



Training Event Summary

Event: Open Space Restoration Workshop

Intended Audience	Community organizations and leaders	Date and Time	2023.06.22 6:30-8pm
Producer / Facilitator	TreePeople	Event Format	Virtual
IRWM Region	Upper Santa Clara River	Number of Participants	15

Event Summary:

This workshop focused on Open Space Restoration and impacts related to watershed health, fire ecology, and climate (change). Presentations were given by TreePeople forestry staff, focused on the following objectives and topics for participants:

- 1) Understand major tributaries and the river that are created by the watershed, the area that drains into the Santa Clara River, and what makes this area special and unique within Los Angeles County and Southern California.*
- 2) The region's reliance on watershed health - groundwater, including a chart that shows how much comes from local watershed vs imported, and the connection between open space watershed health and water supply/quality.*
- 3) The ecology of native and invasive plants - eco elements working together; what is the difference and the impact.*
- 4) Water and fire cycles, changes due to changing climate and fire ecology.*
- 5) The value of open space restoration including repairing the burn scar and mitigating the intensity of fire.*
- 6) What can be done and current projects with funding, including ongoing restoration, large scale Arundo donax (giant reed) removal and an invitation to join TreePeople in the field to learn more!*

A companion event (a tour of an active site that has been undergoing restoration since 2018) was held May 27, 2023. Due to scheduling conflicts, the tour was held prior to the online workshop.

The workshop presentation slides and event flier continue on the following pages.

TreePeople

**WATER
talks**

WaterTalks Education Series Upper Santa Clara River:

Open Space Restoration Workshop

*The Impact on Watershed Health,
Fire Ecology, & Climate Change*

Thursday, June 22

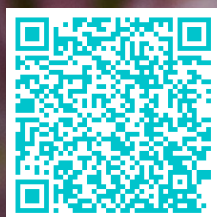
6:30 pm - 8 pm

Join TreePeople's Water Equity and Mountain Forestry teams to learn more about open space restoration and its connection to watershed health and fire ecology in the context of a changing climate.

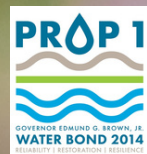


**Online
Educational
Workshop**

Registration:
Click here! OR Scan



For more information:
hturpin@treepeople.org





TreePeople

WaterTalks

Upper Santa Clara River

Open Space Restoration

*The impact on watershed health, fire ecology
and climate change*

June 22, 2023

TreePeople Speakers



Amanda Begley

Watershed Coordinator
Santa Clara River



Heather Turpin

Community Organizer
Upper Santa Clara River



Stephanie Liu

**Mountain Forestry
Coordinator**
Angeles National Forest



Tonight

USCR Watershed Overview

- Our watershed
- Sources of water

Non-native Invasives

- Impact on watershed health

What Can Be Done?

- Wildlands restoration
- Other projects

Wrap-up & Questions



Our Watershed

In 2005, American Rivers designated the Santa Clara River as one of the most threatened in the nation.

- It is the largest river system in Southern California and one of the last remaining river systems in the state that is relatively intact and remains mostly in its natural state (unpaved), providing natural flood control.
- Its river corridor supports Southern California's thriving agricultural industry, supplying water for multiple uses and industries, and creates local sustainable economic development.

Our Watershed

What makes it so special?

Water Sources

We rely on a healthy watershed

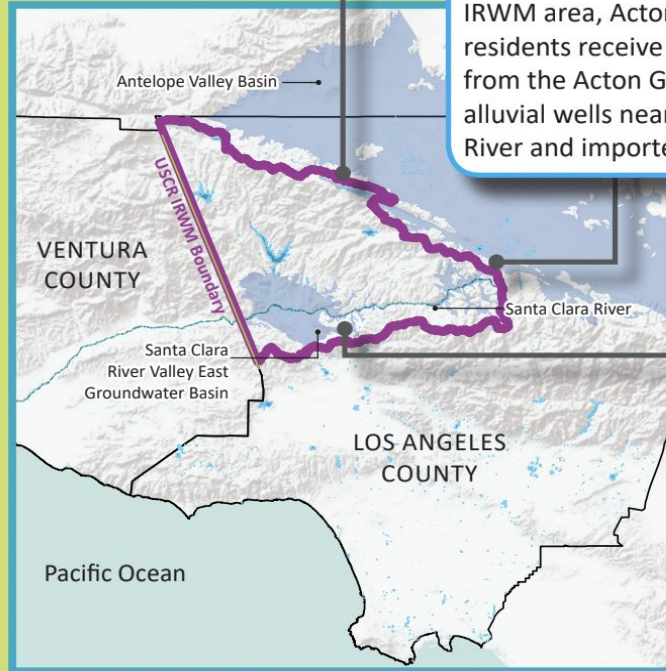
USCR Water Sources

*Percentages fluctuate based on climate conditions

In the northern region of USCR IRWM area, Lake Hughes and Elizabeth Lake residents receive groundwater from the Antelope Valley Basin and imported water.

In the eastern region of USCR IRWM area, Acton & Agua Dulce residents receive groundwater from the Acton Groundwater Basin, alluvial wells near the Santa Clara River and imported water.

In the southern region of USCR IRWM area, most residents receive groundwater from the Santa Clara River Valley East groundwater basin and imported water. This area comprises the largest populated area and drinking water use.



Source: Greater Los Angeles County Integrated Regional Water Management Plan, 2014

Water Sources

What does open space watershed health have to do with it?



Invasives!

An invasive plant is an introduced species that displaces natives — altering species composition within an ecosystem and overall watershed health!

Introduction methods

- Agriculture (anthropogenic)
- Ranching (anthropogenic)
- Trade and travel (anthropogenic)
- Wind and birds (natural)



How do invasives affect watershed health?

Hydrological Cycling



Wetland and Riparian habitats are particularly sensitive to invasive plant invasions.

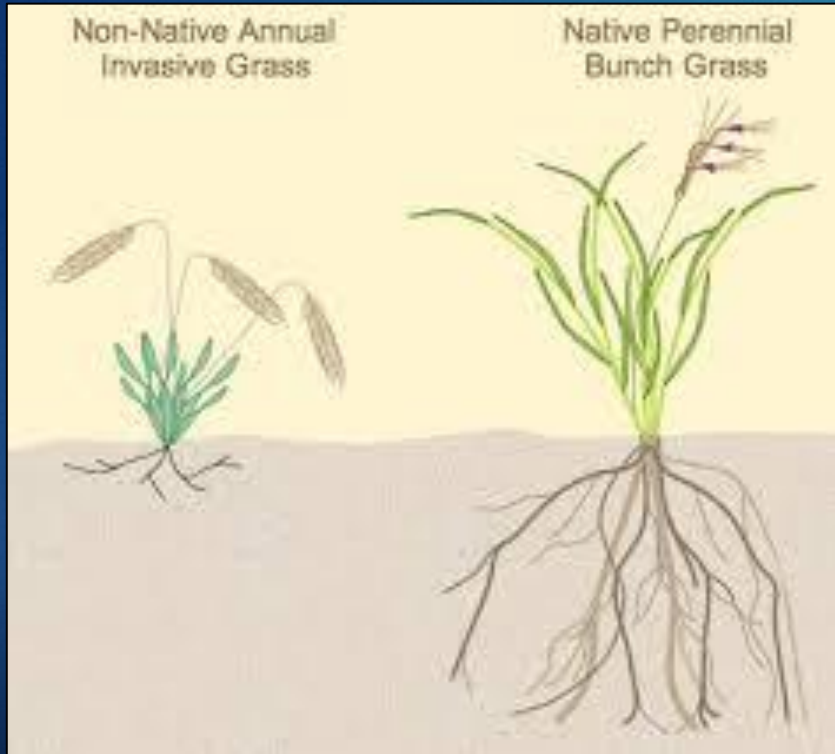
Invasive plants can act like straws sucking up water and lowering the region's water table.

Dense strands of invasive plants:

- Alter sediment flow
- Increase flooding frequency

How else are invasive plants destructive to ecosystems?

Erosion



Invasive plants that grow and root differently than members of the native plant community can increase the likelihood of mudslides and alter sedimentation.

In areas of single, invasive species with one root depth, chances of soil erosion are increased.

In healthy native plant communities a variety of root systems help to hold soil in place.

Nutrient Cycling



Non-natives alter leaf litter deposition — changing historic soil chemistry composition.

Through allelopathy — a survival mechanism in which they release chemicals into the surrounding soil to inhibit seed sprouting, root development, or nutrient uptake by other plants.

Fire Frequency



Invasive plant presence can increase fuel loads and alter fire regimes.

Chaparral and many other plant communities in California are fire adapted. Natural chaparral fire return is in intervals — 30-150 years.

Unnaturally frequent fires that burn hotter and move faster can prevent these communities from recovering, slowly type-converting a community.

What Can Be Done?

To transform the watershed...



BEFORE



AFTER

Wildlands Restoration!

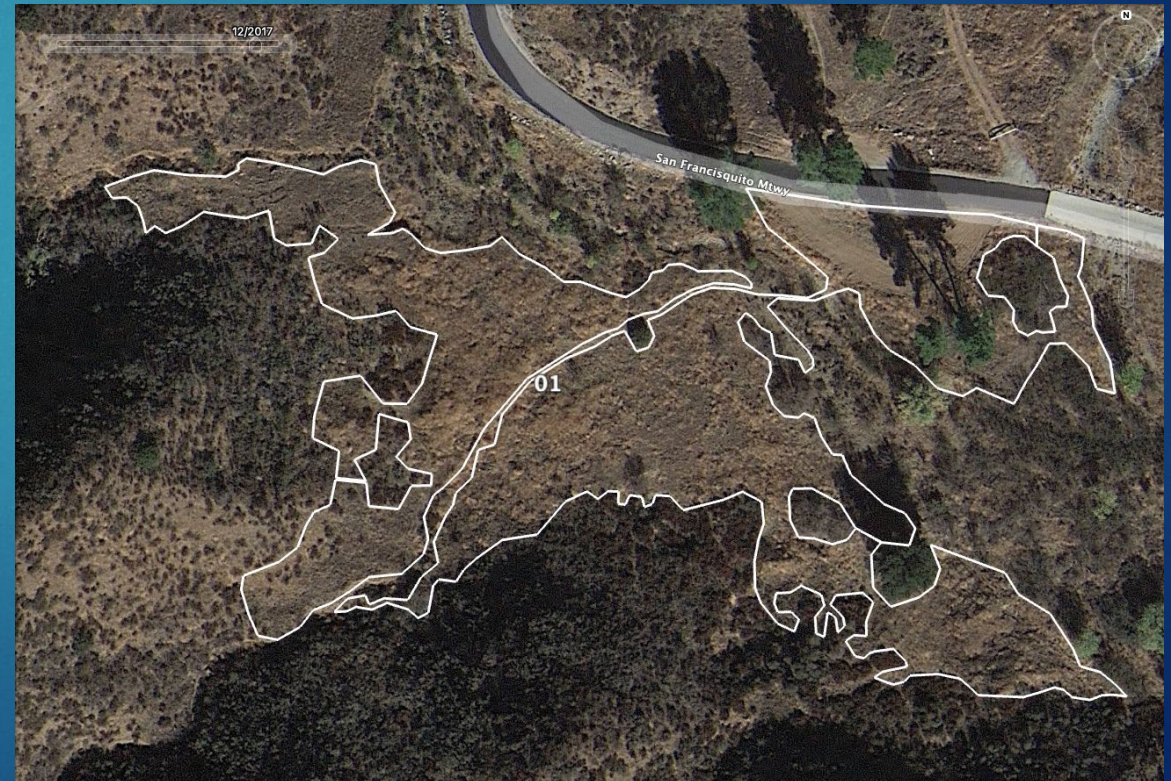
Planting and Maintenance



SITE 1 SFC:
April 2017, spring
invasives bright yellow
and green



December 2017 after
invasives have dried and are
just flash fuel





August 2018 after we've removed invasives and began planting



August 2019 after natives have begun to grow and invasives have been continually controlled





March 2021 after continual maintenance of natives and invasive removal



February 2022 after continual maintenance of natives and invasive removal



Other Local Projects

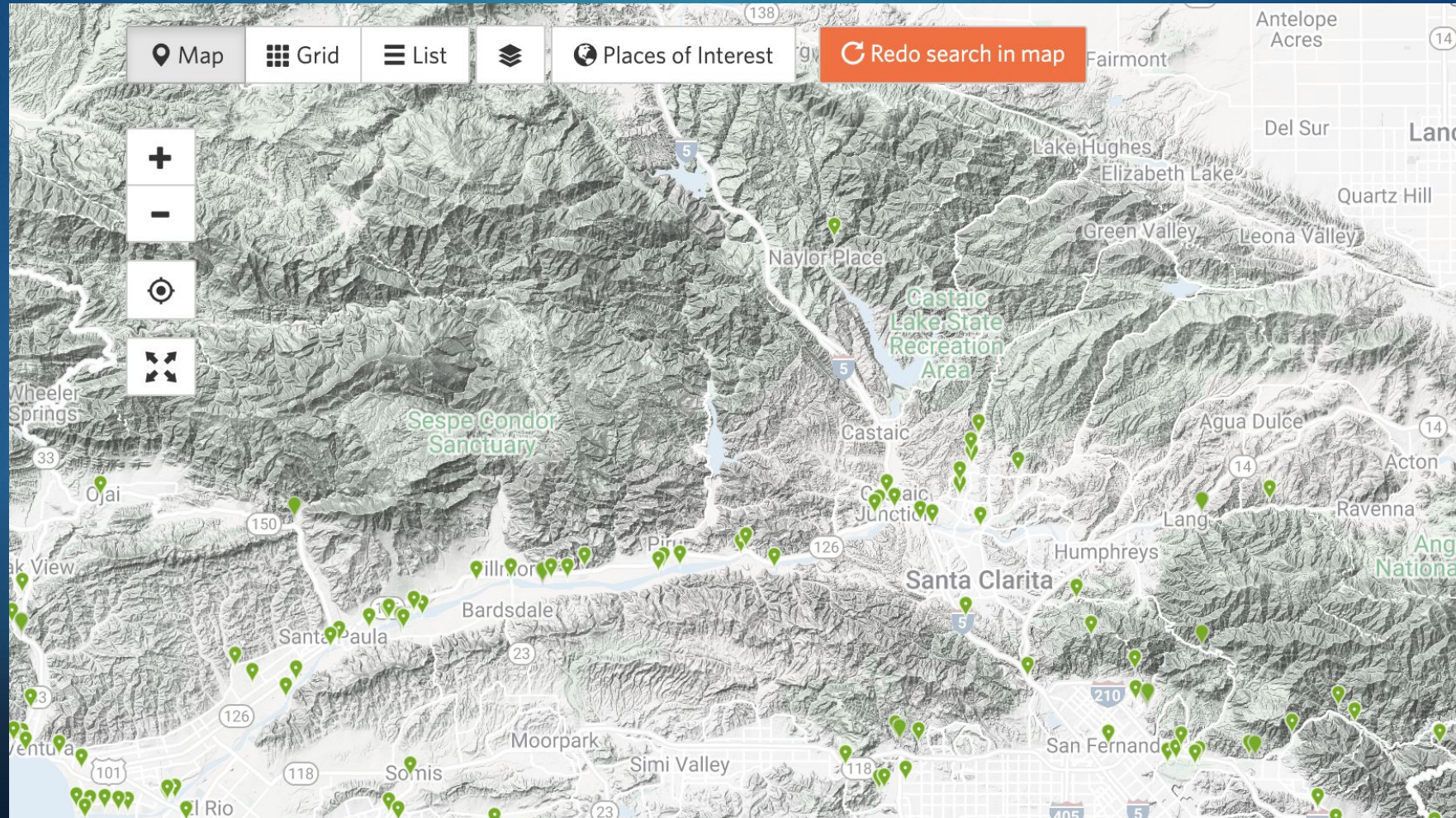


Giant Reed (*Arundo donax*) Removal

- Is the largest of six species in the genus *Arundo* and is one of the tallest grasses in the world
- Is listed among the top five invasive species degrading natural ecosystems in CA
- Threatens CA's riparian ecosystems by outcompeting natives for water (*Willows*, *Cottonwoods*)



Arundo specimens found along riparian areas throughout the watershed



Tying It All Together





TreePeople



COUNCIL FOR
**WATERSHED
HEALTH**



Stantec

THANK YOU!