing sparse to moderate tamarisk density



- 2015: Treated 124 acres (sparse to moderate density of tamarisk) in fire burned area

OTHER CNF WEED MANAGEMENT

Cottonwood Creek Tamarisk Treatment



- Cut/pile tamarisk with chainsaws & herbicide spray the cut stump (Triclopyr).
- Replanted with native vegetation: willow and cottonwood cuttings gathered on site and deergrass container plants.



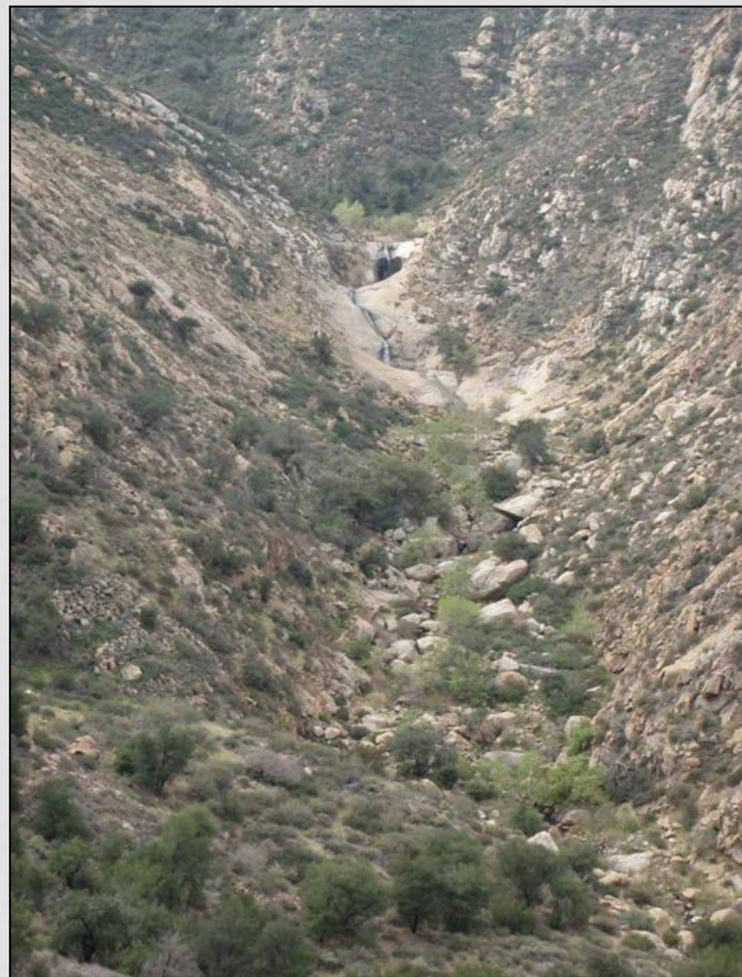
IMPACTED SITE RESTORATION

Water Quality and Habitat Restoration

Eagle Peak Trail



Three Sisters Falls Trail



IMPACTED SITE RESTORATION

Water Quality and Habitat Restoration

Three Sisters Falls Trail



- Growing web of trails
- Chronic source of sediment

- Erosion
- Damage to habitat
- Safety concerns



IMPACTED SITE RESTORATION

Water Quality and Habitat Restoration



- Close off impacted area
- Stabilize and restore impacted area

Restoration Actions

- Designate main trail
- Drainage improvement on the trail to reduce erosion



IMPACTED SITE RESTORATION

Public Outreach

- Kiosks at four different sites emphasizing natural resource concerns and sustainability
- Interpretive site tour



SIMILAR RESTORATION EFFORTS

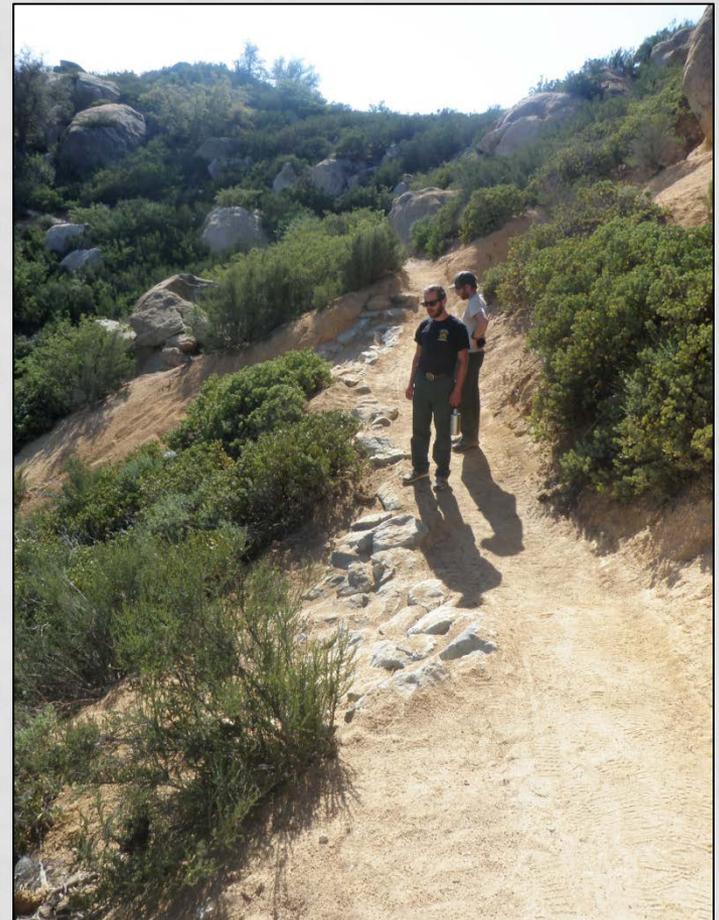
- Decommissioning



- Cedar Creek Trail Permit system



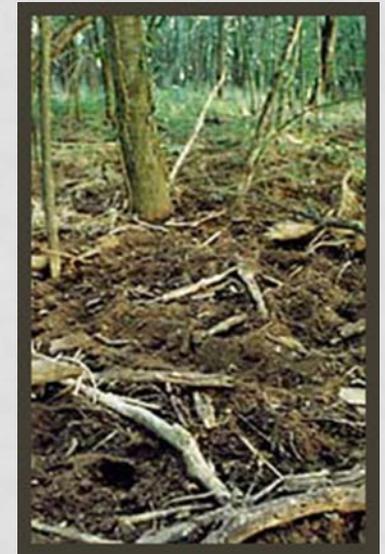
- Stormproofing



INVASIVE SPECIES REMOVAL AND HABITAT IMPROVEMENT



- **Feral pig eradication**—rooting, disease, sedimentation
- **Invasive aquatic species removal**—predatory species prey on native aquatic species or compete with them for resources.



OTHER RESTORATION EFFORTS

Coastal Sage Scrub Restoration 2016



- 30 acres of restoration
- Burned 4 times in the last 25 yrs.
- Supports Calif. Gnatcatcher

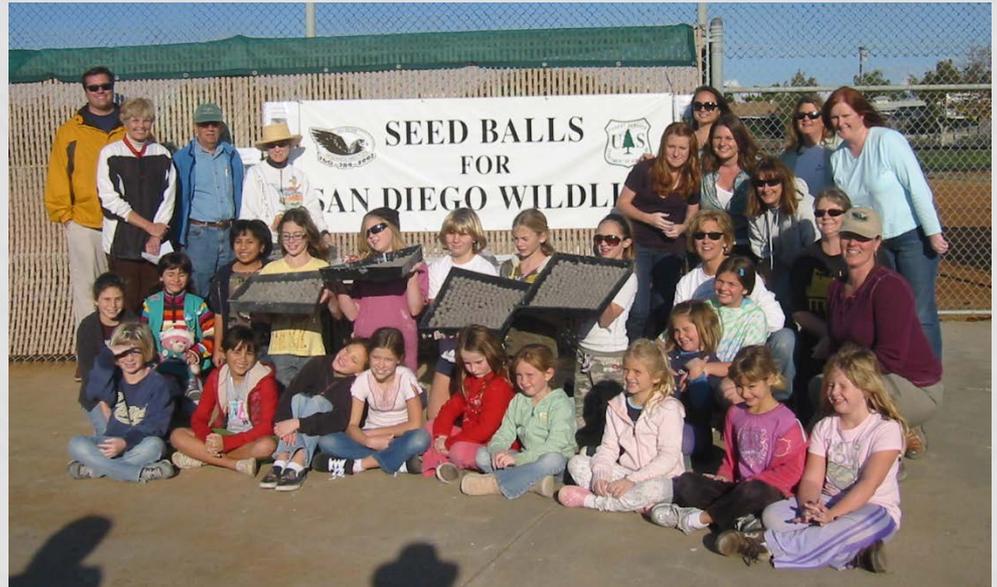
- Weed control
- Seeding
- Promote coastal sage scrub (less acacia)



OTHER RESTORATION EFFORTS

Previous Coastal Sage Scrub Restoration

- 1993 Eagle Fire
- Consumed 4,600 acres
- Post fire seeding with seed balls
- Utilized volunteer groups



OTHER RESTORATION EFFORTS

Marijuana Grow Site Cleanups

- Leave behind trash, infrastructure, pesticides, poisons, dead animals.
- Use a significant amount of water during the grow operations.



QUESTIONS?

