



# Fox Canyon Groundwater Management Agency

First Periodic GSP Evaluation for the LPVB



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**DUDEK**

SEPTEMBER 2024

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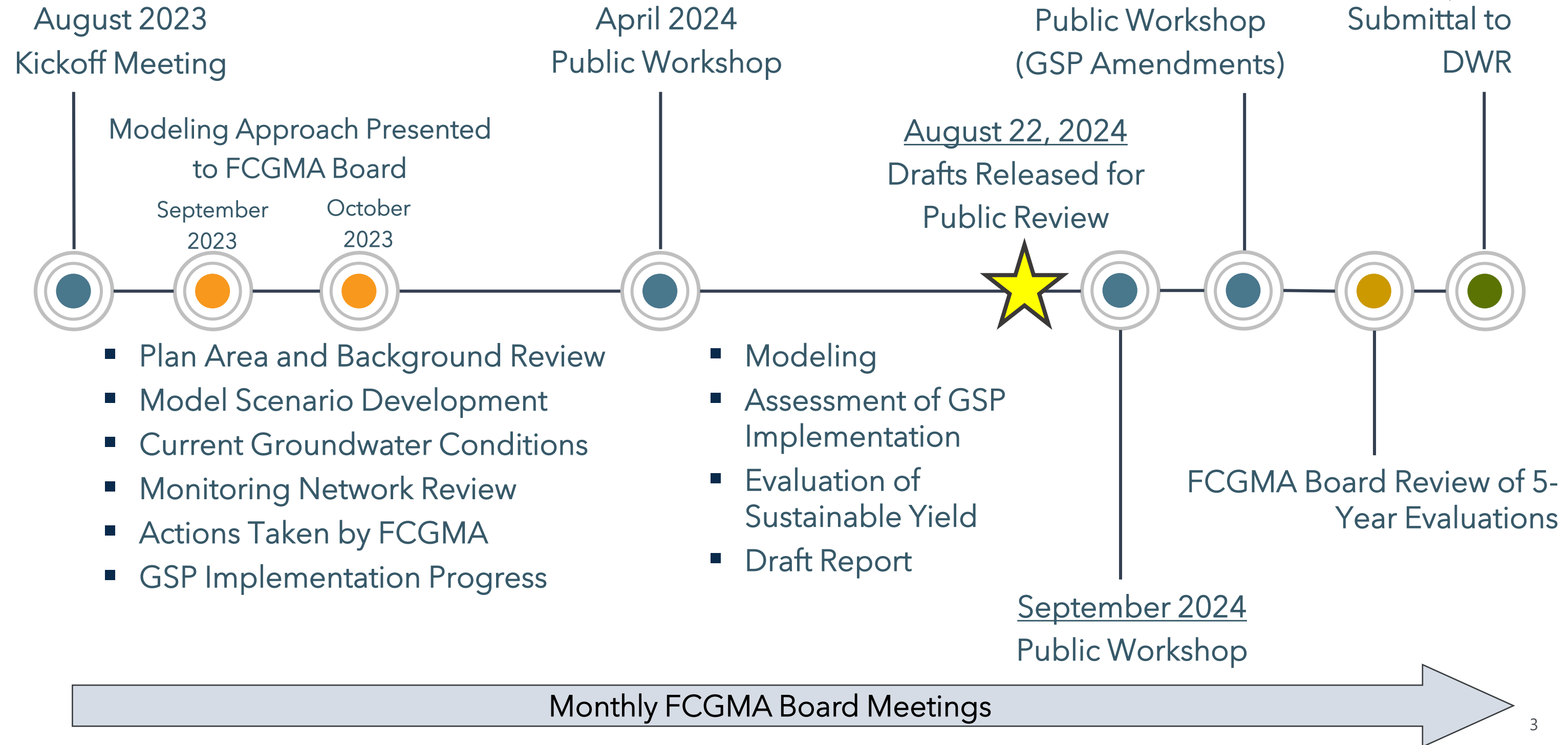
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Periodic Evaluation Timeline

LPVB PAC and TAC Consultation



# Stakeholder Involvement Periodic Evaluation Timeline

## LPVB PAC and TAC Consultation



August 2023  
Kickoff Meeting

April 2024  
Public Workshop

Public Workshop  
(GSP Amendments)

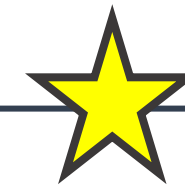
Submission to  
DWR

Modeling Approach Presented  
to FCGMA Board

September  
2023

October  
2023

August 22, 2024  
Drafts Released for  
Public Review



September 2024  
Public Workshop

FCGMA Board Review of 5-  
Year Evaluations

- Plan Area and Background Review
- Model Scenario Development
- Current Groundwater Conditions
- Monitoring Network Review
- Actions Taken by FCGMA
- GSP Implementation Progress

- Modeling
- Assessment of GSP Implementation
- Evaluation of Sustainable Yield
- Draft Report

Monthly FCGMA Board Meetings



# Background Information

## The Periodic Evaluation Does:

- Summarize new information
- Evaluate groundwater conditions
- Address DWR Recommended Corrective Actions
- Evaluate the sustainable management criteria
- Evaluate progress towards sustainability

## The Periodic Evaluation Does Not:

- Establish new management strategies or policy
- Amend the GSP
  - FCGMA will be amending the LPVB GSP.

# Evaluation Content

## Technical Components

- 1) Significant New Information
- 2) Current Groundwater Conditions
- 3) Status of Projects and Management Actions
- 4) Basin Setting Review
- 5) Updated Numerical Modeling
- 6) Monitoring Network

## Policy and Engagement

- 7) Agency Actions
- 8) Outreach, Engagement, and Coordination
- 9) Other Information (Legal Challenges, Consideration of Adjacent Basins)
- 10) Summary of Proposed GSP Revisions or Amendments

# Evaluation Content

## Technical Components

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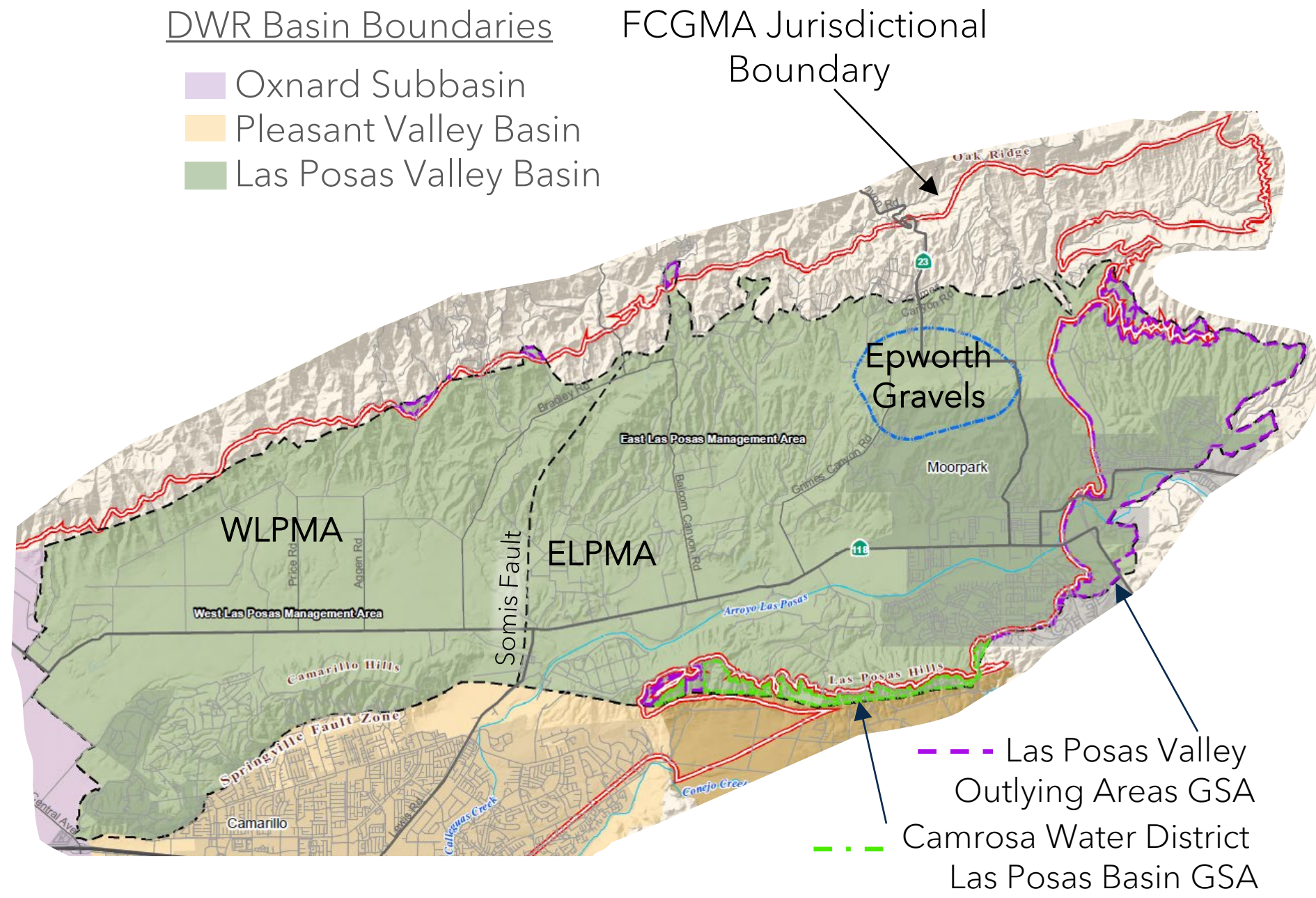
## Policy and Engagement

- 7) Agency Actions
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# Current Conditions – Undesirable Results in the LPVB

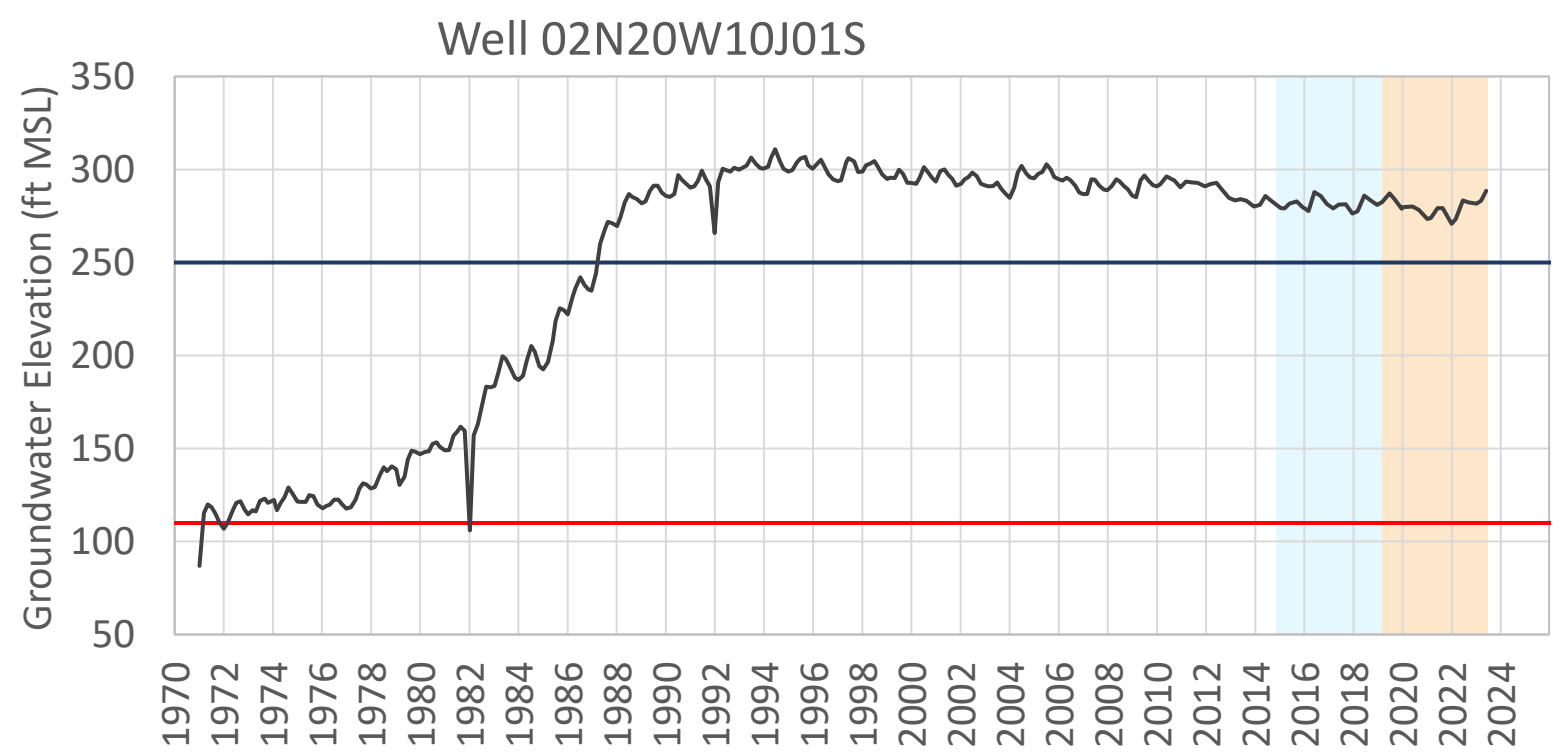
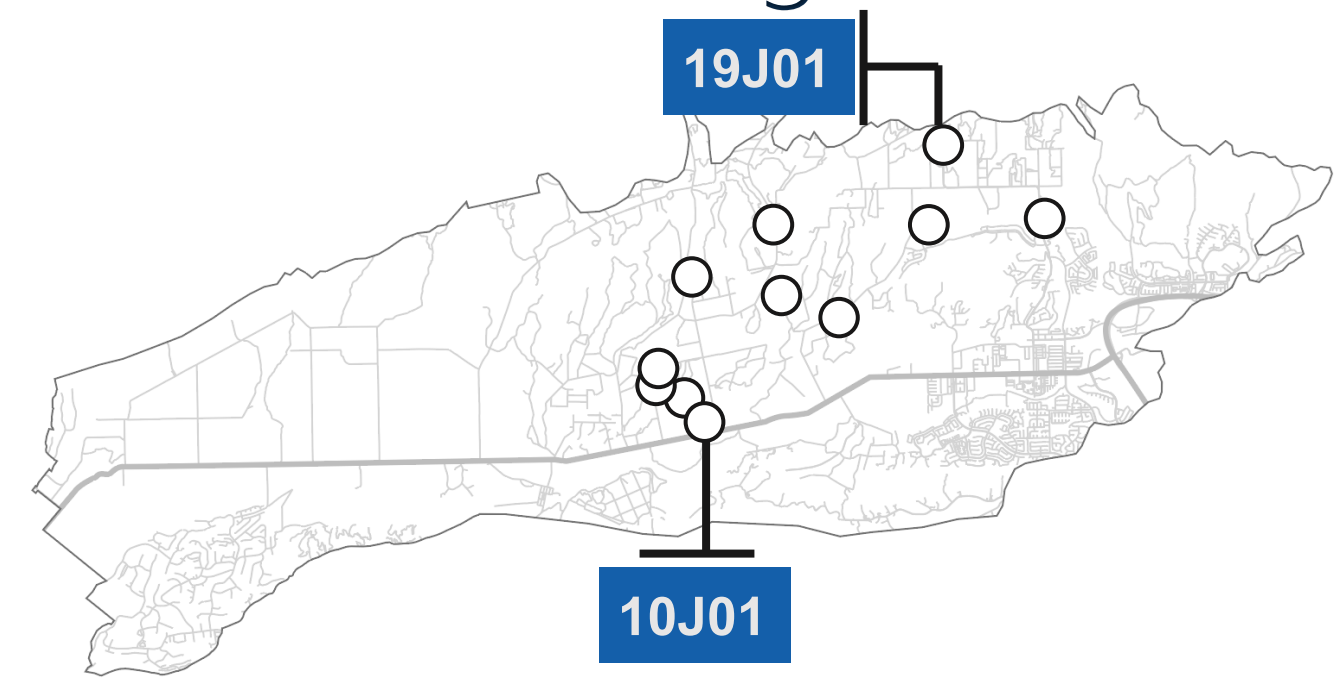
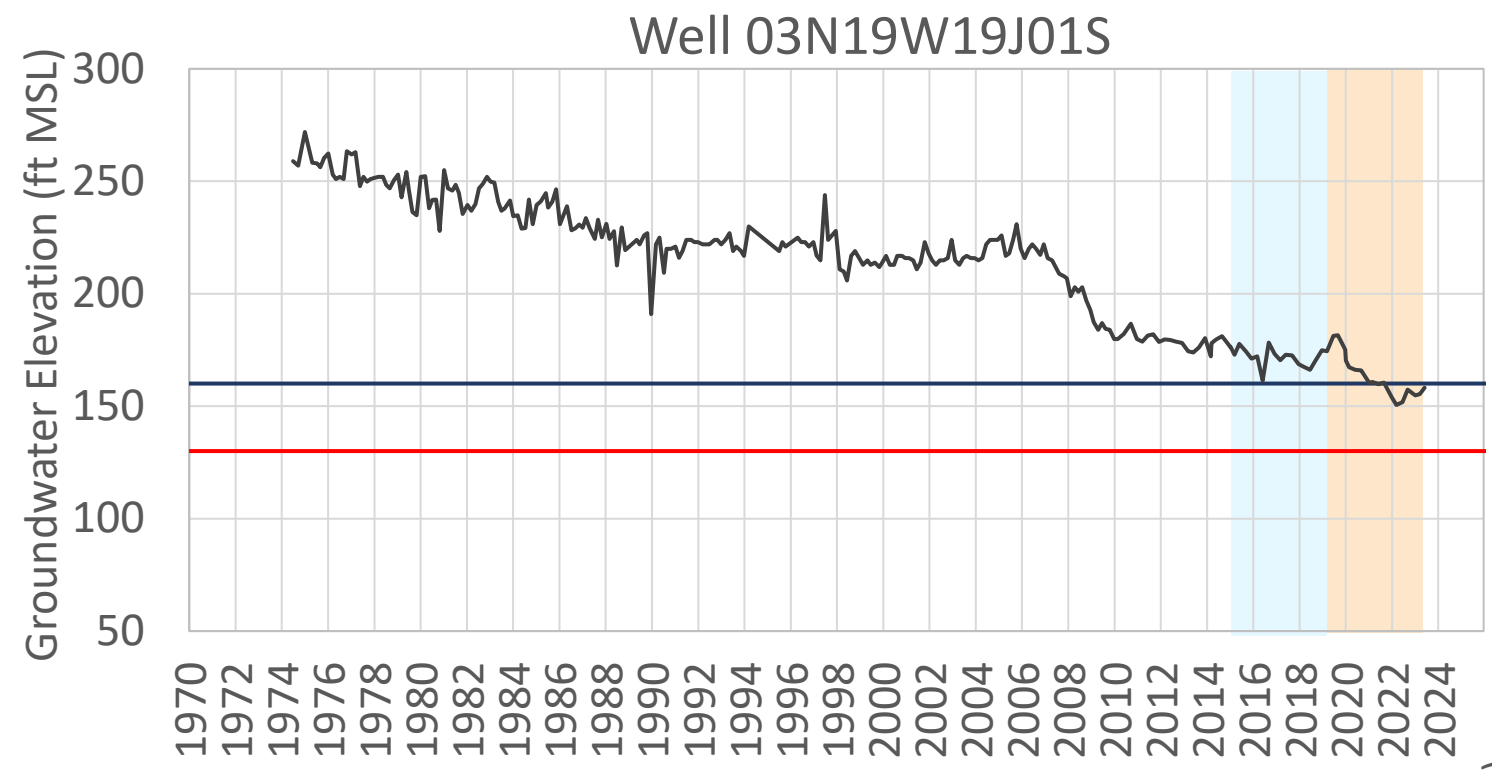
## SUSTAINABILITY INDICATORS

-  Groundwater Elevation
-  Groundwater in Storage
-  Seawater Intrusion
-  Groundwater Quality
-  Land Subsidence
-  Interconnected Surface Water and Groundwater





# Las Posas Valley Basin Groundwater Elevation Changes

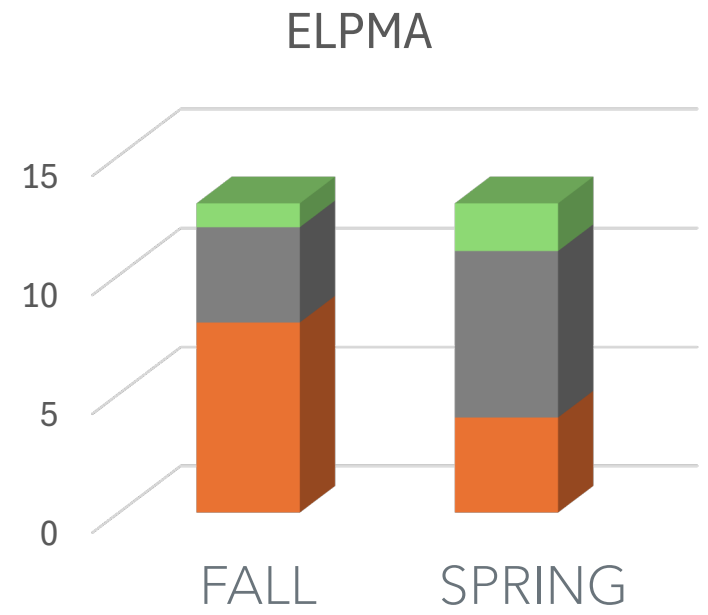
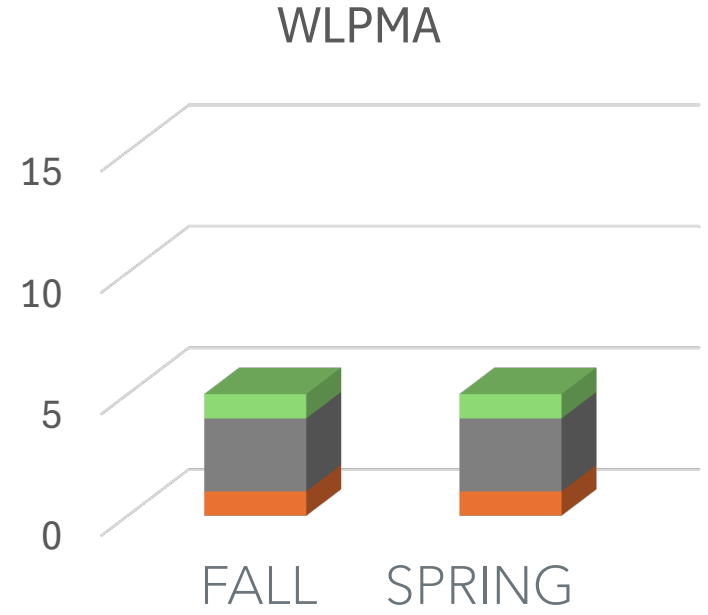
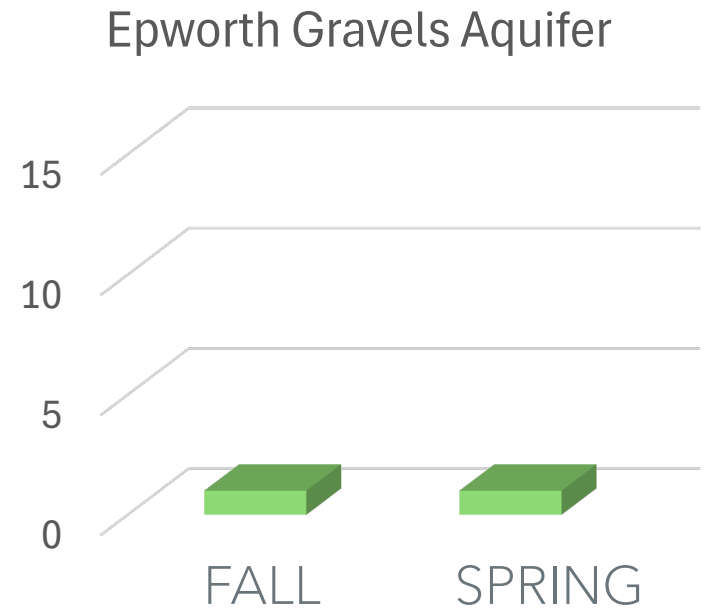
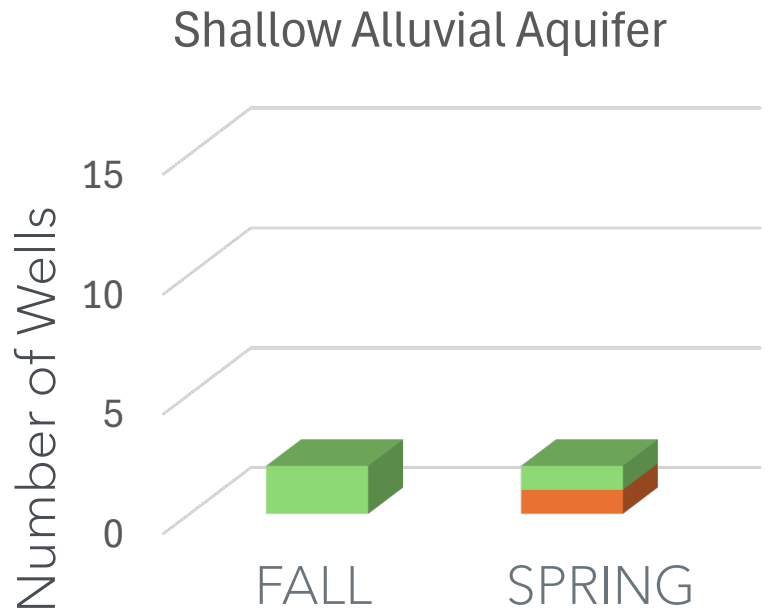


**Legend**

- Measured: Black line
- Measurable Objective: Blue line
- Minimum Threshold: Red line
- Post-GSP Reporting: Light blue shaded area
- Evaluation Period: Light orange shaded area

Data Source: Section 2.2; Figure 2-17a  
(Draft LPVB GSP Evaluation)

# Summary of Groundwater Elevation Changes



2 Key Wells

- Spring 2024 water levels were 1 foot higher than spring 2020 water levels

1 Key Well

- Spring 2024 water levels were 13 feet higher than spring 2020 water levels

5 Key Wells

- 3 were not measured in both spring 2020 and spring 2024
- Increase of 10 feet since spring 2020
- Decrease of 5 feet since spring 2020

13 Key Wells

- 7 were not measured in both spring 2020 and spring 2024
- Increase of 1 to 48 feet since spring 2020 in 2 wells
- Decrease of 0.1 to 23 feet since spring 2020 in 4 wells

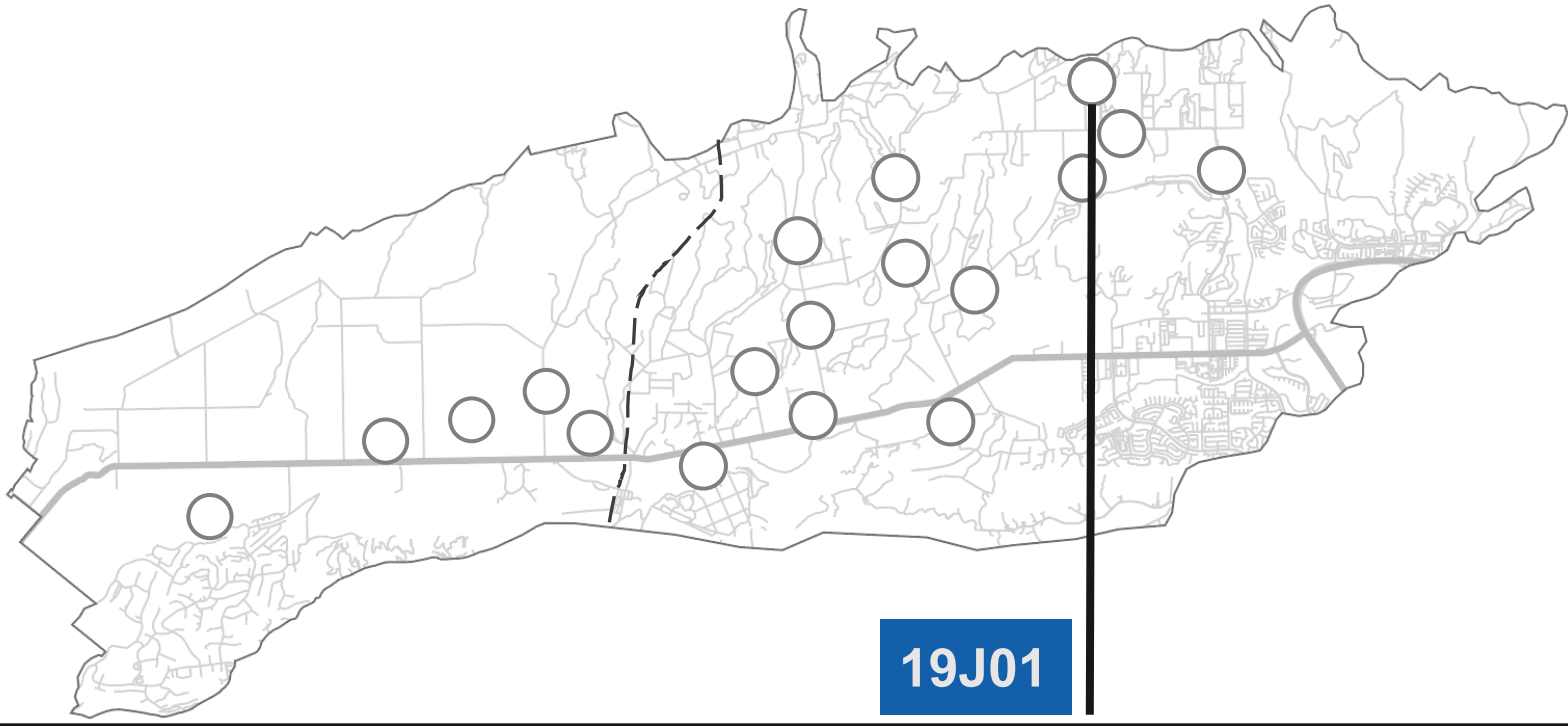
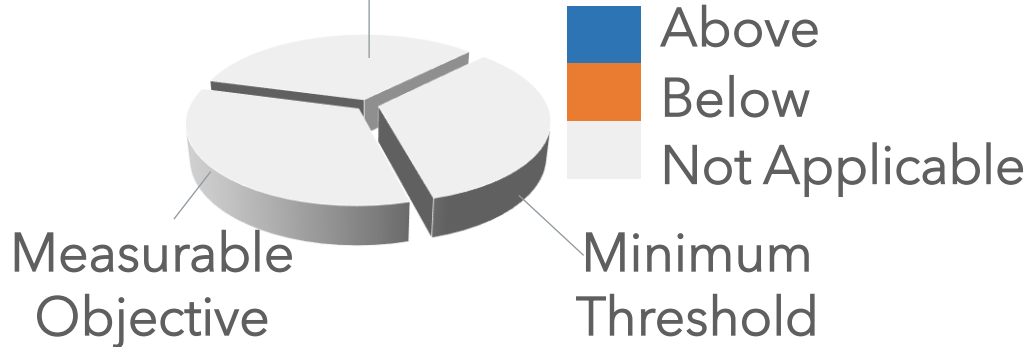
Legend

- Groundwater Elevation Increase
- Groundwater Elevation Decline
- Not Available

# Las Posas Valley Basin: Current Groundwater Levels

## Legend

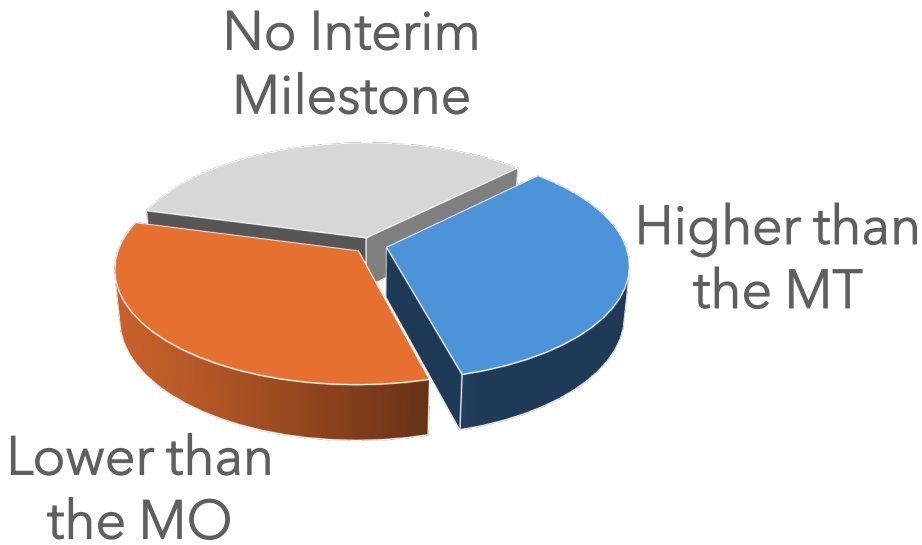
Interim Milestone to Reach Measurable Objective



## AQUIFER



Well 03N19W19J01

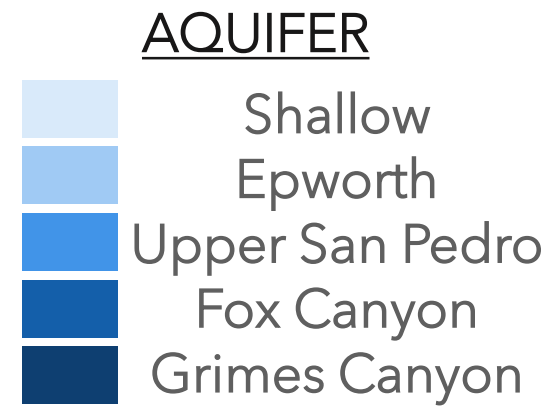
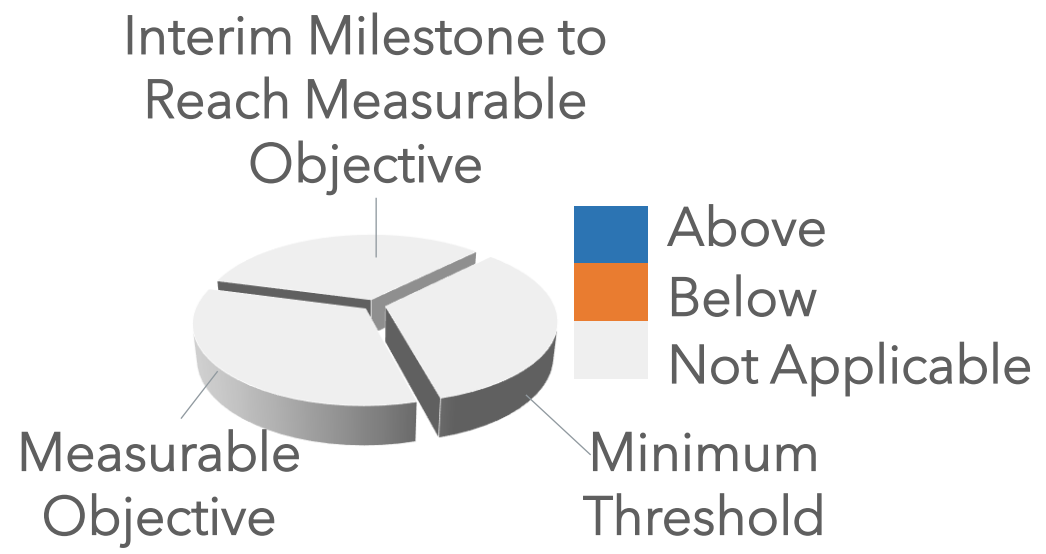


Well 03N19W19J01S

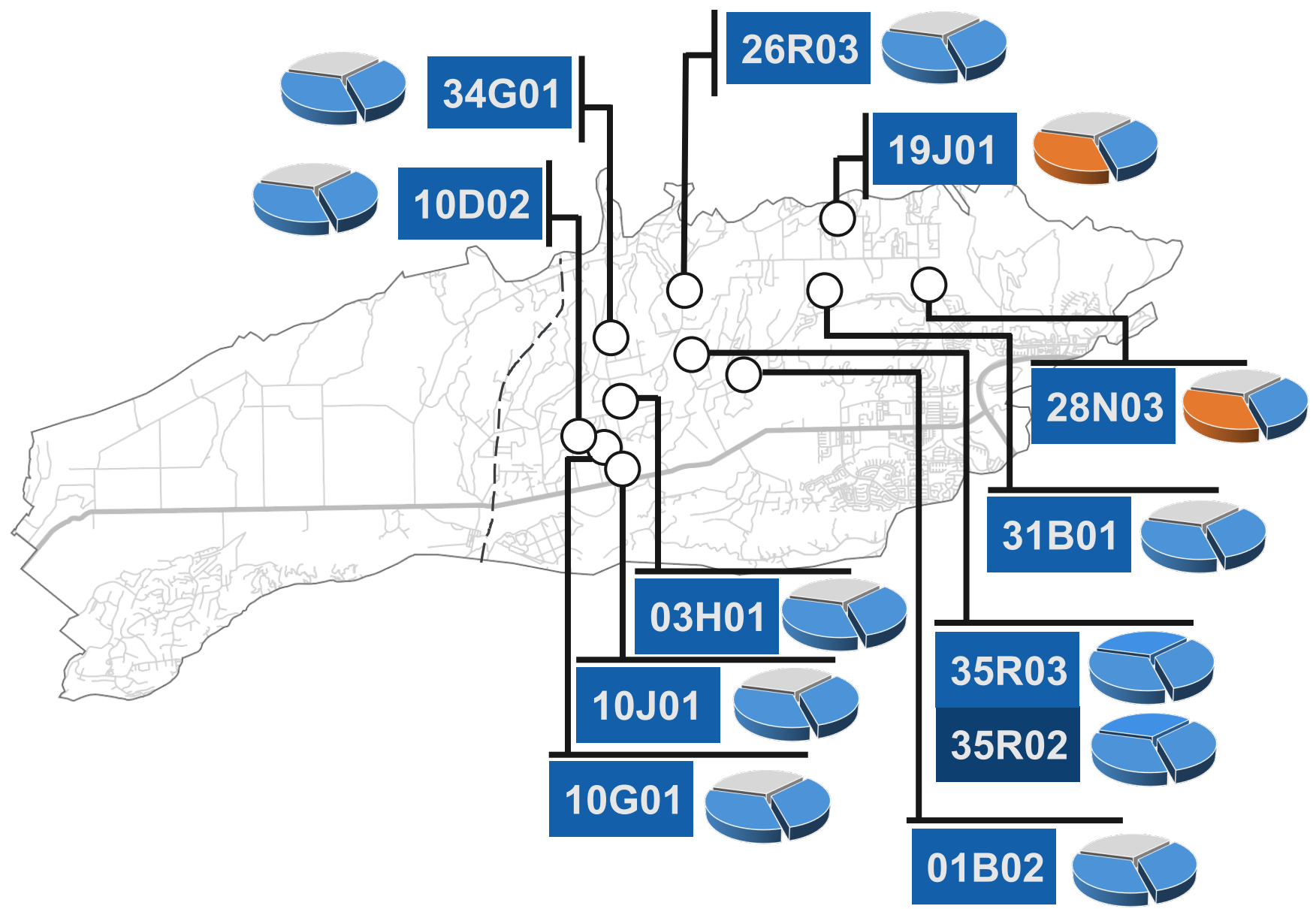


Data Source: Section 2.2; Table 2-2  
(Draft LPVB GSP Evaluation)

# East Las Posas Management Area 2024 Spring Groundwater Levels

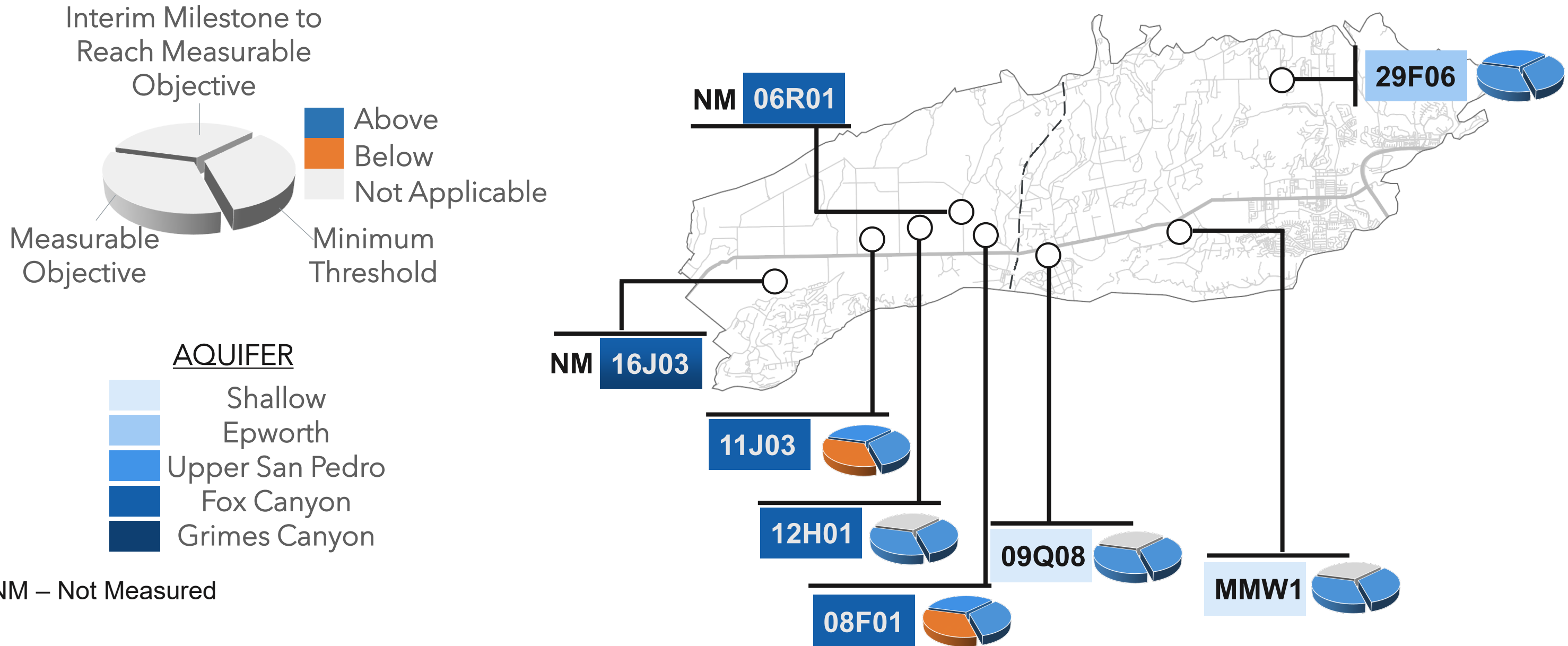


NM – Not Measured



Data Source: Section 2.2; Table 2-2  
(Draft LPVB GSP Evaluation)

# West Las Posas Management Area, Epworth Gravels Aquifer, and Shallow Alluvium 2024 Spring Groundwater Levels



Data Source: Section 2.2; Table 2-2  
(Draft LPVB GSP Evaluation)

# Undesirable Results

## East Las Posas Management Area

- Undesirable results did not occur during the evaluation period (2020 - 2024)
  - Groundwater elevations were not measured below the minimum thresholds in more than five key wells
  - Groundwater elevations in a single well were not below the minimum threshold for more than 3 of 5 consecutive monitoring events

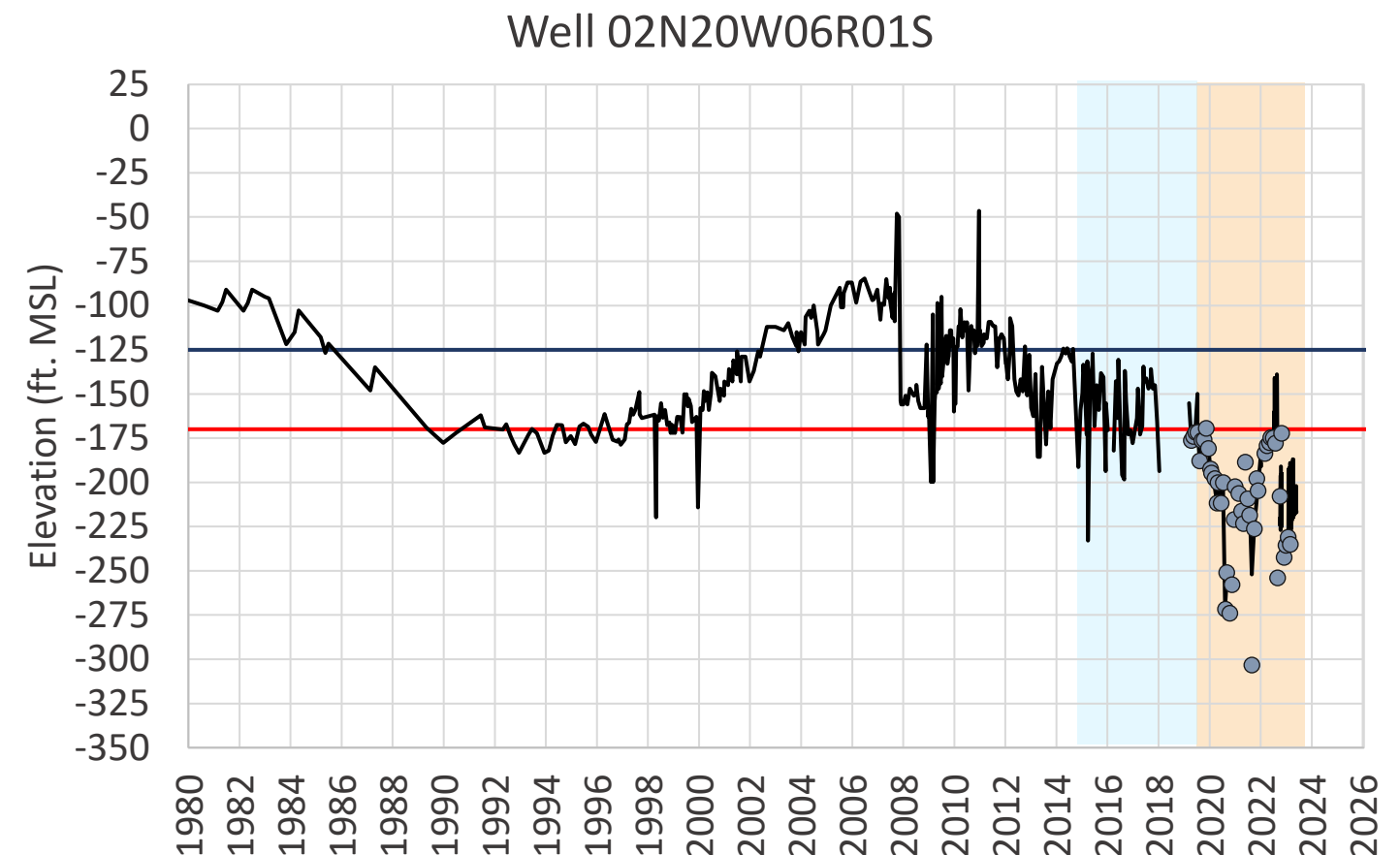
## Epworth Gravels Management Area

- Undesirable results did not occur during the evaluation period (2020 - 2024)
  - Groundwater elevations in the only key well were not below the minimum threshold for more than 3 of 5 consecutive monitoring events

Data Source: Section 2.2.4  
(Draft LPVB GSP Evaluation)

## West Las Posas Management Area

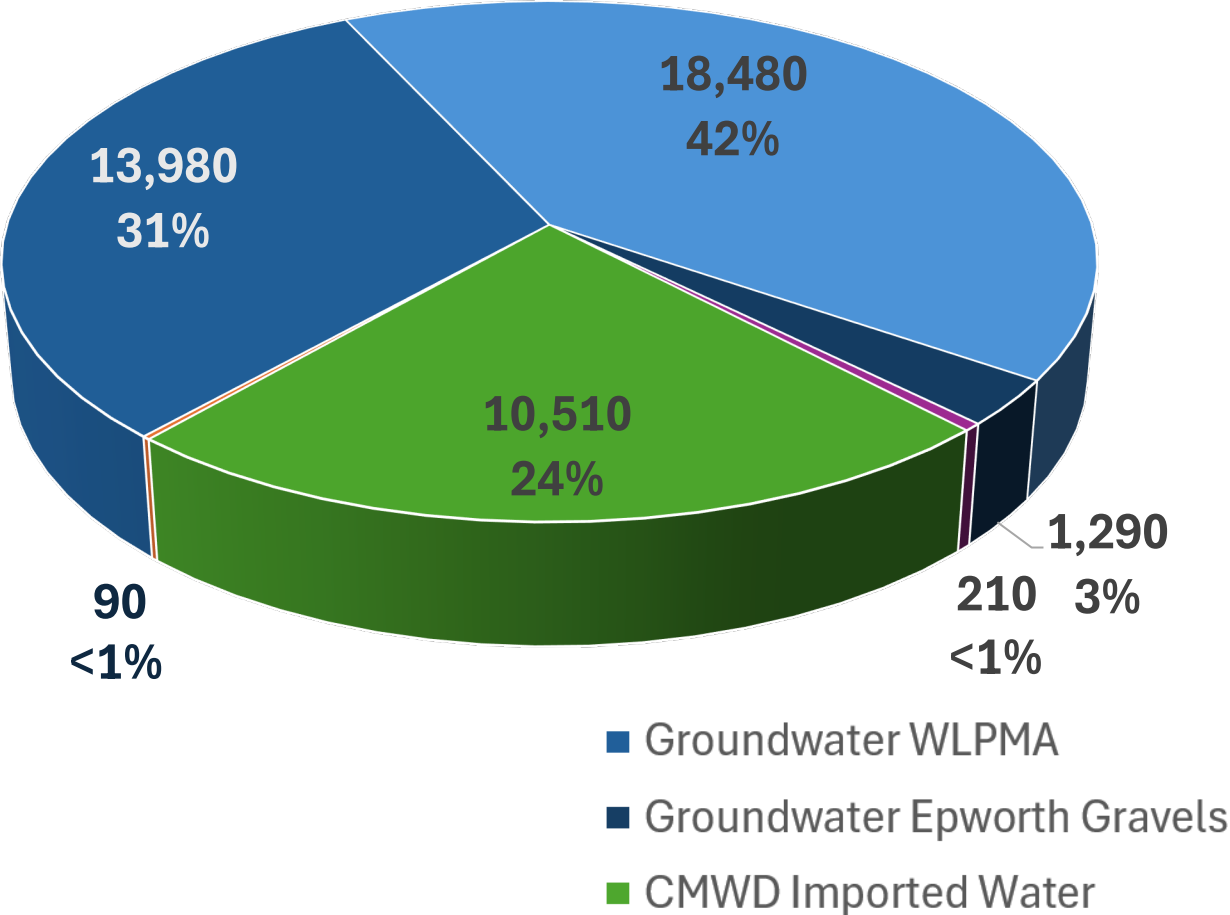
- Undesirable results occurred during the evaluation period (2020 - 2024)
  - Groundwater elevations in 02N20W06R01S were below the minimum threshold for more than 3 of 5 consecutive monitoring events
- SGMA provides flexibility over the 2020 - 2040 period as the GSP is implemented



# Total Water Demand

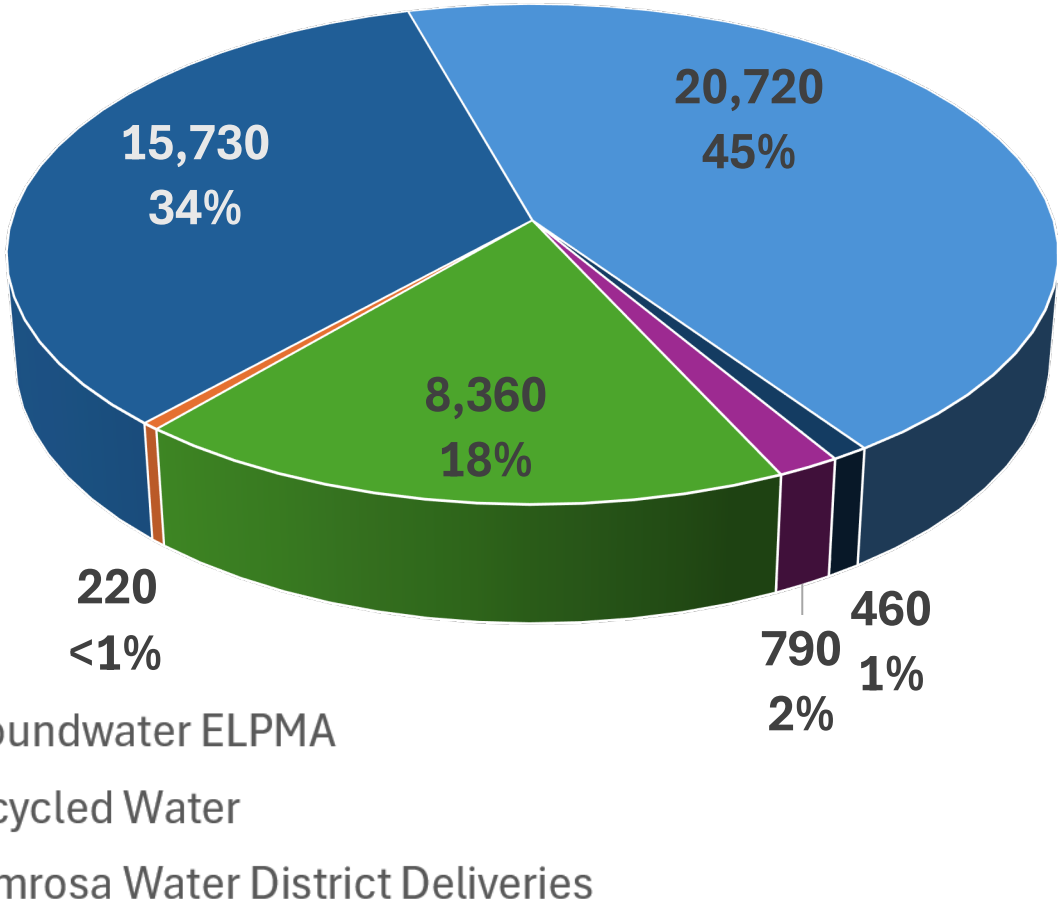
Historical Average (1985-2015)  
Water Supply

Total: 44,560 AFY



Current Average (2016-2022)  
Water Supply

Total: 46,280 AFY



- All values are in acre-feet per year
- Data Source: Table ES-2 (DRAFT LPVB GSP Evaluation)

# Updated Sustainable Yield



## Future Baseline

### Updated pumping and expanded suite of projects

- Reflects recent pumping trends
- Includes projects that are currently funded and under construction in the LPVB and OPV



## No New Projects

### Sustainable pumping rate

- Includes projects currently funded and under construction in the LPVB and OPV



## Projects

### Integrates Management Actions and New Projects

- Adds future projects that are consistent with the Judgment and likely to be implemented in the LPVB and OPV
- Evaluates the impacts of demand reduction through voluntary temporary fallowing



## Projects With EBB

### Shifts the management framework

- Operation of UWCDs Extraction Barrier Brackish (EBB) water project
- **Only applicable for WLPMA**



# Updated Sustainable Yield: New Projects

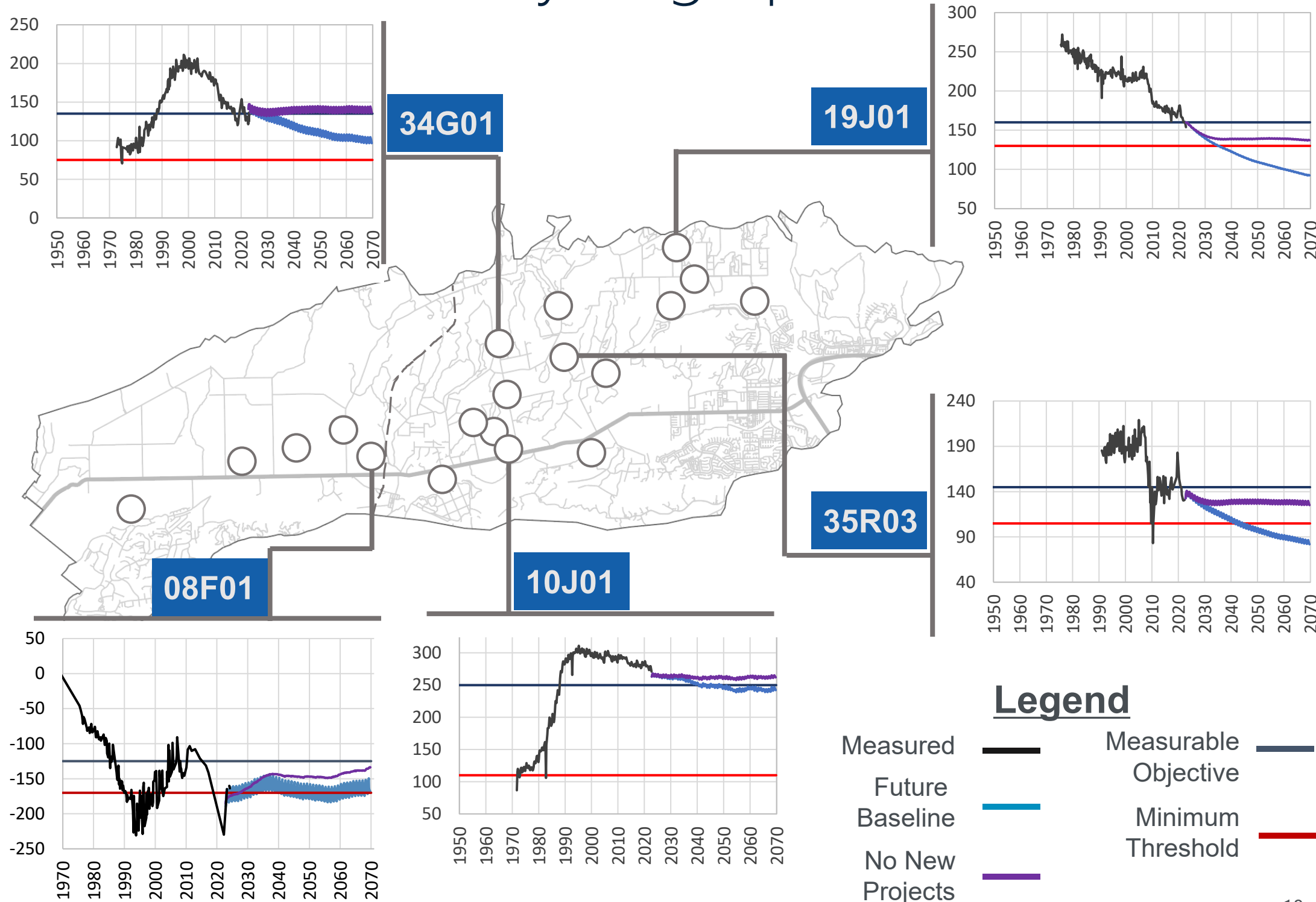
Project Type	Project Name	Modeling Scenario	Basin
Surface Water	SVWQCP Discharges to Arroyo Las Posas	All	LPVB
	Ferro-Rose Recharge Basin	All	OPV*
Imported Water	Supplemental SWP purchase	All	OPV*
Recycled Water	Camarillo Recycled Water Deliveries to PVCWD	All	OPV*
	Laguna road recycled water interconnect	All	OPV*
Demand Reduction	Water Delivery Infrastructure Improvements	Projects, Projects with EBB	LPVB
	Purchase of Imported Water from CMWD for Basin Replenishment	Projects, Projects with EBB	LPVB
	Arroyo Simi-Las Posas Arundo Removal	Projects, Projects with EBB	LPVB
Brackish Water	Extraction Barrier and Brackish Water Treatment	Projects with EBB	OPV*

# Updated Sustainable Yield: Select Hydrographs

## Sustainable yield metrics

- Avoids chronic lowering of groundwater levels across the LPVB
- Protects portions of the ELPMA where the Fox Canyon aquifer is susceptible to dewatering
- Supports sustainability in the adjacent Oxnard Subbasin

Data Source:  
 Sections 5.2.2, 5.2.3  
 (Draft LPVB GSP Evaluation)



Preliminary Model Results Subject to Change

# Updated Sustainable Yield

Scenario	Estimated Sustainable Yield (Acre-Feet Per Year)		
	No New Projects	Projects	Projects with EBB
East Las Posas Management Area	19,200 (±2,300)	19,200 (±2,300)	N/A
<i>Epworth Gravels Management Area*</i>	1,330	1,330	N/A
West Las Posas Management Area	11,400 (±1,200)	11,740 (±1,200)	13,500
<b>Total</b>	<b>27,100 - 34,100</b>	<b>27,440 - 34,440</b>	-

\* Included in the Sustainable Yield for the East Las Posas Management Area

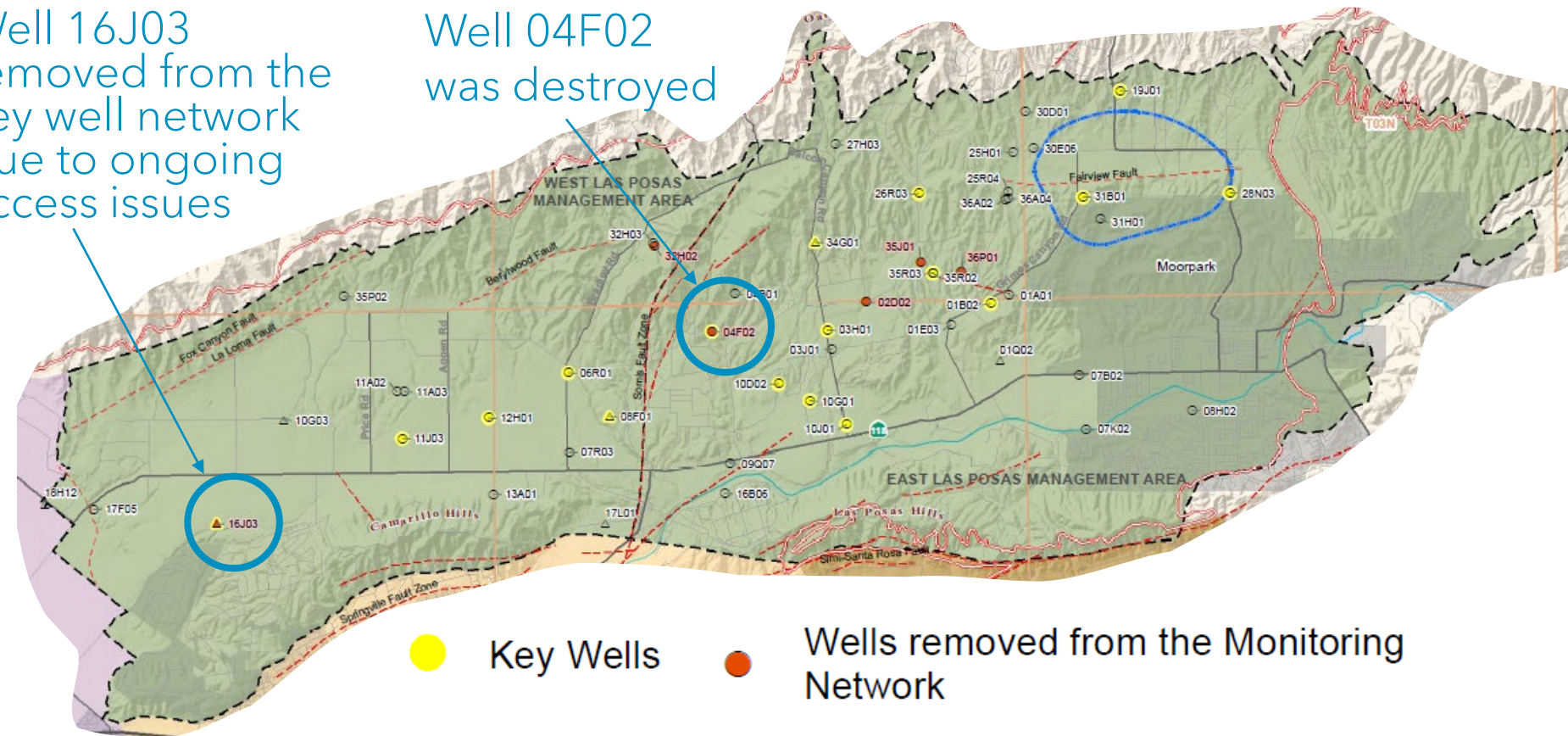
- East Las Posas Management Area
  - Sustainable Yield estimate is approximately 2,300 AFY higher than estimated in the GSP
- Epworth Gravels Management Area
  - Sustainable Yield estimate is approximately equal to estimate in the GSP
- West Las Posas Management Area
  - Sustainable Yield estimate is approximately 1,100 AFY lower than estimated in the GSP

# Recommended Revisions

- No revisions to the sustainable management criteria of the Las Posas Valley Basin are recommended in this evaluation
- Changes to the Key Well Network:

Well 16J03 removed from the key well network due to ongoing access issues

Well 04F02 was destroyed



- FCGMA has not identified suitable replacements for key wells removed from the monitoring network

- Data Gaps – inconsistent measurements at key wells impact characterization of groundwater conditions

# Assessment of Progress Towards Sustainability

- The LPVB is not currently experiencing undesirable results
  - West Las Posas Management Area experienced undesirable results during the evaluation period
- Over the evaluation period, FCGMA has:
  - Conducted groundwater elevation and quality monitoring
  - Implemented projects that address data gaps
  - Developed, evaluated, and implemented projects that increase water supplies within the adjacent Oxnard Subbasin
- Uncertainty remains related to how the LPVB Judgment will impact FCGMA's ability to implement the GSP

# Stakeholder Involvement



August 22, 2024

Public Draft Released on FCGMA Website

Board Meeting  
September 2024

Board Meeting  
October 2024

Public Workshop  
(GSP Amendments)

Board Meeting  
December 2024

Submittal to DWR



September 2024  
Public Workshop

October 7, 2024  
Written comments must be submitted to FCGMA for inclusion in the Final Periodic Evaluation

FCGMA Board Review of 5-Year Evaluations

# Questions & Answers

Written comments must be submitted to [fcgma@ventura.org](mailto:fcgma@ventura.org)  
by October 7, 2024