SACRAMENTO REGIONAL WATER BANK

A Sustainable Storage and Recovery Program

Regional Water Authority Board Meeting

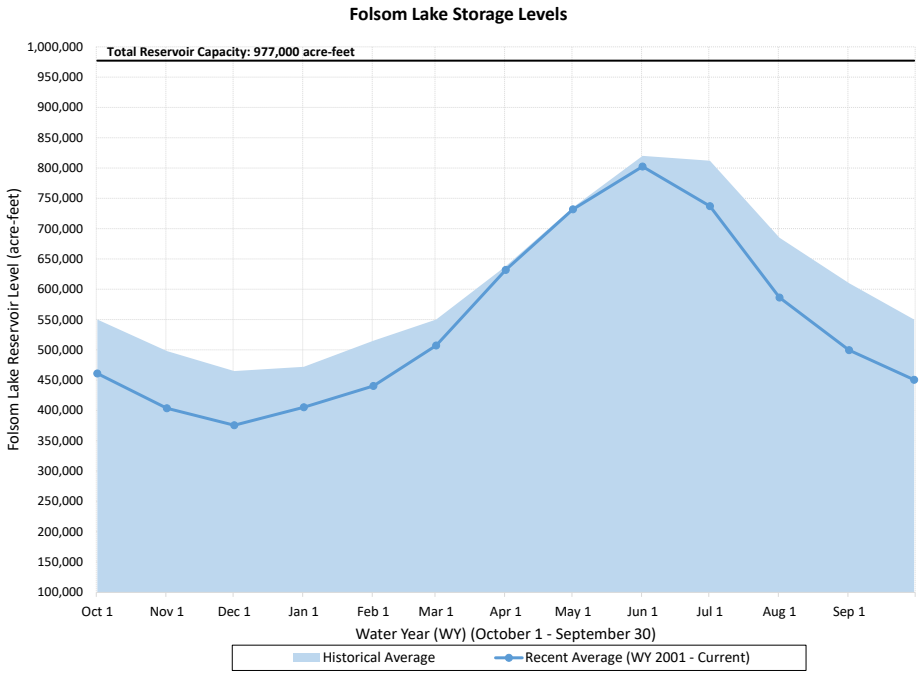
Item 5 – Sacramento Regional Water Bank Program Update

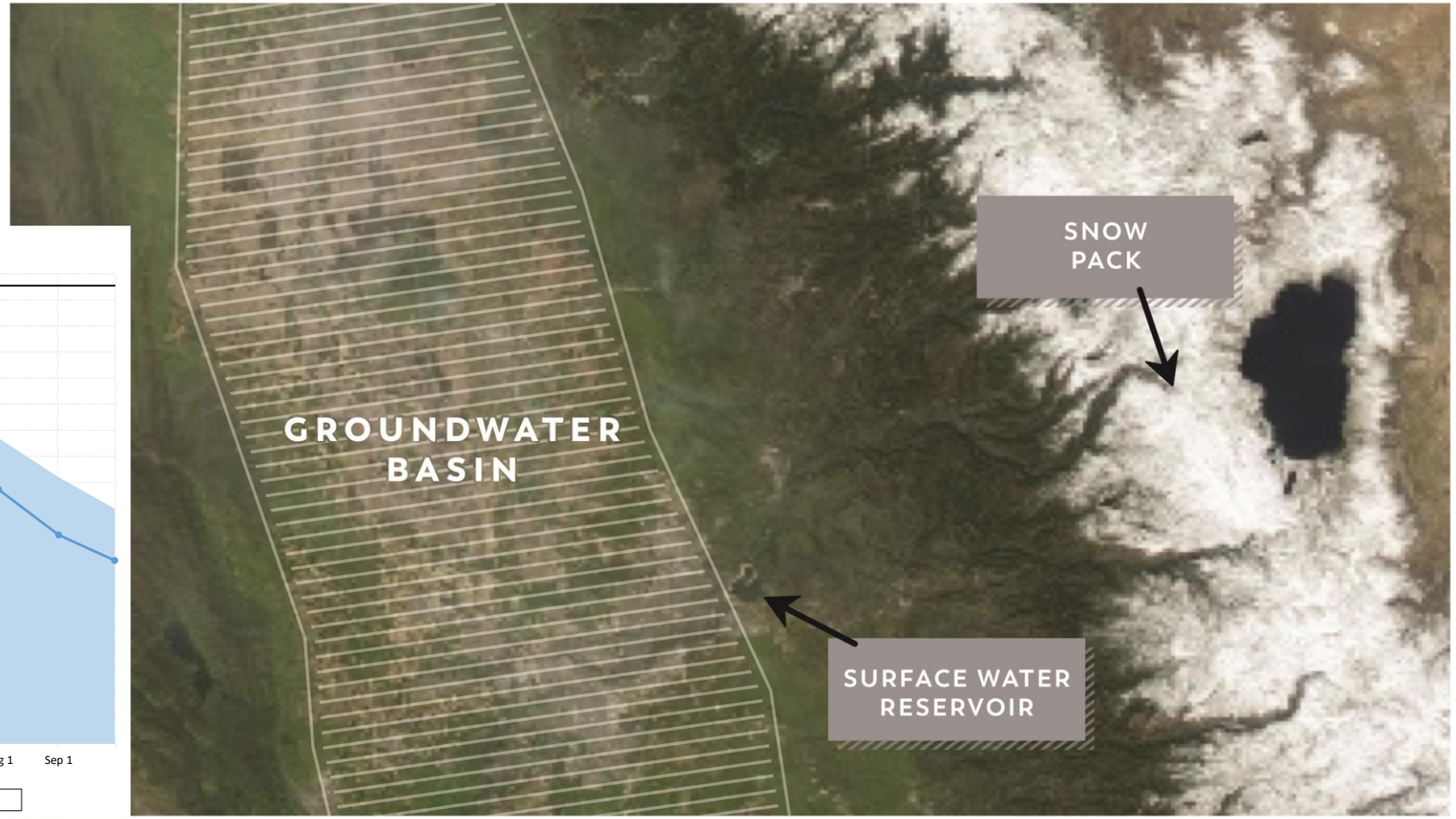
<u>Consulting Team</u>
Stantec
Woodard & Curran
IN Communications

9/8/2022

Why are we working on a Water Bank?

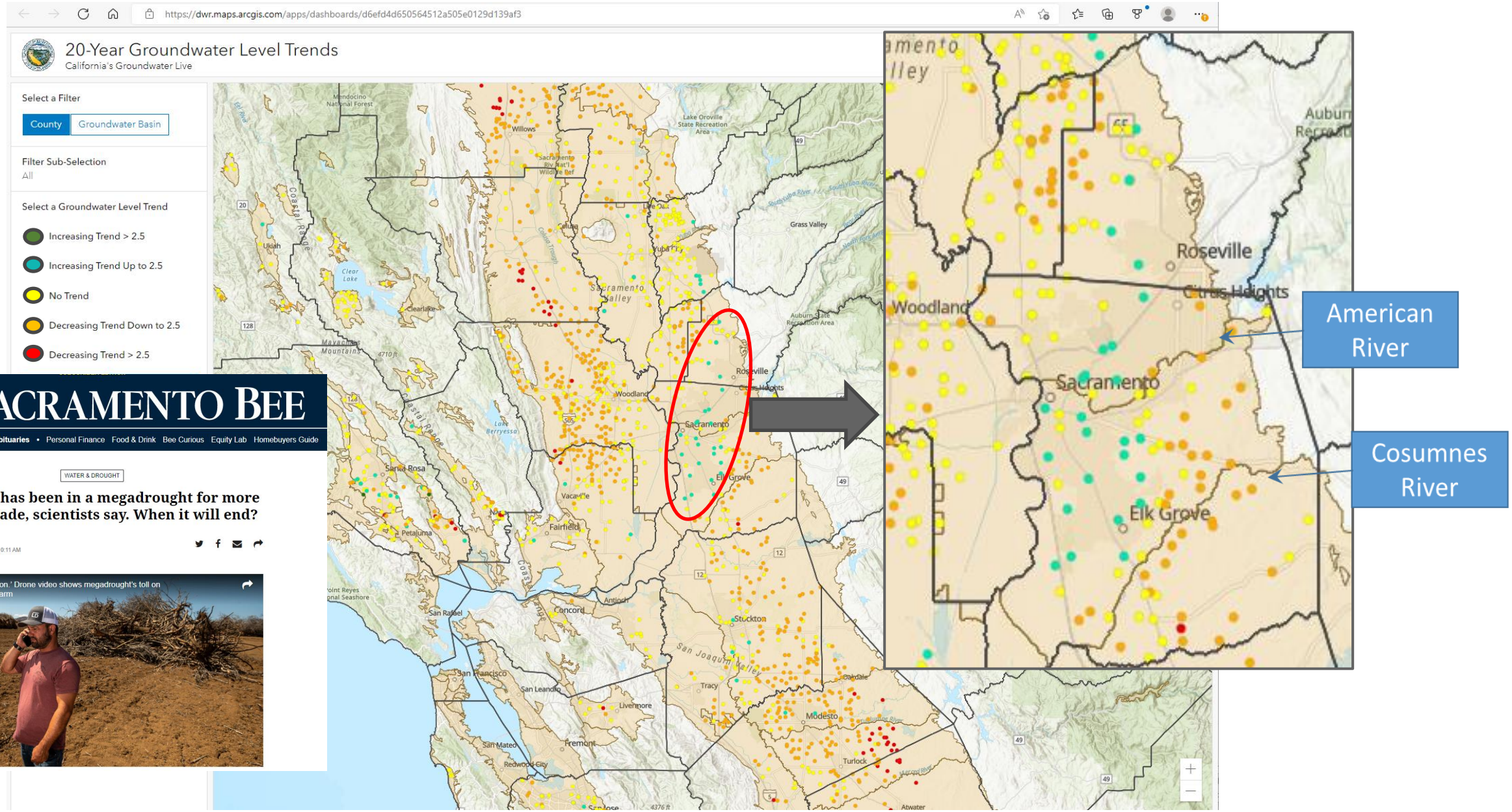
Our reservoir systems are changing



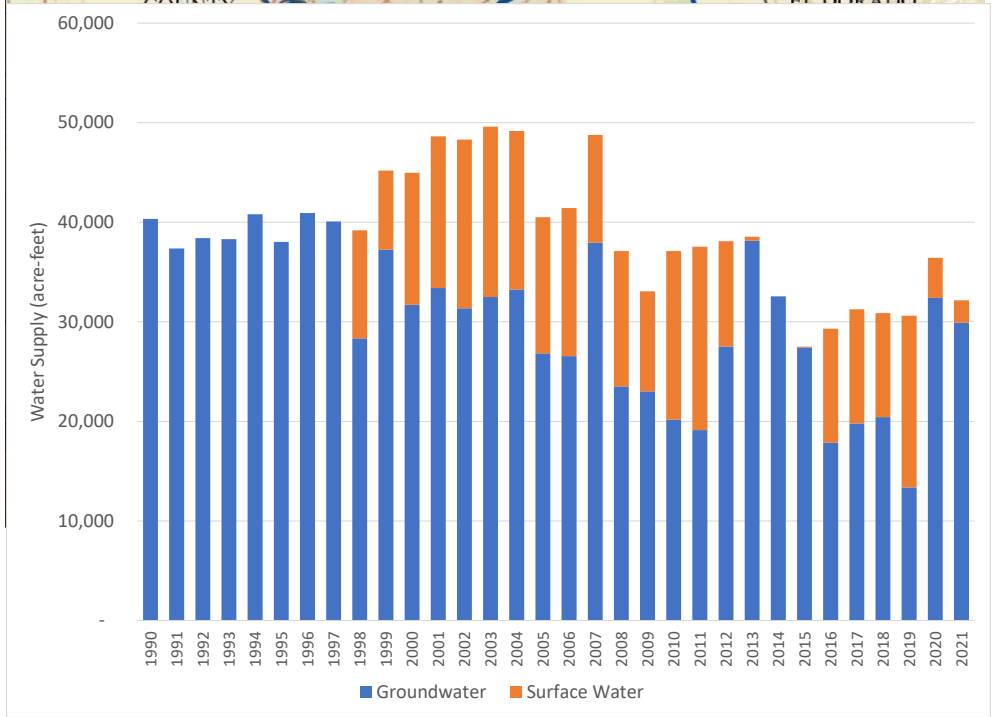


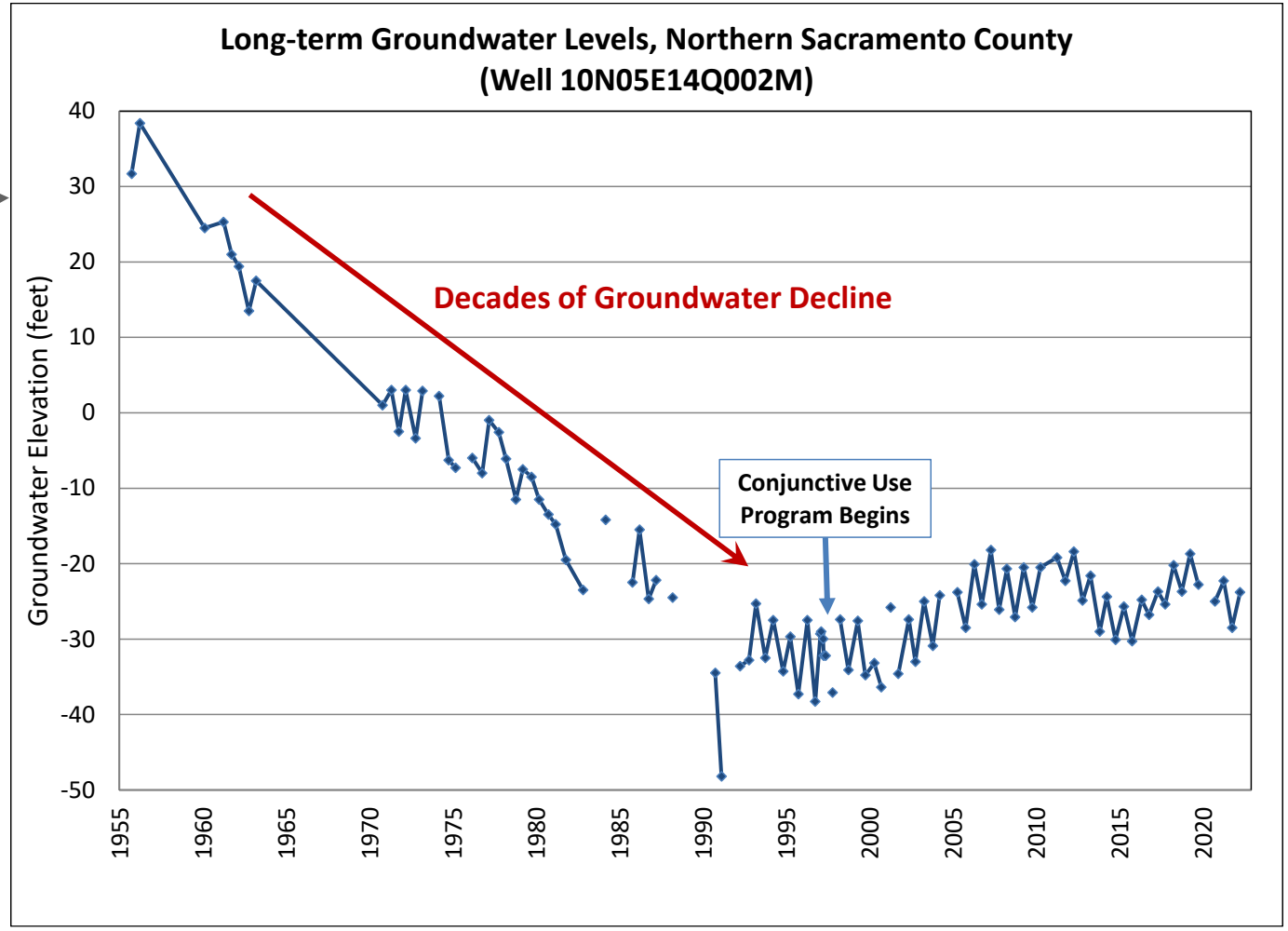
The groundwater basin reservoir is one of our best options for adapting to this change

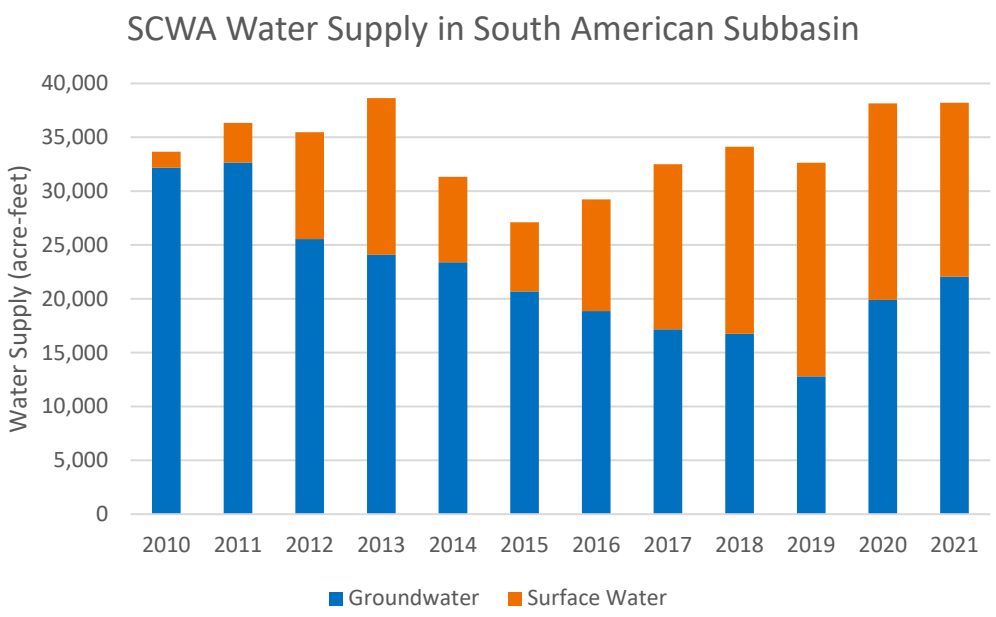
Region has already taken steps toward adaptation

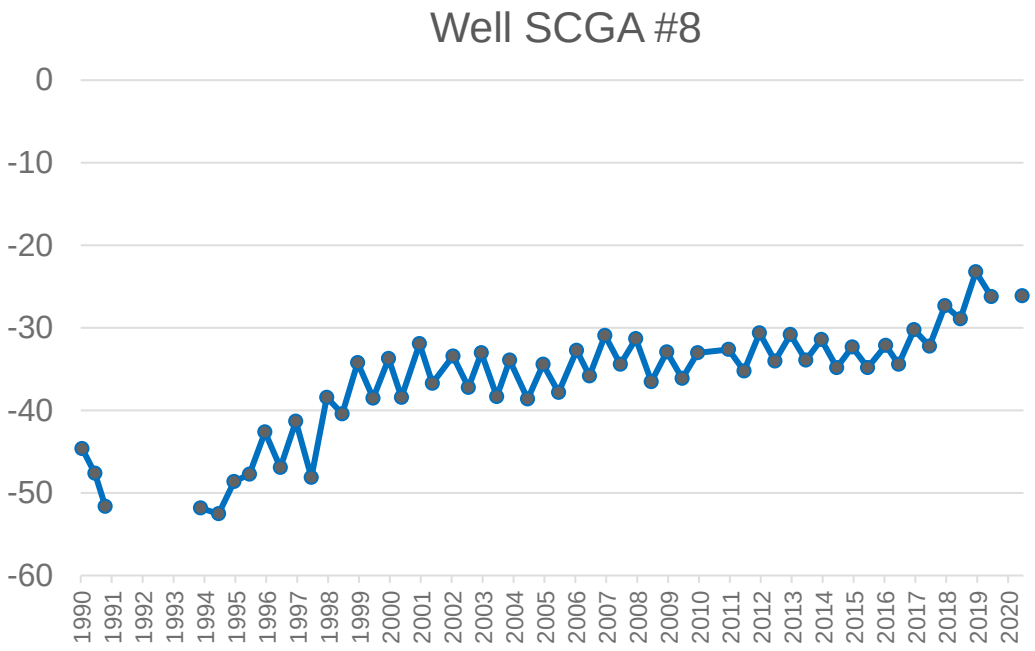


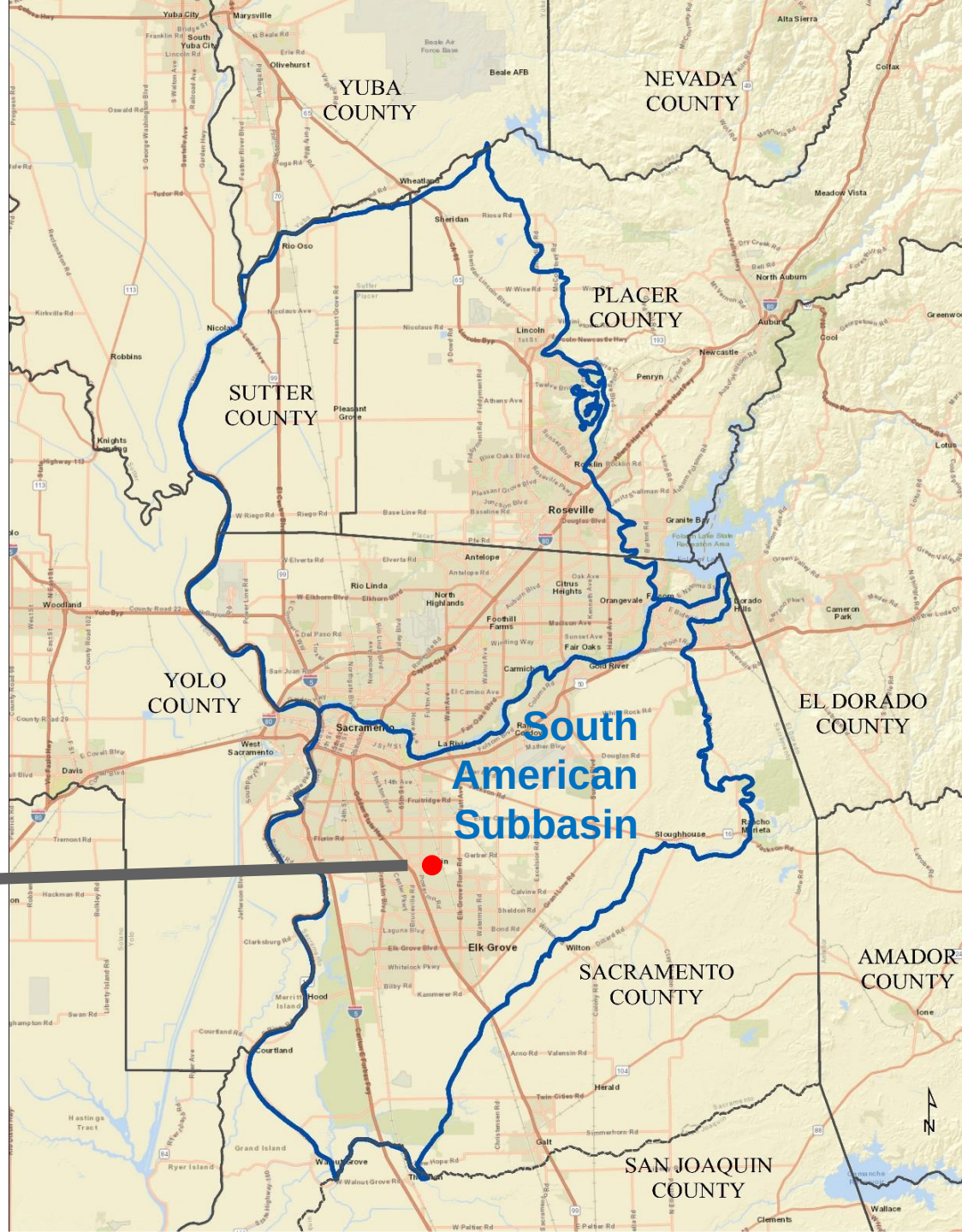
Conjunctive use is a proven method to operate the basin as a reservoir






SCWA Water Supply in South American Subbasin

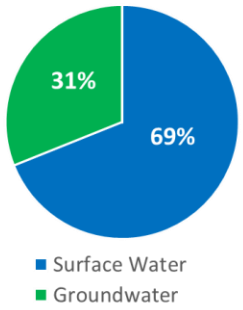

Well SCGA #8



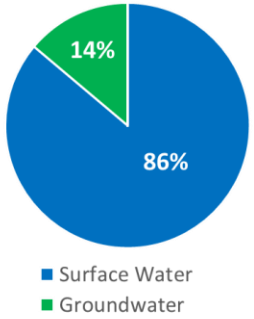
We have plenty more potential for conjunctive use in the region

Wet Conditions

Actual
(2011-13 Average)

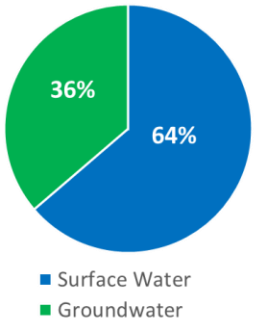


Potential
(2011-13 Average)

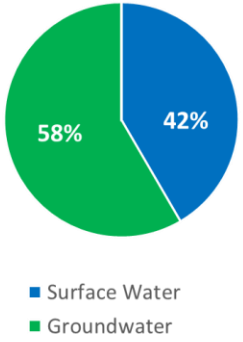


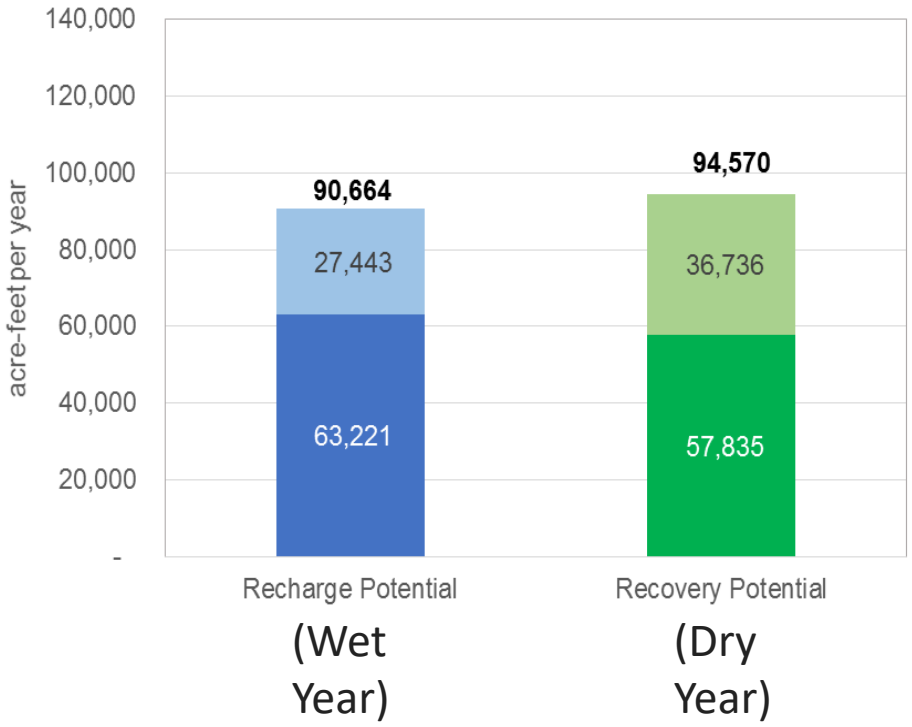
Dry Conditions

Actual (2015)



Potential (2015)





There are barriers to expanding conjunctive use

- We always seem to get by okay
- Disparity in the cost of water (production, treatment, and delivery) between surface water and groundwater
- Expense of infrastructure to support expansion of conjunctive use
- It's complicated
  - Place of use constraints
  - Institutional and operational issues
  - Water quality concerns

Aquifer Storage & Recovery Well
(City of Roseville)

Groundwater Pump Back Facility
(Sacramento Suburban Water District)

The Water Bank is a hybrid of two existing programs

BUREAU OF RECLAMATION

Groundwater Banking Guidelines for Central Valley Project Water

Effective Date: November 12, 2014
Updated October 4, 2019

DRAFT
Technical Information
for Preparing Water Transfer Proposals

(Water Transfer White Paper)

Information for Parties Preparing Proposals
for Water Transfers
Requiring Department of Water Resources or
Bureau of Reclamation Approval

December 2019

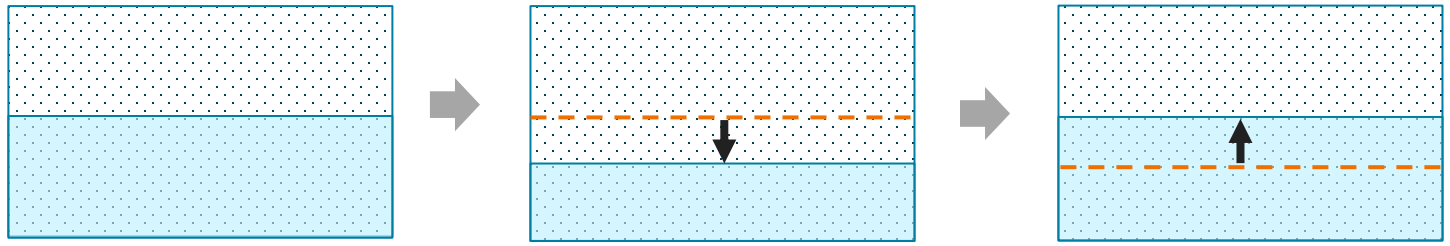
Prepared By:
CALIFORNIA DEPARTMENT OF WATER RESOURCES
AND
BUREAU OF RECLAMATION, MID-PACIFIC REGION

- Multi-year storage (at subbasin level)
- Storage before recovery
- Document consistency with GSP
- Environmental analysis required

- Single year transfers
- Storage is not required
- GSA concurrence required
- Environmental analysis varies based on whether pre- or post-1914 water right

How our Water Bank approach is different

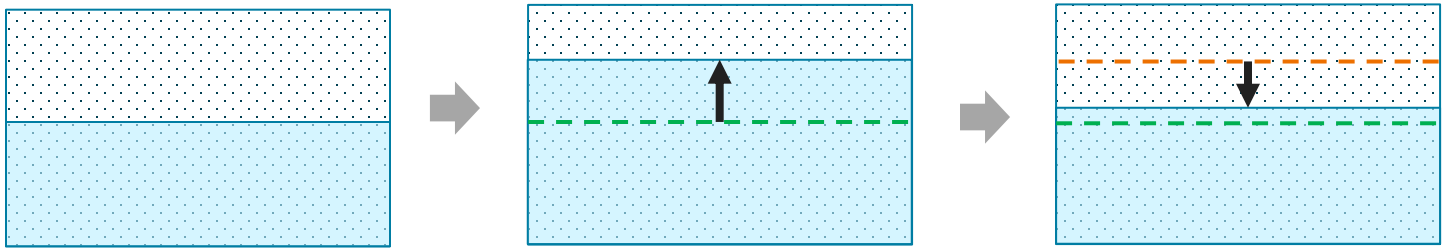
Single-Year Groundwater Substitution Transfers



Baseline Condition | Extraction | Natural Recharge

- Not universally popular

Water Bank



Baseline Condition | Recharge (Storage) | Extraction (Recovery)

- Avoids potential or perceived impacts (pre-mitigate) due to prior storage
- Reduces depletion of surface waters (due to quicker recovery)
- Contributes to groundwater sustainability

Updated Water Bank development timeline

2022 **Water Bank Focus** 2023 2024 2025

Develop CVP Operations Criteria

- Refine and link modeling tools (CalSim 3, CoSANA)
- Assess proposed operations

Development of Water Bank Components

- Develop governance and accounting of storage/recovery
- Assess current and expanded conjunctive use capacity
- Conduct environmental compliance review

Federally Recognized Bank Operational

Outreach & Engagement Activities

Regional Water Challenges & Needs for the Water Bank

Scoping (water bank principles and constraints)

Preliminary Alternatives

Refined Alternatives

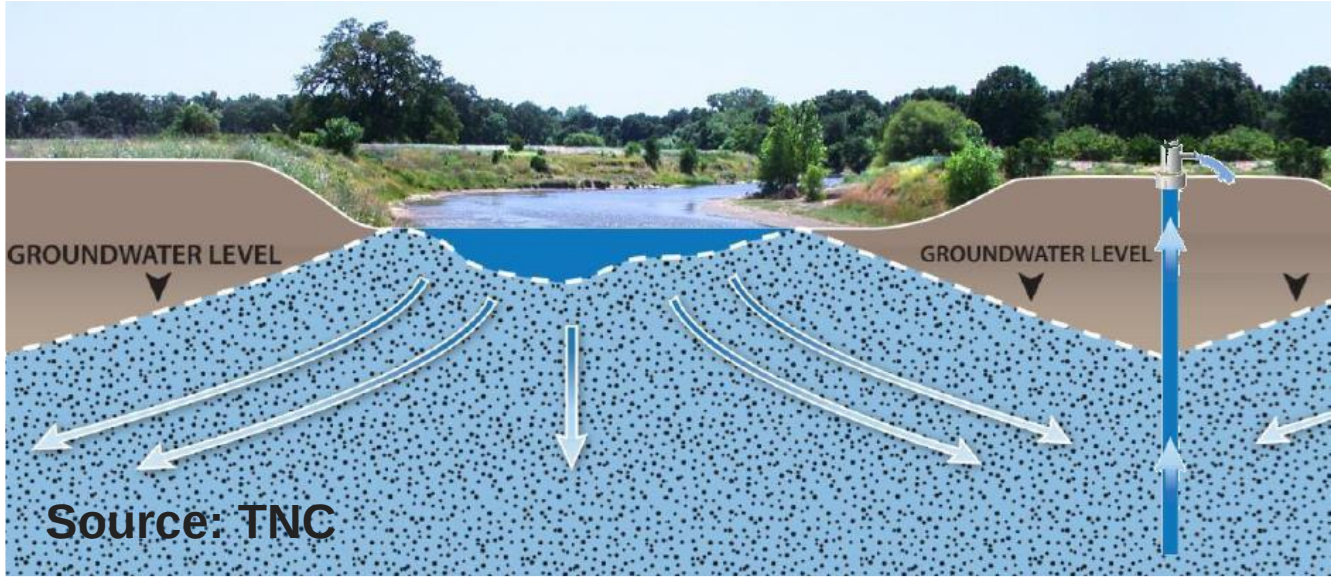
Draft Environmental Document

Water Bank Start up

Water Bank governance is of interest to many

Governance

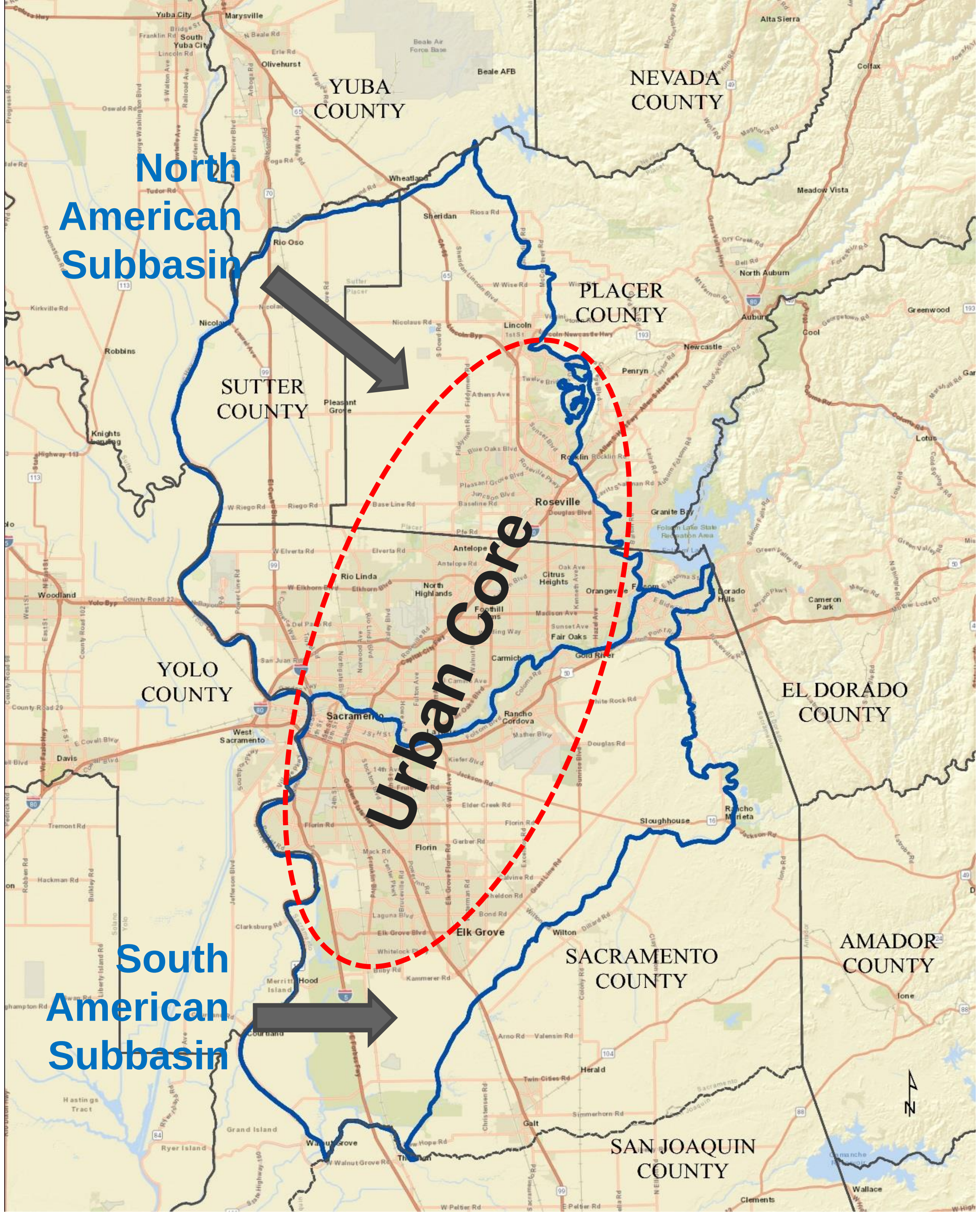
1. Banking/Transfer Guidelines
2. Groundwater Sustainability Agencies
3. Program Participants
4. Program Principles



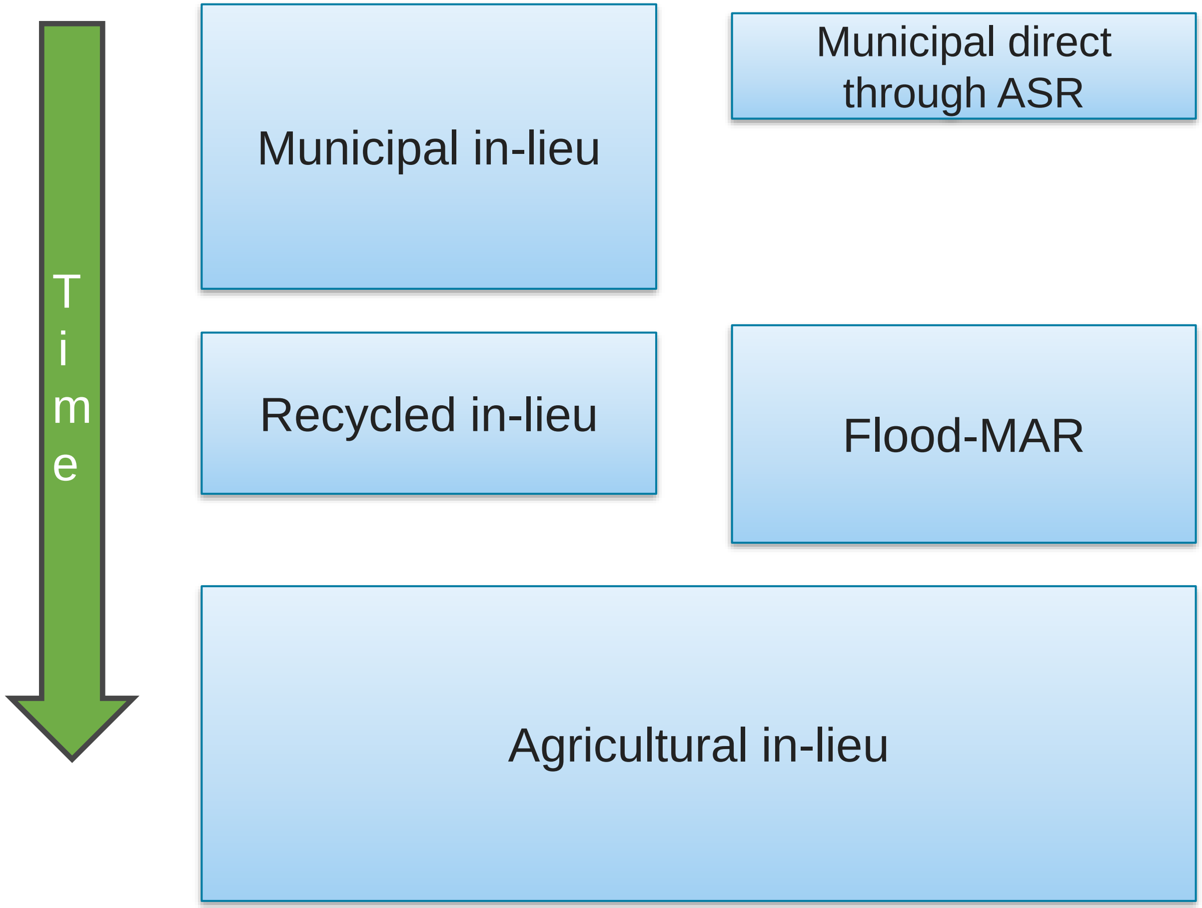
Program Principles (partial list)

- Store water first
- Commit portion to basin
- Recover no more than net stored water
- Identify and avoid sensitive areas
- Others

The Water Bank can grow through time



Sources of recharge



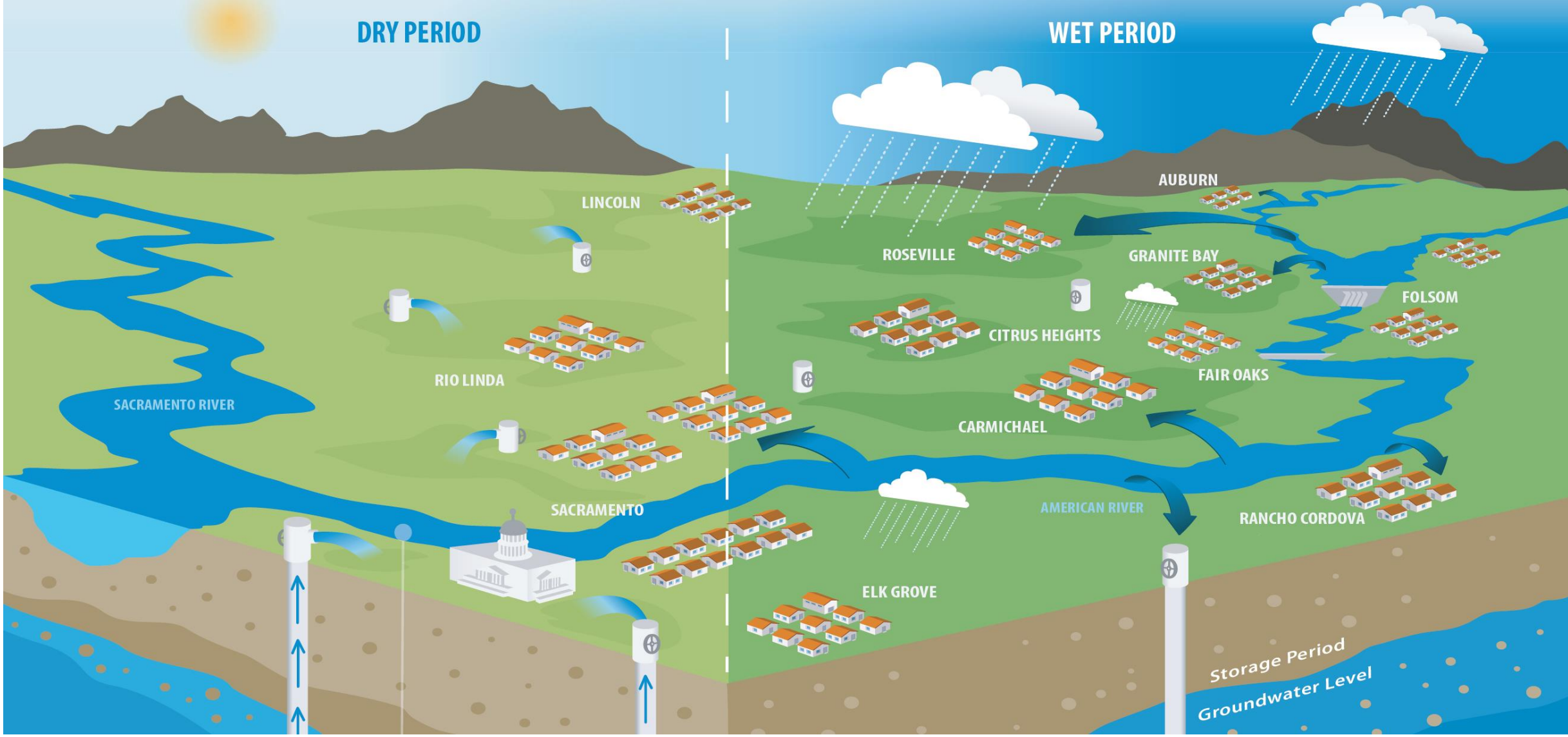
Municipal in-lieu

Municipal direct through ASR

Recycled in-lieu

Flood-MAR

Agricultural in-lieu



Questions/Discussion