Overview of Demand Management

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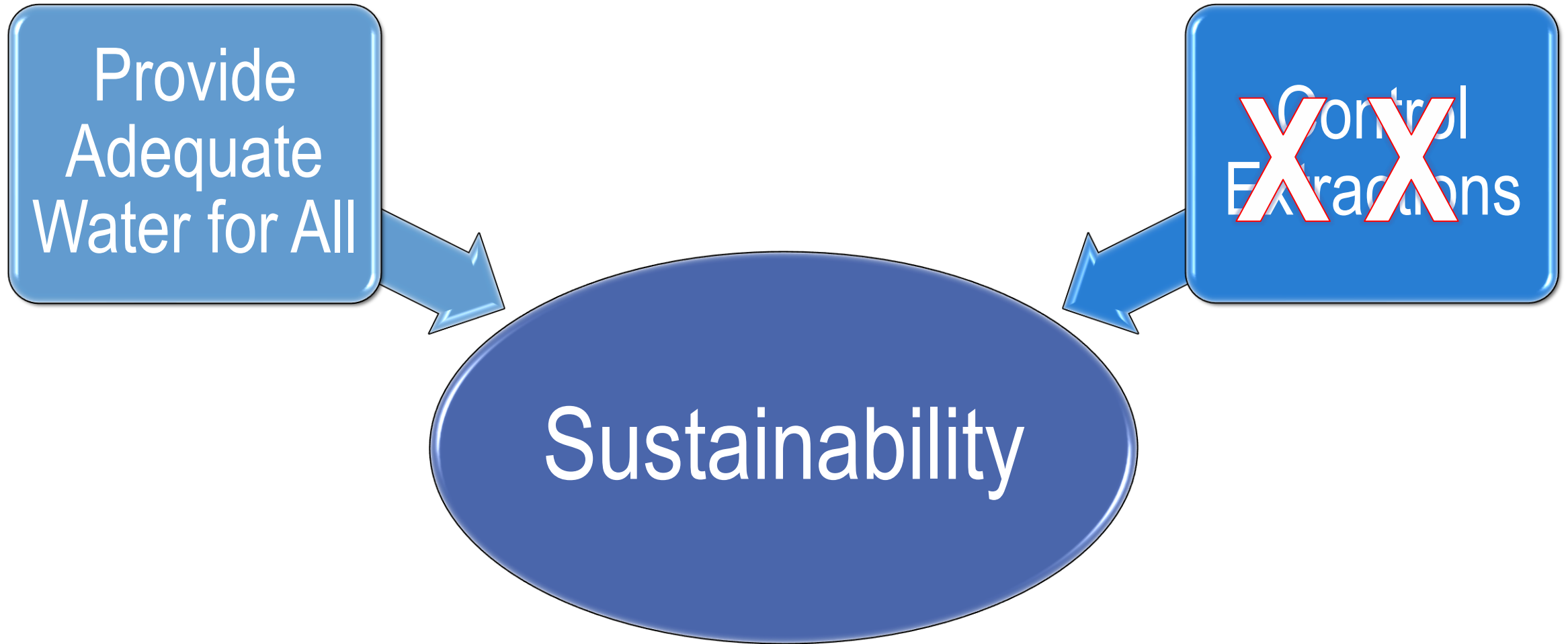Public Workshop

October 31, 2022

Why Talk About Demand Management?

Demand Management is One Option Among Many

- Almost nobody's first option

- Only implemented if it is financially preferable to other options

- Like any action or project, it is only implemented after approval by GSA(s). Nobody is forced into it.

So why do we care about it?

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Two Knobs for Achieving or Maintaining Sustainability

Provide Adequate Water for All

Control Extractions

Sustainability

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If Demand Management is Needed, it Should …

Be equitable

Helps manage groundwater when or as needed

Avoid legal battles (adjudications)

Themes I will return to

# Demand Management Planning vs. Implementing

Planning and Implementing Are Not the Same

Planning

- Build a framework for future activities

  o What do we like or not like about demand management

  o When might demand management be implemented in individual subbasins? (financial decision)

  o What is the structure or the rules for demand management

Implementing

- Implement a ~~~~ or action that follo~~~~ ~~~~

  o La~~~~ ~~~~g

  o Tie~~~~ ~~~~ pricing

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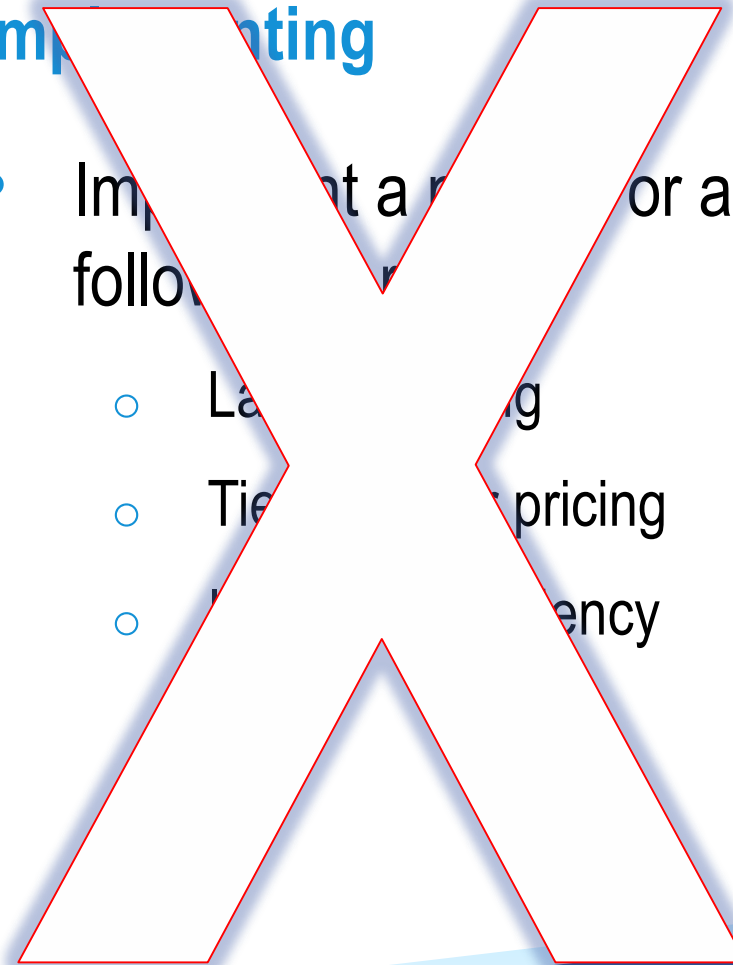
Planning is a Multi-Step Process

Canvass Opinions on Demand Management

SVBGSA is Here

Set Board Policies (if opinion survey supports this)
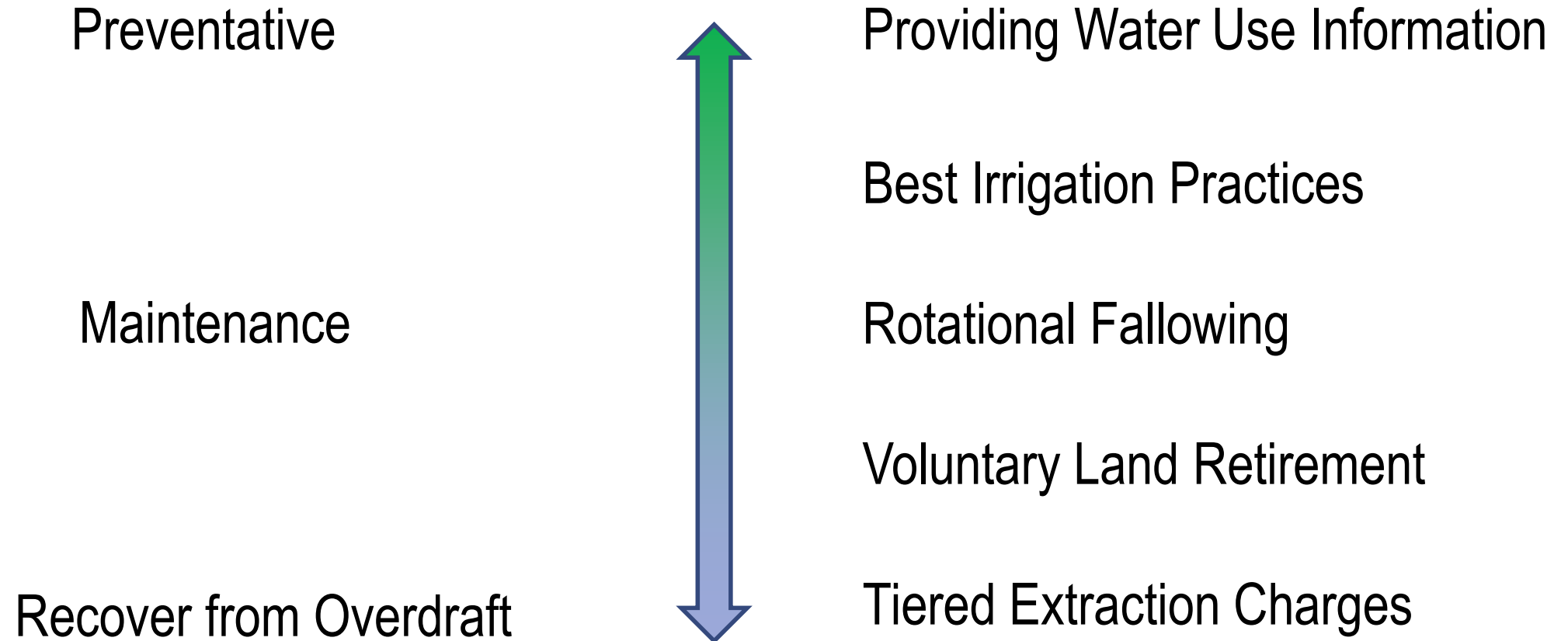
Canvass Subbasin Specific Opinions

Offramps

Develop Subbasin-Specific Policies for Interested Subbasins

Develop Subbasin-Specific Rules About Equity/Funding (or not)

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Whether to Implement, and What to Implement, Comes Later

Demand Management Has a Range of Options

Subbasin's Decide What is Appropriate for the Situation

Preventative

Maintenance

Recover from Overdraft

Providing Water Use Information

Best Irrigation Practices

Rotational Fallowing

Voluntary Land Retirement

Tiered Extraction Charges

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Subbasin's Decide What is Appropriate for the Situation

Short-Term

Long-Term

Respond to Droughts

Interim action while projects are built

Long-term action to maintain groundwater levels

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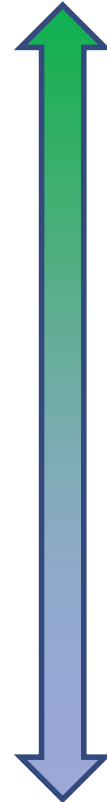
Demand Management Terms and Definitions

Clarifying a confusing topic

No standard definitions – these are my opinion

Demand Management vs. Allocations

- Demand Management: Implementation actions designed to encourage reductions in groundwater extraction

  - May take many forms but should have a goal and an idea of what an unsustainable demand is

  - Example, all growers pay into a fallow bank that is priced to encourage fallowing of 5% of current cropland

- Allocations are **agreements**, NOT implementation actions

  - No specific goal on demand reduction*

Allocations are Agreements Among Stakeholders

- Agree on how groundwater pumping in a basin should be divided equitably – **if** the demand management action needs this information

- Allows a GSA to efficiently implement demand management when needed

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Allocations Reflect Local Understandings of Equity

- Stakeholders agree on equitable distributions
  - Acreage
  - Crop type
  - Historical use
  - Investment in obtaining water
- Should align with legal precedent
- Do not set water rights

THE POLITICS OF WATER

Allocation Rules Help Avoid Adjudications (Derrik opinion)

- Adjudications commonly result in stipulated agreements on how water will be shared

- Establish water rights

- Take years to decades

- Allocations reach consensus on how water will be shared

- Do not establish a water right

- Shorter process

- Do not prevent people from filing legal actions

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Allocations Relate to Water Budgets, But are Not the Same

Water Budget

- Accounts for all inflows and outflows

- Accounts for location of groundwater and flow directions

Conceptual Water Budget
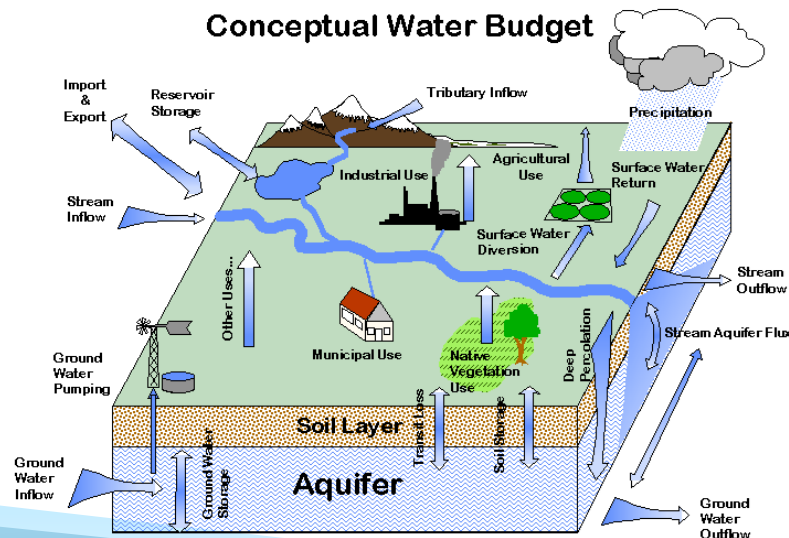
Allocations

- Agreement on permission to use groundwater

- Location of water does not matter.
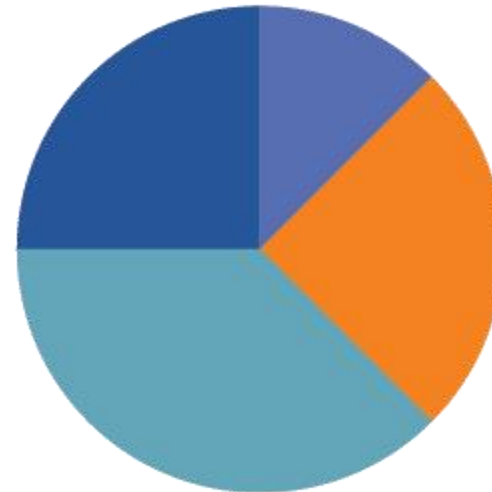
Both Address the Amount of Groundwater in the Basin

SGMA Allocation Examples

What Some GSA Demand Management Planning Includes

- Dispute resolution rules

- Funding/finances

- Groundwater credits/debits
    - How do you measure use?
    - Do fallow fields use water?

- Allocation rules, if needed

- Etc.

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Turlock Subbasin (Not Critically Overdrafted)

- Current allocation talks are between 2 GSAs, not by parcel

- Nine months working on the legal rules for allocations.
  - Not complete yet

- **No current plan to implement allocation rules** in a demand management program
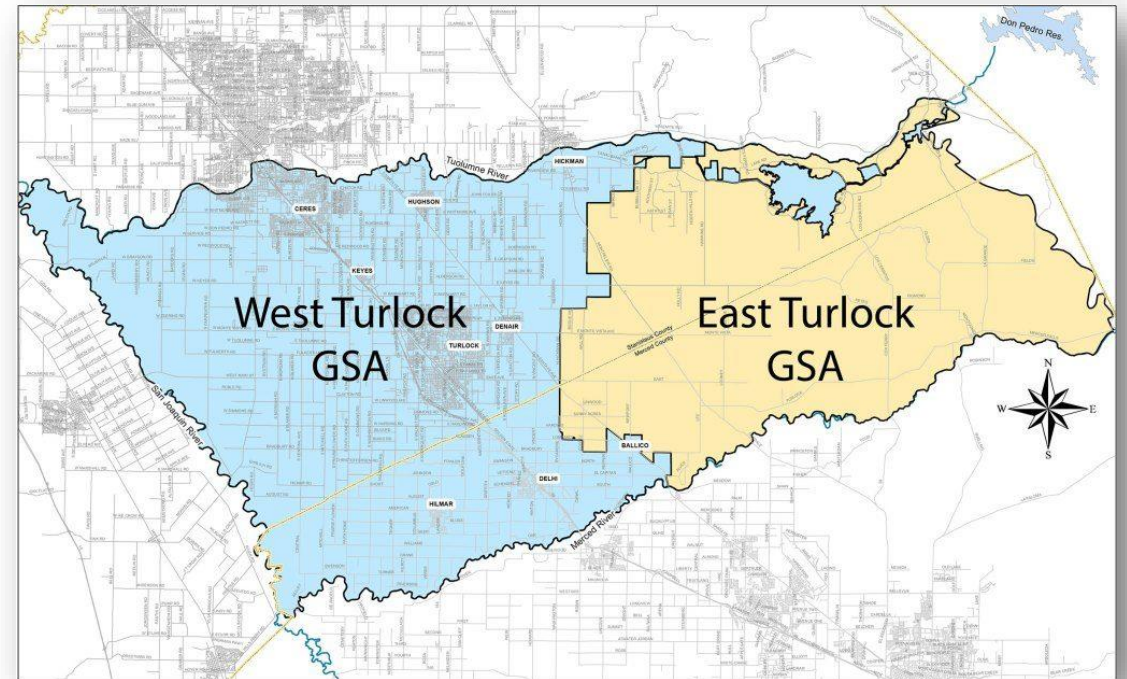
Turlock Subbasin

- A three-bucket approach to allocating groundwater
  - Native water (natural recharge)
  - Foreign water (imports)
  - Salvaged water (recycled water)
- Each GSA gets a different portion of the three buckets
- Average year calculations still to come, based on agreed to rules
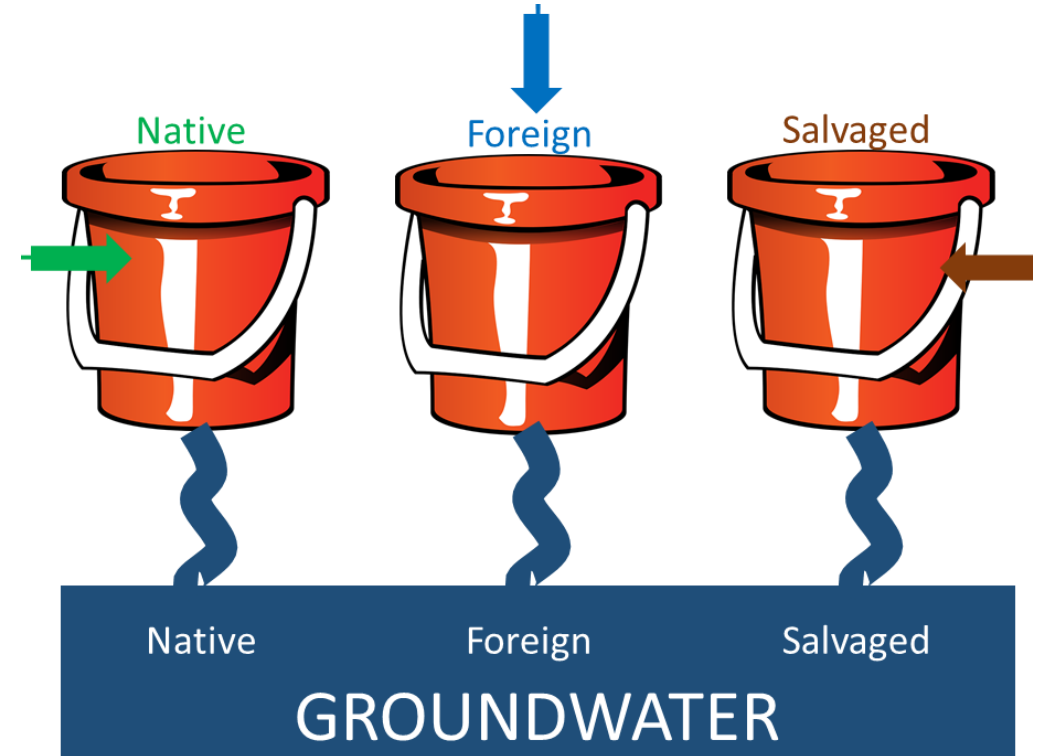
Kaweah Subbasin (Critically Overdrafted)

- Signed an allocation agreement in the 3-GSP cooperative agreement. (2 ½ + years ago)

- Allocation between 3 GSAs, not by parcel

- <u>Currently trying to implement</u> tiered pricing in each GSA (each GSA's pricing system is different)
 - Tough negotiations
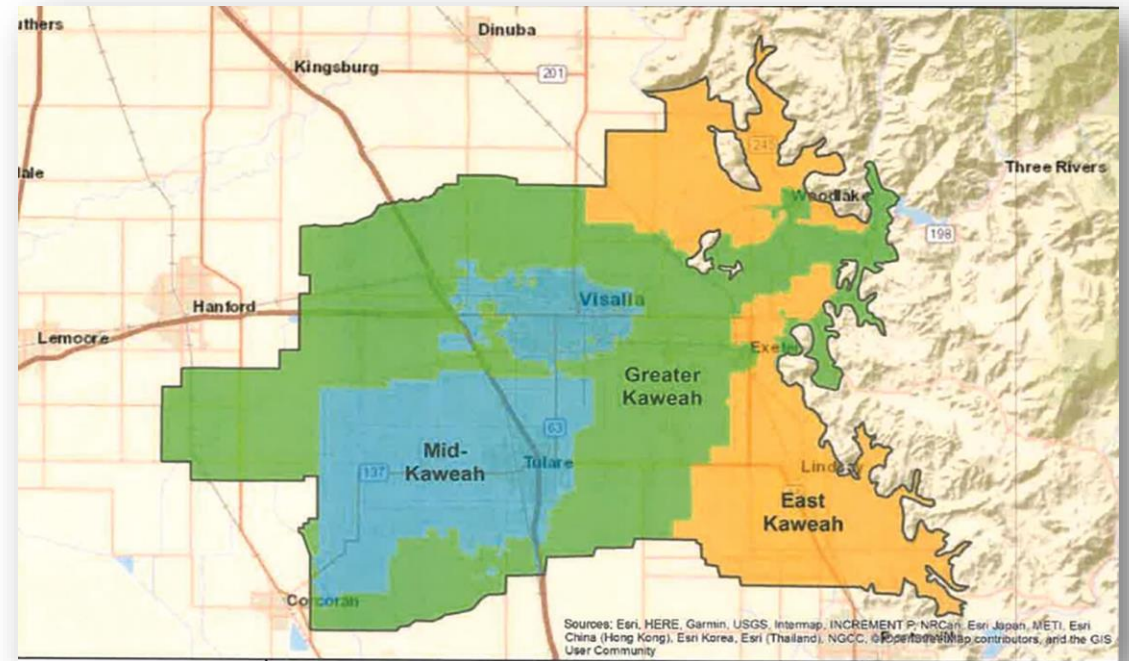
Kaweah Subbasin

- Two GSAs **appear** to plan on using funds from pumping to buy and recharge additional water

- One GSA **apparently plans** to pump groundwater down to the Minimum Thresholds, then use pumping funds to permanently retire farmland
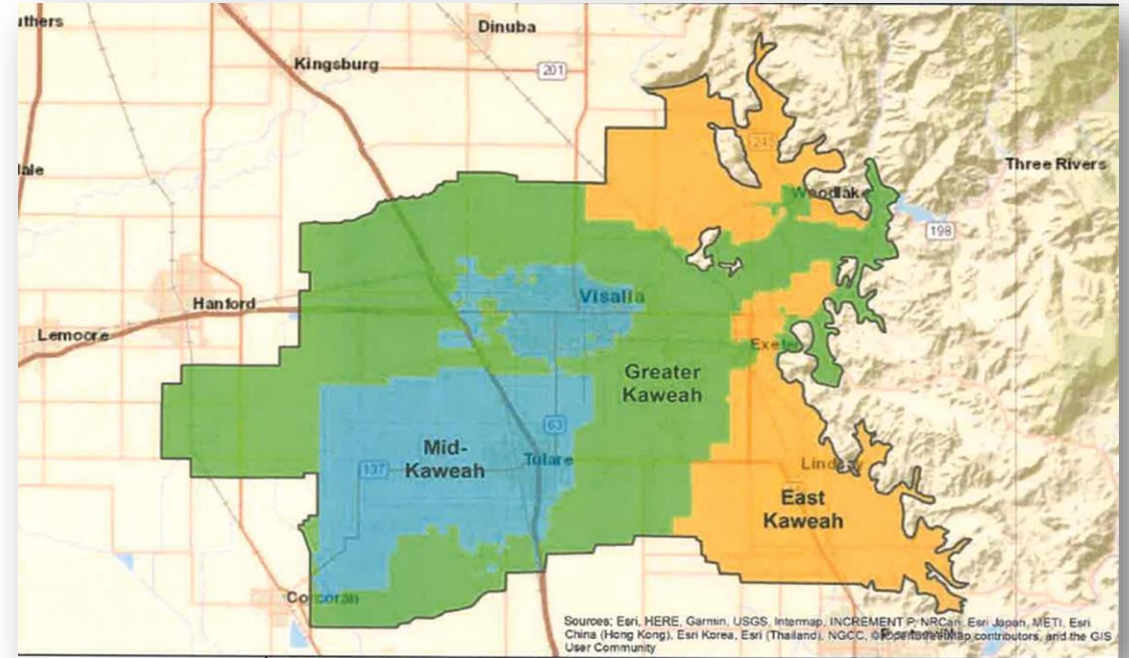
Kaweah Subbasin

- Same three-bucket approach
  - One GSA is the major water importer. (foreign water)
  - This GSA "gave" some of its foreign water to the native water bucket to increase allocations for other GSAs.
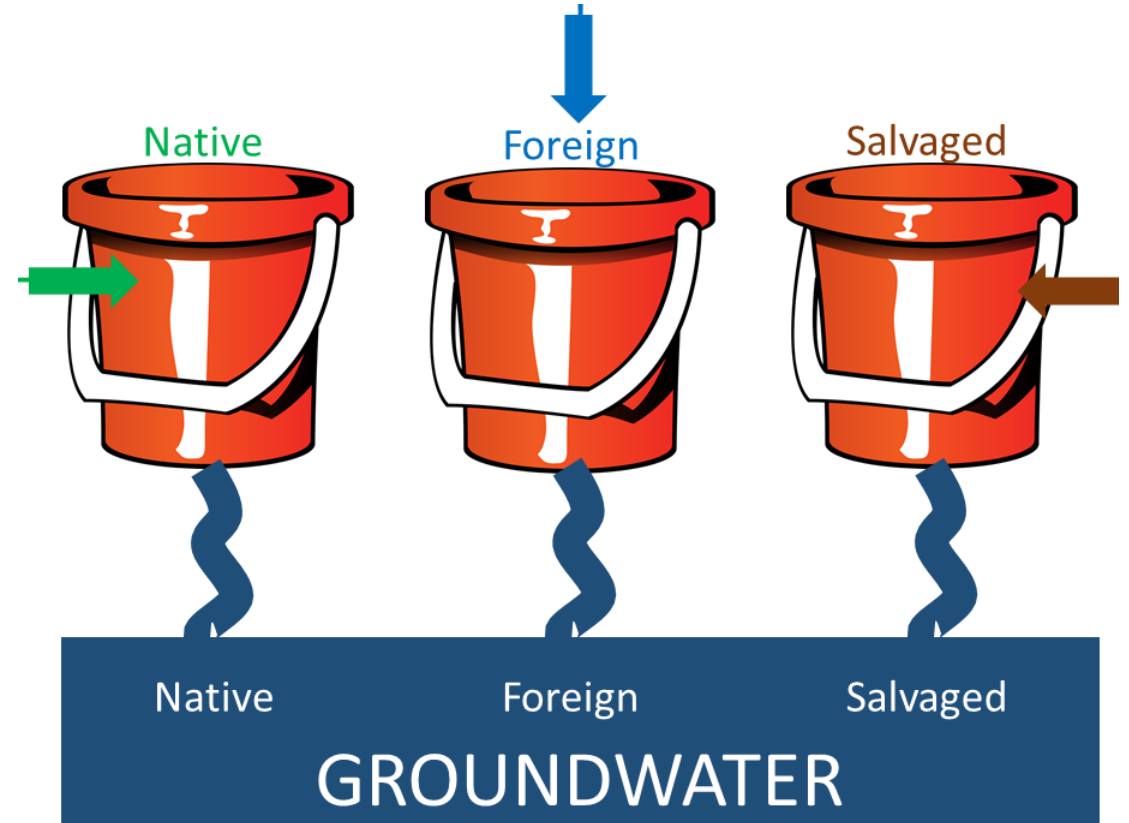
Cuyama Valley (Critically Overdrafted)

- GSP proposed pumping reductions on certain parcels in the center of the Valley. The area of greatest overdraft

- Certain growers filed an adjudication action claiming the reductions are "legally inappropriate."
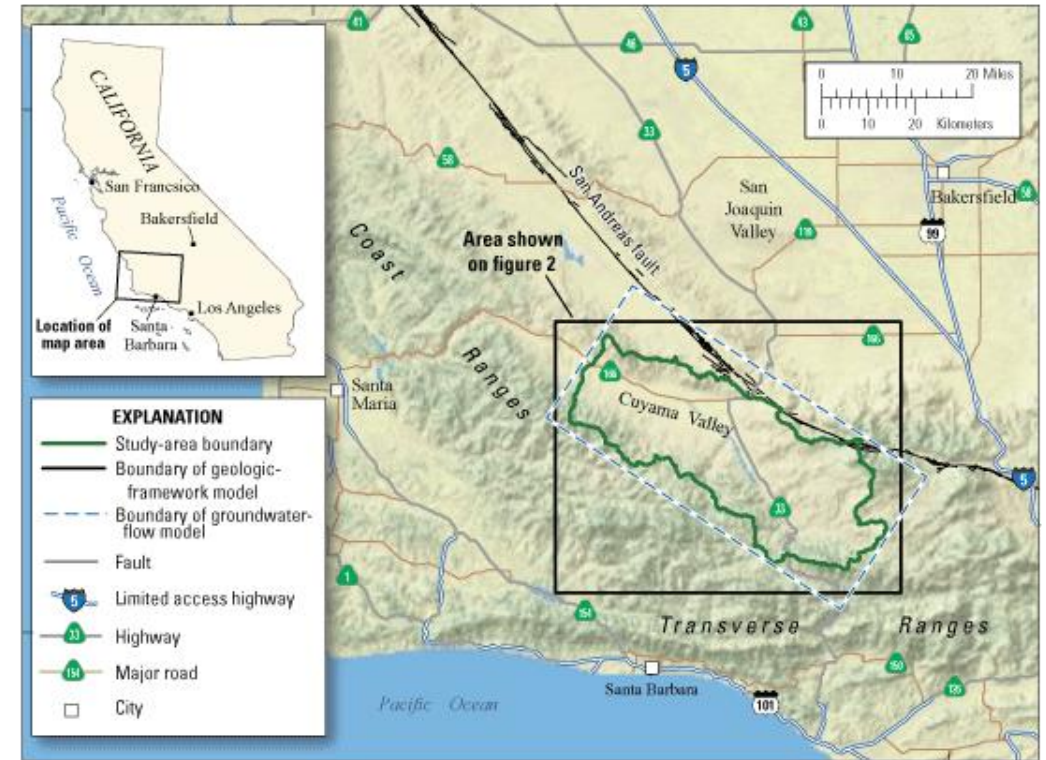
Shaded relief base from ESRI ArcGIS Online Map Service http://services.arcgisonline.com/arcgis/services: ESRI_ShadedRelief_World_2D. Roads from Cal-Atlas Geospatial Clearinghouse http://atlas.ca.gov/download.html Place names sourced from USGS Geographic Names Information System, 1974-2009. San Andreas fault from Bryant (2005). Albers Projection, NAD83

Concluding Thoughts

- Demand management takes careful and thoughtful planning

- Don't rush demand management if you don't need to. Find what you're comfortable with.

- Planning for demand management does not require implementing demand management. It might simply be a safety valve to prevent future, unanticipated changes.

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Questions

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