A Green Infrastructure Vision for Coyote Valley

SPUR Forum

October 24, 2017

OPEN SPACE AUTHORITY
SANTA CLARA VALLEY

Santa Clara Valley Water District

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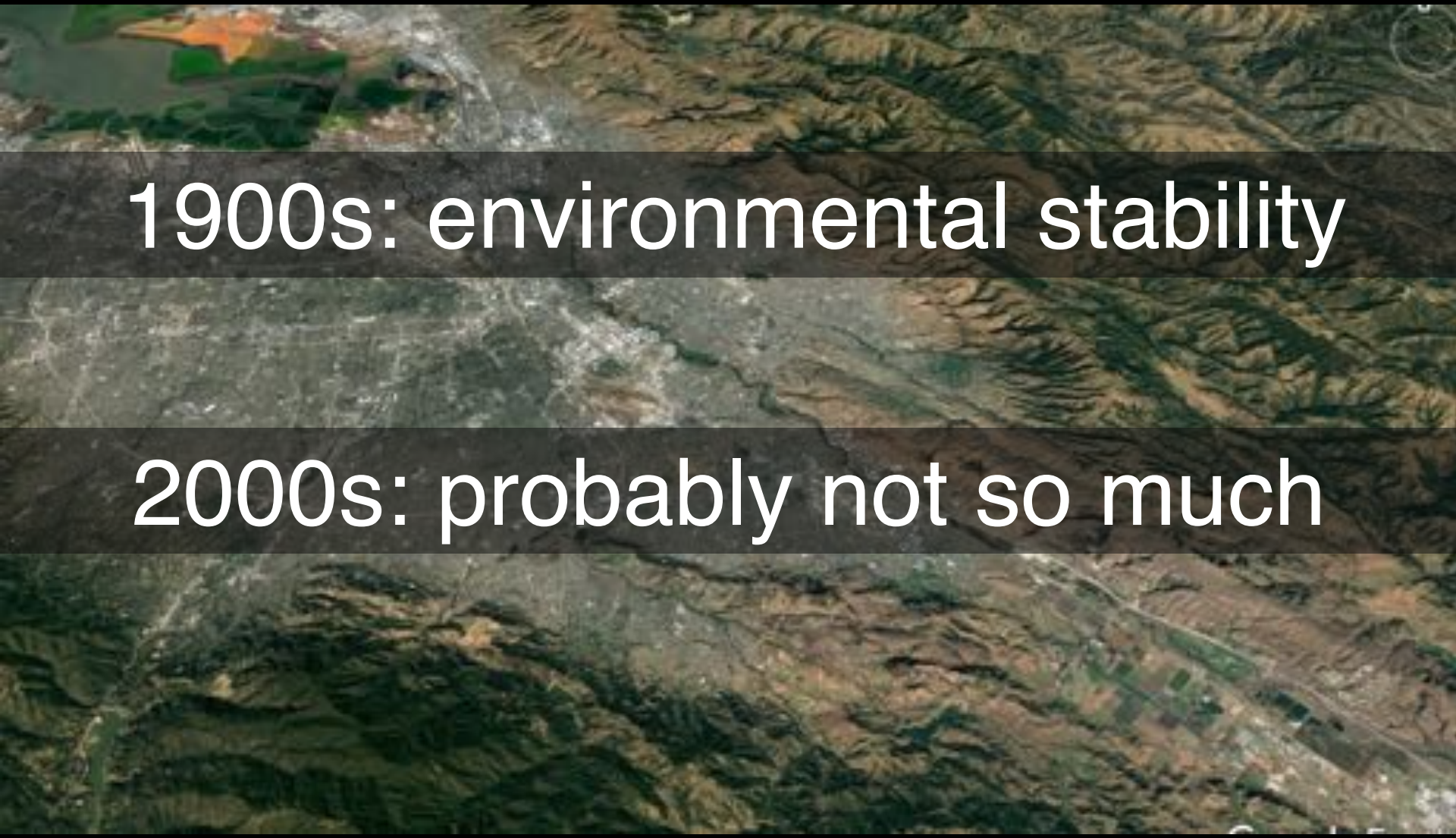
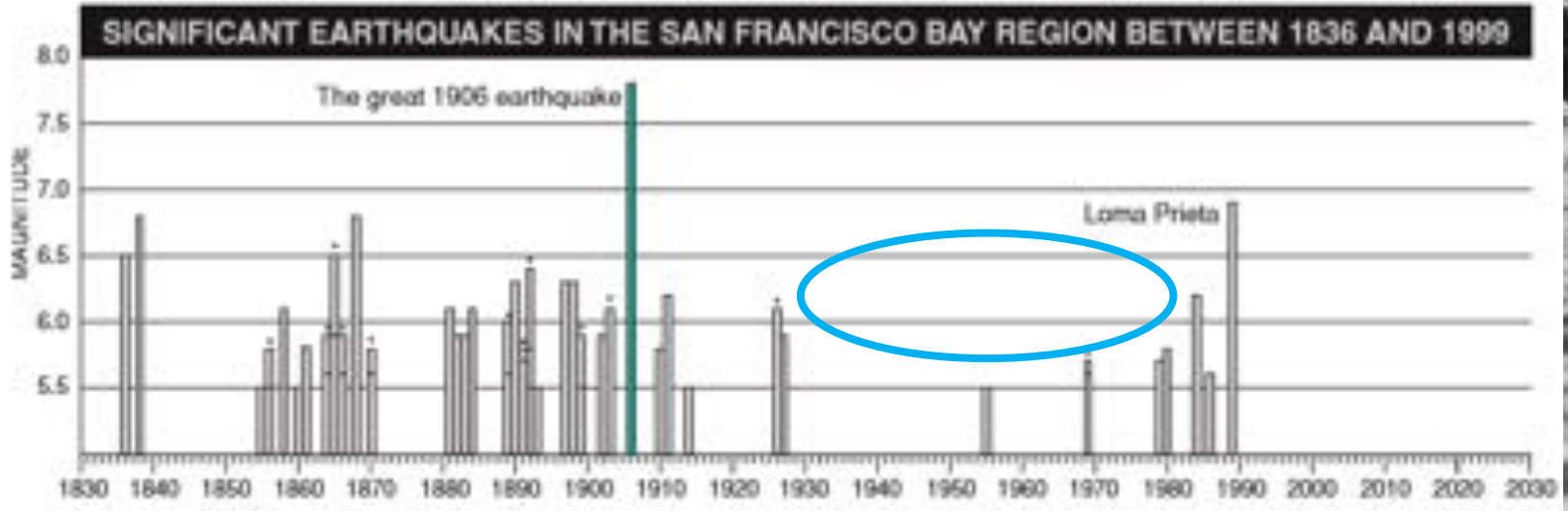

1900s: environmental stability
2000s: probably not so much

Graphic: Don Foley
Source: *The Coming Megafloods (Scientific American 2013)*
by Michael Dettinger & Lynn Ingram


roughly every 200 years
last in 1861-62
Graphic: Don Foley
Source: *The Coming Megaflood*
by Michael Dettinger & Lynn Ing

THE BIG ONE

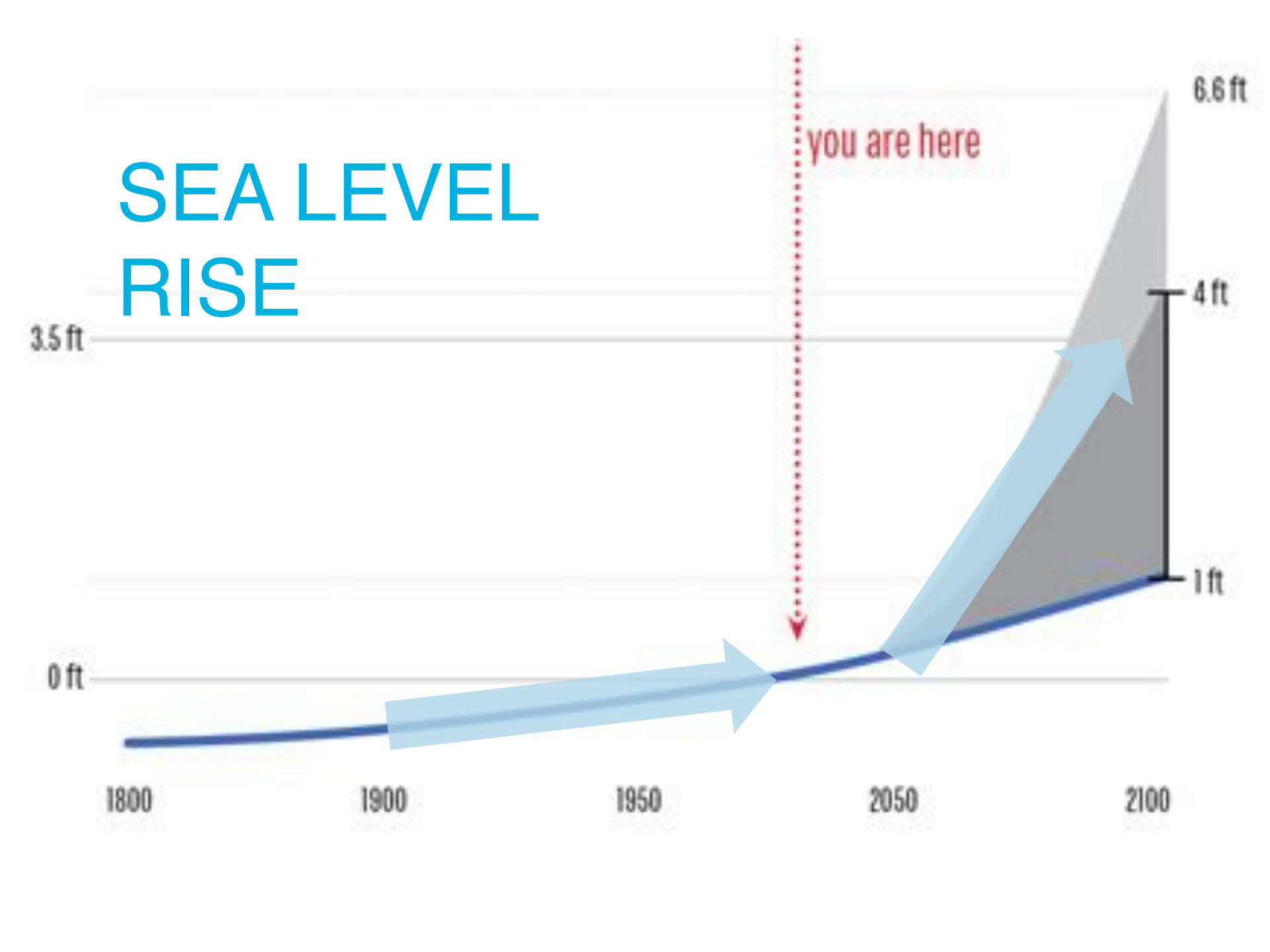
protective “stress shadow” cast over most of the 20th century



(Harris and Simpson, 1998)

Underwood Archives/Getty Ima

SEA LEVEL RISE



“Landscape Resilience”

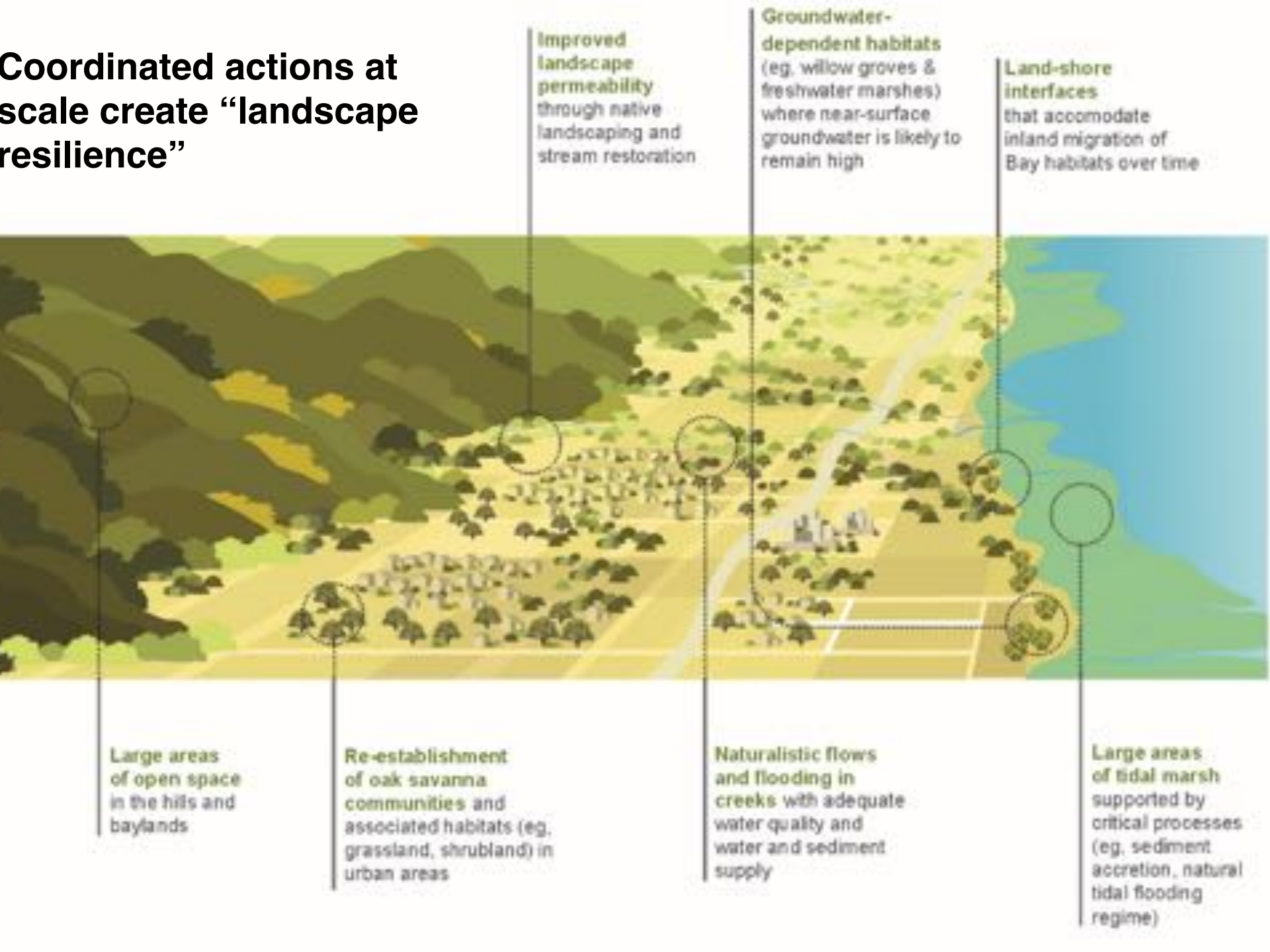
Marshes buffer shoreline from **rising sea levels**

Urban forests reduce **heat**, provide **shade,** and store **carbon**

Creeks with floodplains **reduce flood risk**

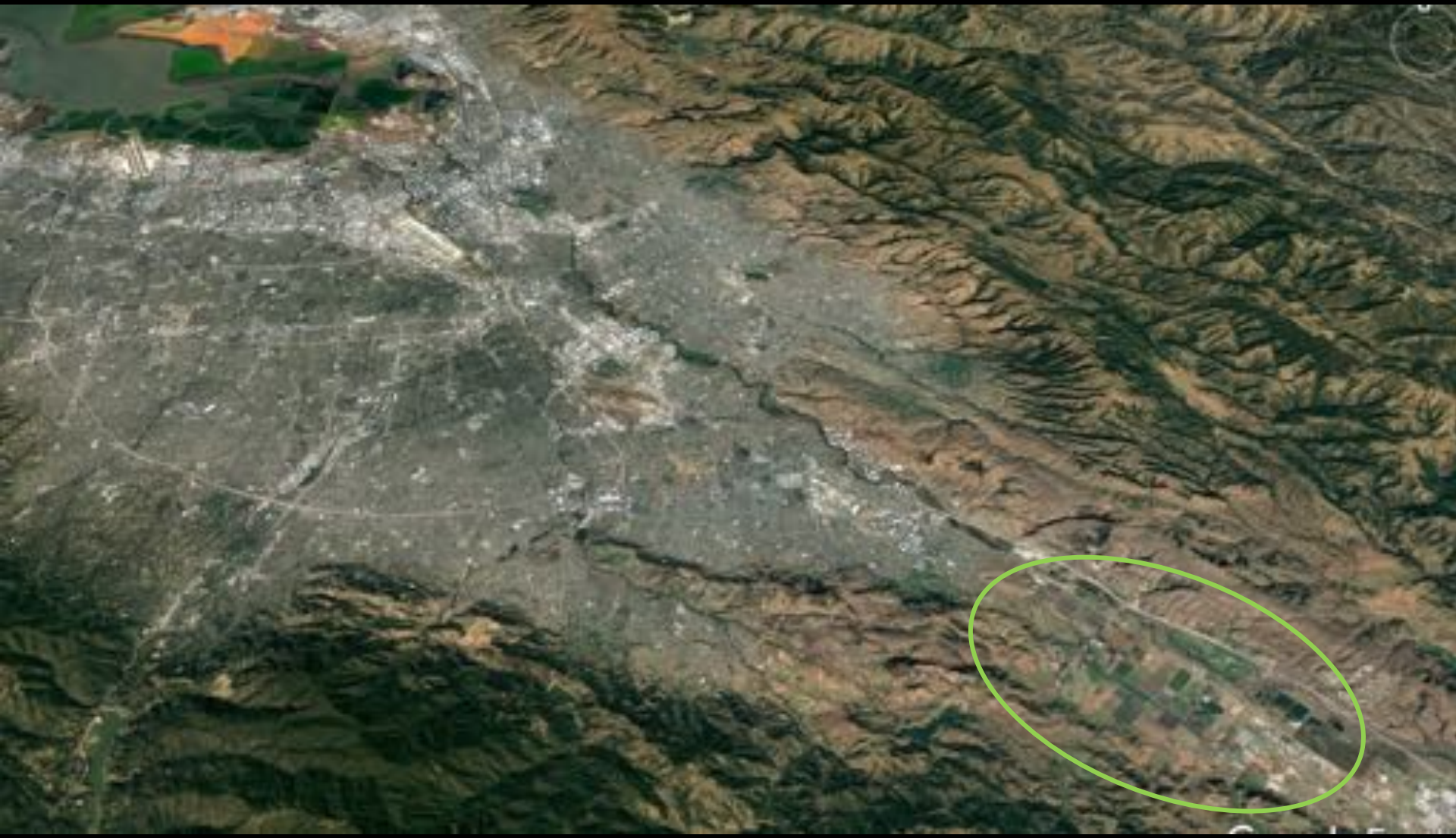
Native trees and landscaping is **drought tolerant**, **connects people to nature**, and makes city **unique**

Coordinated actions at scale create "landscape resilience"



LANDSCAPE RESILIENCE **FRAMEWORK**

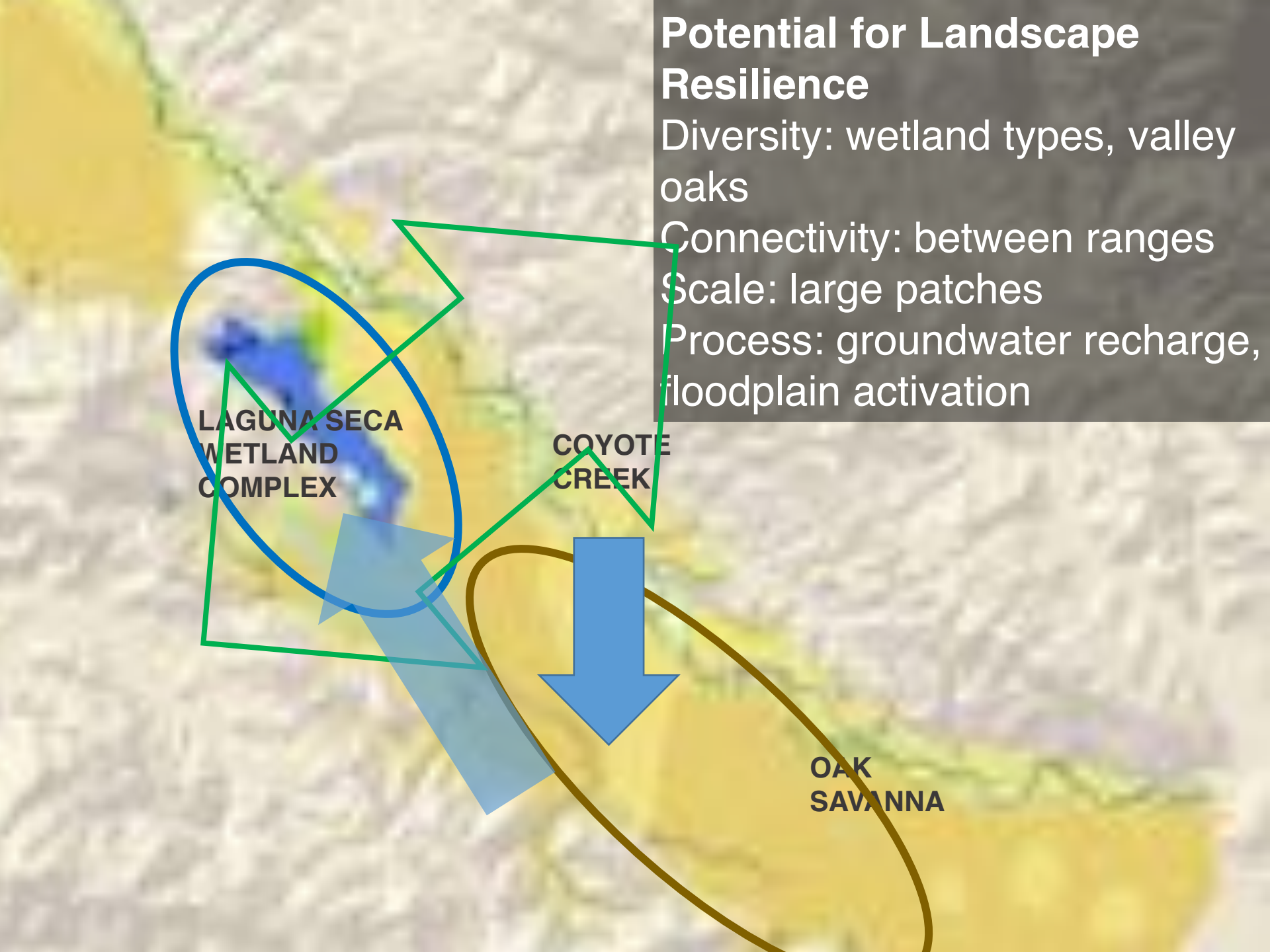
resilience.sfei.org



64-65.

LAGUNA SECA RECLAMATION (64-65)

Looking south from north end of Lagoon, Dec. 28, 1916. (a) Clam-shell at end of Lagoon Ditch--dark line extending eastward is Ditch, (b) Dragline Excavator No. 2 working on Main Canal, (c) New fence on property-line (indistinct dots are posts).


Potential for Landscape Resilience
Diversity: wetland types, valley oaks
Connectivity: between ranges
Scale: large patches
Process: groundwater recharge, floodplain activation
LAGUNA SECA WETLAND COMPLEX
COYOTE CREEK
OAK SAVANNA

LAGUNA SECA RECLAMATION (66-67)

Bottom of Lagoon on December 28, 1916 showing Clam-shell machine at end of Ditch. Discoloration on tulles shows height of water before drainage. Small shallow pools are from drainage water still coming from tulles and flowing to Ditch.

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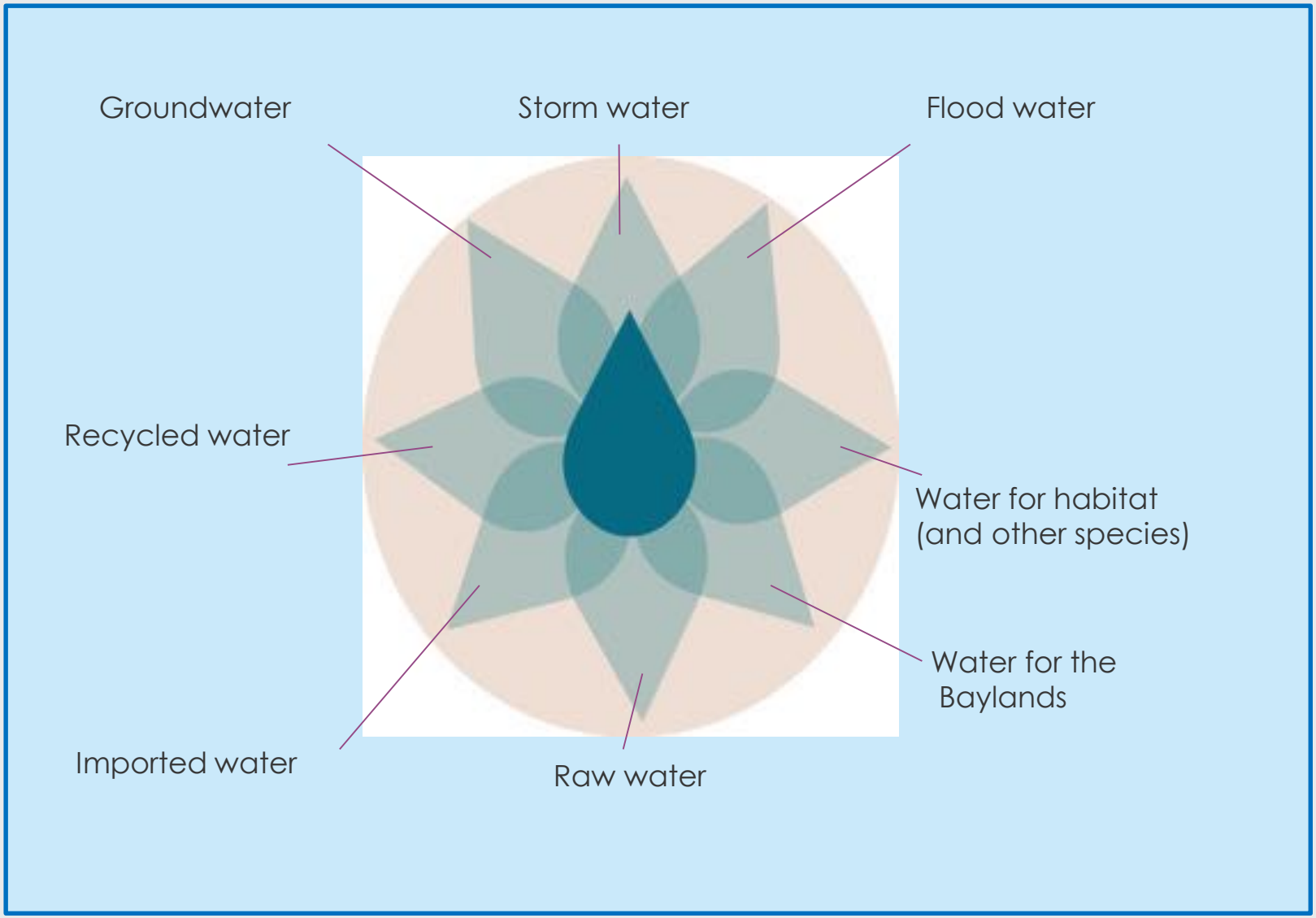
Water Resources through One Water Context



Seek Opportunities to Meet Goals and Objectives

GOALS

1. Valued and Respected Rain

Manage rainwater to improve flood protection, water supply, and ecosystem health

2. Healthful & Reliable Water

Enhance the quantity and quality of water to support beneficial uses

3. Ecologically Sustainable Streams & Watersheds

Protect, enhance and sustain healthy and resilient stream ecosystems

4. Resilient Baylands

Protect, enhance and sustain healthy and resilient baylands ecosystems and infrastructure

5. Community Collaboration

Work in partnership with an engaged community to champion wise decisions on water resources

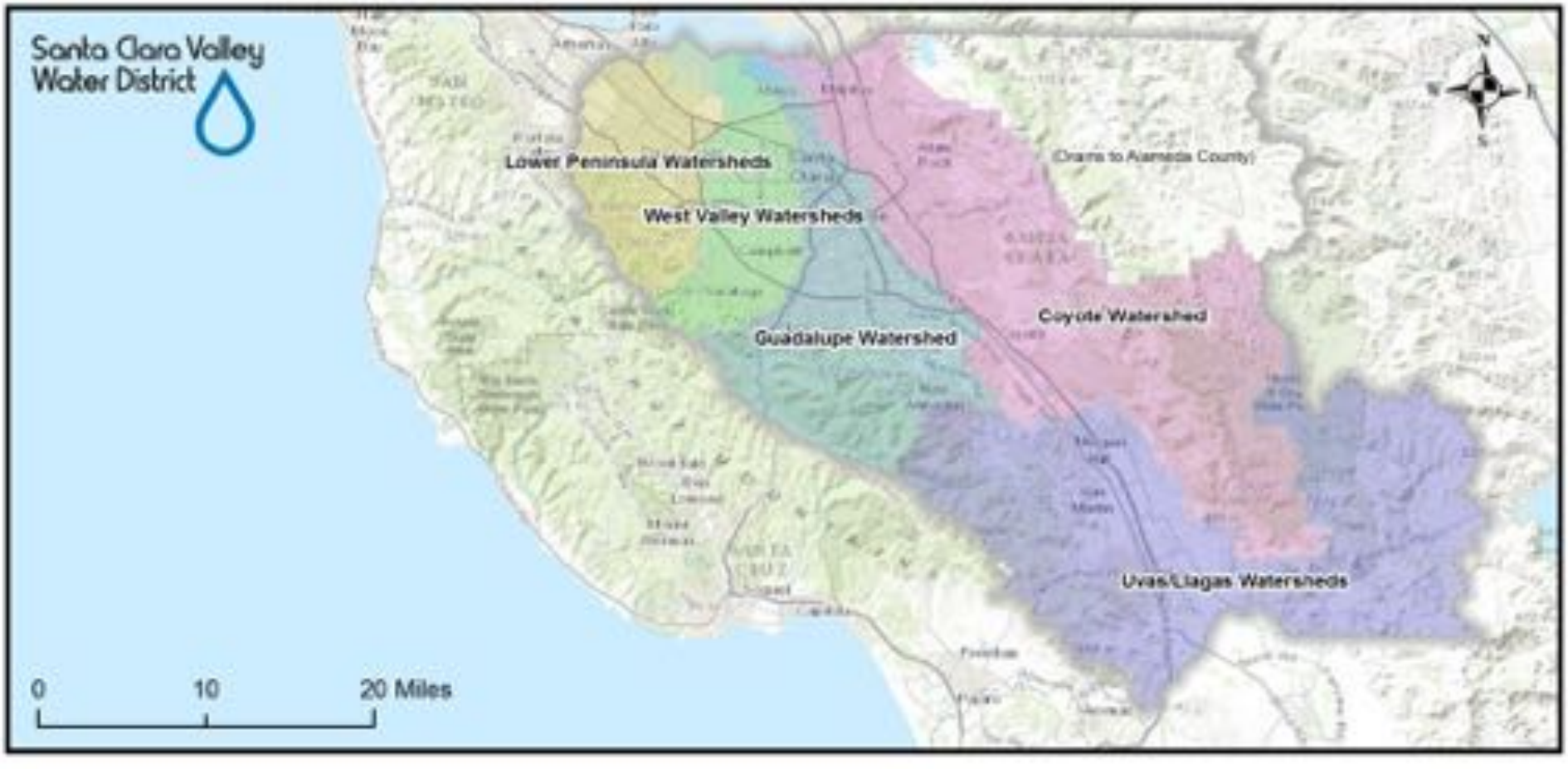
	OBJECTIVES*
A	Reliable Current and Future Water Supply for Urban, Rural, Agricultural, and Environmental Needs
B	Sustainable Groundwater Subbasins
C	High Quality Surface Water and Groundwater
D	Reliable and Effective Flood Risk Reduction Using an Integrated Approach
E	Expanded and Protected Buffer Lands Adjacent to Water Bodies
F	Stream Flows Support Natural Processes
G	Resilient Habitats and Resources for Native Species
H	Adapt to and Prepare for Climate Change
I	Anticipate and Prepare for Emergencies
J	Effective Community and Tribal Engagement

* Order of objectives does not indicate order by priority.

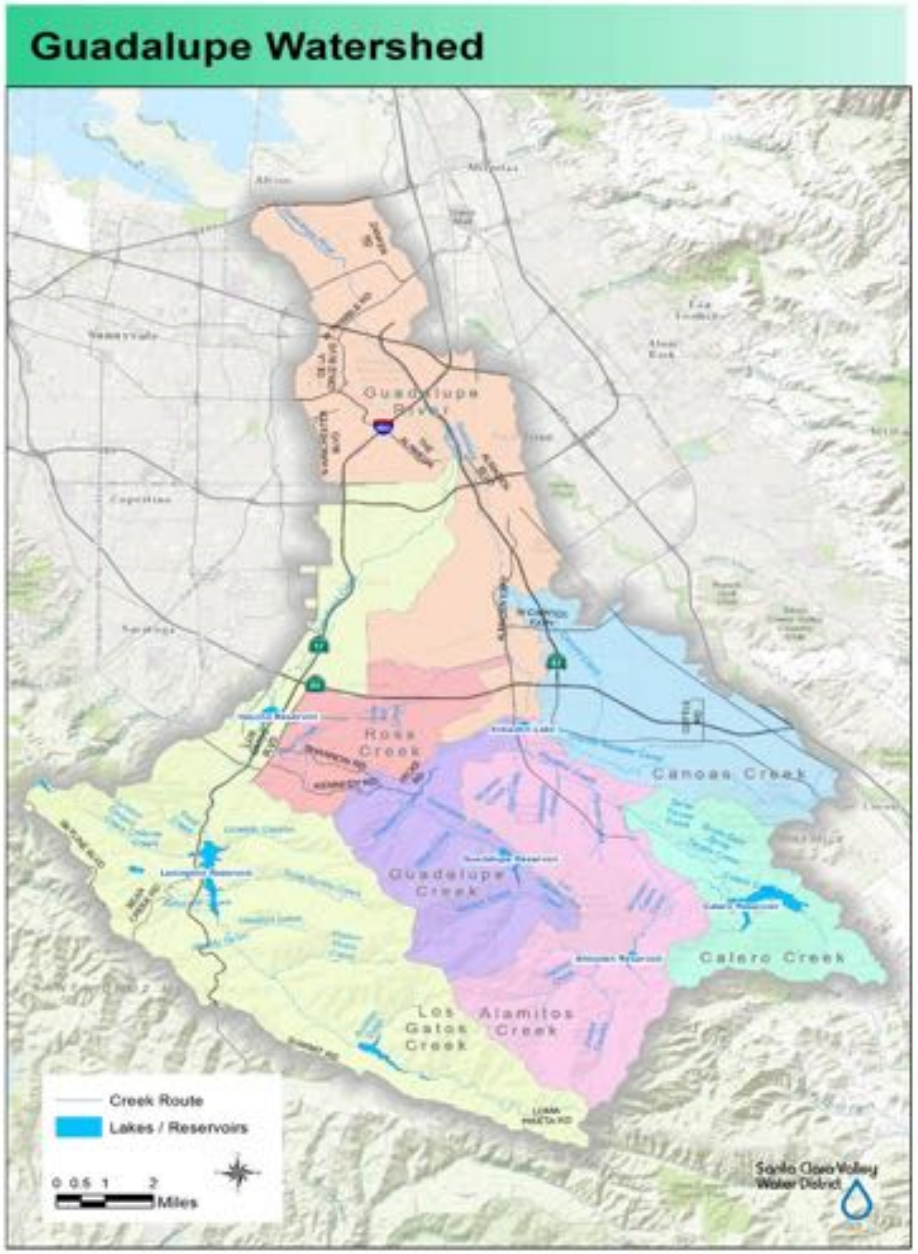
Integrated Watershed-Based Planning

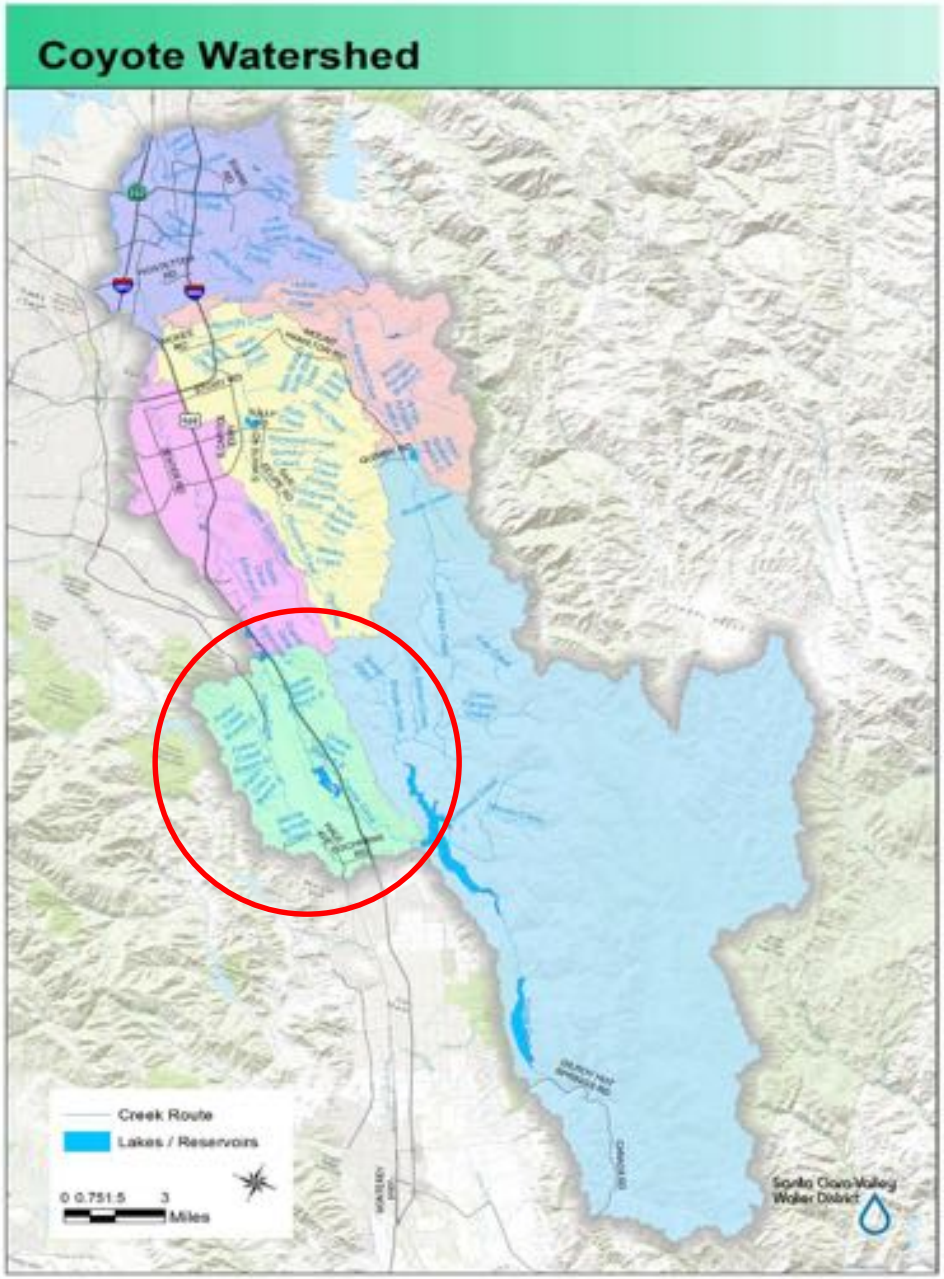
Santa Clara Valley Water District

Watershed View and an Integrated Approach

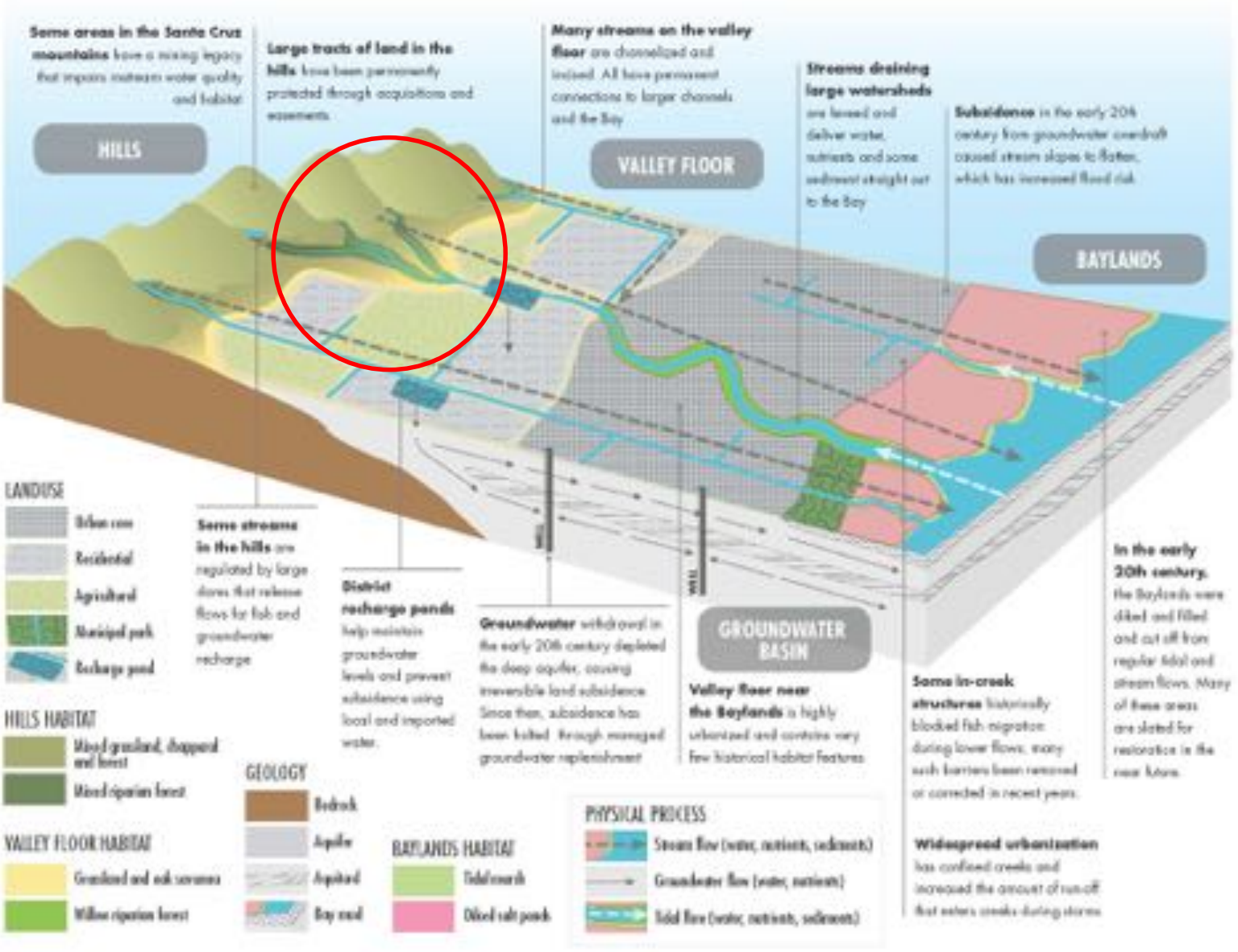


Watershed View and an Integrated Approach



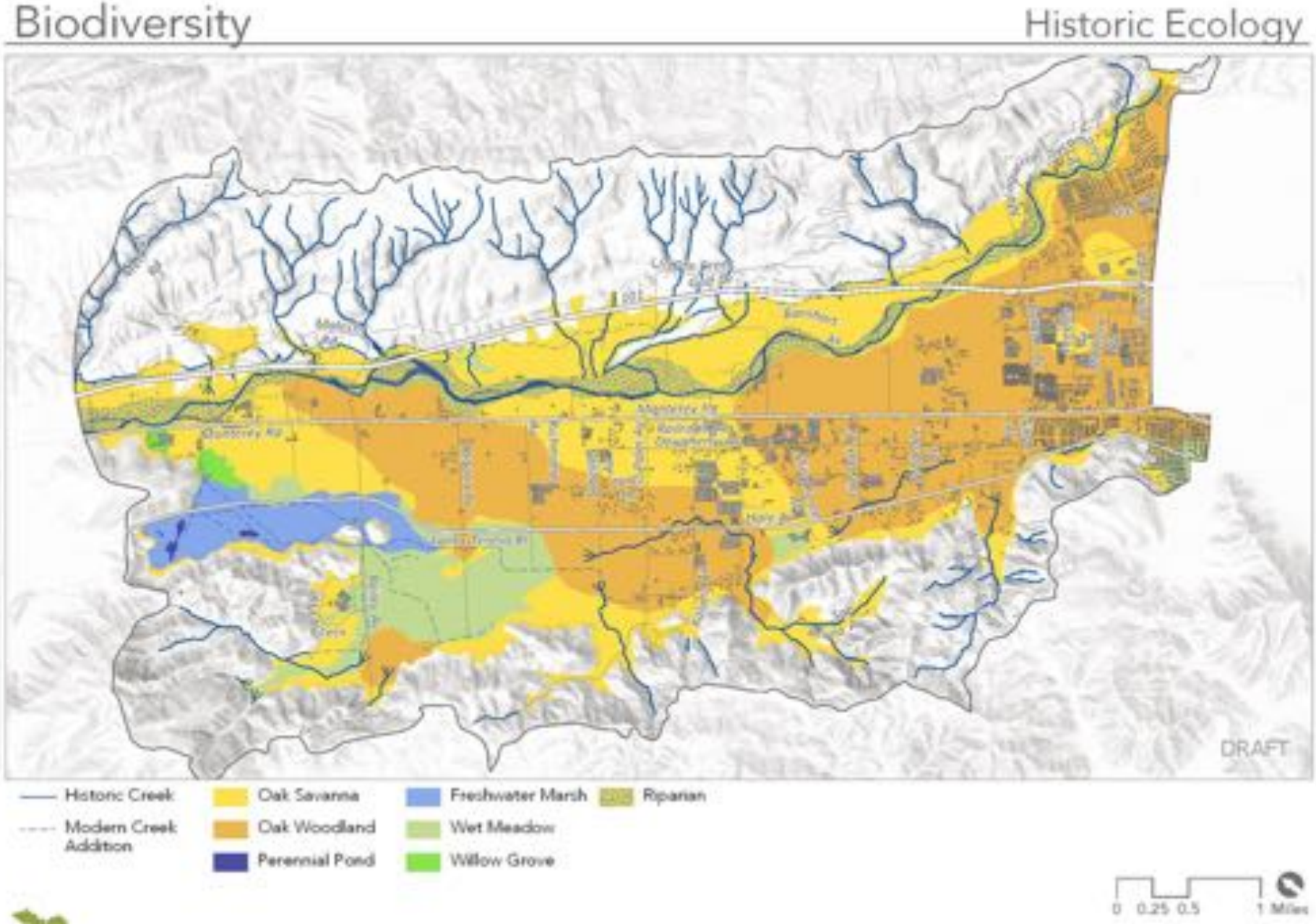


Landscape View



SFEI CONCEPTUAL MODEL (2016)

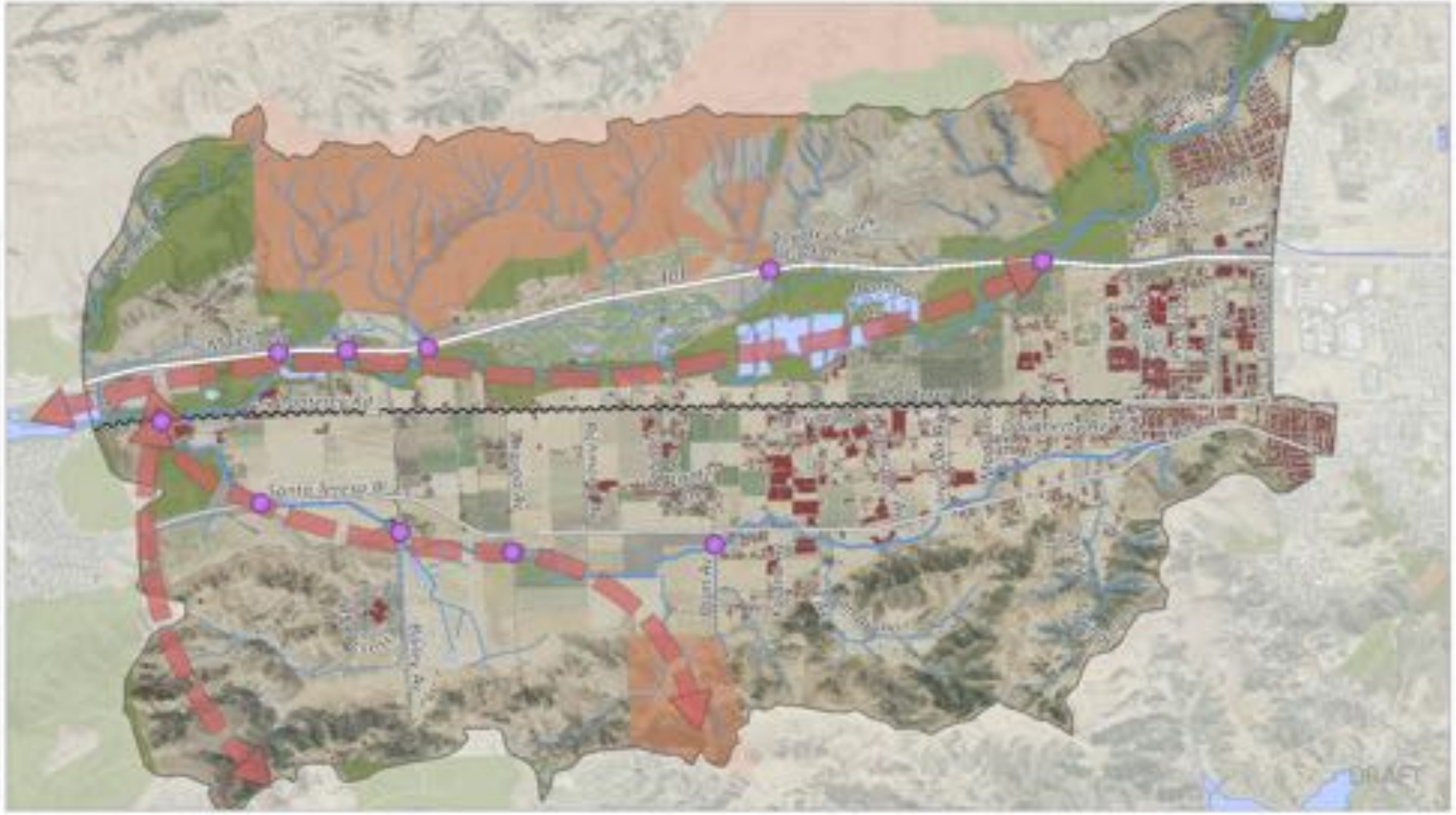
Upper Coyote Creek/Coyote Valley



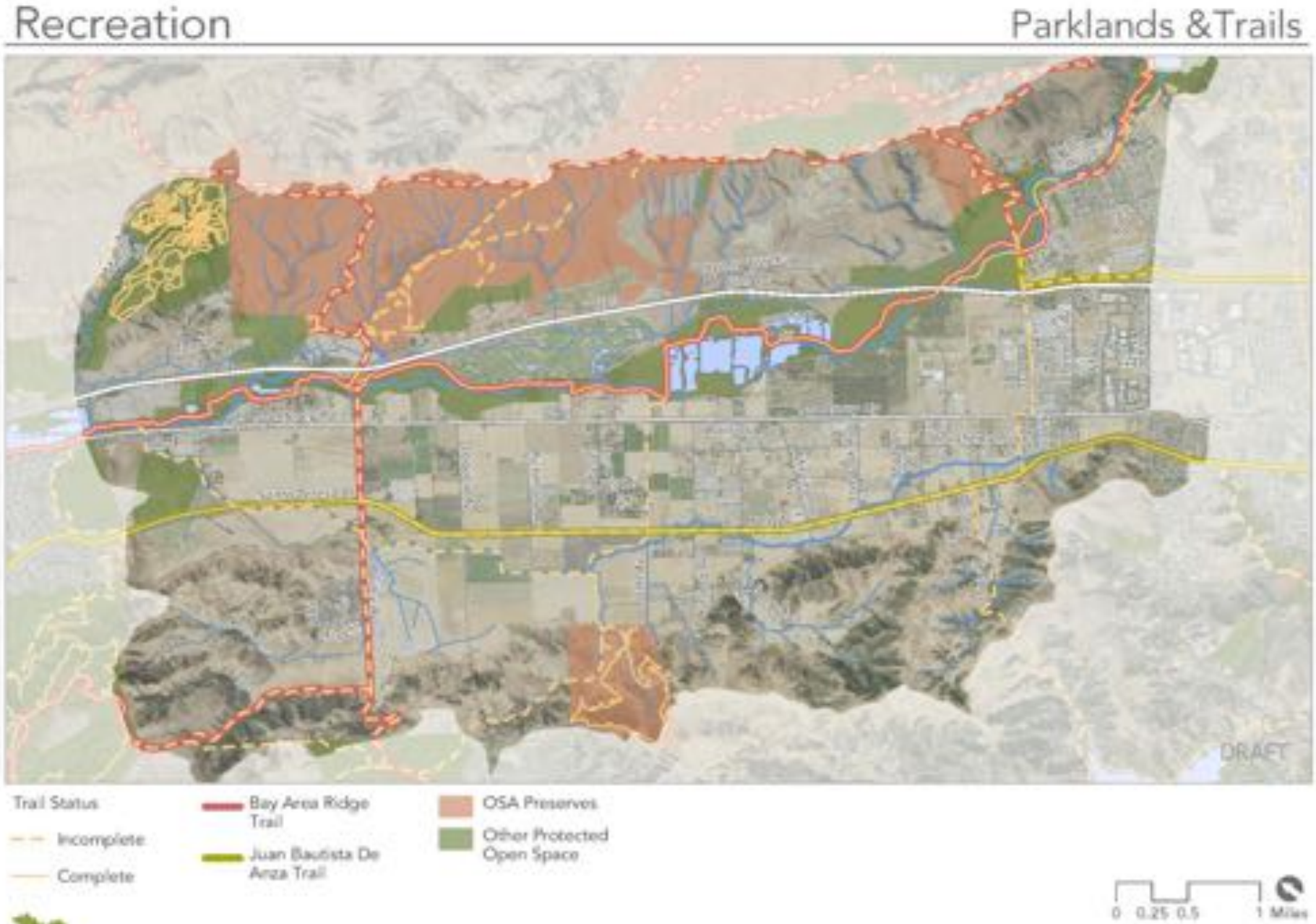
Upper Coyote Creek/Coyote Valley

Biodiversity

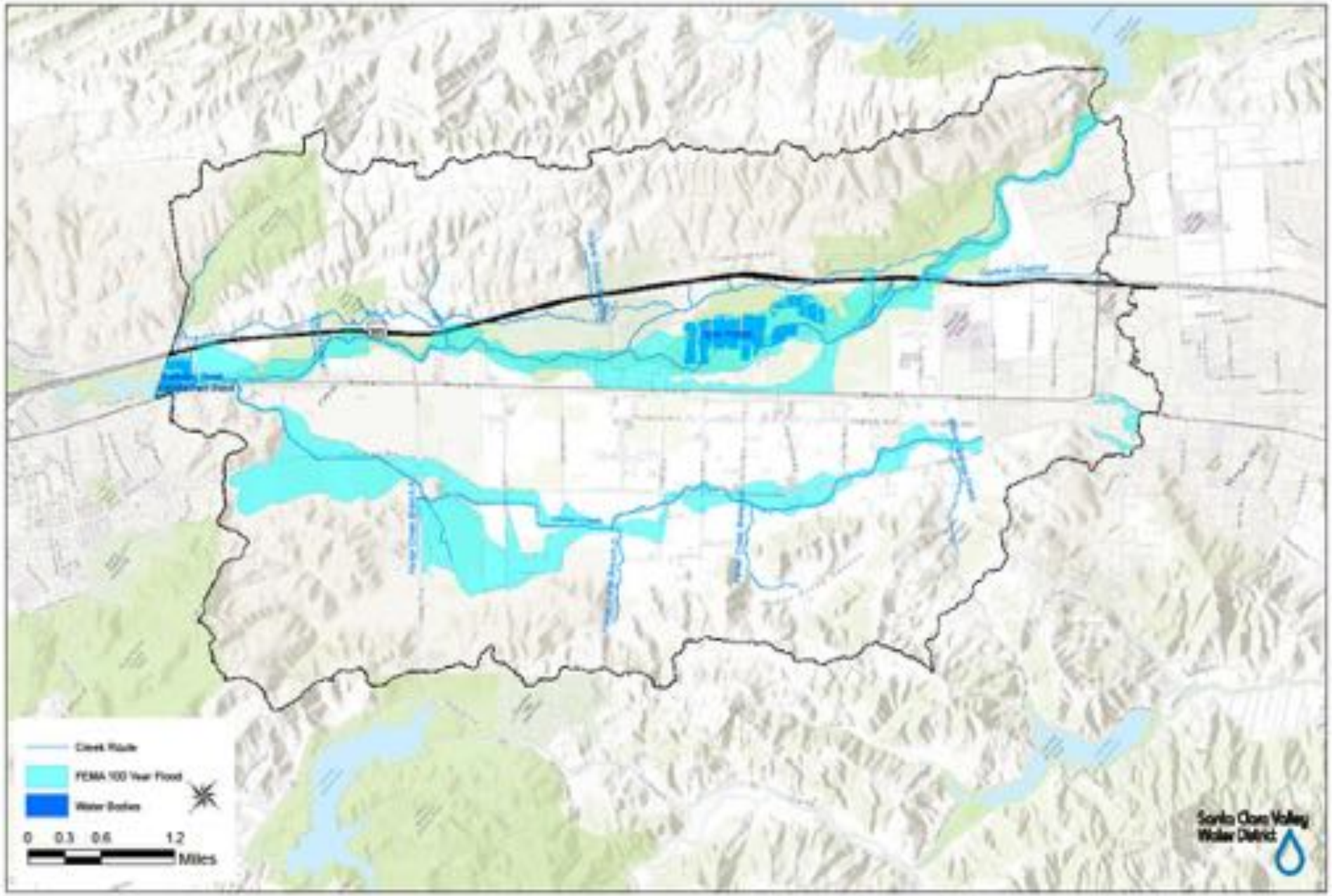
Wildlife Movement



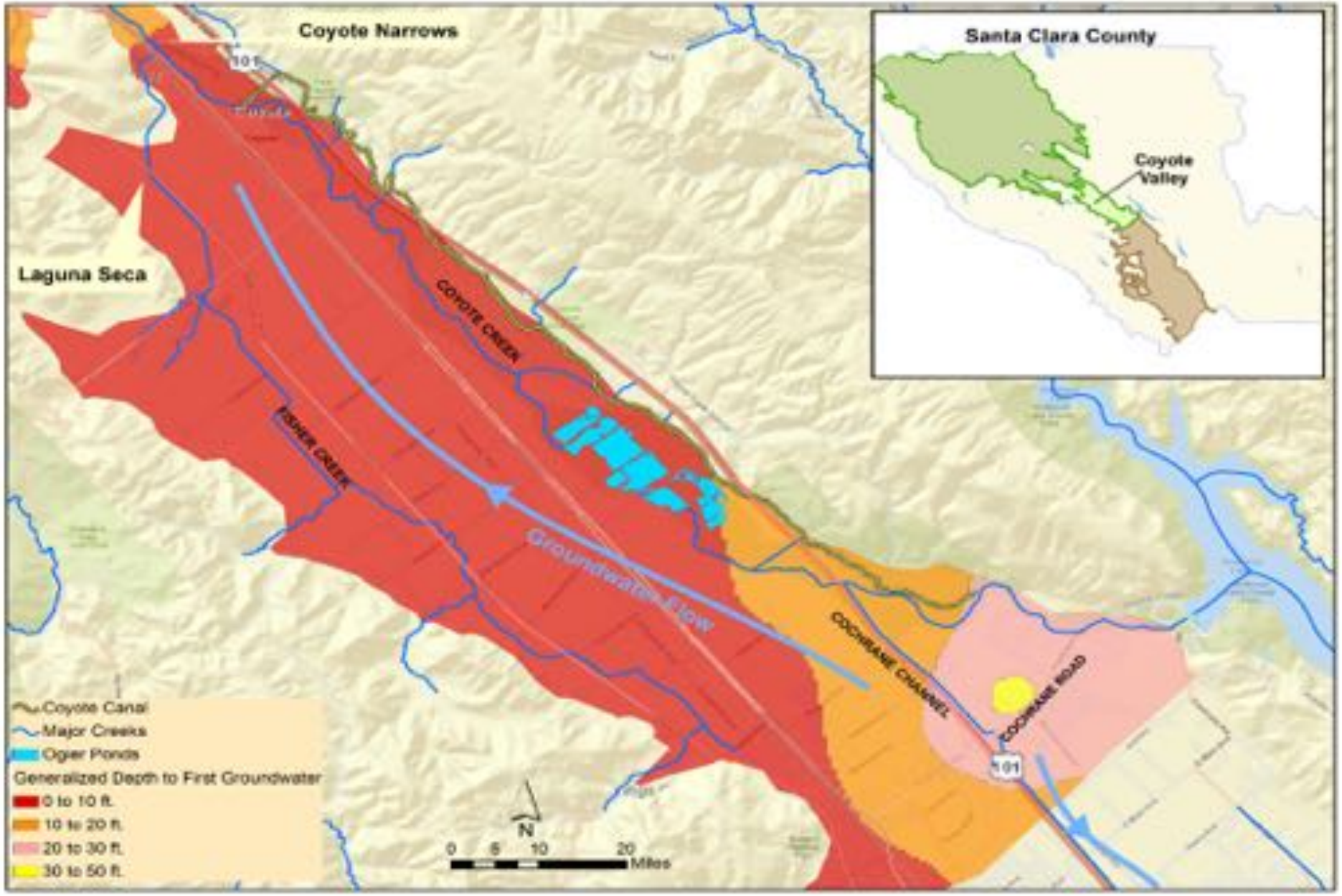
Upper Coyote Creek/Coyote Valley



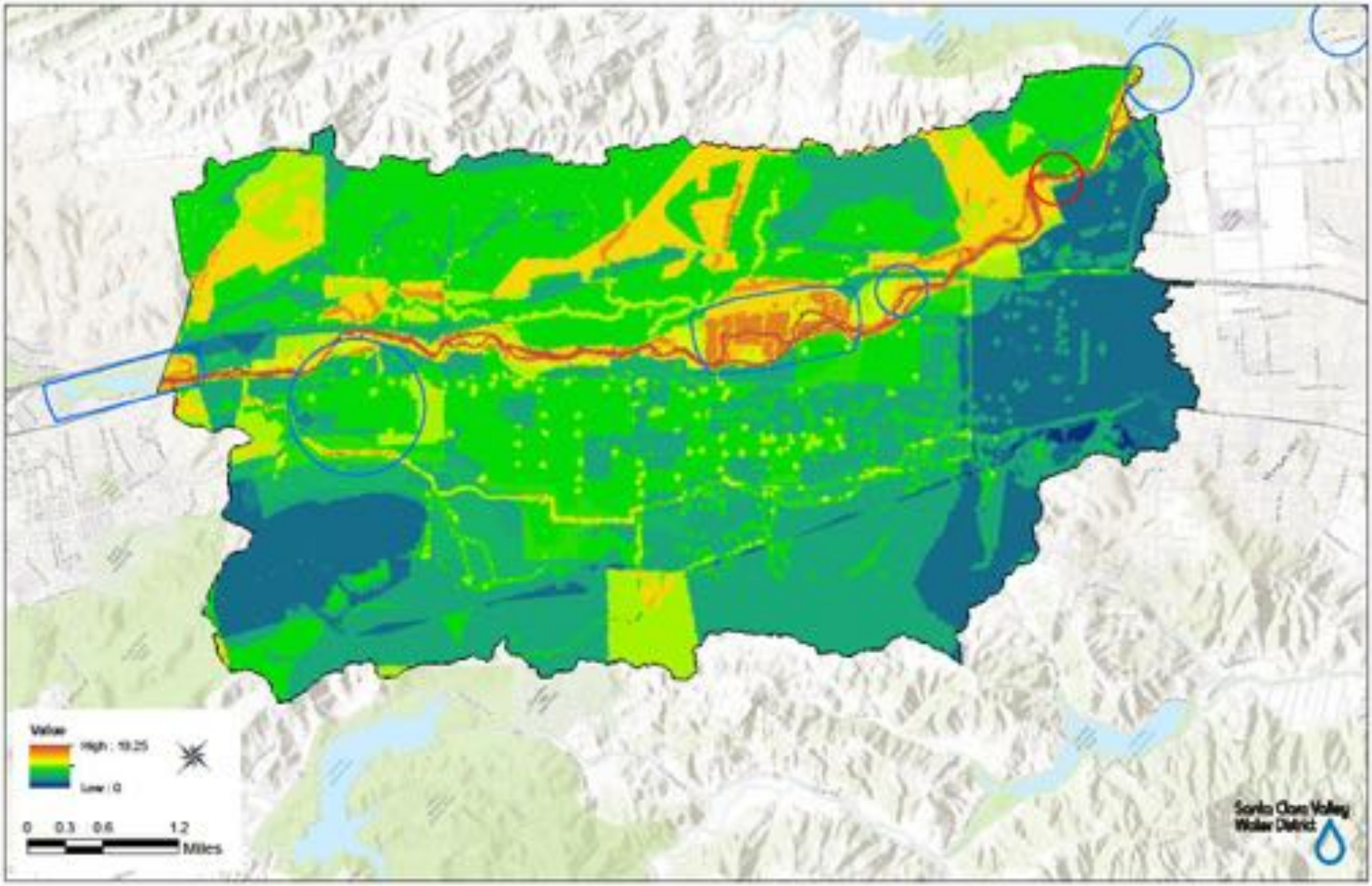
Upper Coyote Creek/Coyote Valley



Upper Coyote Creek/Coyote Valley



Coyote Valley Opportunities



Coyote Valley – Relevant Regional Efforts

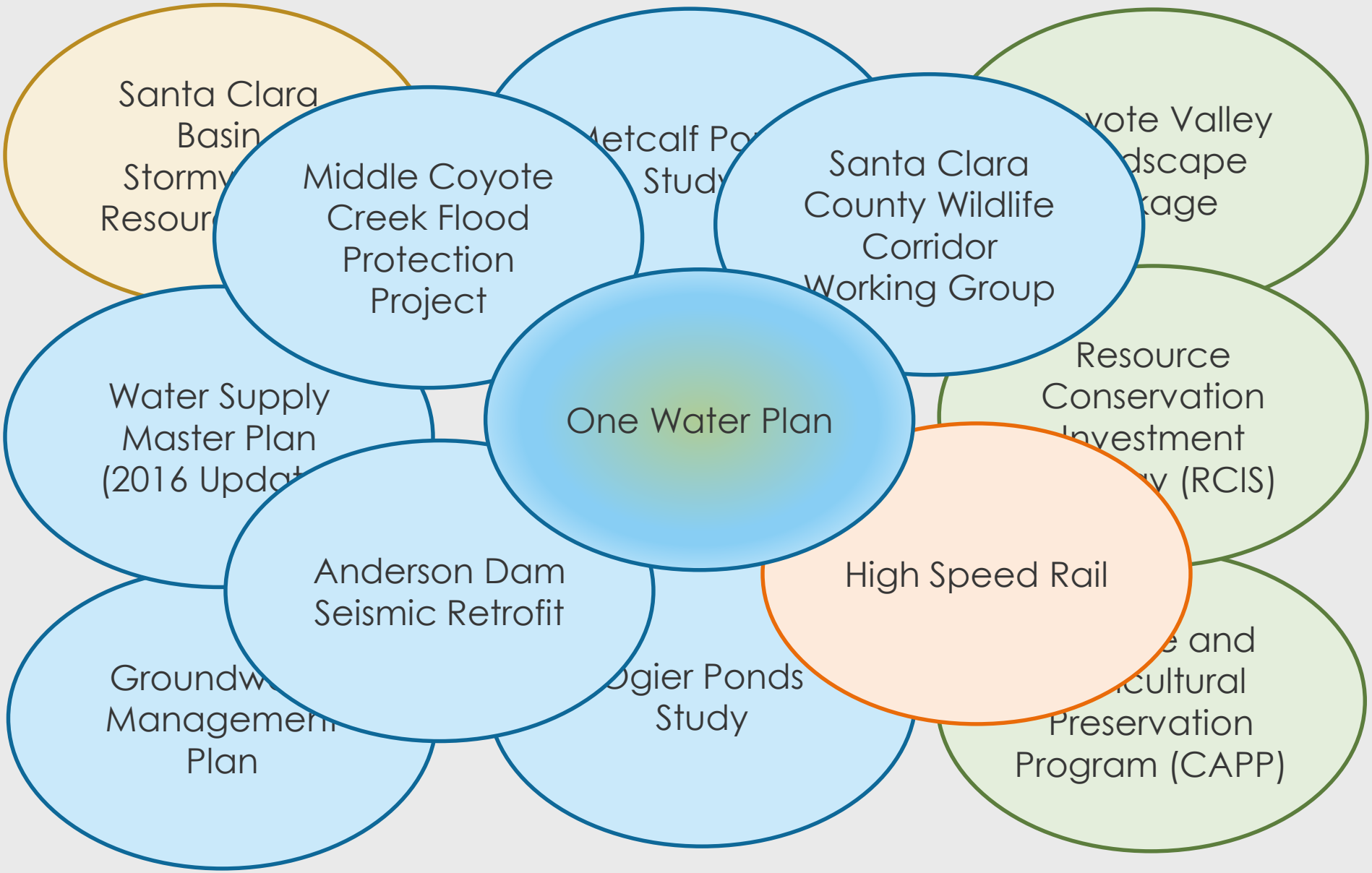


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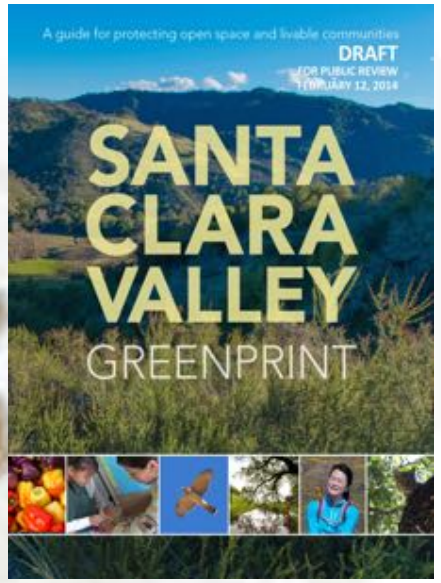
Figure 13: Conservation Focus Areas



Data sources: CPAD 2013, SCC Parklands Database, FMMP 2010, SCVWD Waterbodies, the Open Space Authority.

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Coyote Valley Landscape Linkage: Conservation for a Resilient Future

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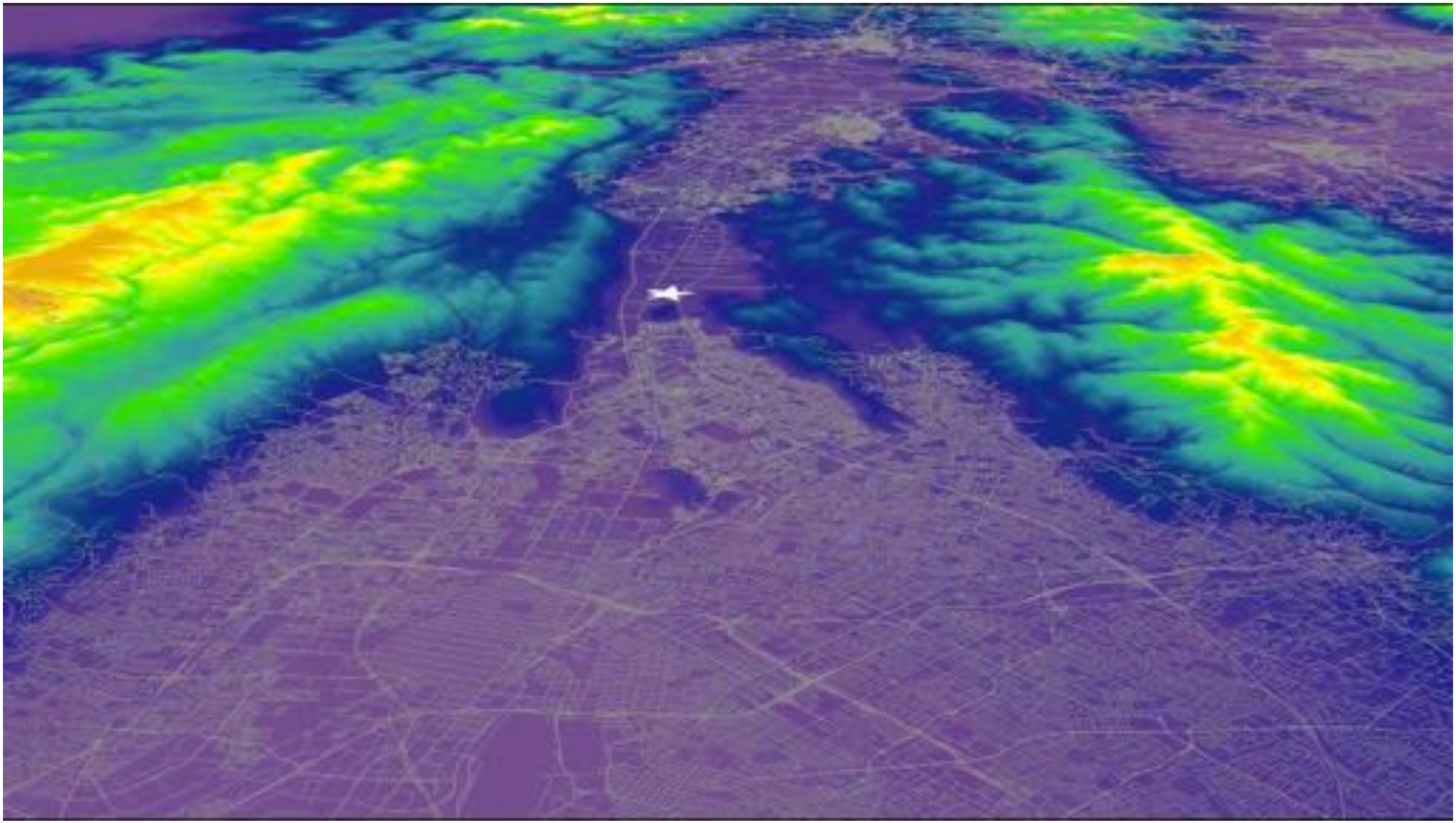
Coyote Valley



Coyote Valley's ROI

- *7,400 acres connect over one million acres of habitat*
- *$3.5 billion of public/private investment*

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Coyote Valley - An Irreplaceable Natural Resource

Laguna Seca

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Research Confirms Wildlife Movement Through Coyote Valley

- De Anza College (2012)
- Coyote Valley Linkage Assessment Study, Pathways (2016)
- Ground Squirrel Genetic Research and Occupancy Modeling, Morgan Gray, UC Berkeley (2017)
- Burrowing owl (2017, in progress)
- Tri-colored Blackbird (2017, in progress)
- Bobcat and Gray Fox Radio-collar Study (2017, in progress)

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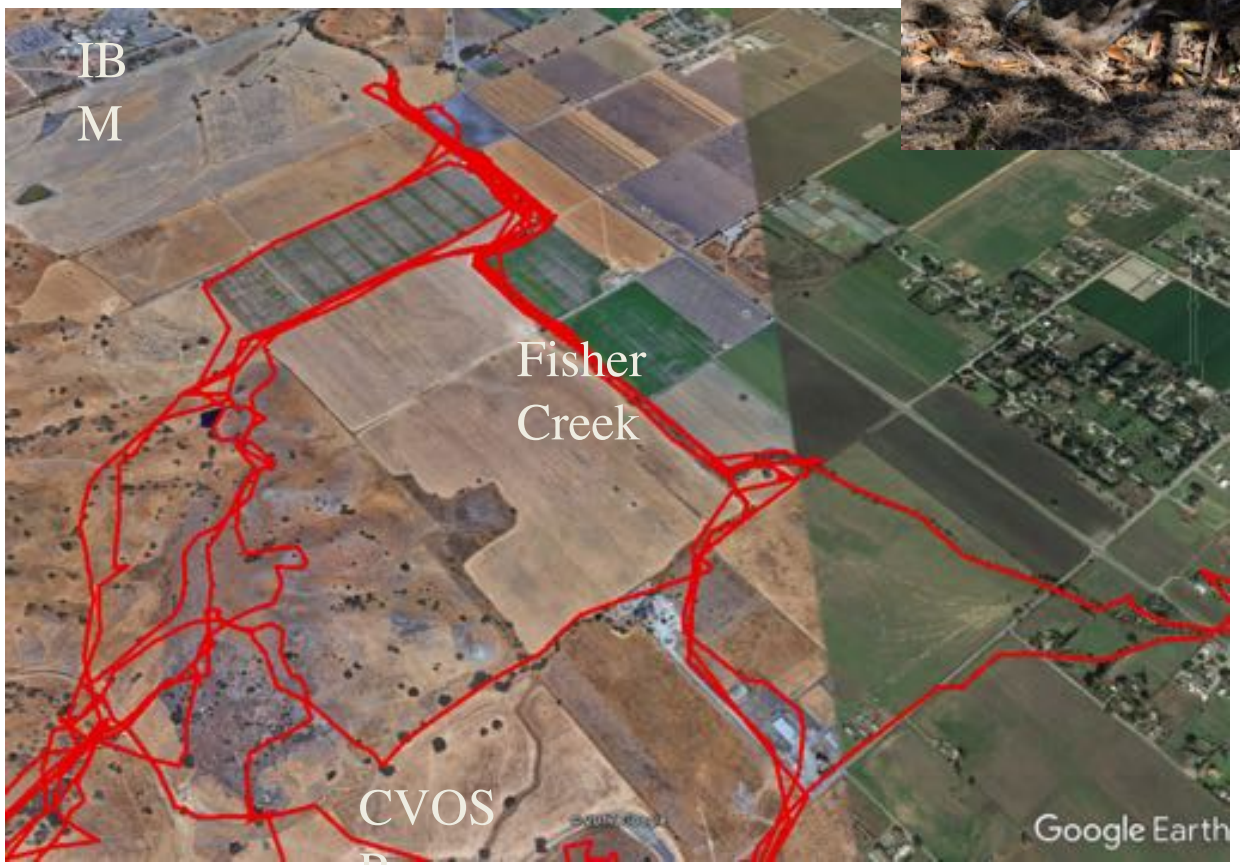
Bobcat B-08 “Madrone” Travels Through Coyote Valley



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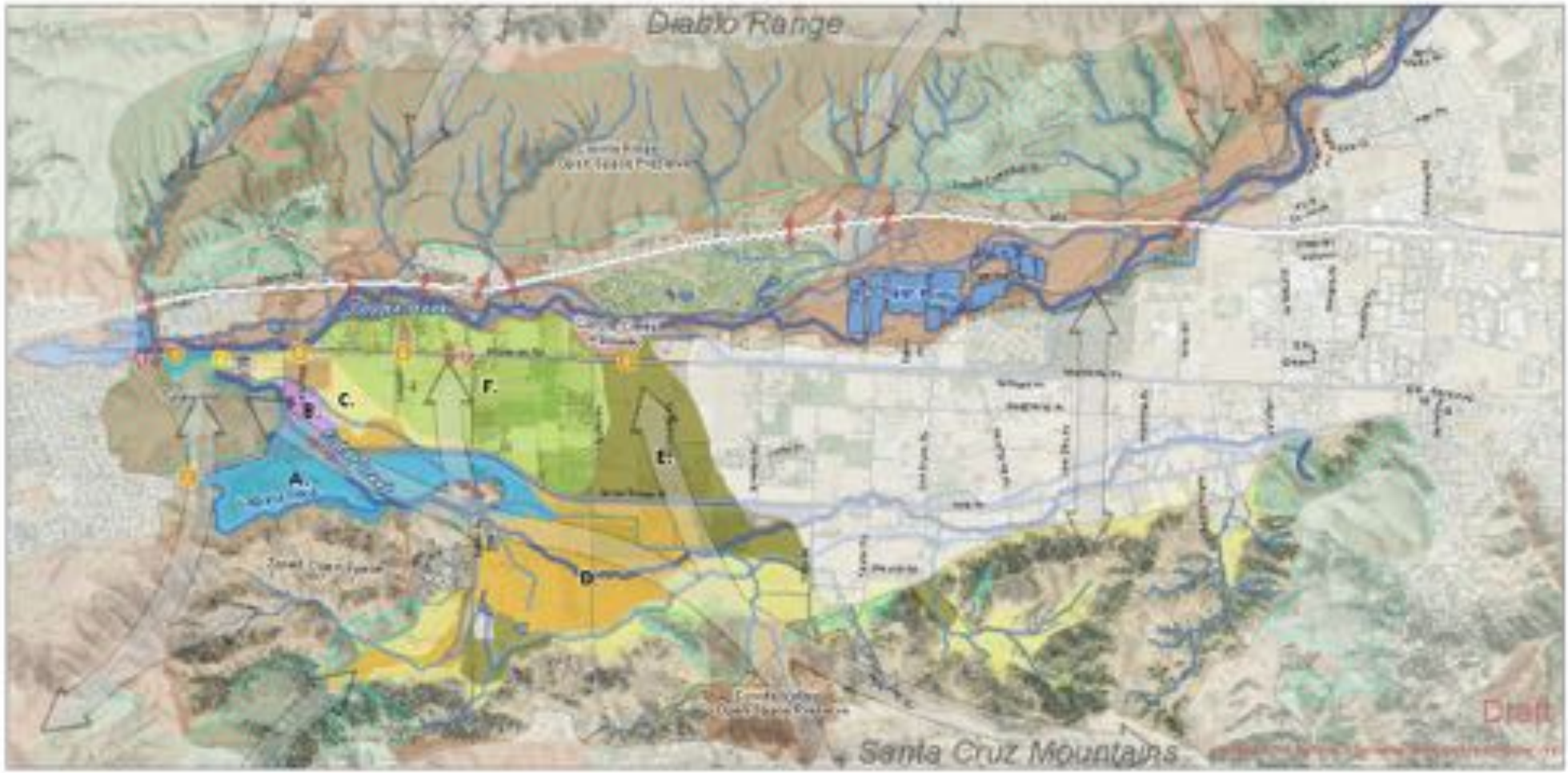
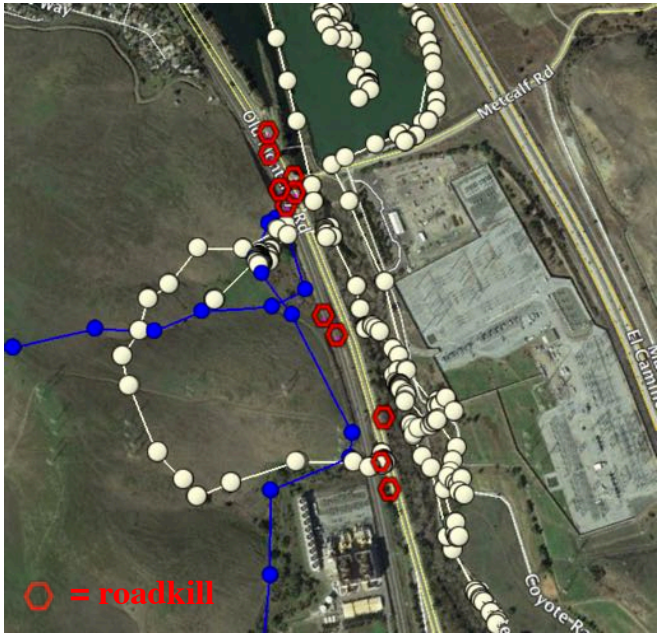
Coyote Valley: Landscape Linkage Vision



Landscape Linkage Recommendations

- Work with willing landowners and local government to conserve areas identified as essential for conservation
- Improve existing infrastructure (culverts) and remove barriers to movement (Monterey Highway median and fencing)
- Coordinate with transportation and wildlife agencies to plan, design, implement additional wildlife under and overcrossings (HSR)

Major Barriers – Monterey Highway



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Landscape Linkage Recommendations

- Integrate Coyote Valley's water resources and floodplain benefits into the SCVWD OneWater Plan and resiliency planning for City of San Jose
- Secure public and private funding for model restoration projects
- Create a 21st Century Greenbelt with multiple community benefits: Placemaking, compatible agriculture and public trails system

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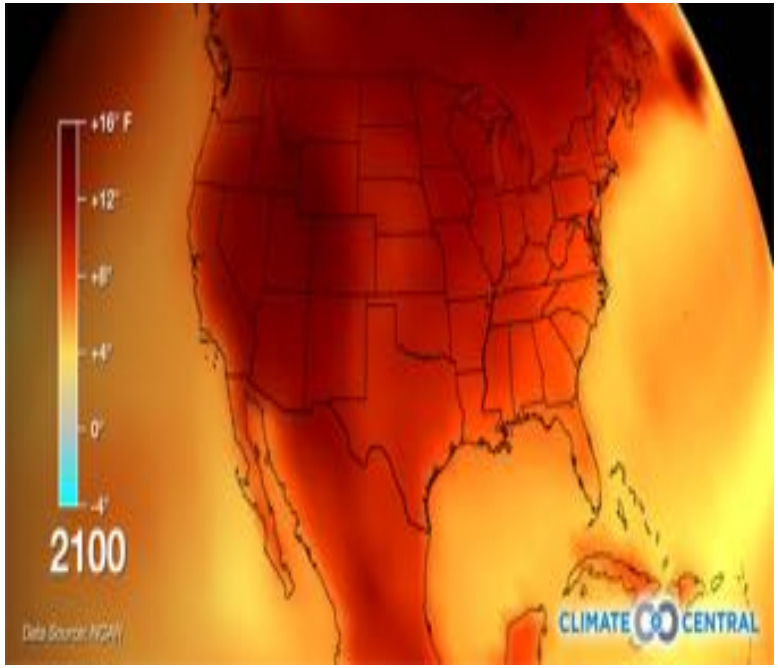
A Green Infrastructure Vision for Coyote Valley: Helping Nature and Humans Adapt to a Changing Climate

- Biodiversity and Plant and Animal Migration
- Stormwater Capture
- Groundwater Recharge
- Groundwater Quality
- Flood Risk Reduction
- Carbon Sequestration
- Food Security
- Climate Stability and Resilience



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