

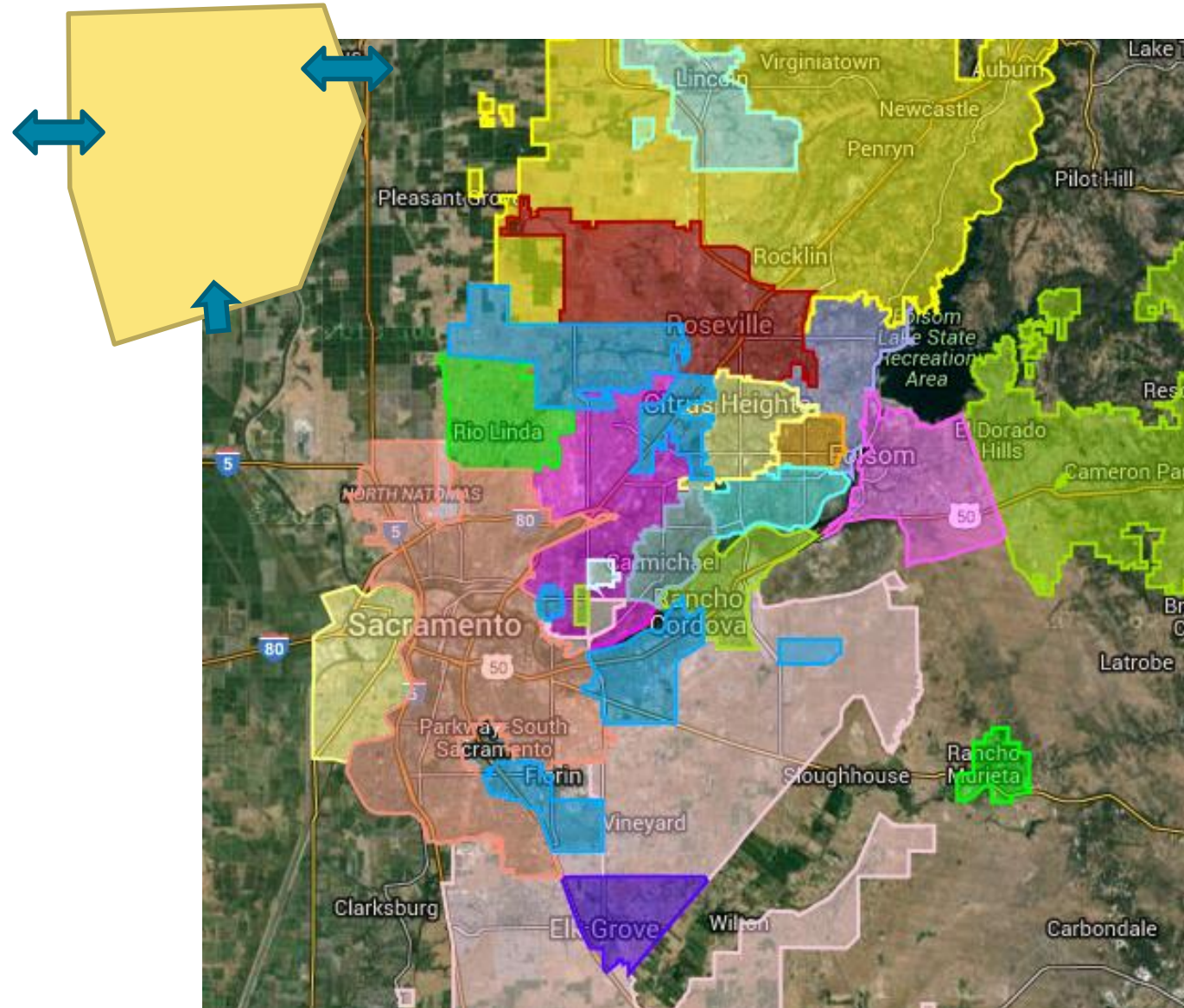
# Improving Regional Water Reliability in the Sacramento Region



May 9, 2017

# What are We Doing?

- Identifying operational, institutional and physical improvements to expand reliability of each member's water supply
- Exploring an expansion of conjunctive use in the region
  - Current/near-term yield
  - Long-term yield based on planned improvements
- Exploring interest in establishing water bank, both for internal and external partners



# Why are We Doing It?

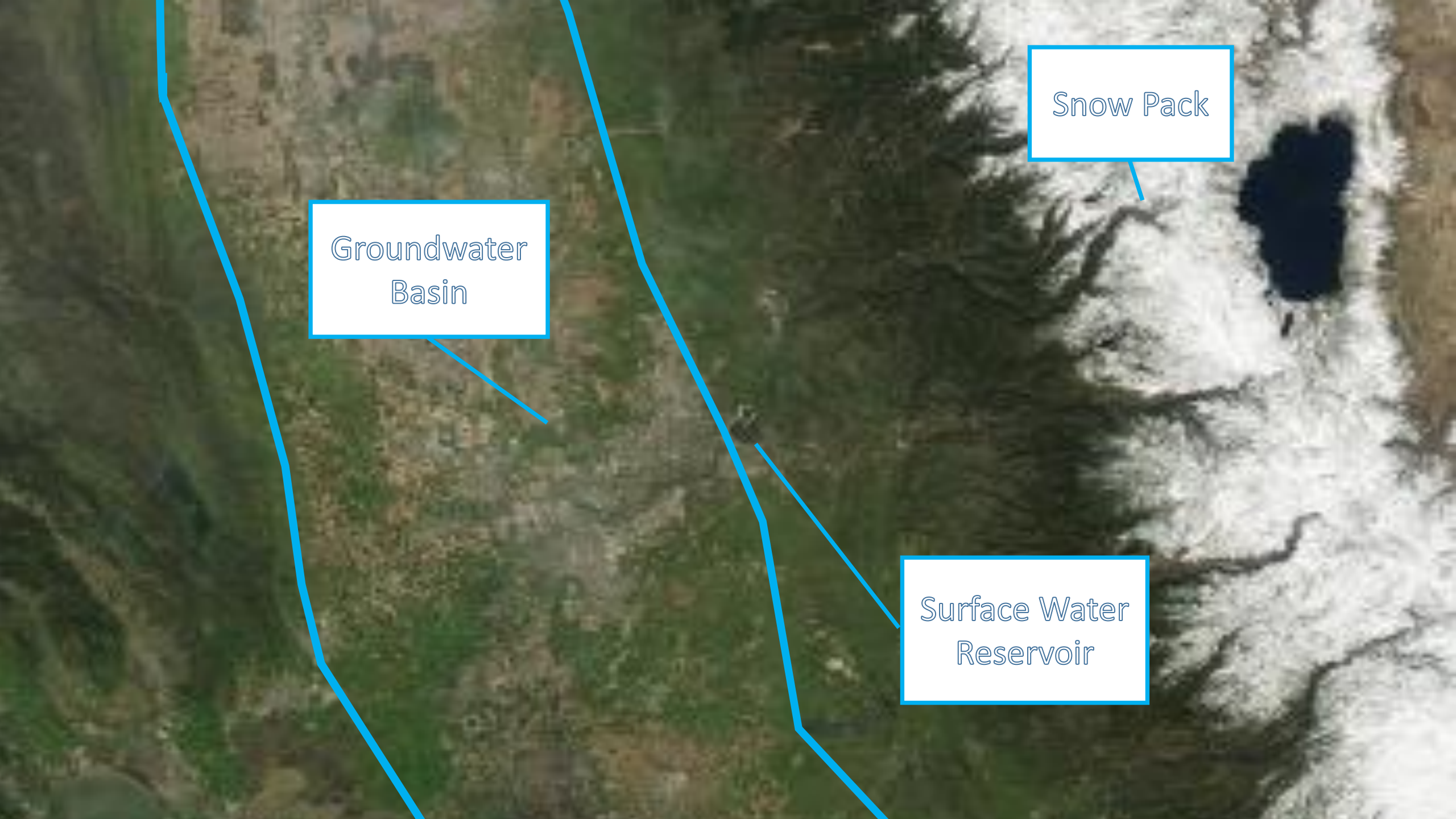
- Have some vulnerable infrastructure
- Courtesy of recent drought
  - Nearly dry Folsom Lake served as a wake-up call on the vulnerability of the American River Basin
  - Water right curtailments compel us to develop backup supply options
- Regulatory requirements for Sustainable Groundwater Management Act (SGMA)
- Future climate might alter the reservoir systems that we have relied on in the past



*Collapsed Bear River Canal (2011)*



*A very dry Folsom Lake (2015)*

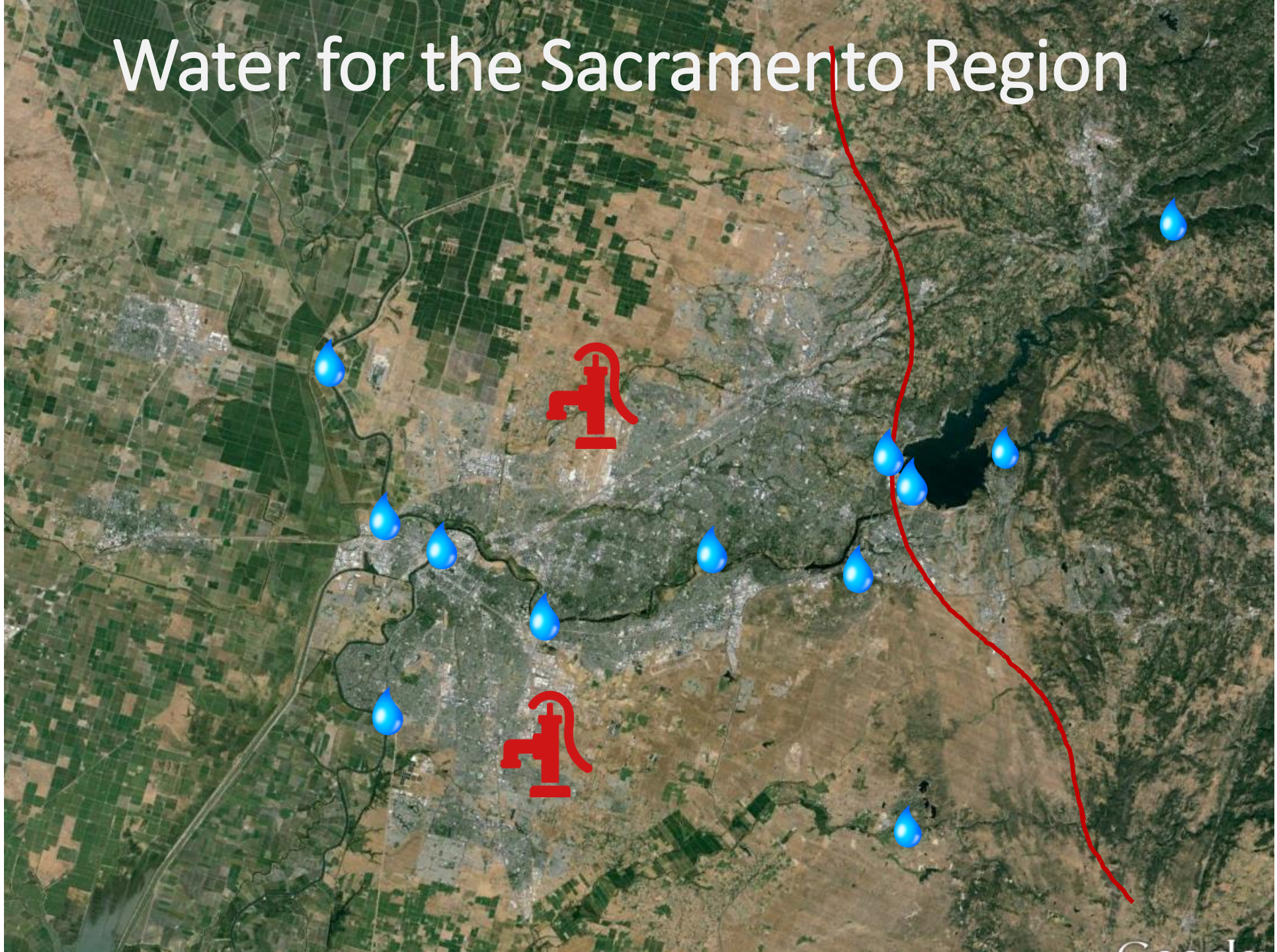


Groundwater  
Basin

Snow Pack

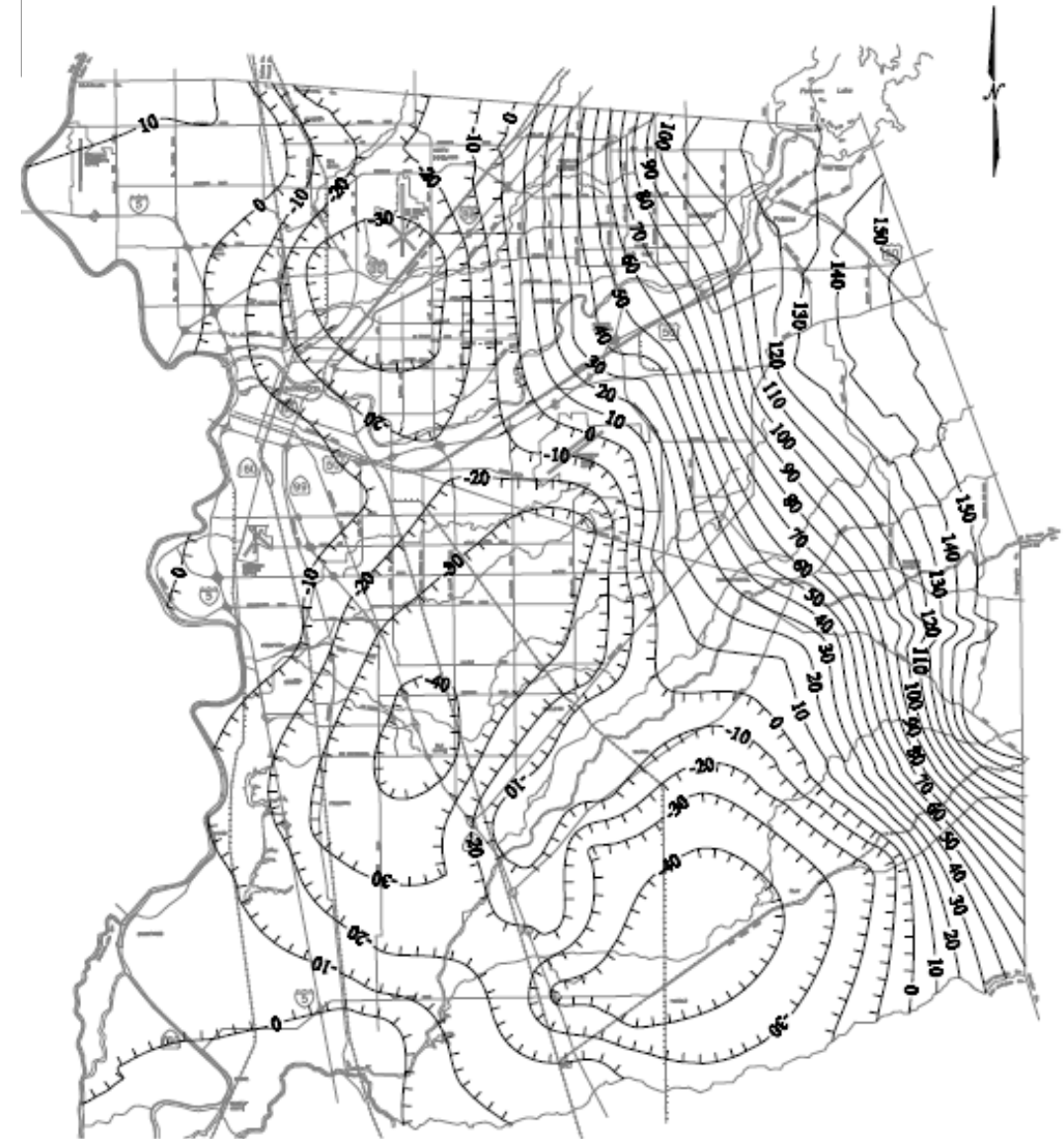
Surface Water  
Reservoir

# Water for the Sacramento Region



# Result of Supply Imbalance

- Multiple cones of depression developed slowly over 60+ years



SACRAMENTO COUNTY, CALIFORNIA

GROUNDWATER ELEVATIONS

SPRING 2007

MEAN SEA LEVEL

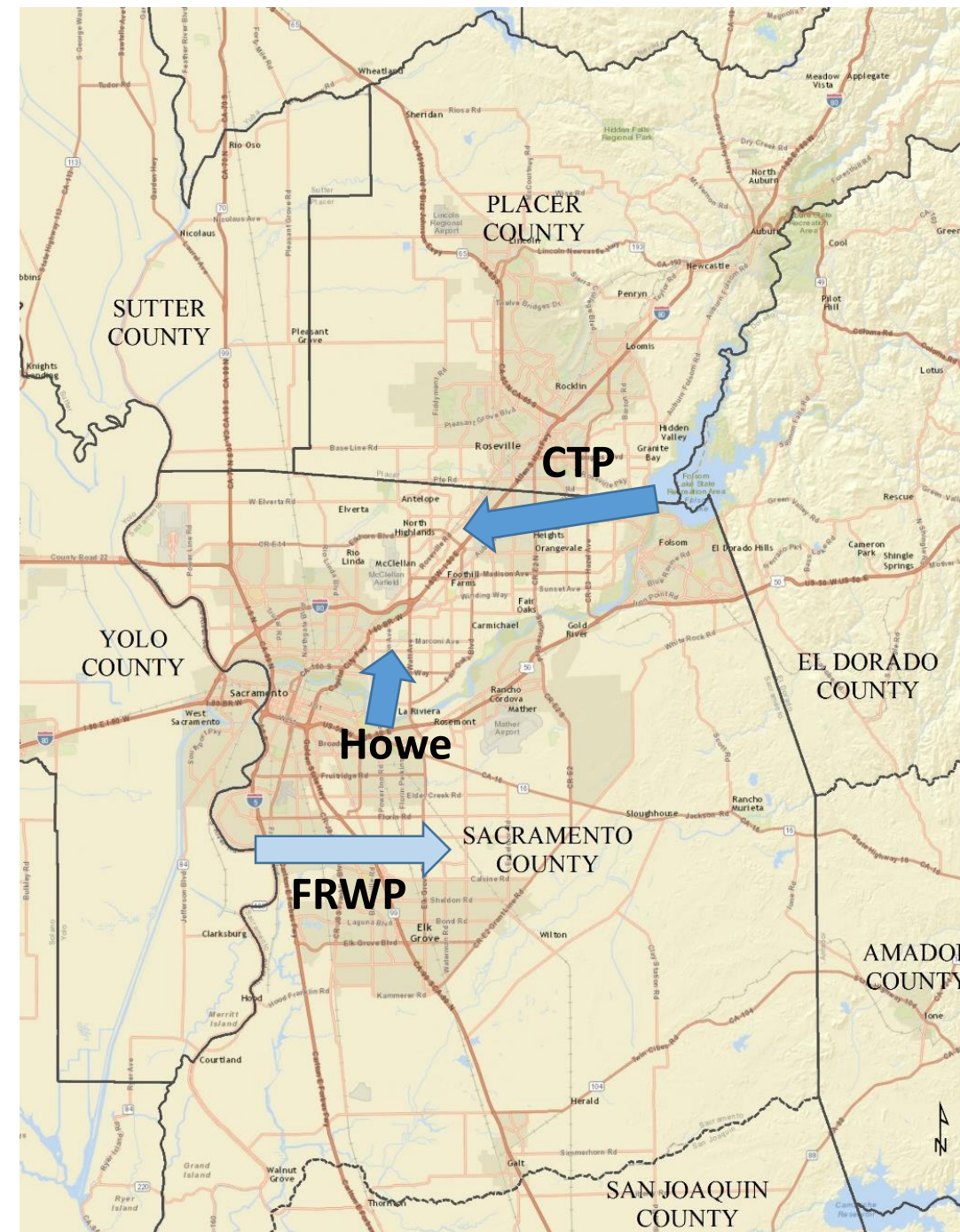
# Key Recent Regional Infrastructure Improvements

## Cooperative Transmission Pipeline and Howe Transmission Pipeline

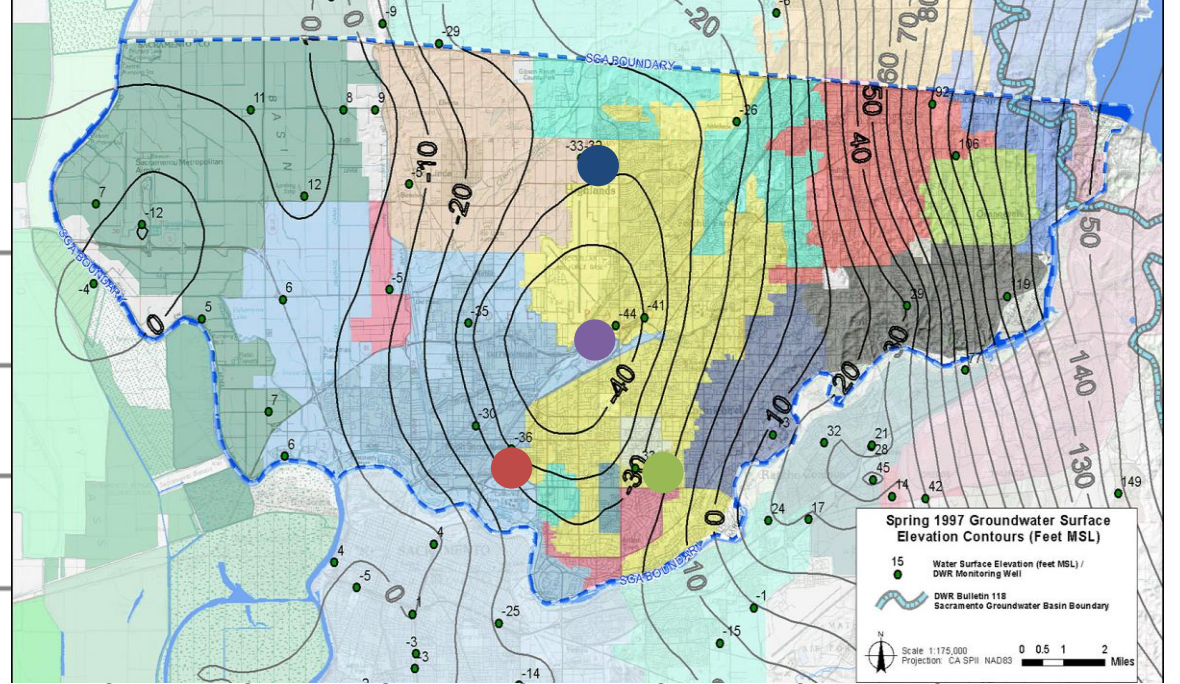
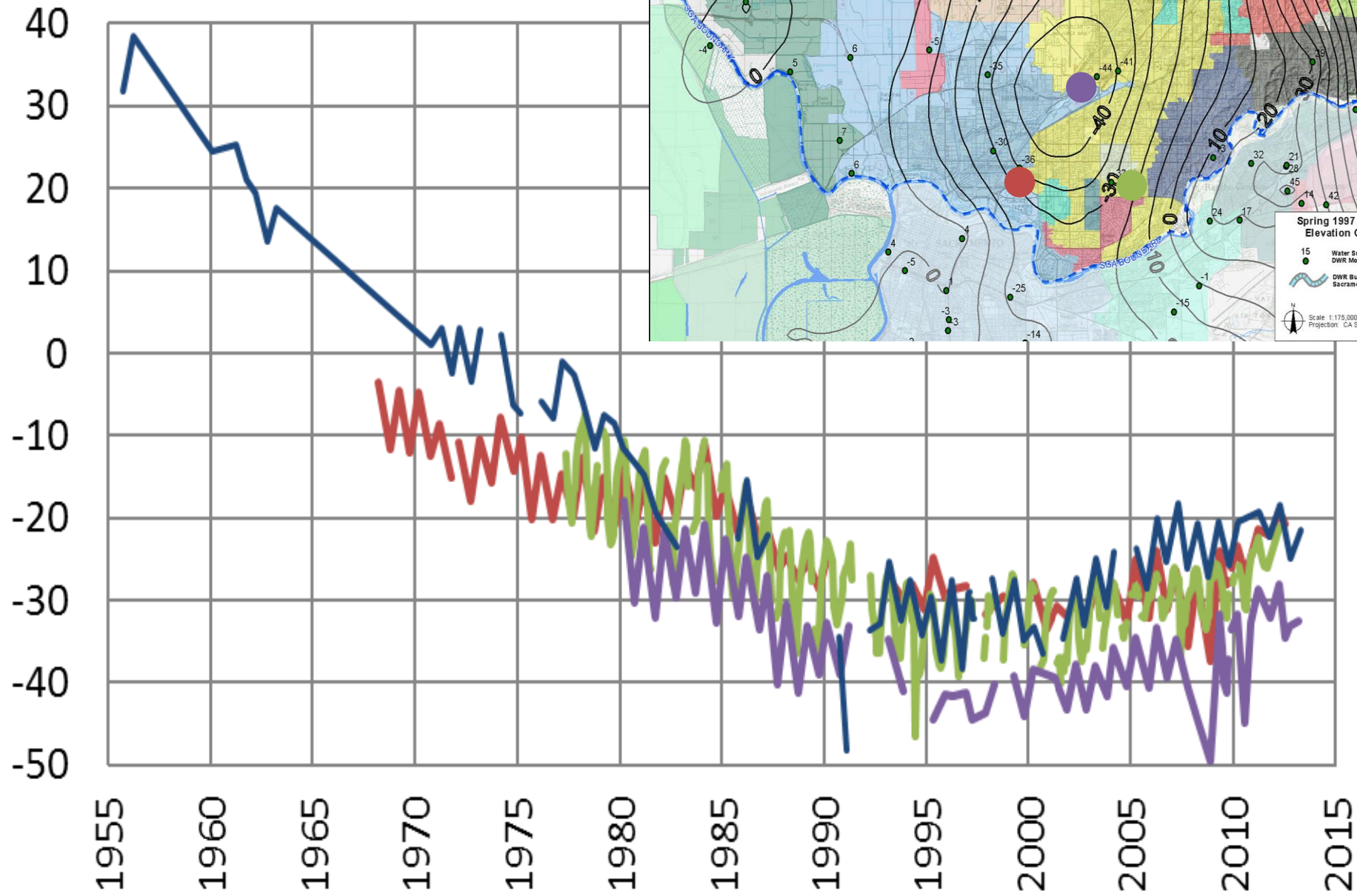
- Imported >300 TAF since mid-1990s

## Freeport Regional Water Project

- 185 MGD intake (2010)
- 85 MGD in County
- 50 MGD SWTP in County, expandable to 100 MGD



# In-lieu Conjunctive Use is Already Proven Successful Locally

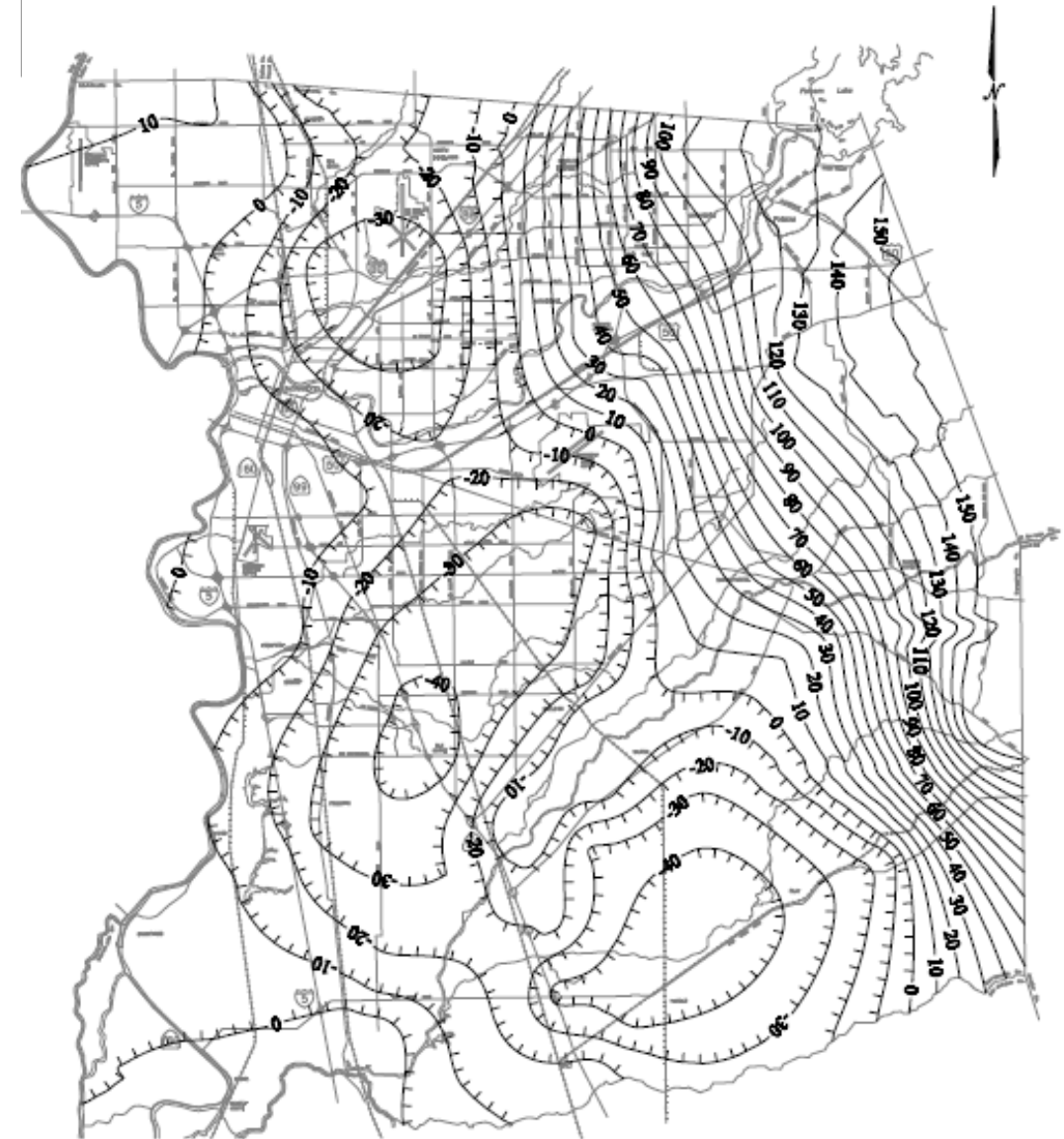




# Significant Storage Potential

- Most of basin has been fairly stable over past 10+ years
- In excess of 2 million acre-feet available storage space in Sacramento County

But how will we get it in the groundwater basin?



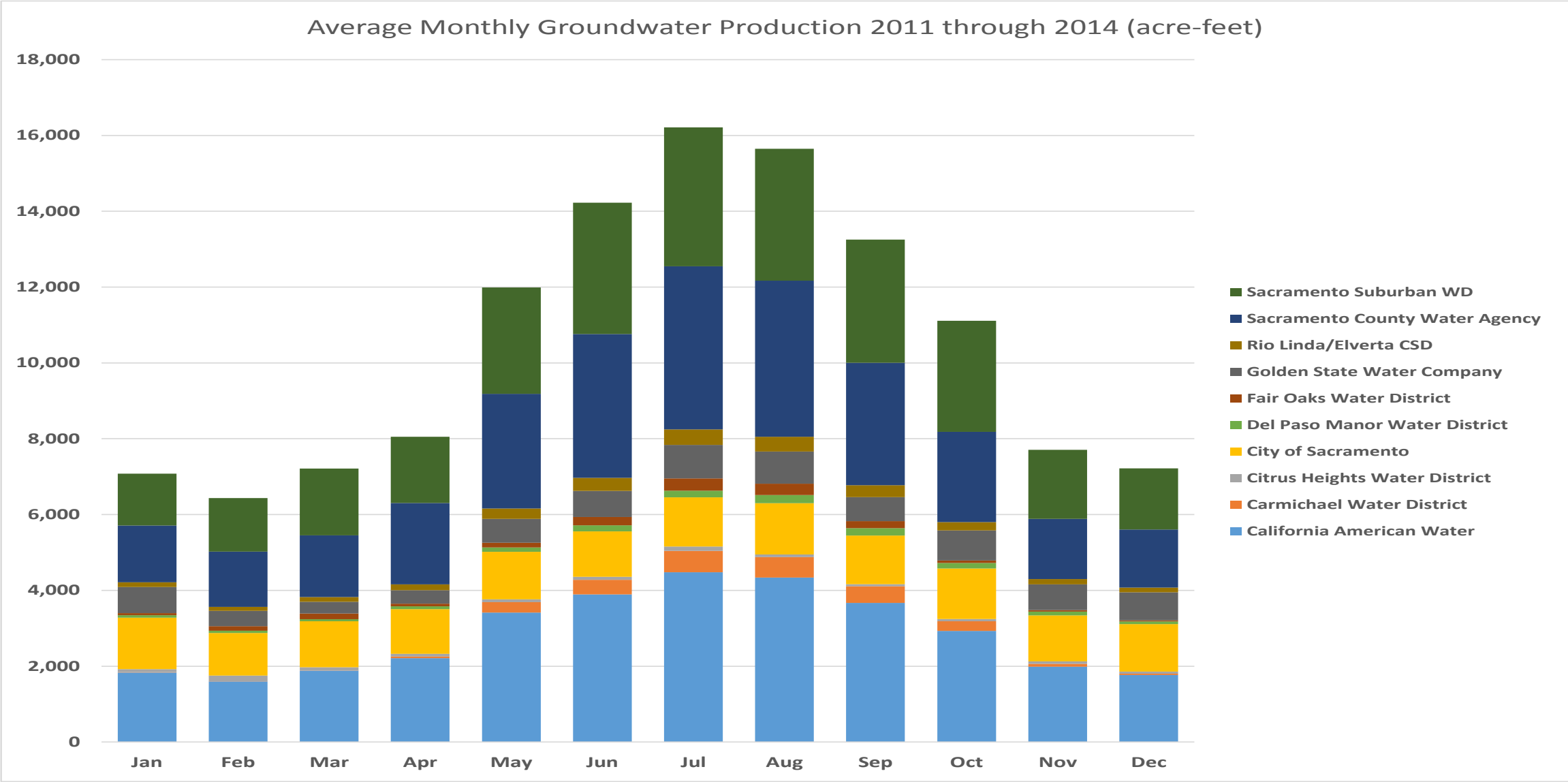
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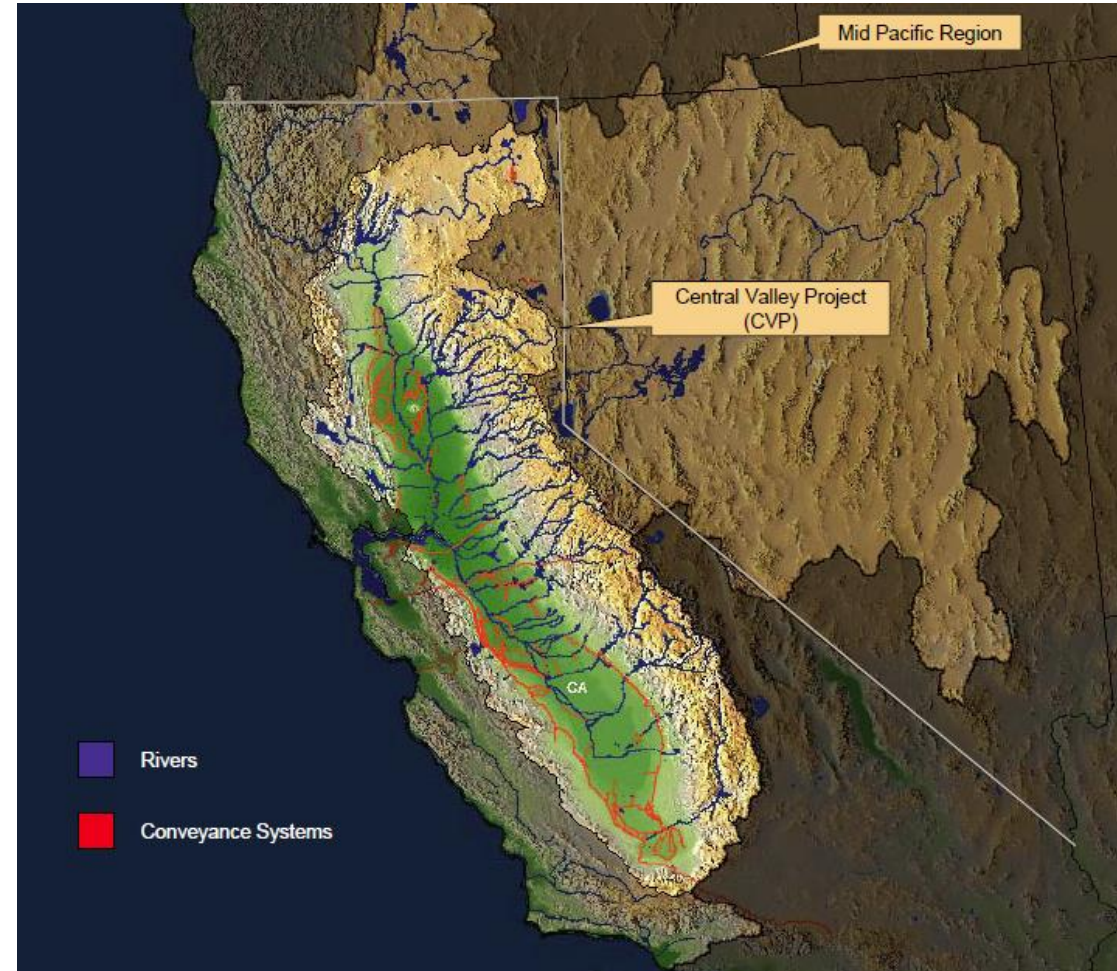
# Significant Urban In-Lieu Recharge Potential





# Reclamation Water Banks

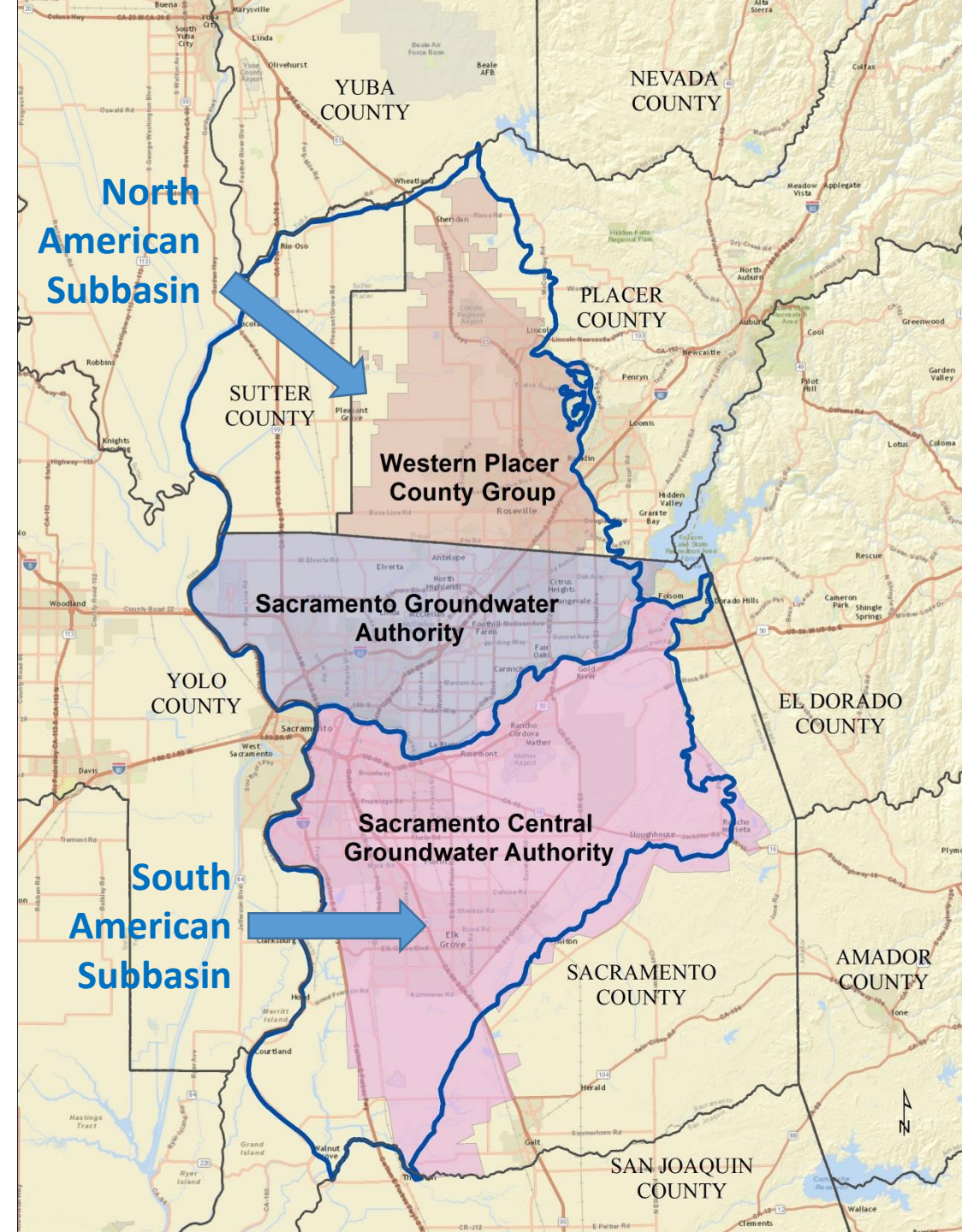
- Authorized by Central Valley Project Improvement Act of 1992
- 9+ existing water banks in CA
- Reclamation does not own/operate facilities
- Once established:
  - Can bank own CVP water outside contract area
  - Can bank for other CVP contractors
  - Can have long-term banking contracts (typically >10 years)
- Requires:
  - Demonstrate “banking” and “recovery” capacity
  - Demonstrate no harm to other groundwater users
  - Bank water before it can be recovered



# Ultimate Goal – Regional Water Bank

- Key Benefits

- Reduce impacts of future droughts by establishing a local “reservoir” in the groundwater basin
- Create additional supply yield by operating basin as storage reservoir
- Promote investing in facilities and operations needed for local reliability
- Includes a “loss factor” to ensure a net benefit to basin



# Steps Toward USBR-recognized Water Bank

## Evaluate Needs/Opportunities (2 yrs)

- High level look at opportunities created by near and long-term improvements with initial look at potential partners (Regional Water Reliability Plan)

## Development Analysis Tools (2 yrs)

- Update regional modeling tool to conduct technical analysis to further define opportunities and evaluate impacts

## Complete Legal/Institutional Framework (3 yrs)

- Complete environmental analysis, establish governance, develop legal agreements, and engage with partners