CA’s Primary Water Source:

The Sierra Nevada Region

Sierra Nevada Conservancy

- **Created in 2004**: via AB 2600, the Laird-Leslie Sierra Nevada Conservancy Act.

- **Region and Governing Board**:
  - 22 counties/25 million acres
  - 13-Member Governing Board (6 local Supervisors, 7 State appointees) with 3 Non-Voting Federal Liaisons

- **Mission**: To initiate, encourage and support efforts that improve **the environmental, economic and social** well-being of the Sierra Nevada Region, its communities and the citizens of California.

California's Primary Watershed
The Delta is not the "Source"

The Sierra Nevada provides:

- More than 60% of the state's developed water supply
- All or part of the drinking water for 23 million people
- Urban water source, e.g.
  - San Francisco → 85% from Tuolumne watershed
  - East Bay → 90% from Mokelumne Watershed
- Major water source agriculture
- Half of the inflow to the Sacramento-San Joaquin Delta

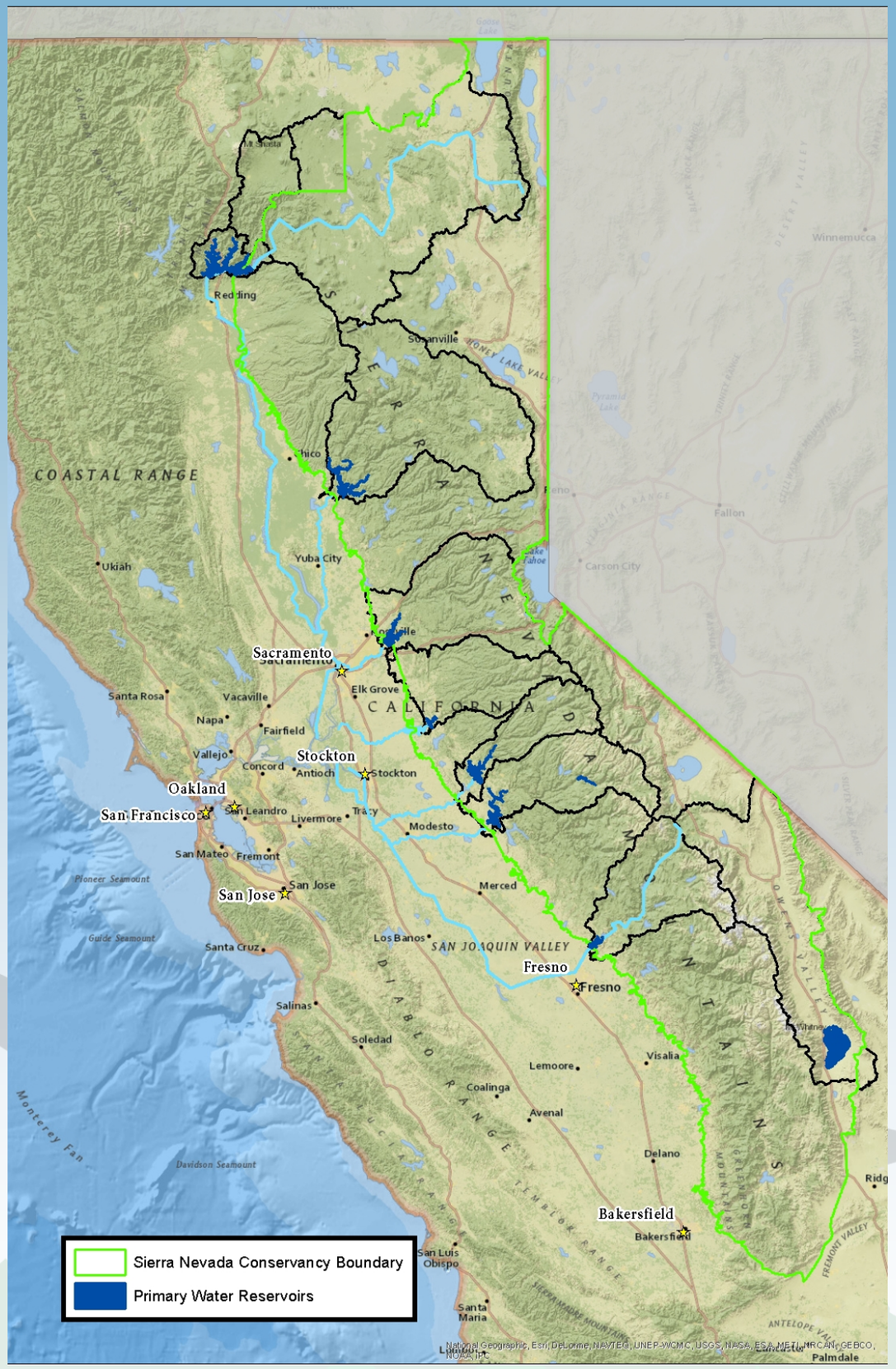
Bringing Water to CA's Farmers

- The State Water Project provides water for 750,000 acres of irrigated farmland; 30 percent of the water stored and distributed by the SWP goes to agricultural users

- The Central Valley Project provides about 5 million acre-feet for farms -- enough to irrigate about 3 million acres, or approximately one-third of the agricultural land in California

CA's Water Infrastructure

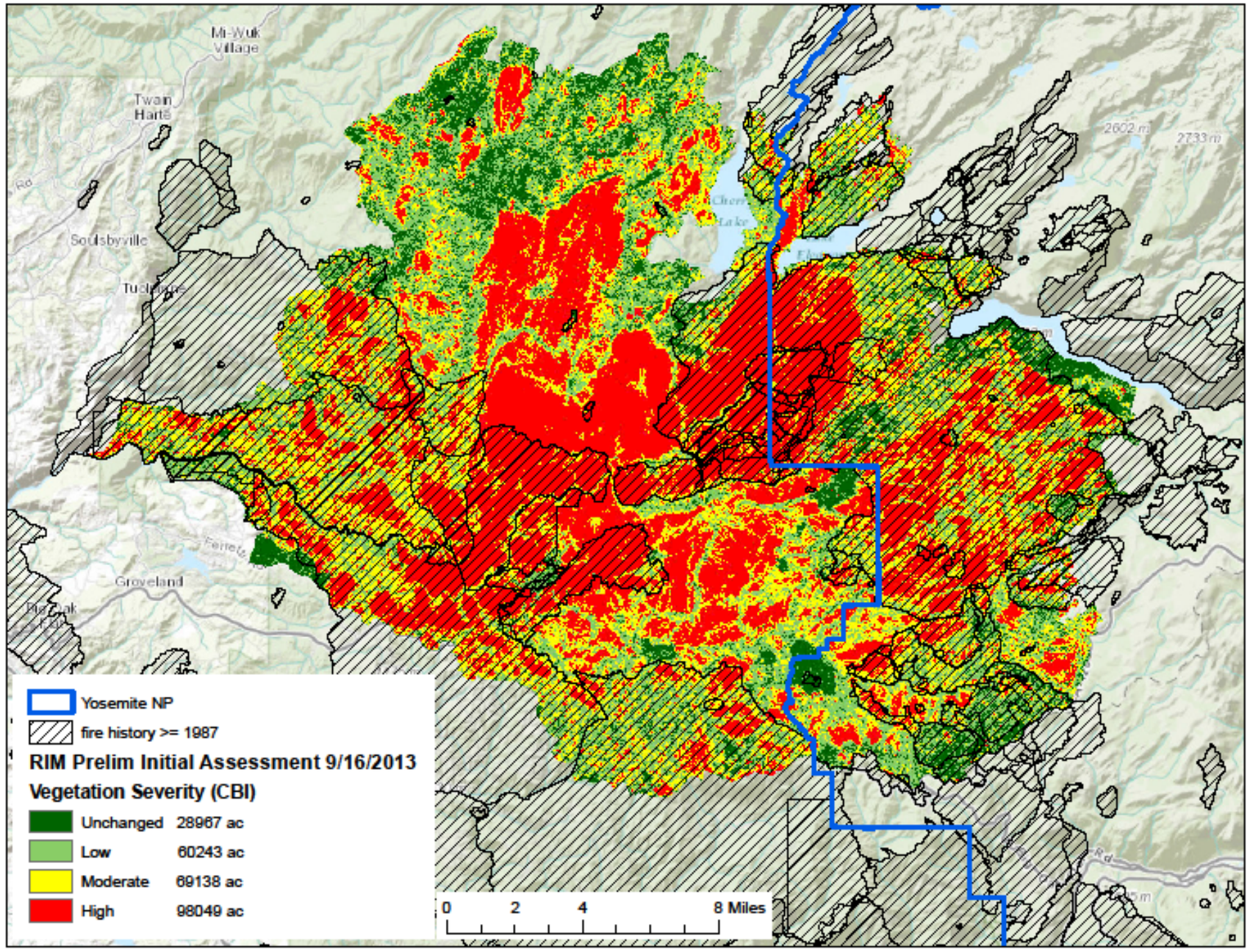
Reservoirs along the western slope of the Sierra Nevada are critical to meeting CA agriculture's needs.



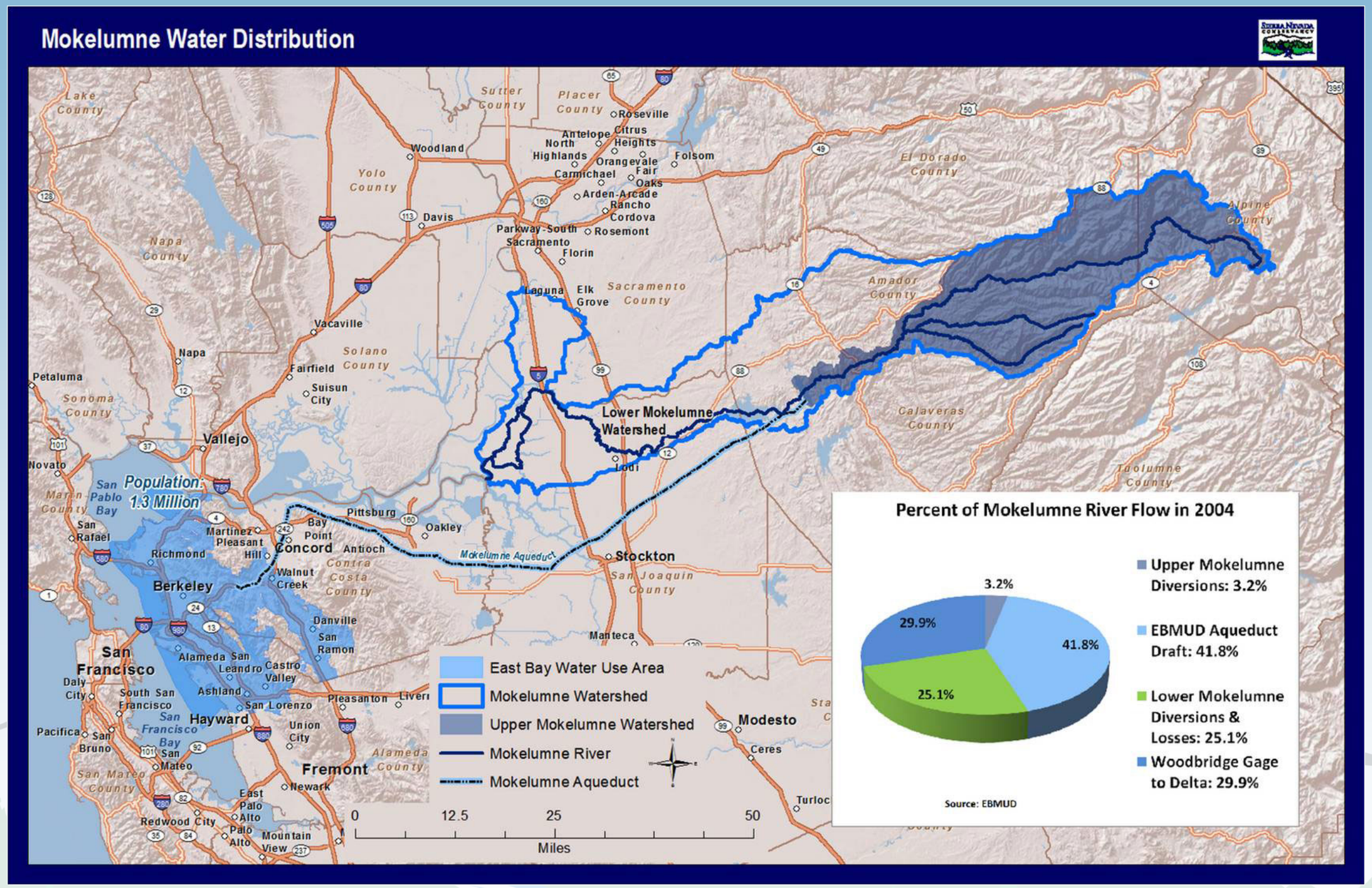
The Rim Fire

- Largest in the recorded history of the Sierra Nevada
- High intensity that will change the hydrology of the watersheds for decades.
- Massive amounts of sediments will result, much of which will end up in Don Pedro Reservoir.
- Fuels treatments work – very different fire behavior in untreated versus treated areas.

Rim Fire Vegetation Severity



Mokelumne River Watershed



Mokelumne Environmental Benefits Analysis

- Source of more than 90% of EBMUD's water supply
- SNC, USFS, Cal Fire, conservation groups, local government and EBMUD are leading the effort
- The fire-sediment model shows significant impacts that will occur in the event of a catastrophic fire – sediment outputs will increase by as much as 50 times from current conditions

USGS Reservoir Sedimentation Model

A USGS modeling exercise found the following:

- The model predicted that at present, over 120 reservoirs have capacities reduced to less than 25% of original and almost 190 reservoirs with less than 50% of original capacity

- Watershed variables that influence sediment transport and deposition:
  - o fires and forest health
  - o development, land-use, mining & abandoned mine sites
  - o climatic events

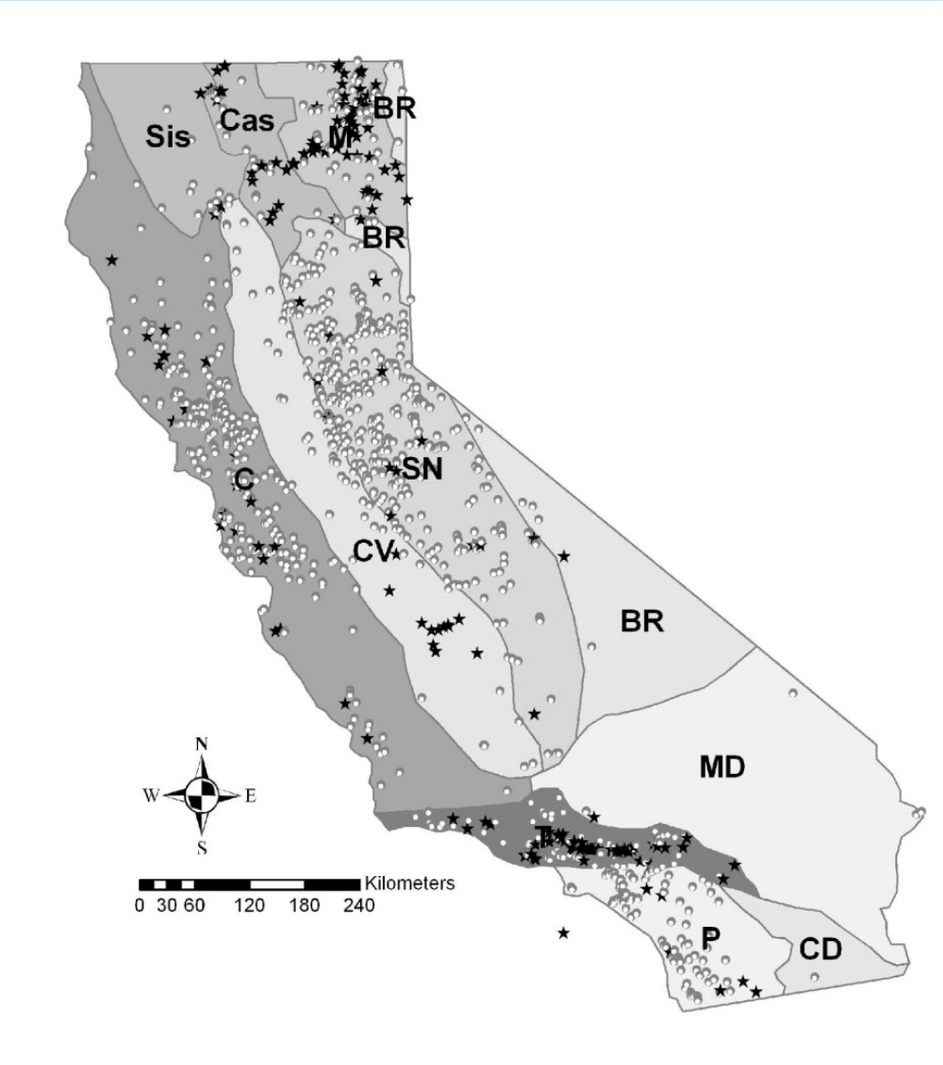


Figure 1b from *Estimating reservoir sedimentation rates at large spatial – and temporal – scales: a case study of California* - (Figure 1b).

What Happens in the Sierra Doesn’t Stay in the Sierra

- The Sierra Nevada Region, as the state’s primary watershed must be included in any proposal to “fix” California’s water issues. Delta issues flow upstream to the watersheds.
- Investment and policy decisions regarding meeting the state’s water needs should consider, at a minimum:
  - Restoring Forest Health and Reducing Risk of Catastrophic Fire
  - Restoring Watershed and Meadow Function
  - Conserving Land to Protect Key Benefits
  - Addressing Sedimentation and Capacity in Dams