



# Central Coast Climate Collaborative

Water Panel

August 23, 2017

*Lynn Rodriguez  
Watersheds Coalition of Ventura County*

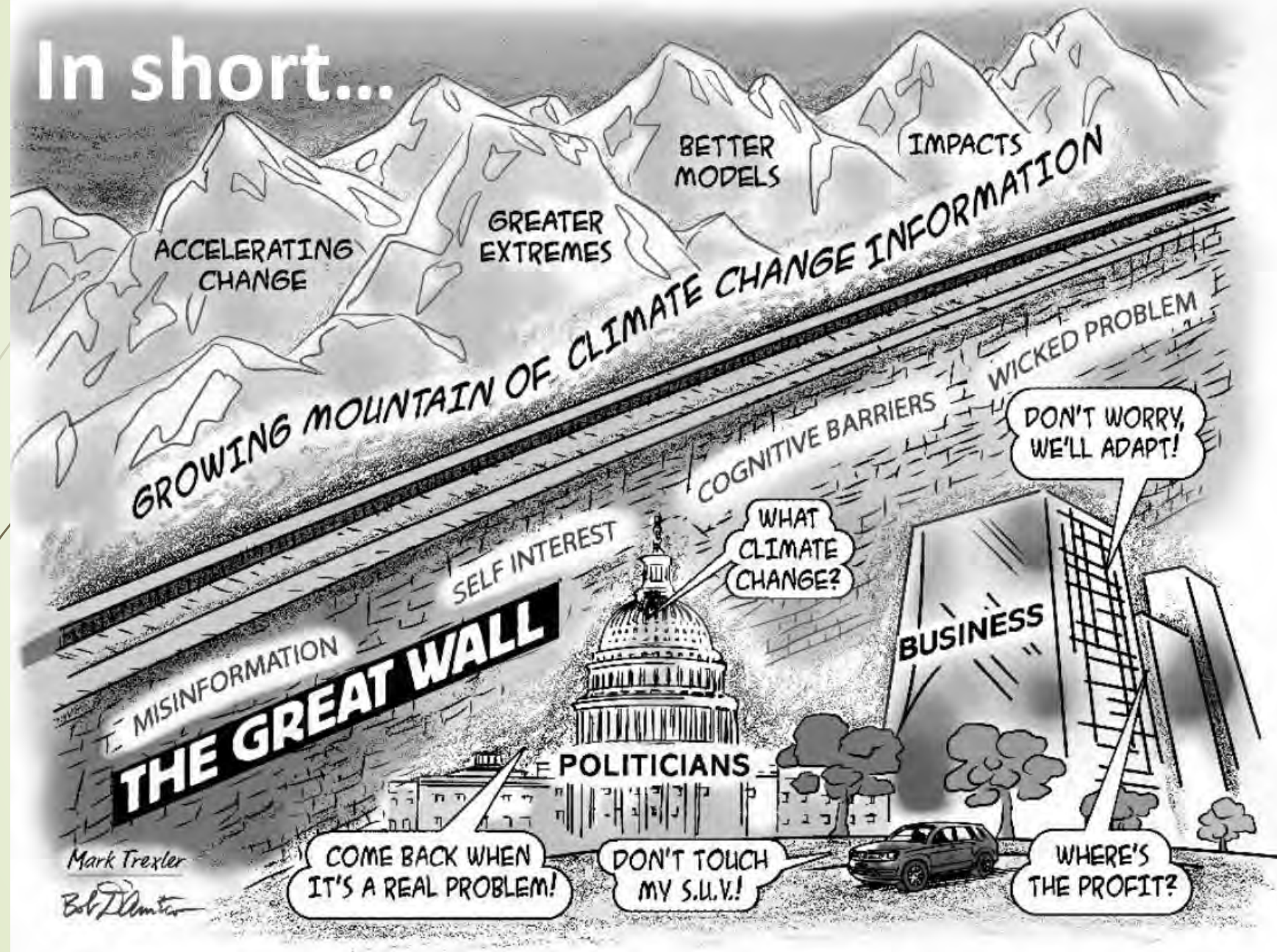


# Topics




- Climate change vulnerabilities and impacts on water resources
- Integrated Regional Water Management (IRWM)
- Watersheds Coalition of Ventura County IRWM Program
- Example project
- Collaboration among IRWM regions on Central Coast

In short...







“The past five years have painted a clear picture of what is in store for California, according to numerous scientific studies that underpin the new assessment: Rising temperatures will bring more frequent and severe hot spells, intensifying heat stress; more precipitation will fall as rain rather than snow, increasing storm water runoff; snow that does fall will melt earlier in the year, leaving less for the warm, dry season; and more moisture will be drawn out of soils and vegetation, increasing stress on crops and ecosystems. All of this will lead to more frequent and severe water deficits, punctuated by wet periods with increasing flood risk.”

*Noah S. Diffenbaugh, professor of earth system science at Stanford University from New York Times, August 17, 2017*

# Characterizing Impacts

## Direct Impacts

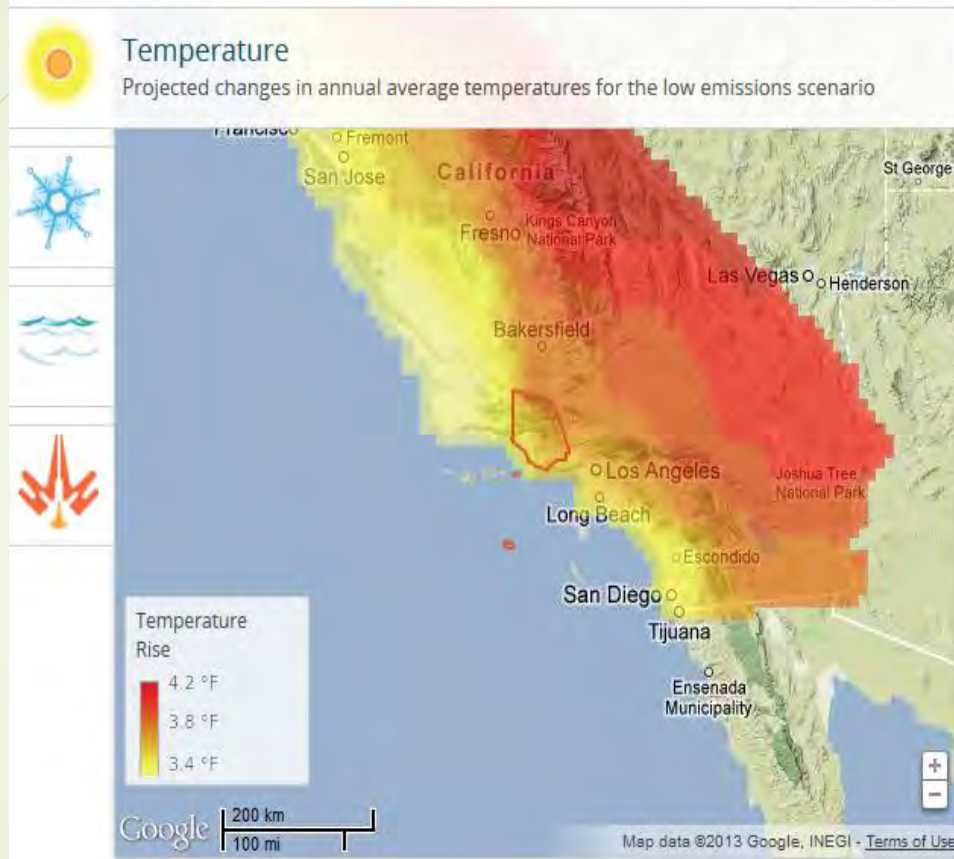
- Sea Level Rise
- Changed precipitation pattern
  - Flooding
  - Drought
  - Intense Rainfall events
- Changed temperature profile
  - Extreme heat
  - Shift in seasons

## Indirect Impacts

- Wildfire
- Landslide
- Species migration
- Erosion
- Human health
- Economy
- Safety
- Infrastructure
- Ecosystem health



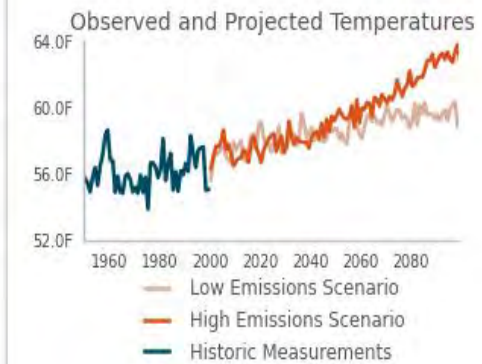
Source: CIG, 2007; CNRA, 2009 – From Cal Poly Workshop: Dr. Michael Boswell, AICP and Dr. Adrienne Greve



### VENTURA COUNTY

The information in the chart below corresponds to the selected area on the map (outlined in orange).

Historical Average	55.9 °F
Low-Emissions Scenario:	59.6 °F <b>+3.7 °F</b>
High-Emissions Scenario:	62.1 °F <b>+6.3 °F</b>



[disclaimer](#)



# Tools



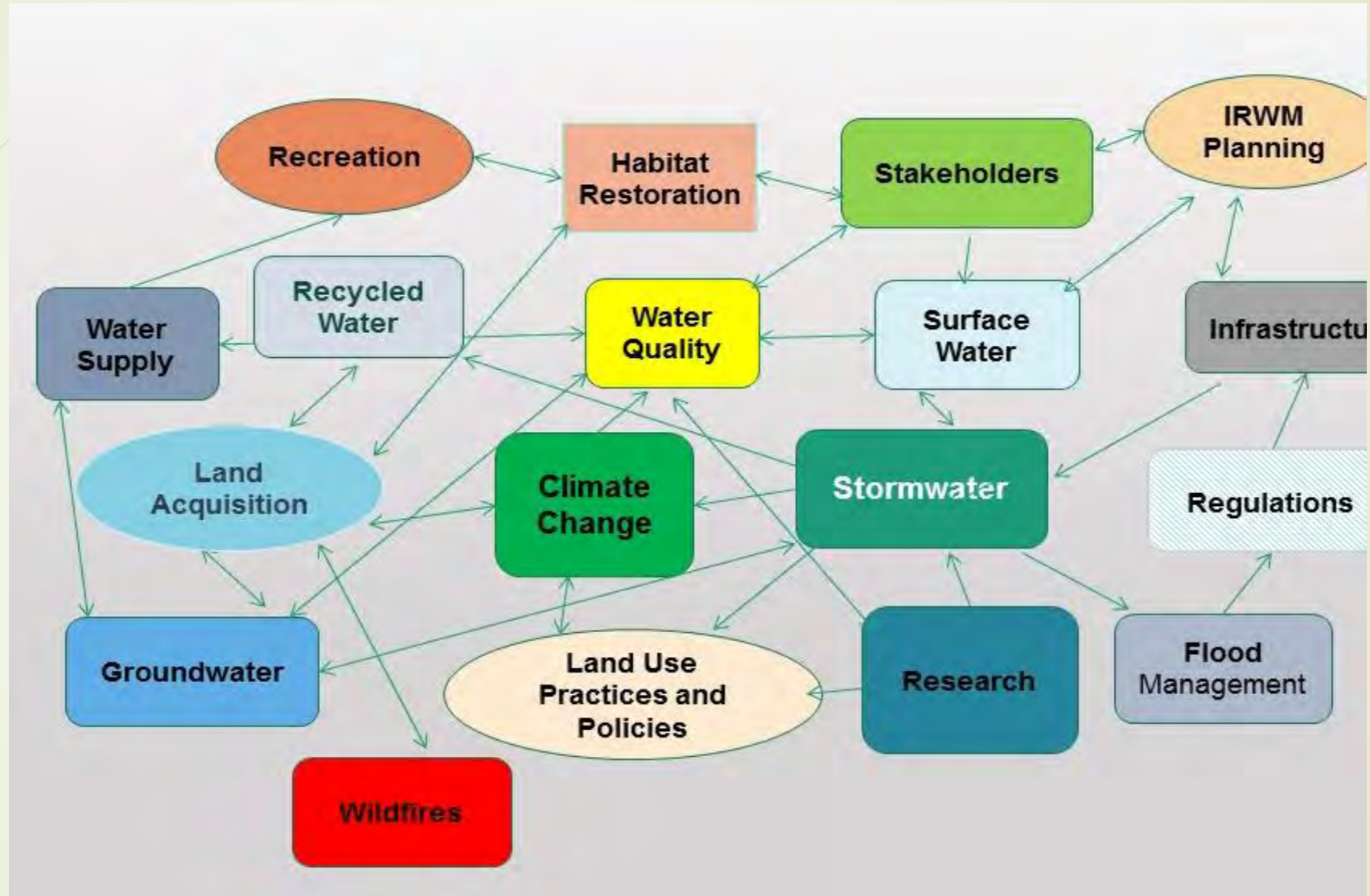
- 4<sup>th</sup> Climate Assessment
- CoSMoS Model – USGS
- Coastal Resilience Model – The Nature Conservancy
- General Plans and Local Coastal Plans
- IRWM Plans
- Watershed Management Plans
- Project location and design
- Best management practices
- Sustainable groundwater management plans
- Grants – including DACI Program under Prop. 1

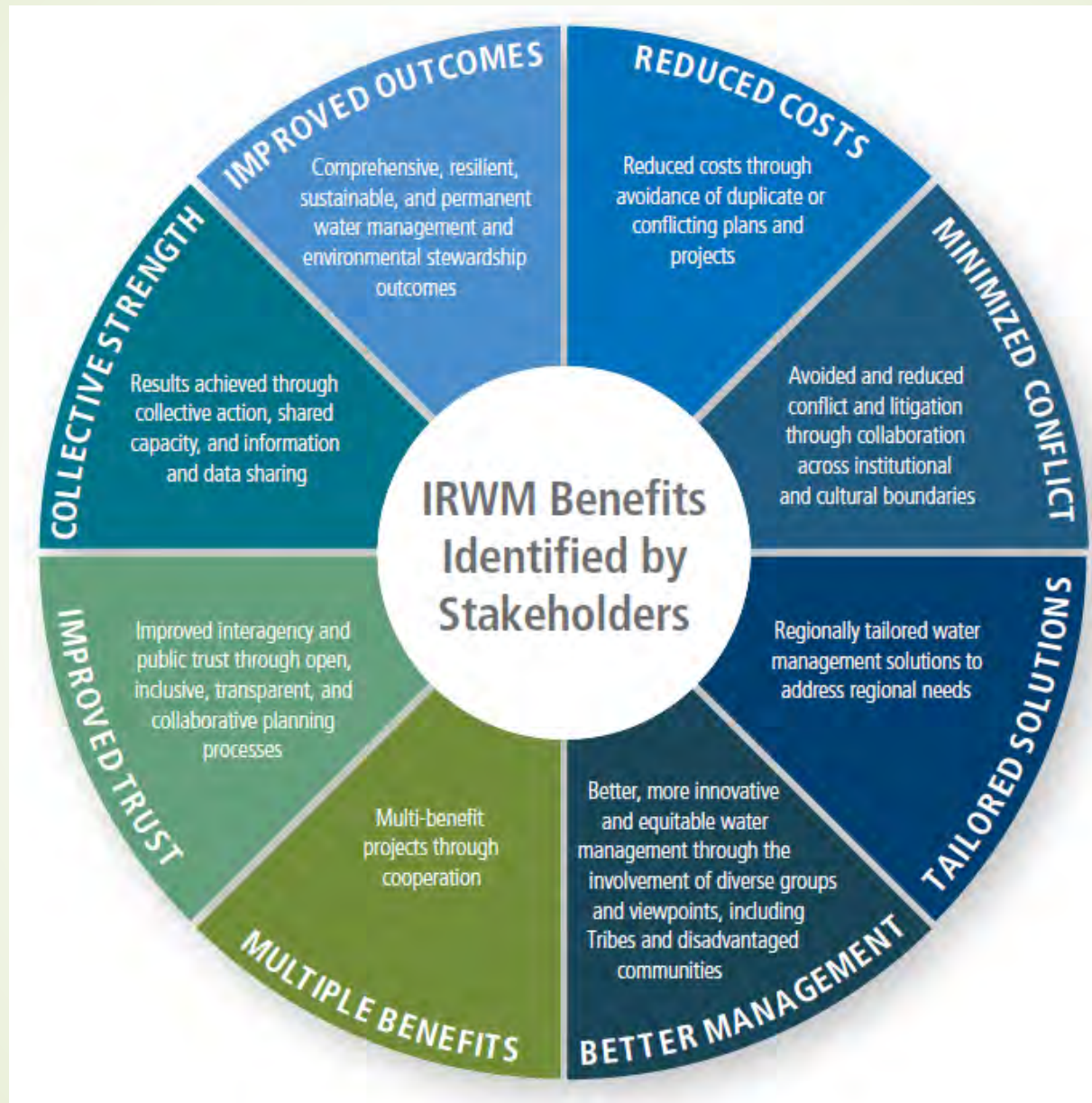


# Integrated Regional Water Management

- Paradigm in water management –focused on collaboration, integration and multiple benefits
- Diverse interests coming together in IRWM Regions
- Grant program approved by voters (Props. 50, 84, 1)
- Long-range planning approach









# Benefits of IRWM

- Access to IRWM Grants, and other, funding
- Vehicle for ongoing decision-making and allocation of grant resources
- Identification of water-related priorities, needs, goals, and potential solutions
- An inclusive/participatory public involvement process
- Watershed-scale planning and implementation
- Long-term perspective
- Phased implementation and conjunctive use of resources; adaptive management
- Integration and coordination among local, state and federal agencies





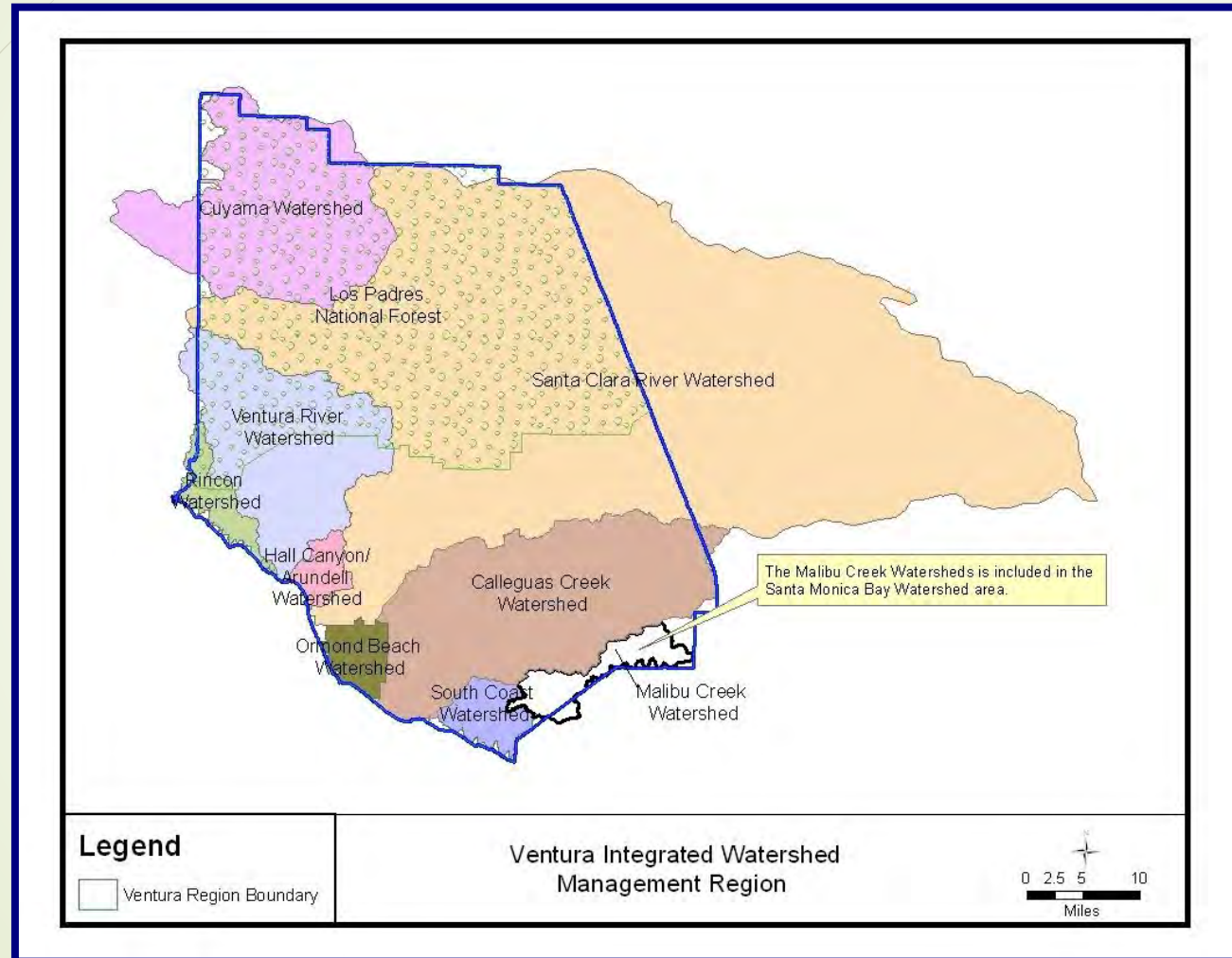
# California Water Action Plan – 10 Actions

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- Make Conservation a California Way of Life
  - Increase Regional Self-Reliance and Integrated Water Management Across All Levels of Government
  - Achieve the Co-Equal Goals for the Delta
  - Protect and Restore Important Ecosystems
  - Manage and Prepare for Dry Periods
  - Expand Water Storage Capacity and Improve Groundwater Management
  - Provide Safe Water for All Communities
  - Increase Flood Protection
  - Increase Operational and Regulatory Efficiency
  - Identify Sustainable and Integrated Financing Opportunities





# Watersheds Coalition of Ventura County



# IRWM Plan Goals

## GOALS

- Reduce dependence on imported water and protect, conserve and augment water supplies
- Protect and improve water quality
- Protect people, property and the environment from adverse flooding impacts
- Protect and restore habitat and ecosystems in watersheds
- Provide water-related recreational, public access, stewardship, engagement and educational opportunities
- Prepare for and adapt to climate change

## PLAN





# Stakeholder Participation



- County of Ventura
- Cities
- Wholesale Water Agencies
- Sanitation Districts
- Water Purveyors
- Native American Tribes
- Flood management entities
- State and Federal Agencies
- Environmental Groups
- Other Non-Profits
- Resource Conservation District
- Land use planners
- Farm Bureau
- Other Special Districts



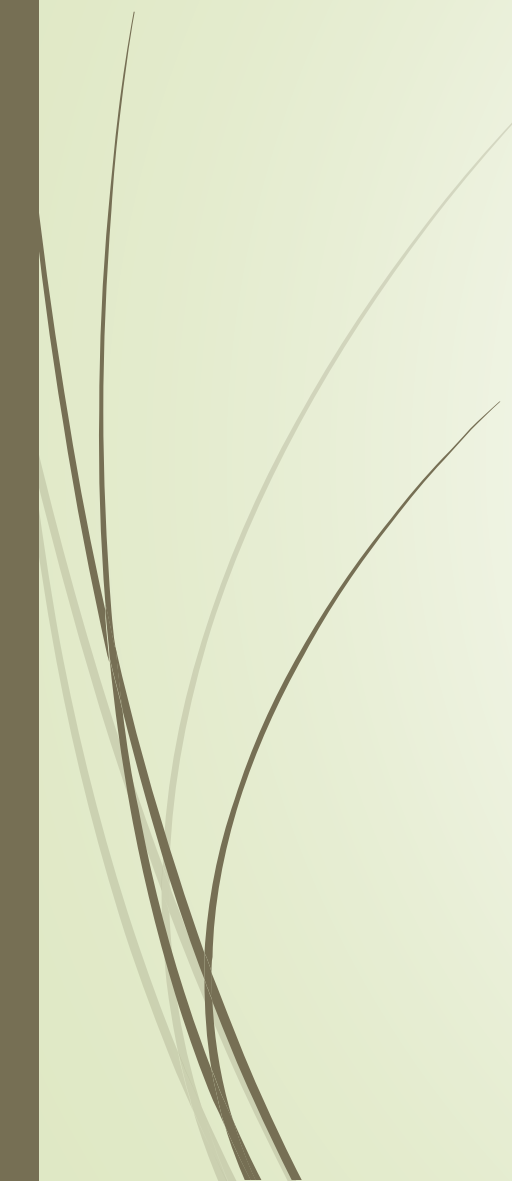
# Types of Projects

- ◆ Groundwater Recharge
- ◆ Septic-To-Sewer Conversion
- ◆ Wastewater Treatment Plant Upgrades/Recycled Water
- ◆ Invasive Species (Arundo) Removal
- ◆ Regional Landscape and Agricultural Efficiency
- ◆ Natural floodplain management and protection
- ◆ Turf replacement/conservation
- ◆ Flood protection
- ◆ Groundwater management
- ◆ Water quality improvement





# Adaptation and Mitigation Considerations for Water-Related Projects

- Energy use – (i.e. Green House Gas Emissions)
  - Project location – avoiding sea level rise inundation or flood-prone areas, and urban/wildland interface
  - Impact on habitat areas
  - Impact on local water demand
  - Flood hazard risk
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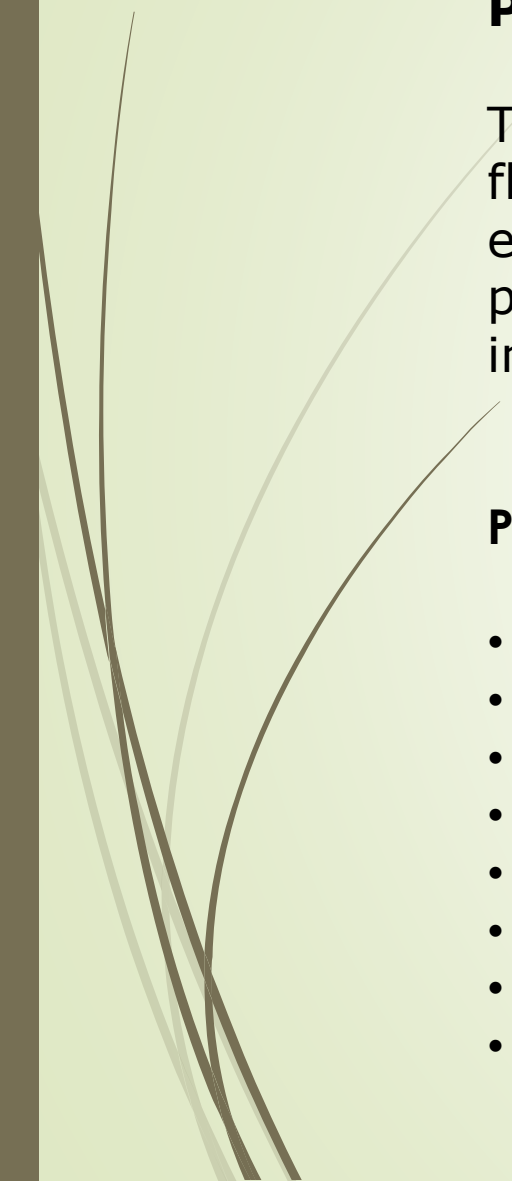


# Santa Clara River Natural Floodplain Protection Project

## **Project Goal:**

To preserve a critical section of the remaining undeveloped 500-year floodplain in the Santa Clara River Watershed by acquiring property easements to preclude development. Acquisition of these easements will provide downstream flood benefits by allowing flooding to occur upstream in the watershed.

## **Project Benefits:**

- Climate change adaptation
  - Effective flood control
  - Cost savings
  - Direct benefits for floodplain landowners
  - Public policy precedent
  - Water quality improvement
  - Groundwater recharge
  - Habitat preservation
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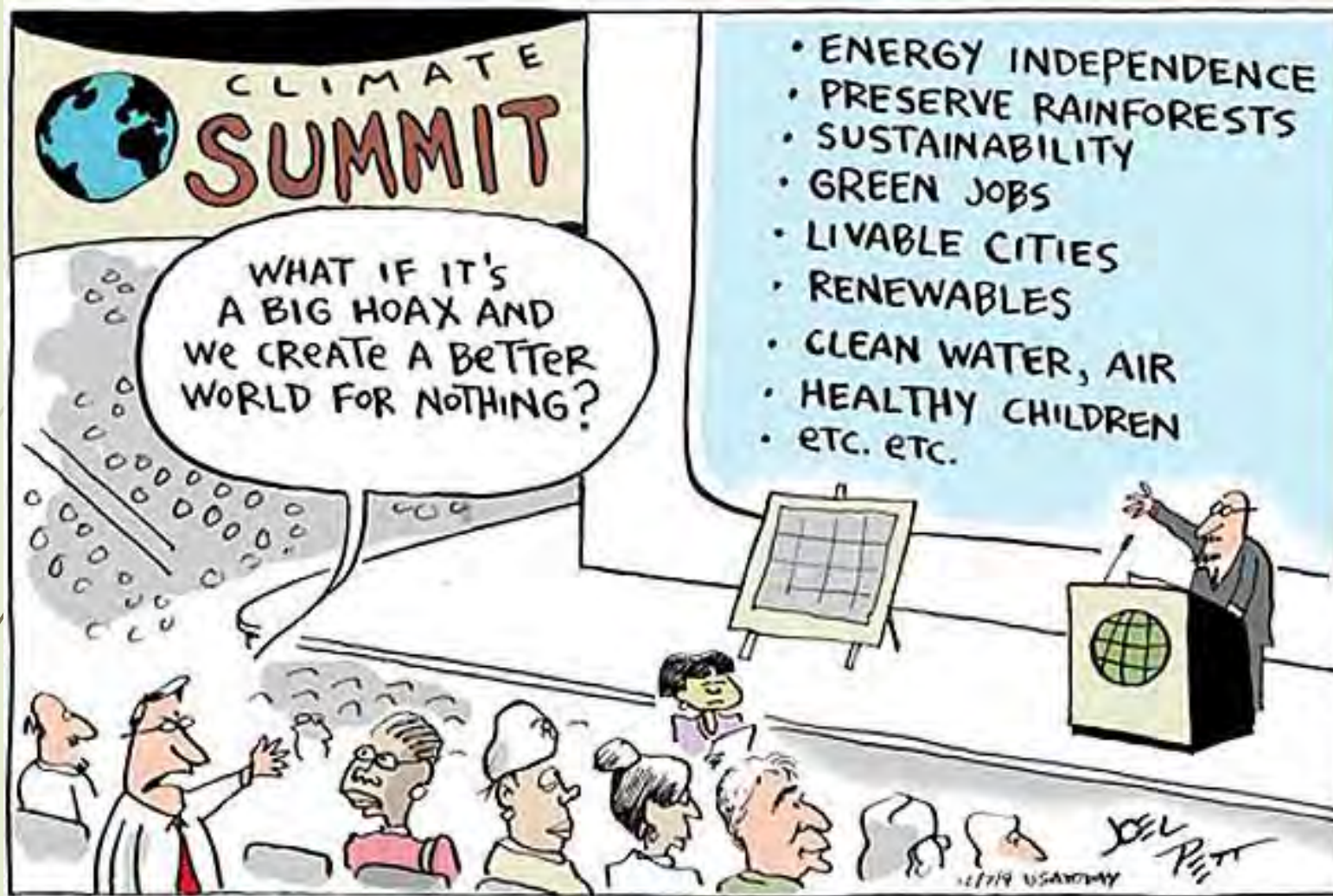






# Collaboration Among Central Coast IRWM Regions and CCCC

- Collaborate to address climate change in IRWM Plan Updates
- Participate in statewide IRWM Roundtable of Regions
- Participate in Sustainable Groundwater Management efforts
- Conduct climate change workshops – networking and information sharing
- Share data and information – through CCCC and other forums, including online
- Jointly implement regional projects
- Educate and inform the public, elected officials and students -share approach and materials





## Contact Info:

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