



Westlands Water District



# Baseline Groundwater Model- Results

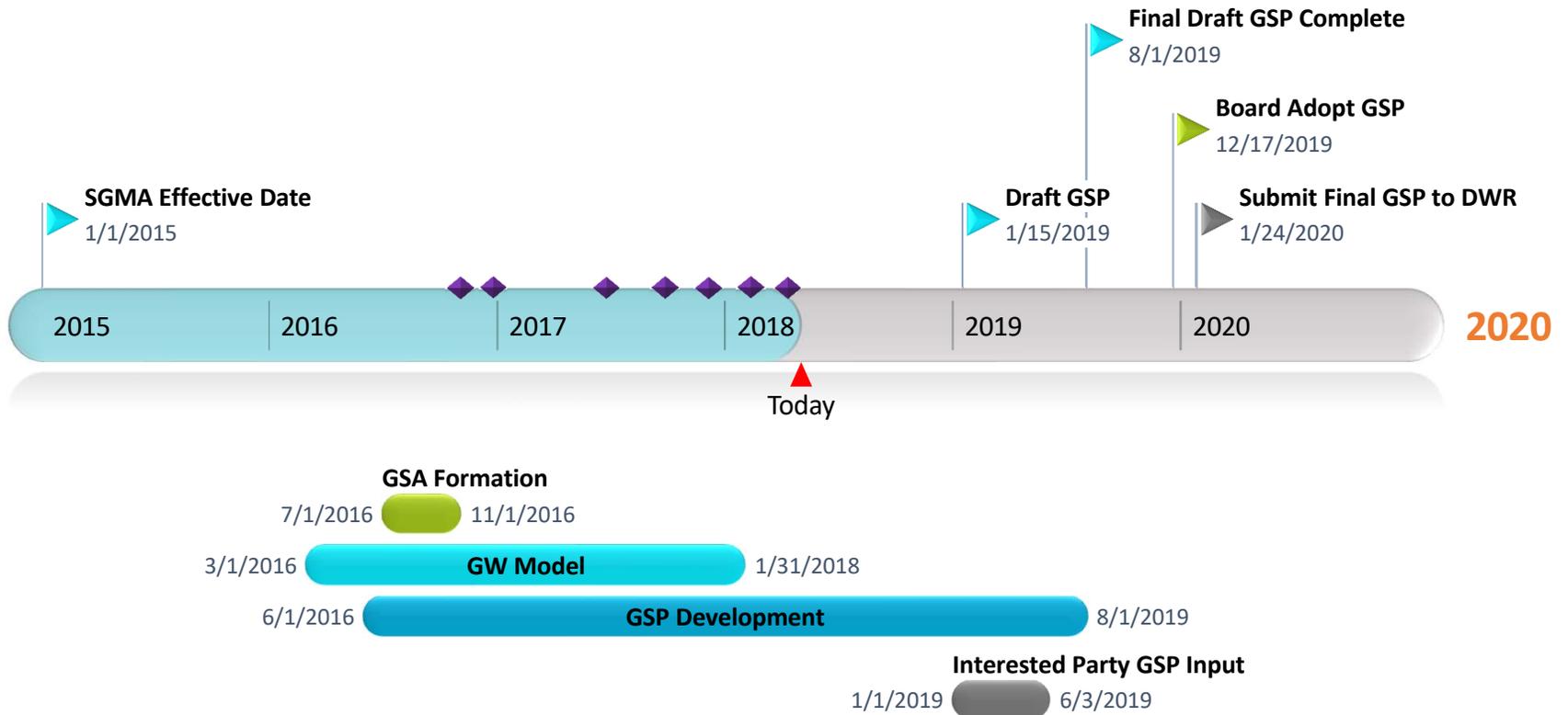
WWD Special Board Meeting  
May 3, 2018

# Outline

- SGMA Implementation Timeline
- SGMA Orientation
- GSP Content
- Westside Subbasin Hydrogeology
- Water Balance
- Modeling Results
- Enhancement Strategies



# SGMA Implementation Timeline



◆ SGMA workshops & outreach events



# SGMA Orientation

- **Groundwater Sustainability Agency (GSA)**
  - **Westlands Board**
    - ✓ **Develop a GSP by 2020:**
      - ✓ **Achieve sustainability by 2040, and**
      - ✓ **Avoids undesirable results**
- **DWR**
  - **Implement regulations, provide technical assistance, manages grant funding, and evaluate GSP**
- **SWRCB**
  - **Oversight and intervention if a GSA is not formed or if basin not managed sustainably**

# SGMA's Obligations

- Expanded Groundwater Sustainability Agency authority
- “Sustainable GW management” is **not voluntary**
- Groundwater Sustainability Plans (GSPs) required in medium – high priority basins within 20 years
- The Westside Subbasin designated as a high priority basin in critical overdraft
- State scrutiny and approval of each GSP
- State intervention now possible for failure to comply

# SGMA Tactical Advantages

## Short Term:

- Conflict management
- Address uncertainty as to rules and outcome

## Long Term:

- Conflict management
- Local adaptive management of groundwater supplies
- Expanded and intergrated groundwater management
- *Physical solution*: Yield optimization through collaboration
- Financing
- Certainty for long term outcome

# GSP Content

1

- **Administrative Information**

2

- **Basin Setting**

3

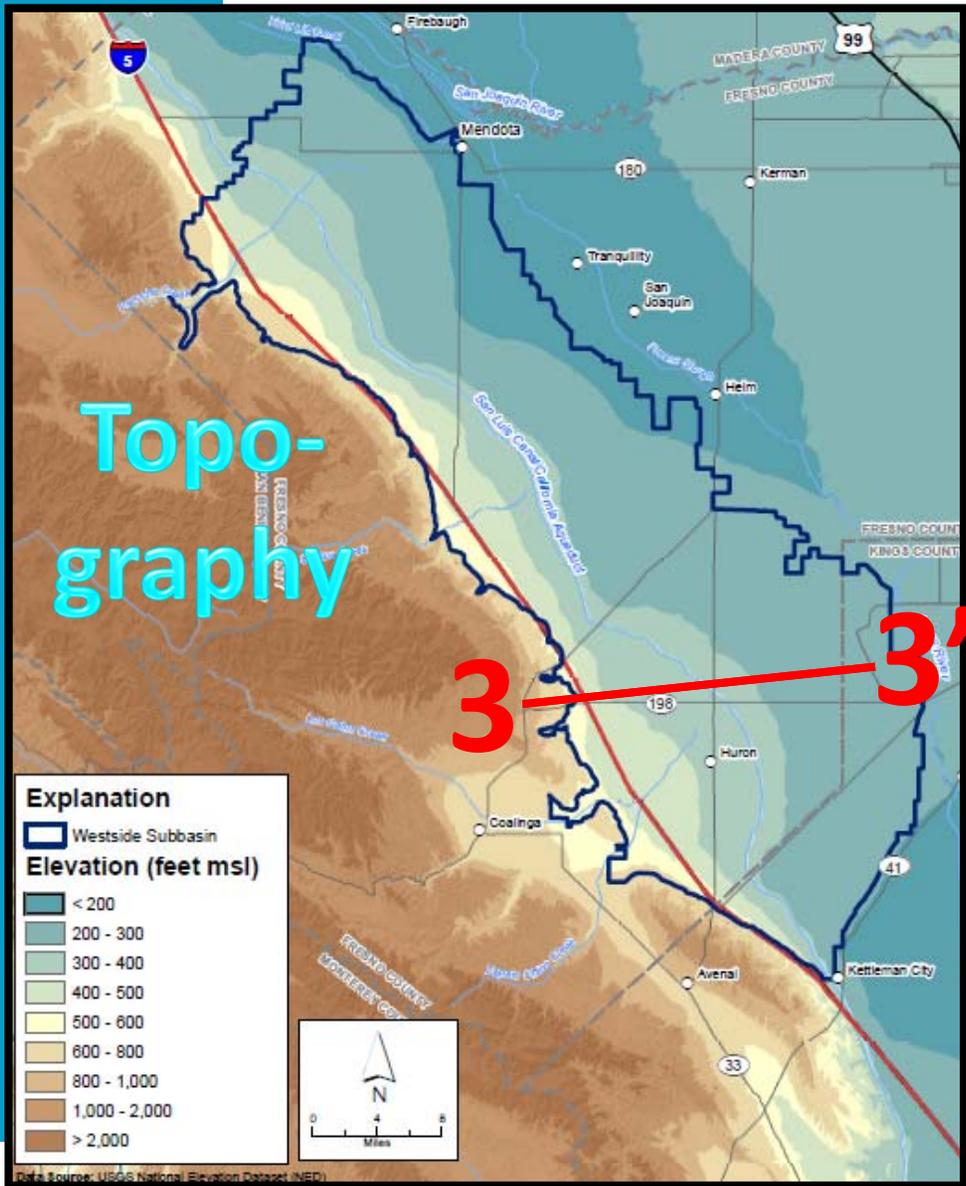
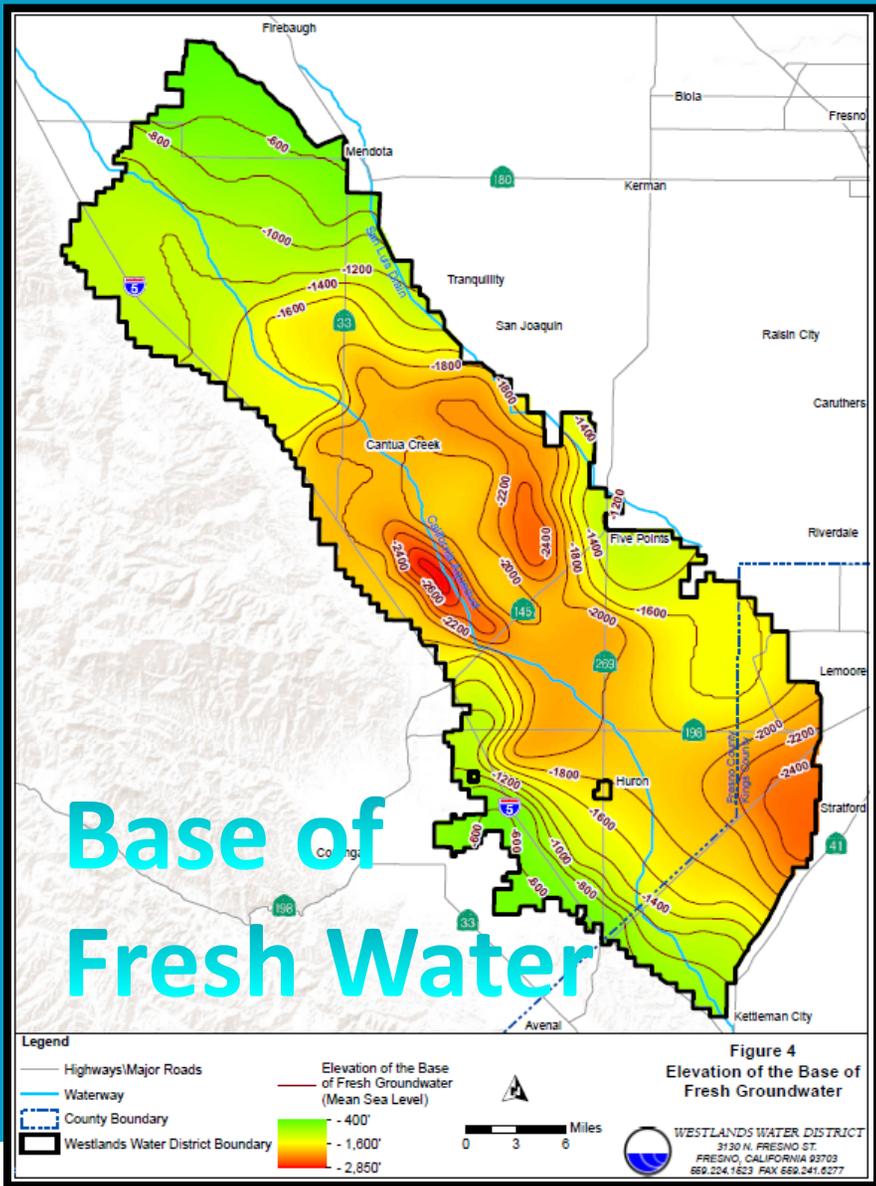
- **Sustainable Management Criteria**

4

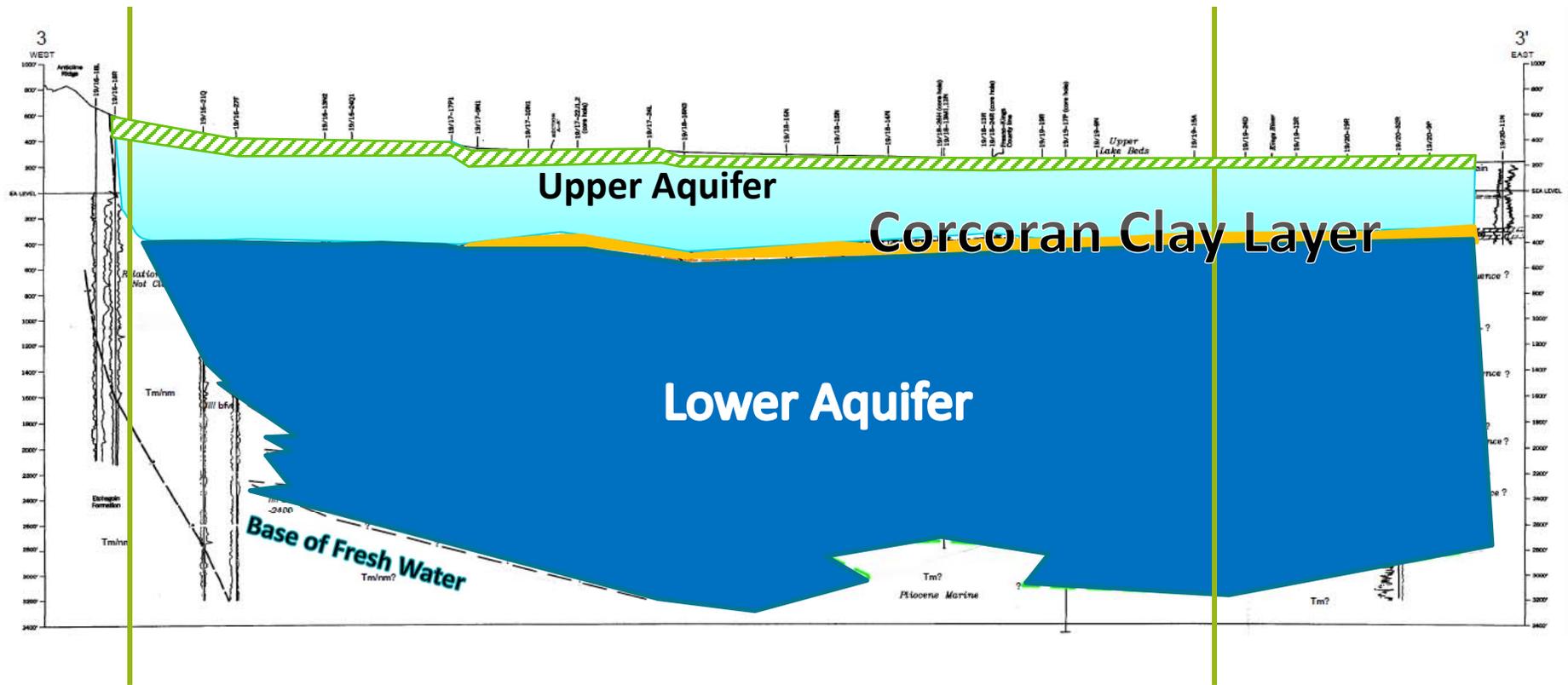
- **Monitoring Network**

5

- **Projects and Management Actions**



# Cross Section



Westside  
Subbasin  
Boundary

Westside  
Subbasin  
Boundary



# Sustainable Groundwater Management Act (SGMA)

- Local Management of the Groundwater Basin
- Requires subbasins to be **sustainably** managed by 2040
  - Avoiding undesirable results

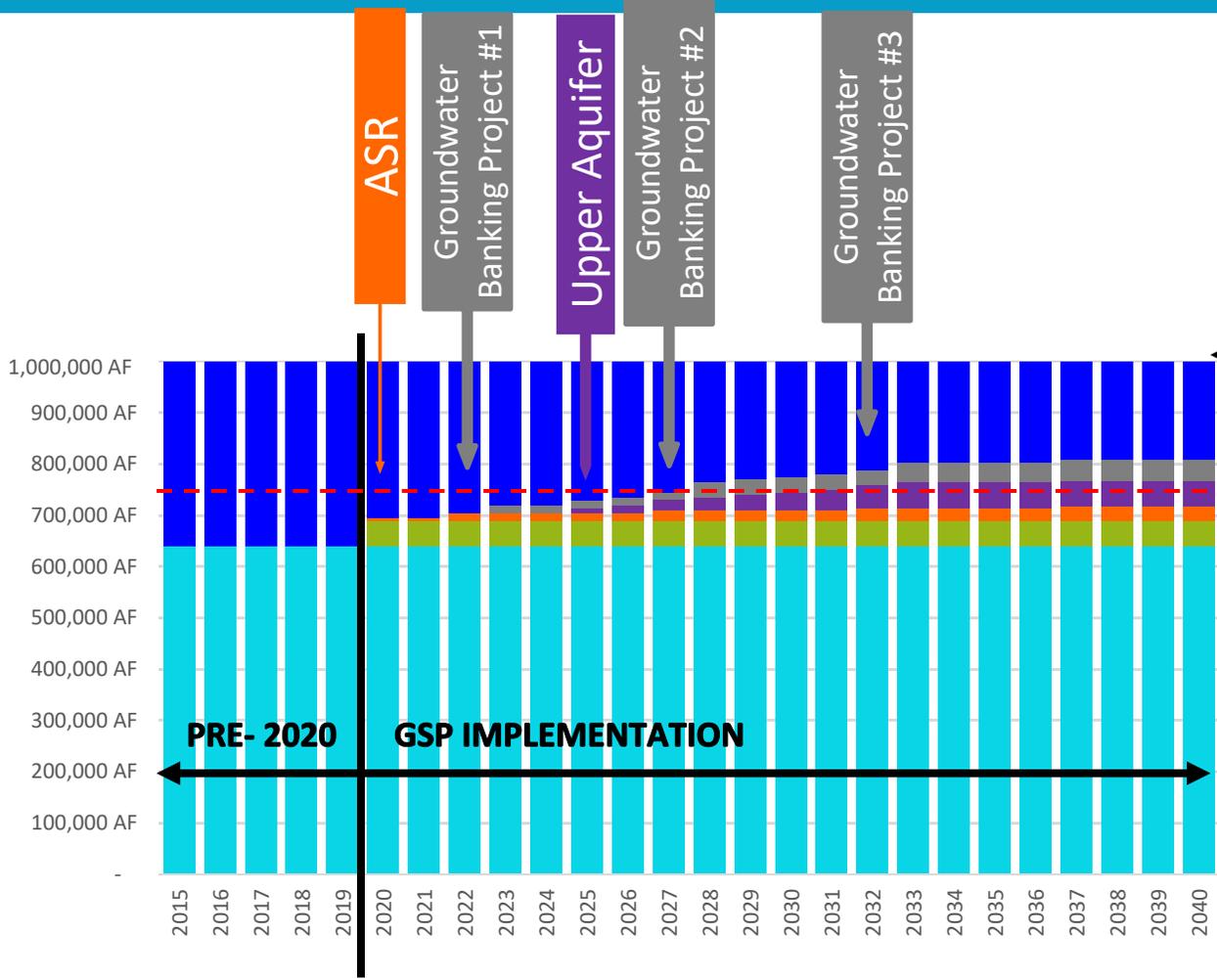


# Water Balance

**Land Use Breakdown  
(2012 Example)**  
 390,000 Acres Irrigated  
 60,000 Acres Dry Farmed  
 120,000 Acres Fallow  
 570,000 Acres Total

**Avg. Demand**  
 390,000 Acres Irrigated  
 \* 2.56 AF/Acre  
 1,000,000 AF

**Avg. Surface Water**  
 478,000 AF 40% Allocation  
 124,000 AF Supplemental  
 38,000 AF W.U. Transfers  
 640,000 AF Total



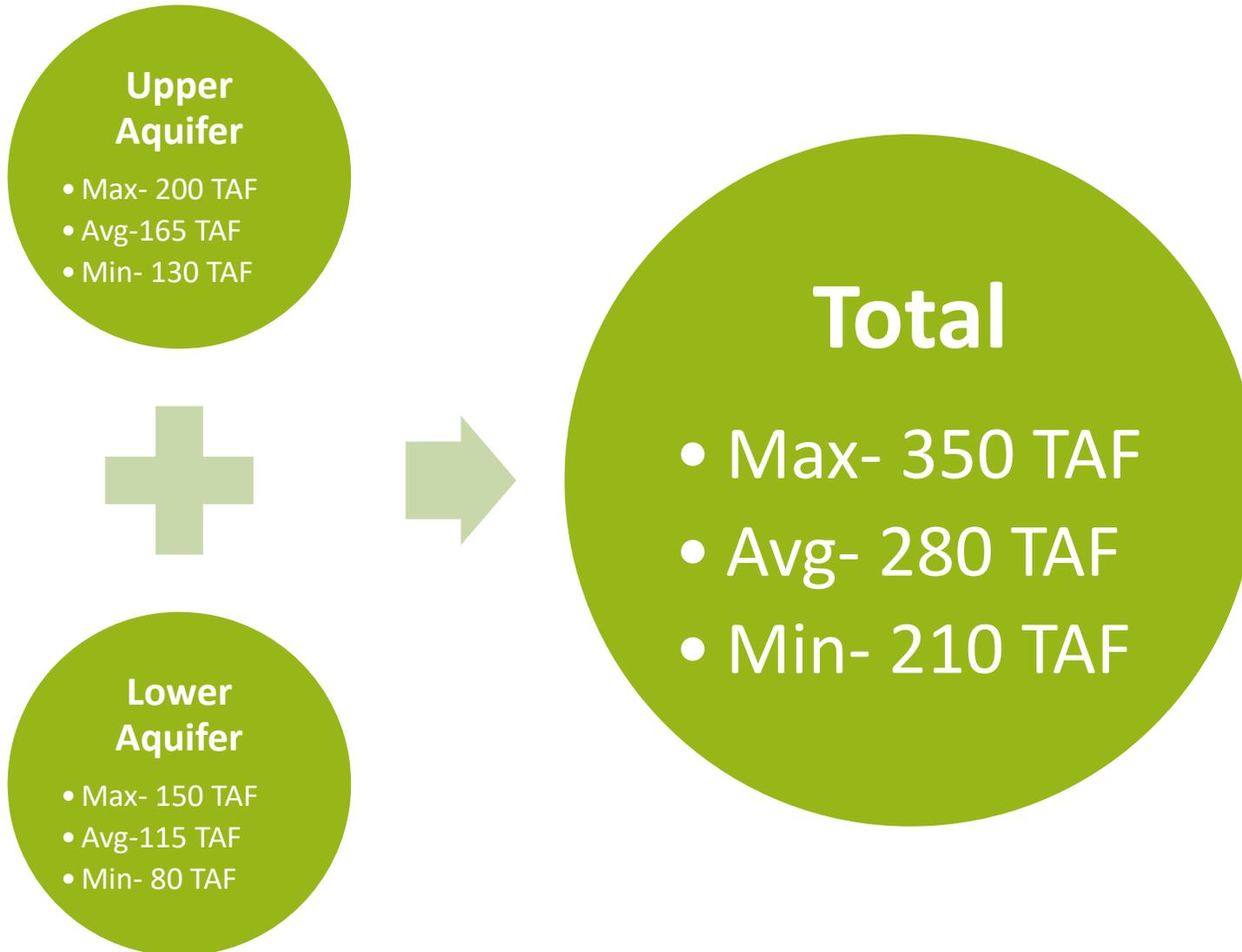
- Surface Water
- Upper Aquifer Supply
- Additional Supplemental Water
- Groundwater Replenishment
- ASR
- Groundwater Pumping



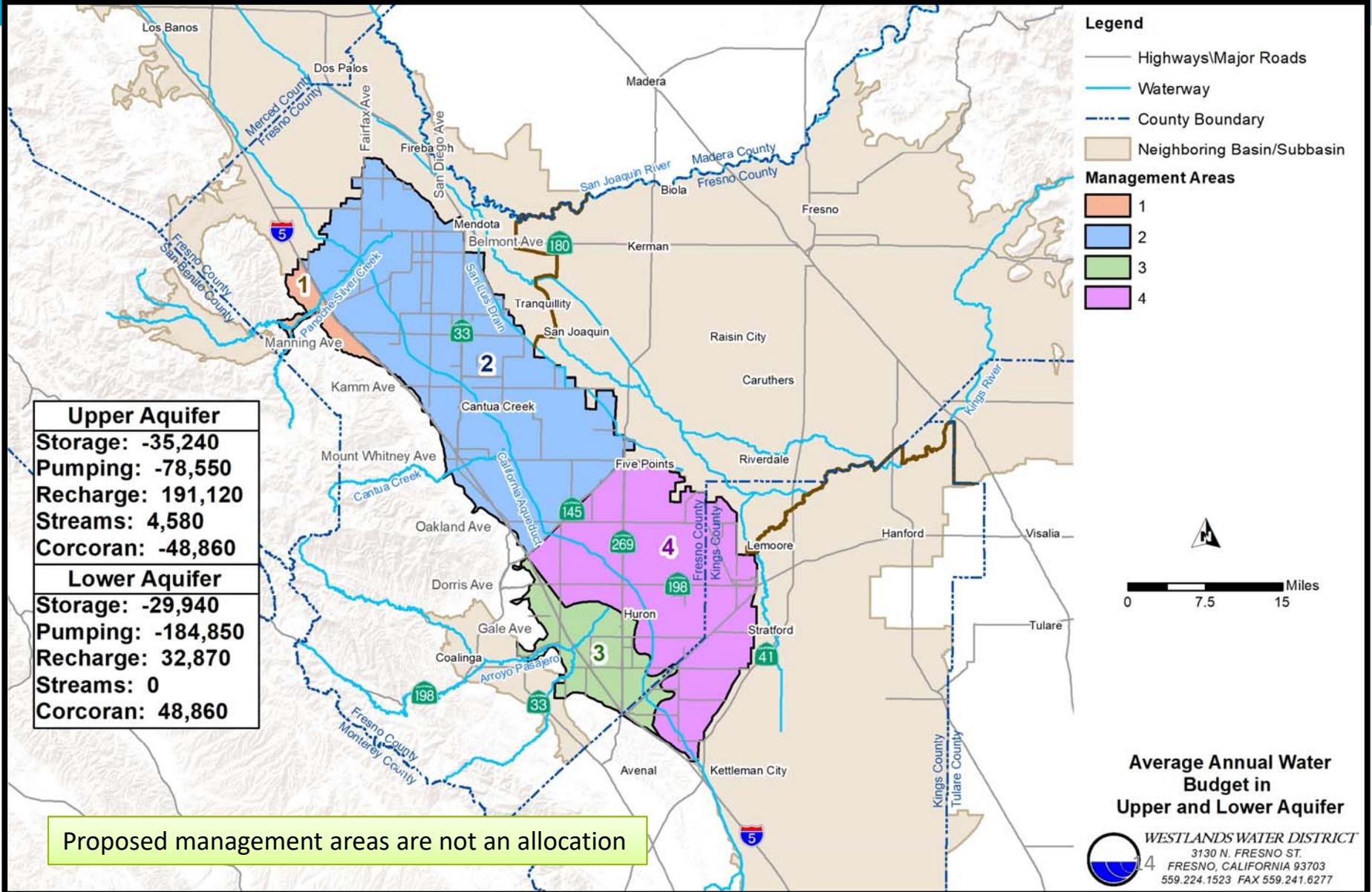
# Water Balance- Average

Water Type	Pre-2020	GSP Implementation (2040)
Surface Water	640,000 AF	640,000 AF
Groundwater Pumping	360,000 AF	<b>192,000 AF</b>
Additional Supplemental Water		50,000 AF
Aquifer Storage and Recovery (ASR)		28,000 AF
Upper Aquifer Pumping		50,000 AF
Groundwater Replenishment		40,000 AF

# Groundwater Pumping Potential



# Average Annual Water Budget

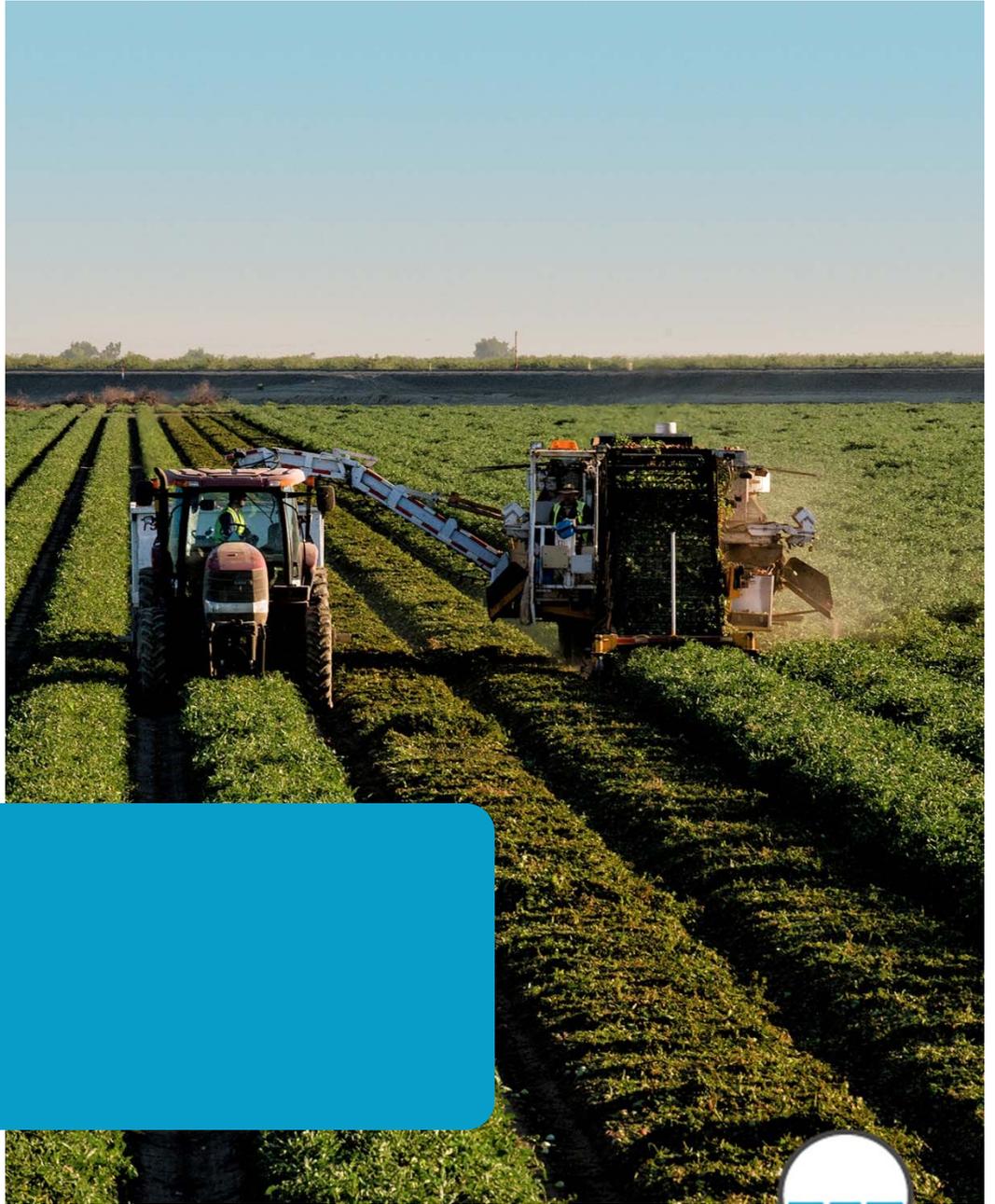


Proposed management areas are not an allocation

# Enhancement Strategies\*

- Augmentation Credits
  - ASR
  - On-Farm Recharge
  - Subsurface Recharge
- Conservation Credits
  - Reduce groundwater pumping
  - Fallowing Land
- Trading Credits
  - Purpose of Management Areas

\*Subject to physical solutions/undesirable results



# QUESTIONS