

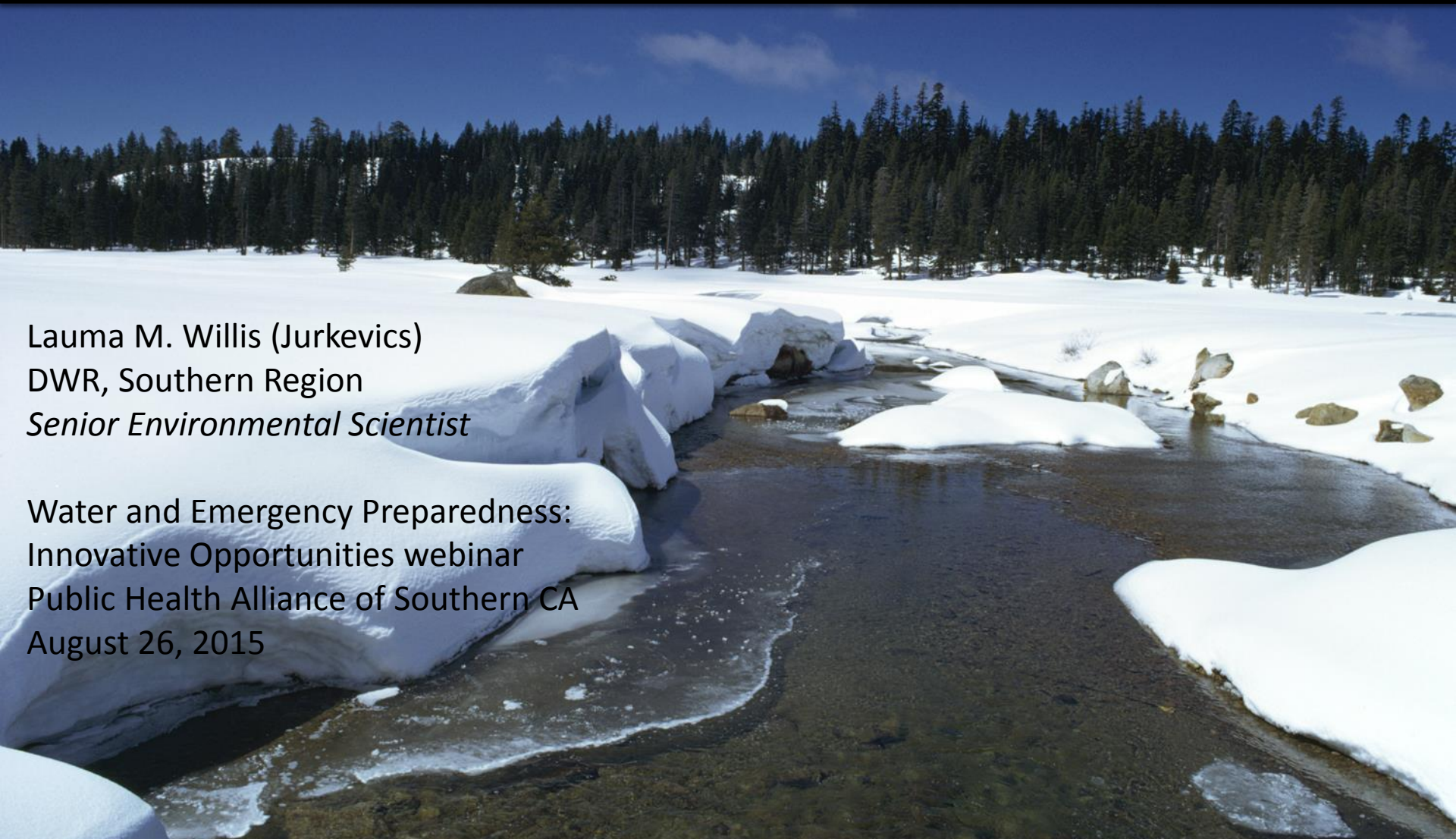


# Climate Change, Water, Public Health

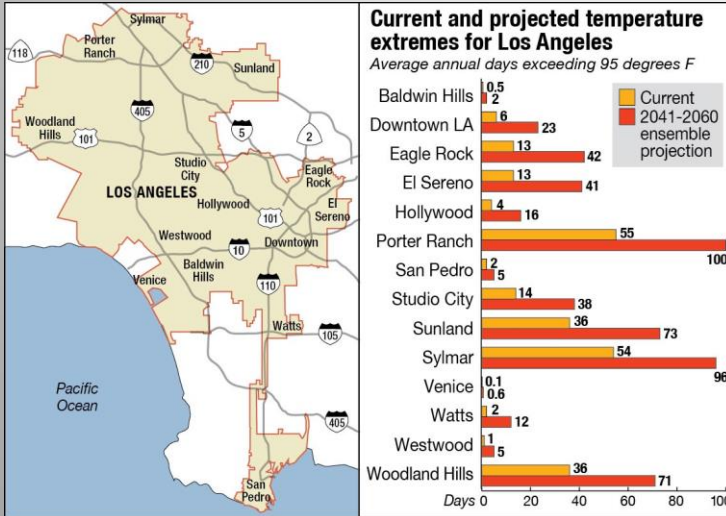
Finding Connections

Lauma M. Willis (Jurkevics)  
DWR, Southern Region  
*Senior Environmental Scientist*

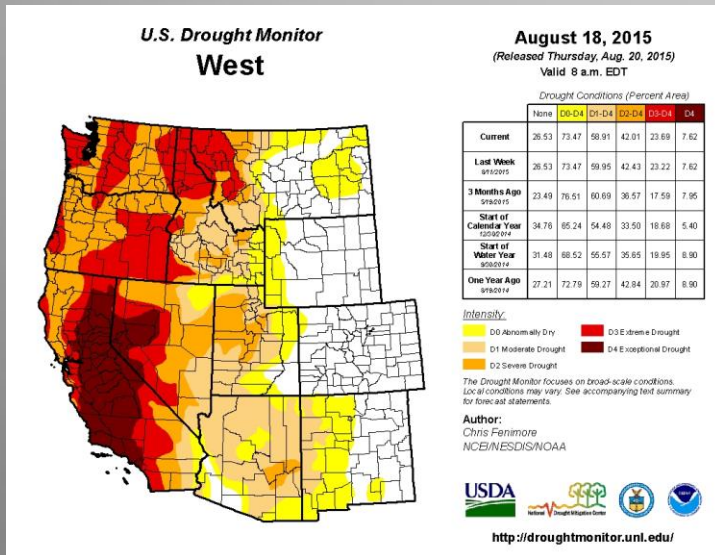
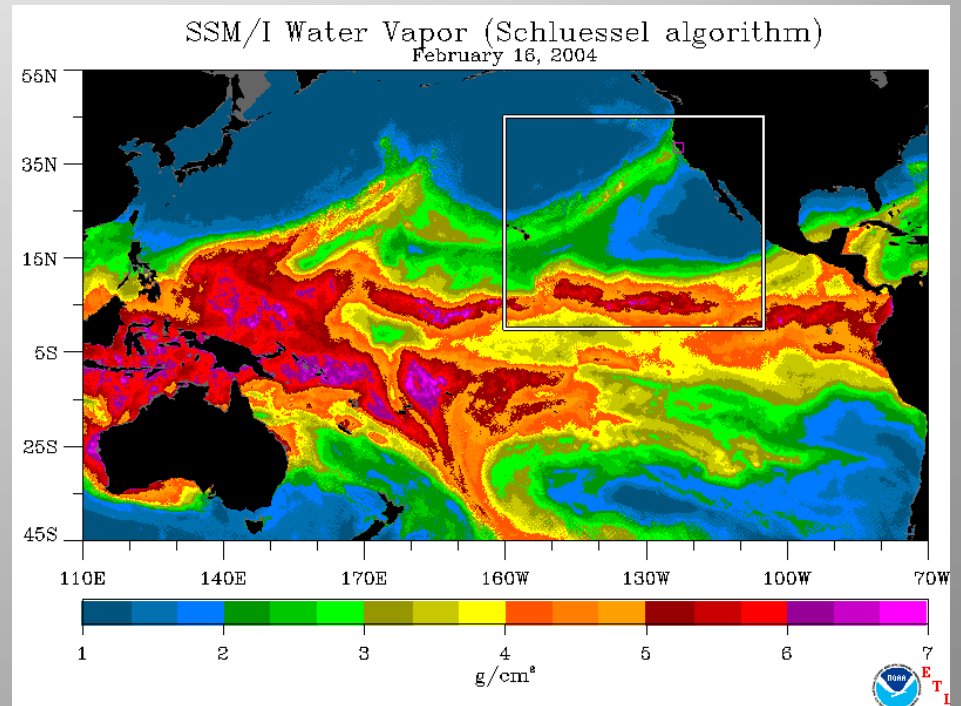
Water and Emergency Preparedness:  
Innovative Opportunities webinar  
Public Health Alliance of Southern CA  
August 26, 2015

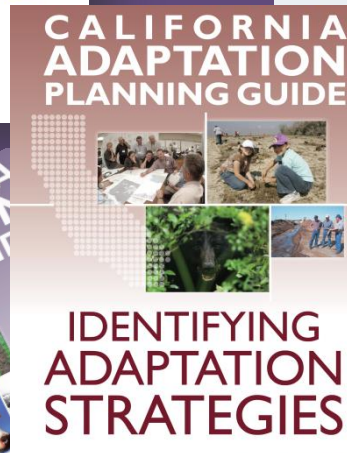
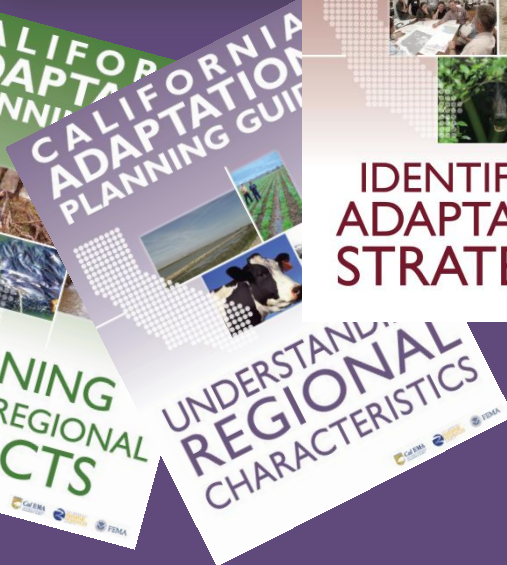
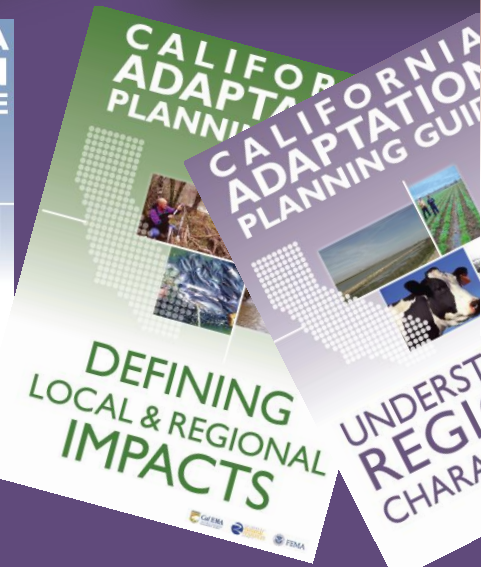
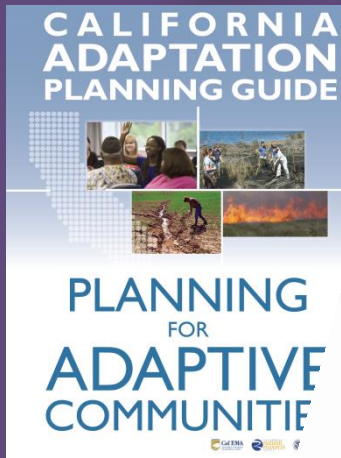
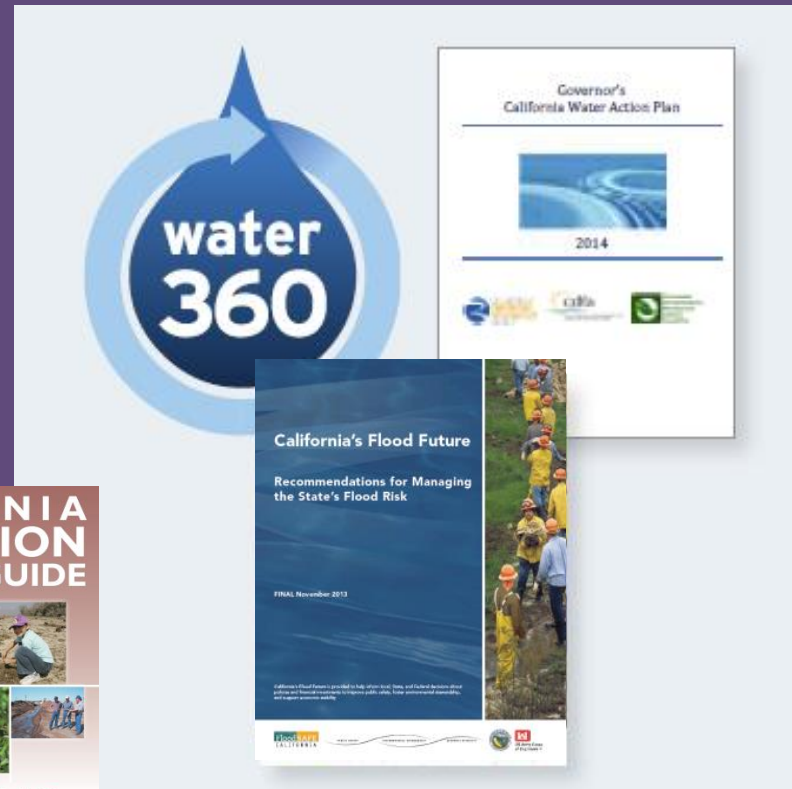
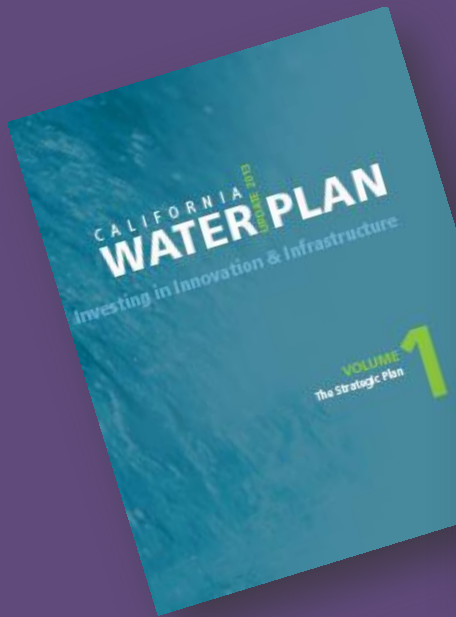


# Experiencing Extremes (heat, drought, rain)



Source: UCLA LARC study, 2012; chart based on the mean/average projected by the 18 climate models





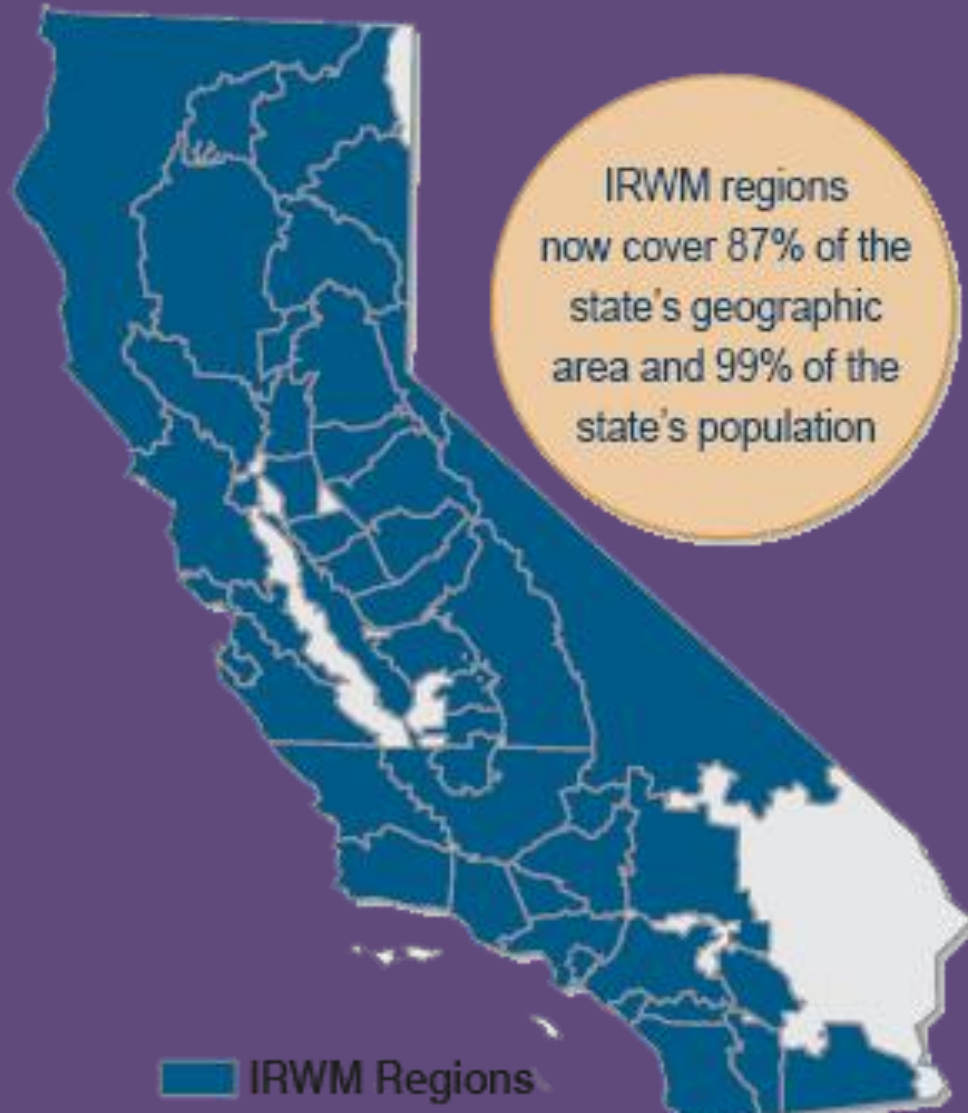
# Legislation – Grant Funding

**Prop 84 (2006): \$5.4 Billion** for Water Quality, Safety and Supply; Flood Control; Natural Resource Protection; Park Improvements. Includes reducing urban communities' contribution to global warming and increasing their adaptability to climate change. **\$580 million** specifically for sustainability and climate change.

**Prop 1 (2014): \$7.1 Billion** in bonds for water infrastructure projects, with emphasis on adapting to climate change.

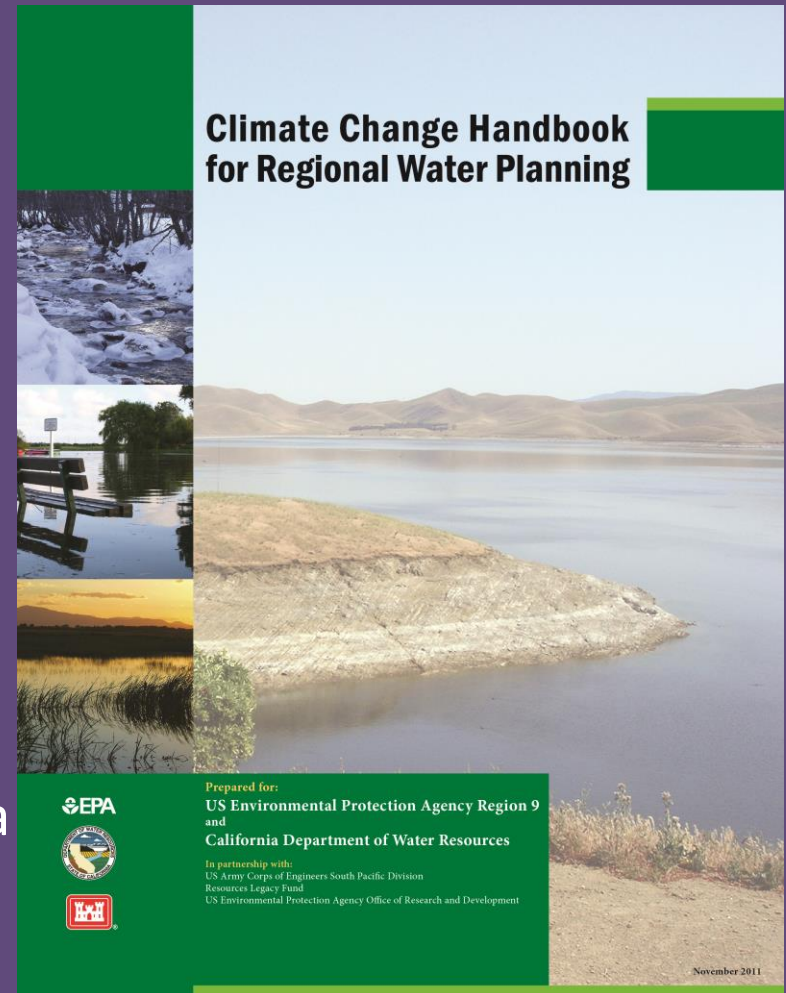


# Integrated Regional Water Management (IRWM)



# Integrated Regional Water Management (IRWM)

- Outline the general process for accounting for climate change in water planning
- Synthesize available literature in a way that is useful for regional water planning
- Support IRWM planning in California



# Climate Change Analysis

## Climate Change Analysis

Assess Vulnerability

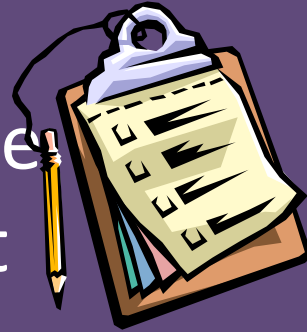
Measure Impacts

Evaluate Strategies  
(including adaptation and mitigation)

Implement Under Uncertainty

# IRWM Plans Must Include:

- a regional climate change vulnerability assessment
- a list of prioritized vulnerabilities
- a plan for data gathering/analyzing the prioritized vulnerabilities



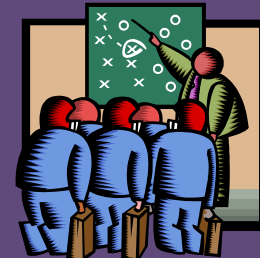
1.



2.



3.



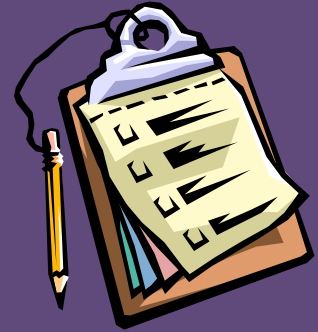


# Regional Vulnerability Assessment

## Chapter 4

Provides several methods for assessing a region's specific vulnerabilities to climate change.

- An extensive checklist of qualitative metrics that highlight vulnerabilities



# Santa Ana River Watershed VA

## OWOW 2.0 IRMW Plan

### Water Quality:

- Are increased wildfires a threat in the Watershed? If so, does the Watershed include reservoirs with fire-susceptible vegetation nearby which could pose a water quality concern from increased erosion?*
  - Increased wildfires are a major risk due to the location of the SARW basin. Cal-Adapt lists the upstream areas of the Santa Ana River as a high risk for fire danger.
  
- Does part of the Watershed rely on surface water bodies with current or recurrent water quality issues related to eutrophication, such as low dissolved oxygen or algal blooms? Are there other water quality constituents potentially exacerbated by climate change?*
  - Warming temperatures will result in lower dissolved oxygen levels in water bodies, which are exacerbated by algal blooms and in turn enhance eutrophication. Changes in stream flows may alter pollutant concentrations in water bodies.
  
- Are seasonal low flows decreasing for some water bodies in the Watershed? If so, are the reduced low flows limiting the water bodies' assimilative capacity?*
  - In the future, low flow conditions are expected to be more extreme and last longer. This may result in higher pollutant concentrations where loadings increase or remain constant.

# DWR Resources

- DWR Climate Change webpage  
<http://www.water.ca.gov/climatechange/>
- DWR IRWM resource webpage  
[http://www.water.ca.gov/irwm/other\\_resources/publications.cfm](http://www.water.ca.gov/irwm/other_resources/publications.cfm)

