

# Leveraging Partnerships to Advance Giant Reed (*Arundo donax*) Removal and Restoration in the Santa Clara River

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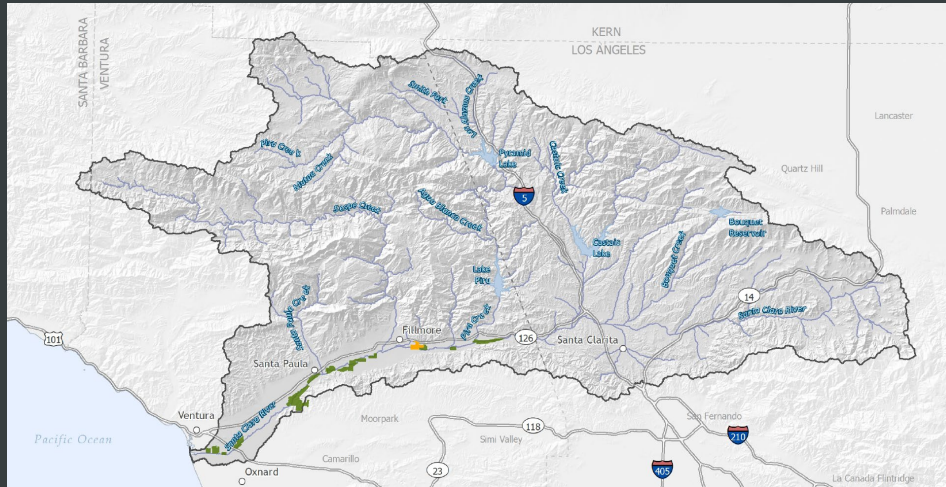
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**UC SANTA BARBARA**



# Santa Clara River Watershed



- Noxious weed invasion primary stressor (the usual riparian suspects)
- Giant reed (*Arundo donax*) occupies over 5000 acres.



# Giant reed (*Arundo donax*)

- Giant reed, giant cane, carrizo
- Family Poaceae; Tribe Arundineae
- Genus *Arundo*; 3-6 species recognized
- Native to Middle East/Asia
- Invasive in variety of wetland types, esp. flashy rivers in Mediterranean biomes
- Introduced into Calif. and other southern states in early 1800's





# Giant reed (*Arundo donax*)

- Rapid growth; prefers disturbed systems.
- Reproduces only by vegetative reproduction; primarily by rhizome fragments.
- Greatest threat to riparian systems in coastal, Southern California (Bell 1997).



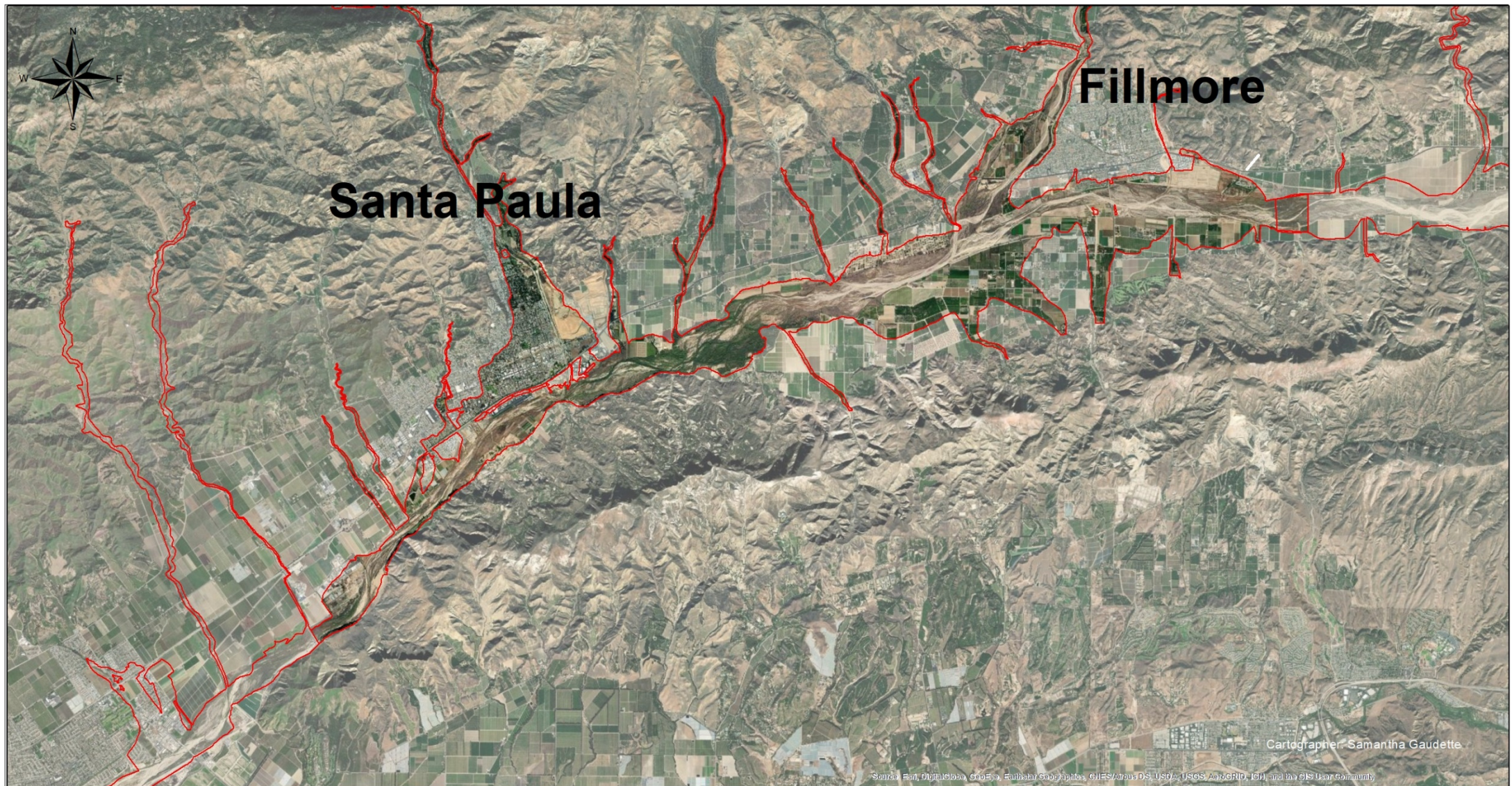




## Arundo's impacts





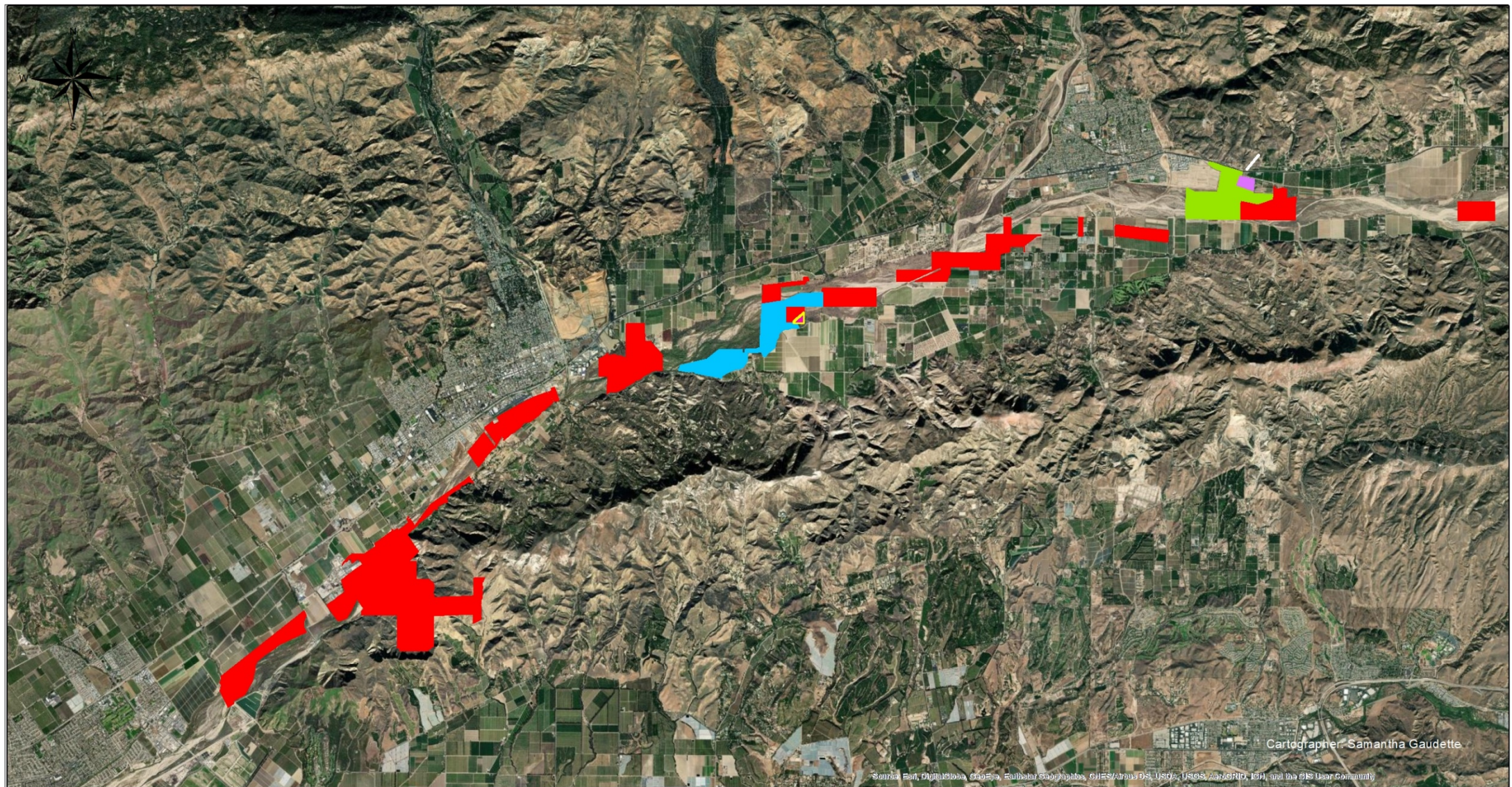


## Santa Clara River 100 Year Floodplain: Santa Paula to Fillmore Focus Area

0 1 2 3 4 Miles





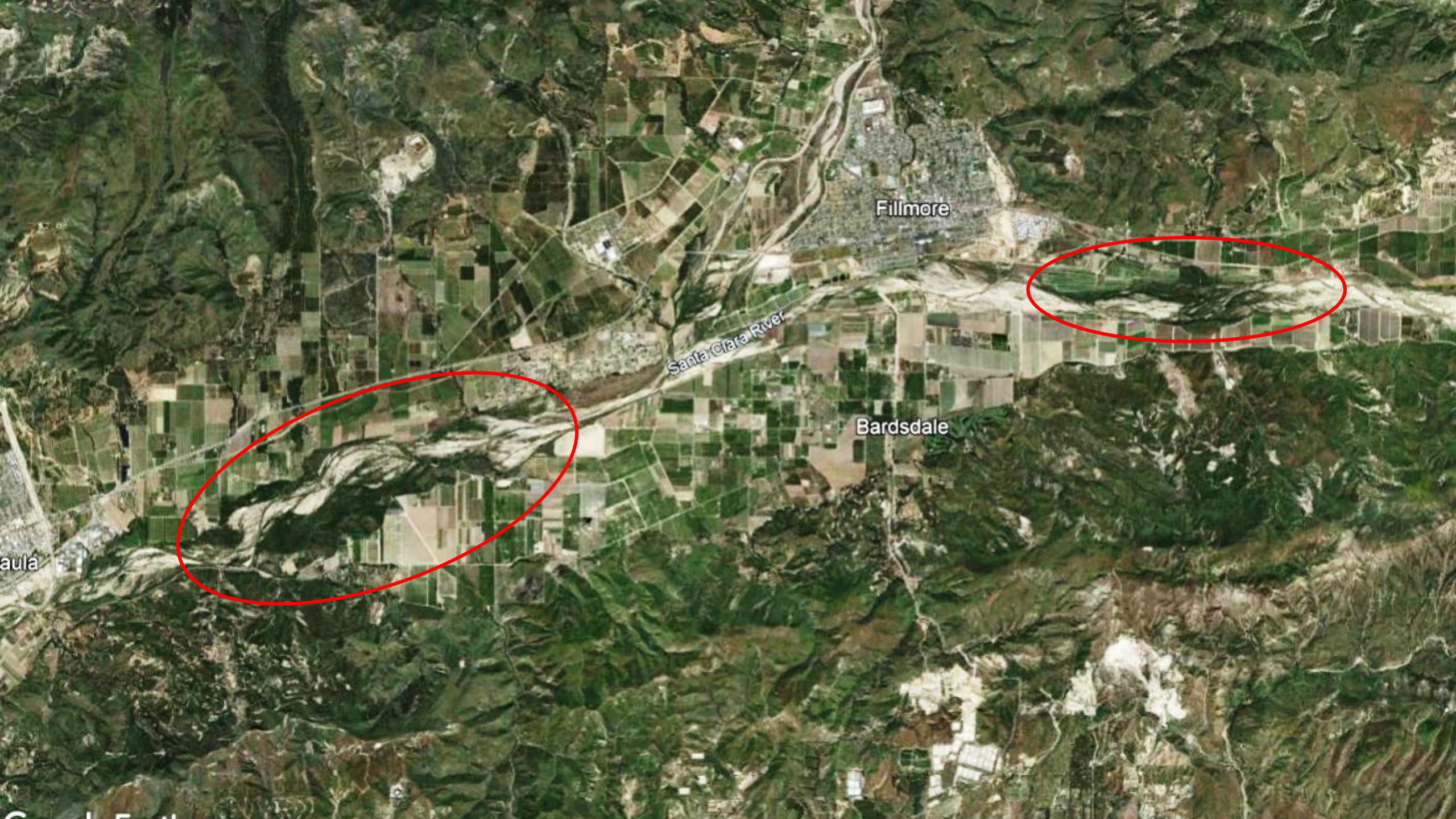


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Fillmore

Santa Clara River

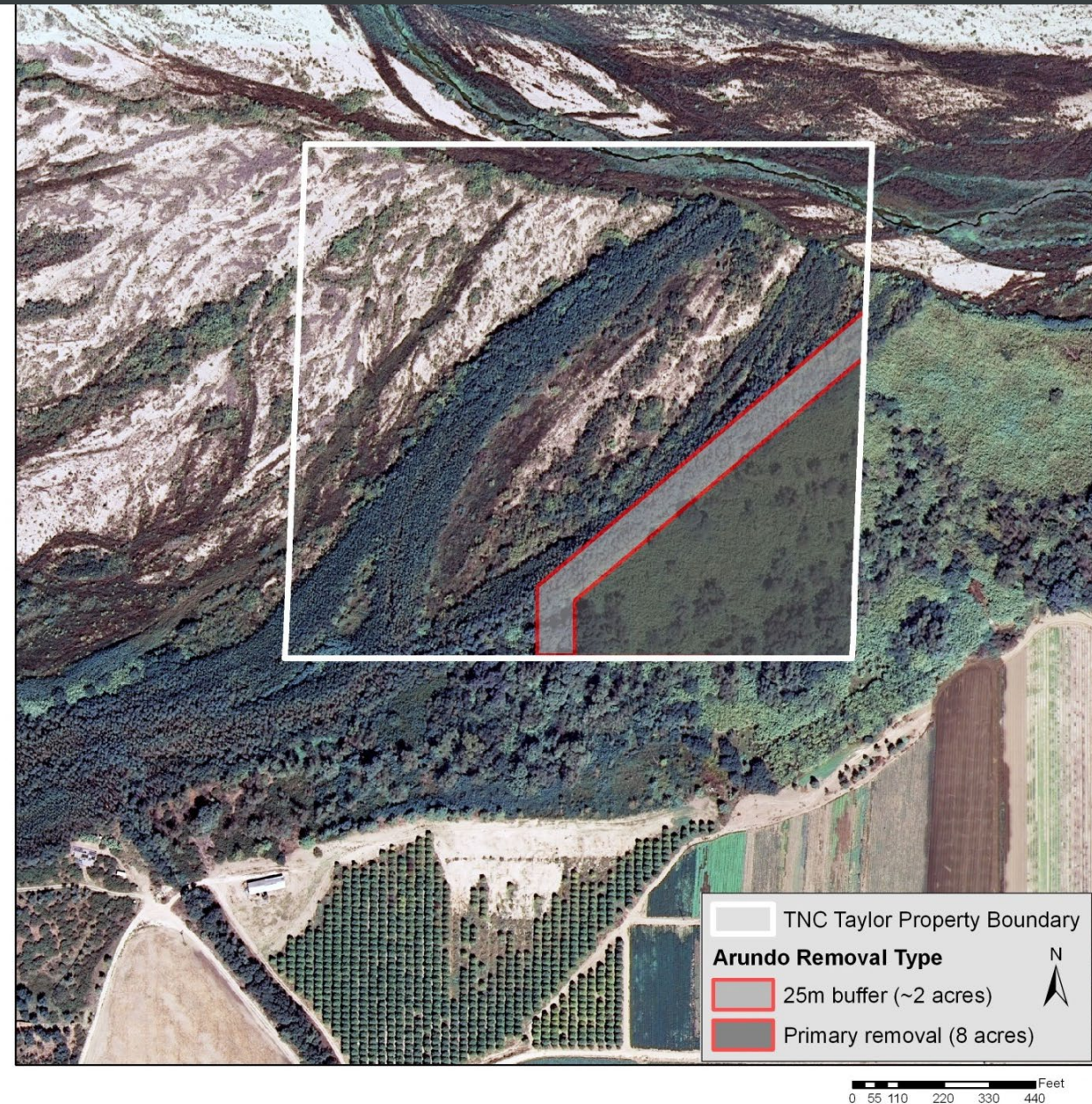
Bardsdale

aula



# 2012

- Seed funding from SCR Trustee Council (USFWS & CDFW)
- 10 acre work area
- 80-90% arundo cover
- Strong focus on effectiveness monitoring and environmental research







**TNC Taylor Property - August 2012**





**August 2014 – drought conditions increasing**





**October 2016 – apex of drought**





**August 2019**



# Building partnerships

- 2012 – going it alone...but gaining the necessary perspective.
- 2014 – Proposition 84 (DWR); 200 acres cooperating with local landowners (&TNC)
  - Regulatory agency buy-in
  - Getting local communities involved
- 2018 – Proposition 1 (WCB); 425 acres
  - Diverse partnerships
- 2021 – Major funding for restoration ‘after the weeds are gone’
  - Restoration at a scale that is having significant benefits for humans and nature.



# Building partnerships

- Critical elements:
  - Building bridges and developing trust
  - Building capacity
  - Demonstrating competency (effectiveness)
- Leveraging partner strengths
  - TNC landowner outreach and acquisition
  - UCSB and WFVZ science evaluation, improving practice
  - SCRC implementation, management
- Over 1000 acres restored or in progress



# Partners

## Non-profits

- The Nature Conservancy
- Friends of the SCR
- CalTrout
- Western Foundation of Vertebrate Zoology
- Ventura Audubon

## Working groups

- Ventura County WMA
- SCR Invasive Weed Taskforce

## Schools

- Santa Paula High School
  - MESA students
  - SESPEA students
- Fillmore Schools (grades 5-12)

## Contractors

- Burns Equipment Services
- Channel Islands Restoration
- Natures Image
- Quality Ag, Inc.

## Agencies

- Wildlife Conservation Board
- Department of Water Resources
- State Coastal Conservancy
- US Fish and Wildlife Service
- California Department of Fish and Wildlife
- Ventura County Watershed Protection District
- Ventura Agricultural Commissioner
- Watershed Coalition of Ventura County
- United Water
- Santa Clarita Valley Water Agency
- California Conservation Corps

## Landowners

- Sandy Hedrick
- Robert Deadlow
- Mike Brucker
- Craig Underwood
- Sommers Family
- Shiells Family

**And many, many more....**











