

San Jacinto Groundwater Basin Groundwater Sustainability Plan Update

Tom Henderson, PG, CHg

May 1, 2024



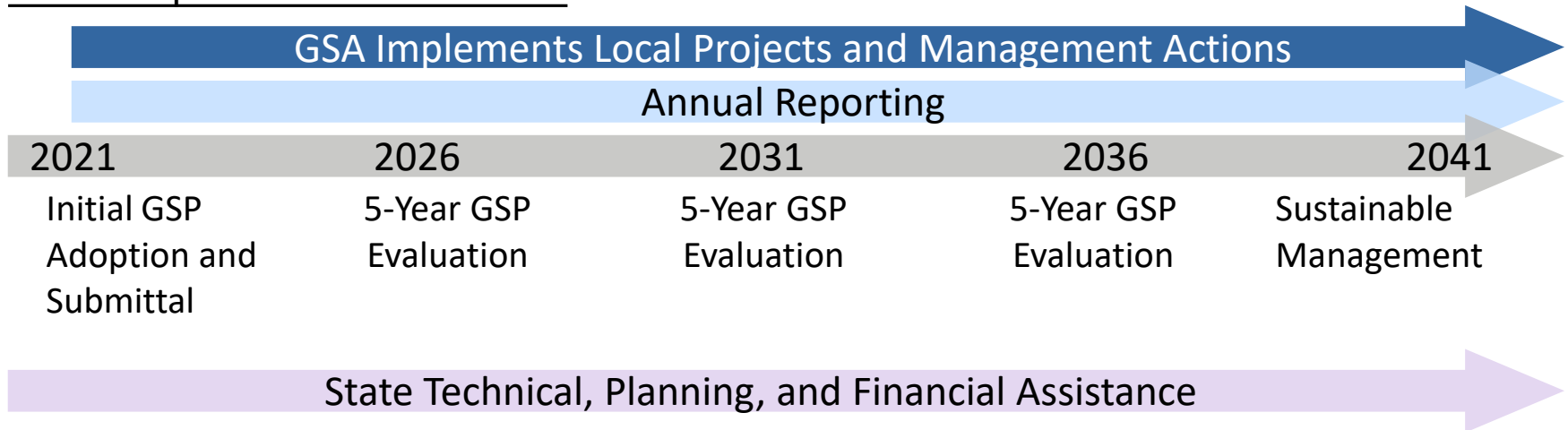
Agenda

- Introduction
- SGMA Background
 - Groundwater Sustainability Plan for the San Jacinto Groundwater Basin
 - DWR's Approval
- Current Groundwater Conditions in the GSP Plan Area
- GSP Implementation Activities
- DWR Technical Assistance Opportunities
- Open Discussion
- Update on Stakeholder Engagement Opportunities

Sustainable Groundwater Management Act

- Legislation passed in 2014 that requires local agencies to form Groundwater Sustainability Agencies and develop Groundwater Sustainability Plans that define a pathway to reaching local sustainability goals that consider all beneficial uses and users of groundwater in the basin
- SGMA requires development of a GSP for all medium and high priority basins

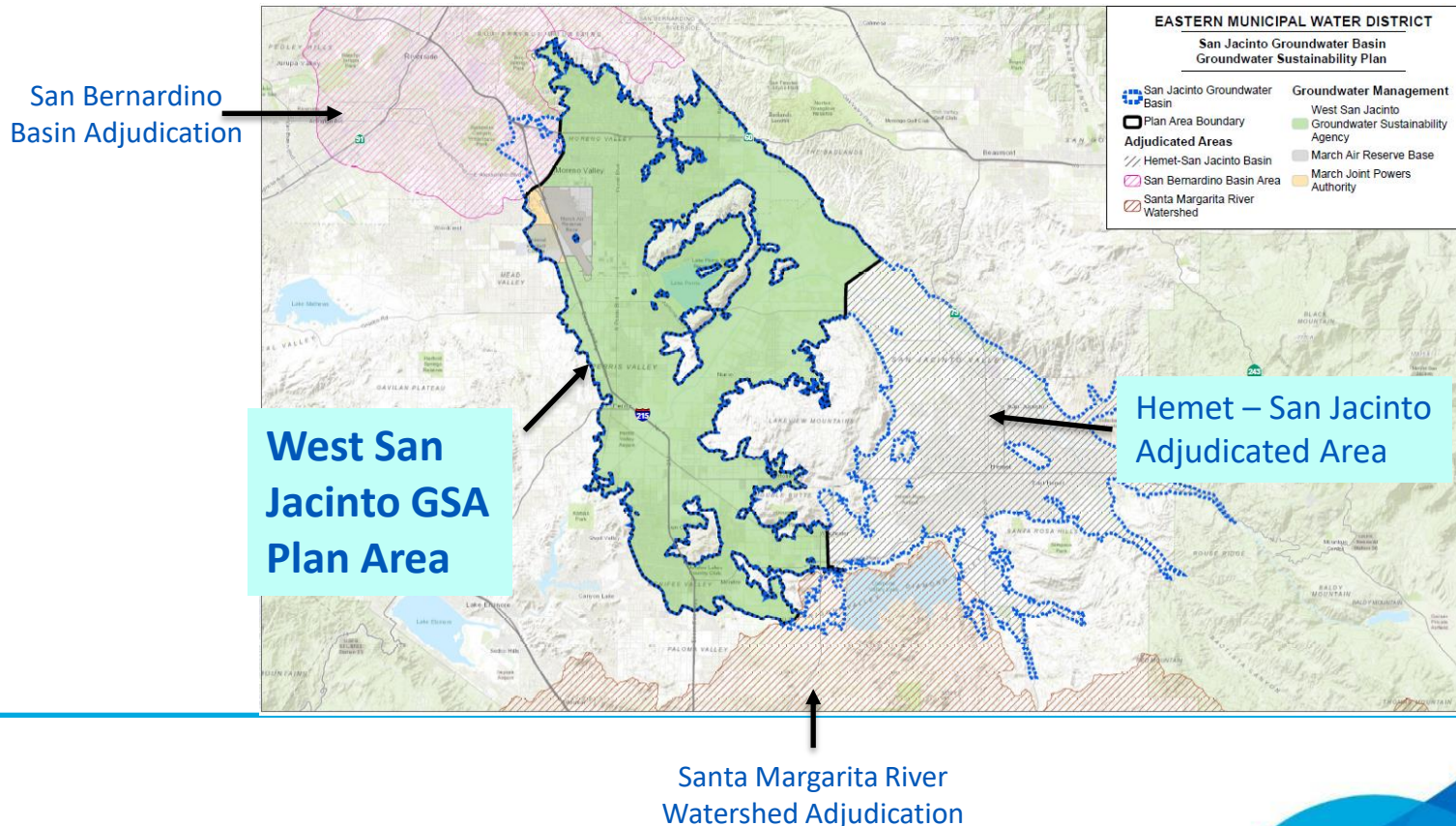
SGMA Implementation Timeline



Source: DWR

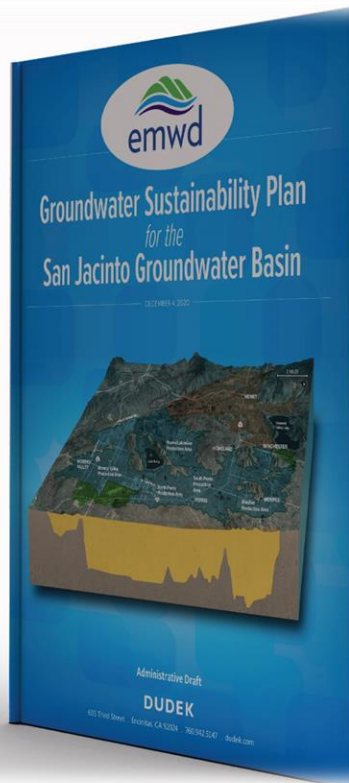
Sustainable Groundwater Management Act

- EMWD is the Groundwater Sustainability Agency (the West San Jacinto GSA) for the non-adjudicated portion of the San Jacinto Groundwater Basin, which was designated as a high priority groundwater basin by DWR
 - As the GSA, EMWD was required to submit a Groundwater Sustainability Plan (GSP) to DWR by January 31, 2022



Sustainable Groundwater Management Act

- EMWD Board of Directors, acting as the West San Jacinto GSA, approved and adopted the GSP on September 15, 2021.



GSP Outline

- Chapter 1** Introduction, duties, responsibilities and powers of the GSA
- Chapter 2** Technical background: basin setting, water budget, and sustainable yield
- Chapter 3** Sustainable Management Criteria and Monitoring Plan
 - Sustainability Goal,
 - Measurable Objectives,
 - Minimum Thresholds,
 - Recommend metering all extraction >2 AFY
- Chapter 4** Projects and Management Actions
 - Planned
 - Potential (if needed)
- Chapter 5** GSP Implementation

DWR Review – GSP Determinations

Regulatory Standard (23 CCR §355.2):

- DWR will evaluate a GSP within 2 years of submittal date and issue a written assessment of the Plan.
- DWR will provide a determination of the Plan status (every 5 years):
 - **Approved:**
 - The Plan satisfies the requirements of SGMA and is substantially compliant with the GSP Regulations
 - **Incomplete:**
 - The GSP has one or more deficiencies that preclude approval, but may be capable of being corrected by the GSA in a timely manner
 - GSA's may be granted up to 180 days to address GSP deficiencies
 - **Inadequate:**
 - The Plan does not satisfy the requirements under the GSP regulations; contains significant deficiencies that have not been corrected; or is determined to be incomplete
 - The Basin is put under probationary status – SWRCB may develop an interim GSP one-year after a basin is placed under probationary status (CWC §10735.4)

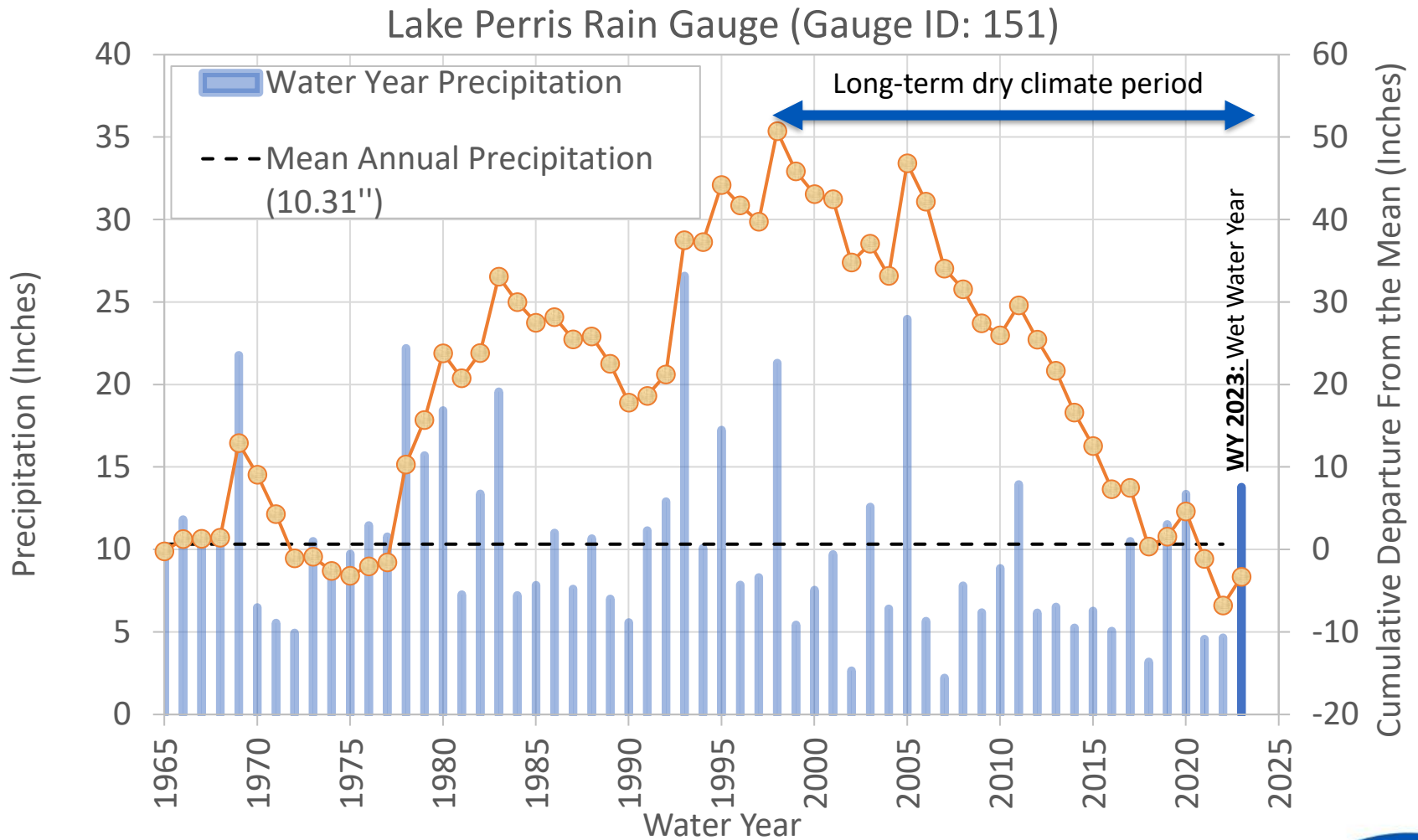
DWR Review – Evaluation of the San Jacinto Basin GSP

- DWR approved the San Jacinto Groundwater Basin GSP on April 27, 2023 and found that:
 - The GSP satisfies the required conditions outlined in the GSP Regulations
 - The GSP is likely to achieve the Sustainability Goal for the Plan Area
 - The GSP identifies feasible projects and management actions that support GSP implementation
 - The GSP identifies reasonable measures to eliminate data gaps
- DWR also recommended 8 corrective actions

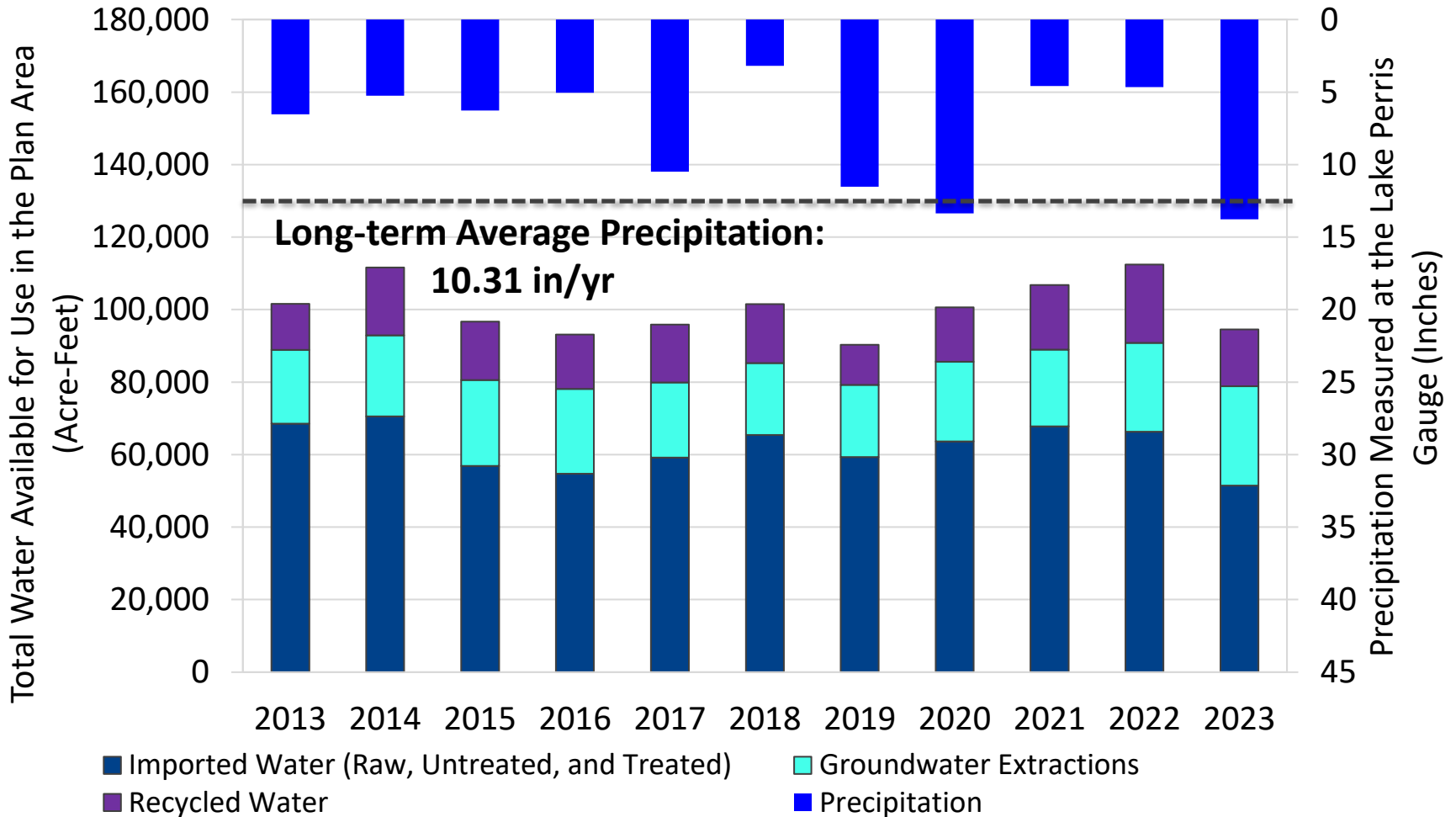
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Historical hydrology



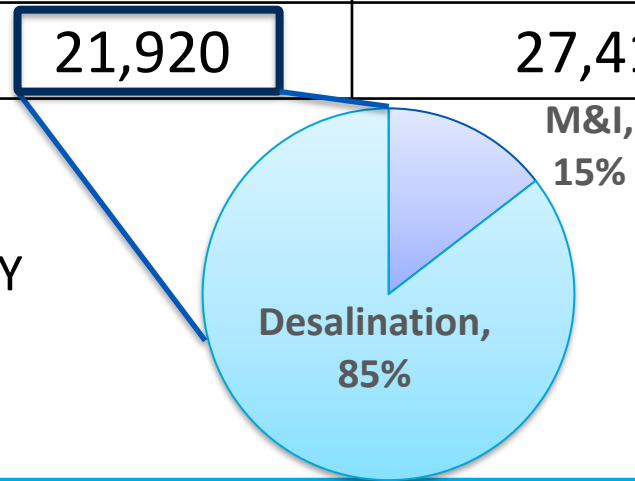
Total Water Use within the Plan Area



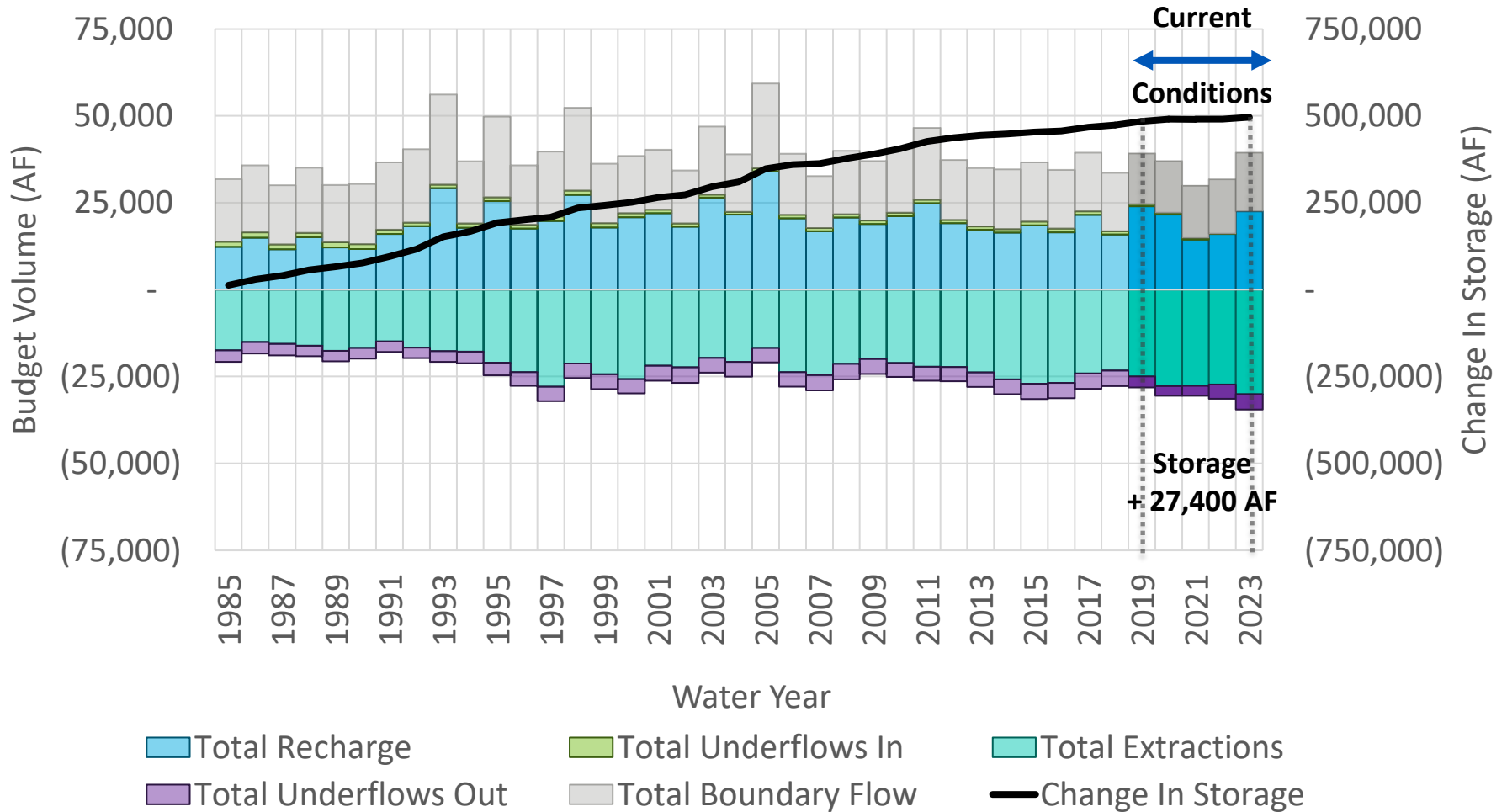
Groundwater Extractions within the Plan Area

Water Year	Water Use Sector (Acre-Feet)		Total Usage (Acre-Feet)
	Agricultural	Municipal	
2019	8,147	11,814	19,961
2020	7,536	14,500	22,036
2021	5,602	15,558	21,160
2022	7,026	16,883	23,909
2023	5,491	21,920	27,411

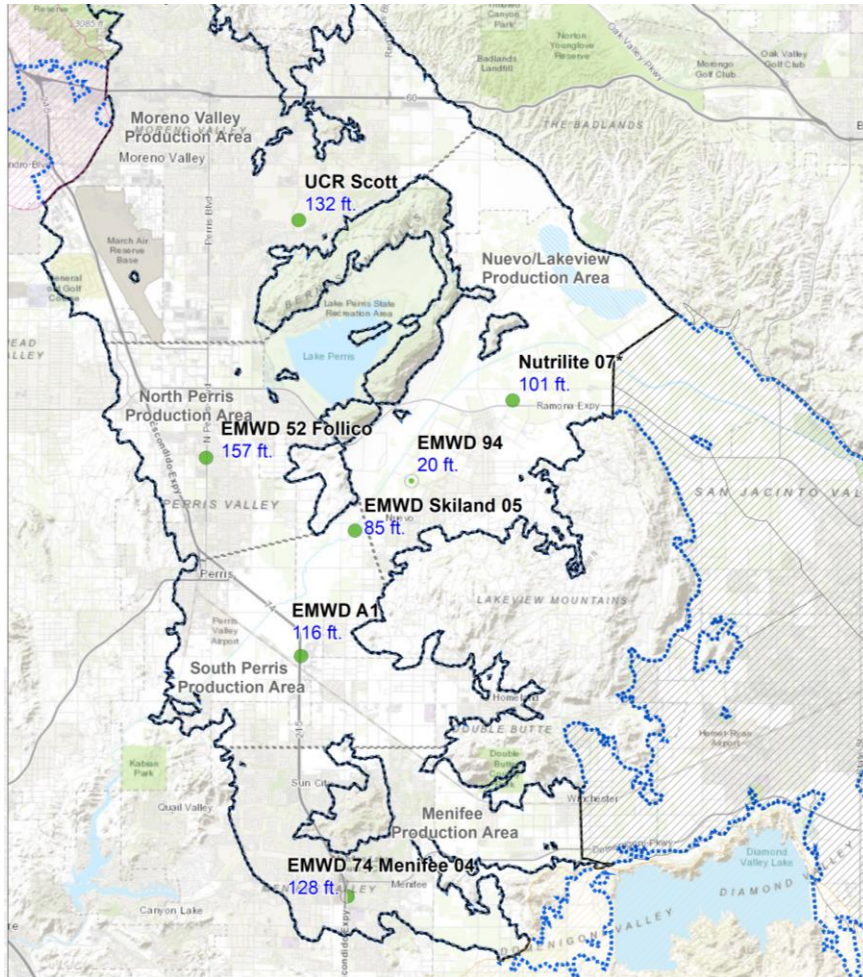
- Average annual 2013-2023 groundwater extractions: 22,900 AFY
- WSJ Sustainable Yield ~ 36,000 AFY



Groundwater Budget



Groundwater Levels

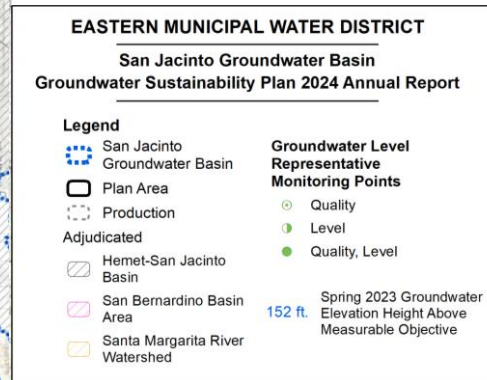


GSP Objectives: Water Levels

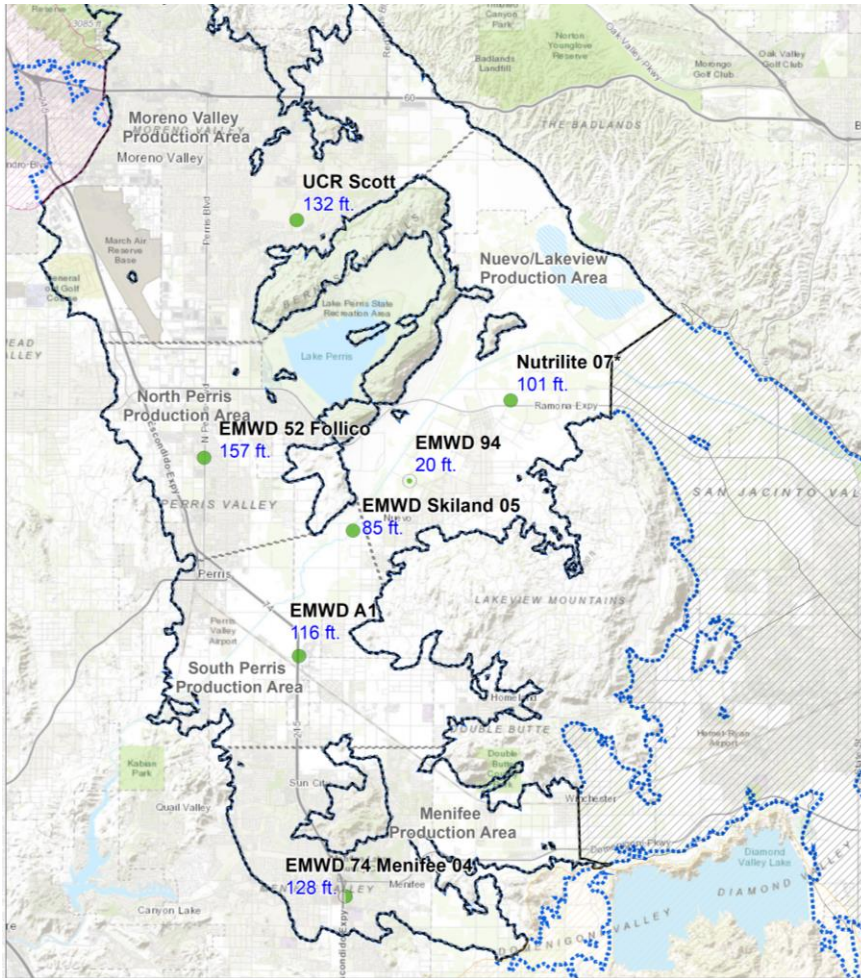
- Aquifer saturation >70%
- Measured at 7 representative monitoring points

FIGURE 2-3
Water Level Representative Monitoring Points

San Jacinto Groundwater Basin Groundwater Sustainability Plan 2024 Annual Report



Groundwater Levels



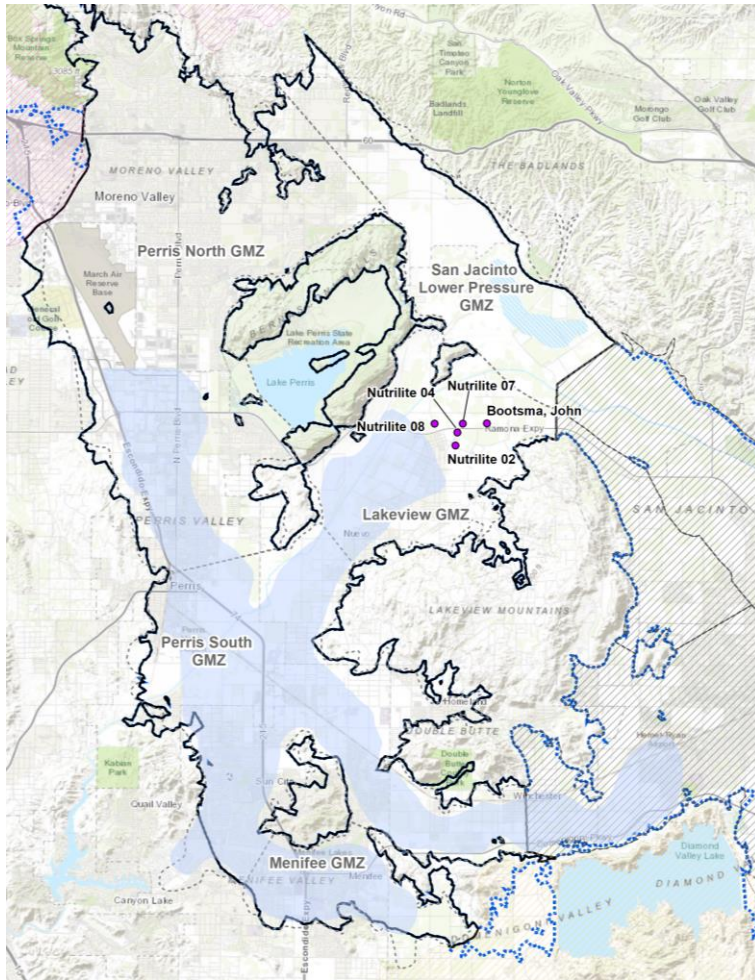
Spring 2023 Conditions

- Spring 2023 Aquifer Saturation
 - 75 – 95% ✓
- Water levels remain approximately **20 to 150 feet higher** than the established measurable objectives at all 7 representative monitoring points

FIGURE 2-3
Water Level Representative Monitoring Points
San Jacinto Groundwater Basin Groundwater Sustainability Plan 2024 Annual Report



Groundwater Quality

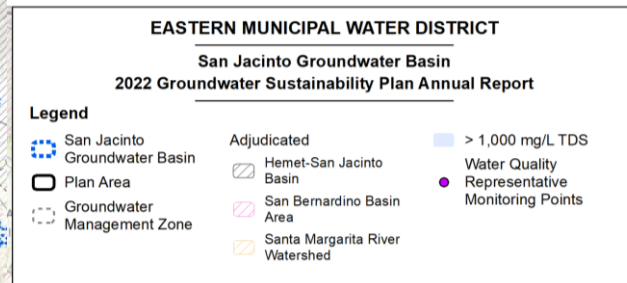


GSP Objectives: TDS

- Minimum Threshold: 1,000 mg/L
- Measurable Objective: 520 mg/L

FIGURE 2-14
Water Quality Representative Monitoring Points

2022 Groundwater Sustainability Plan Annual Report for the San Jacinto Groundwater Basin



Groundwater Quality

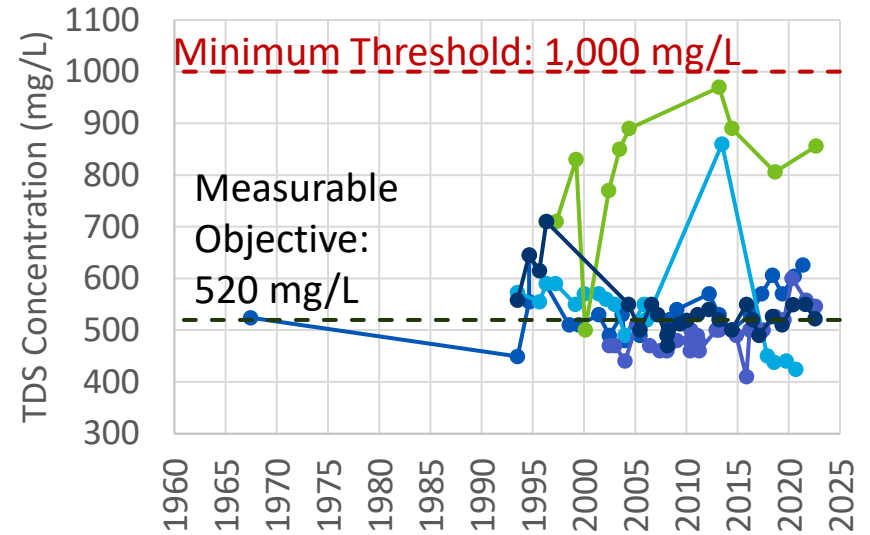
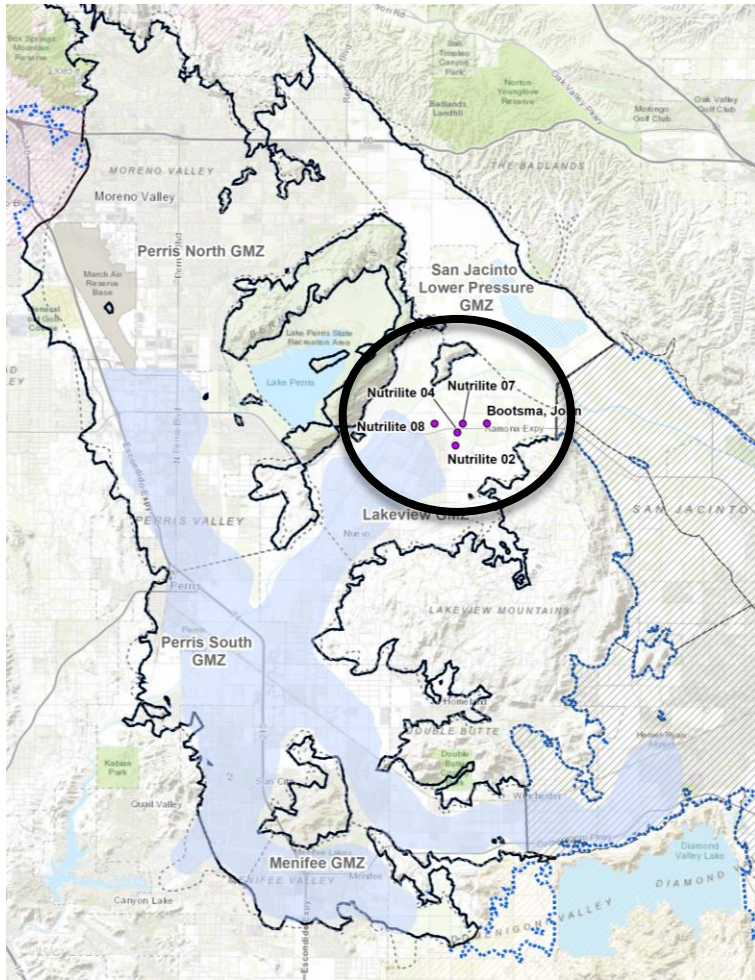
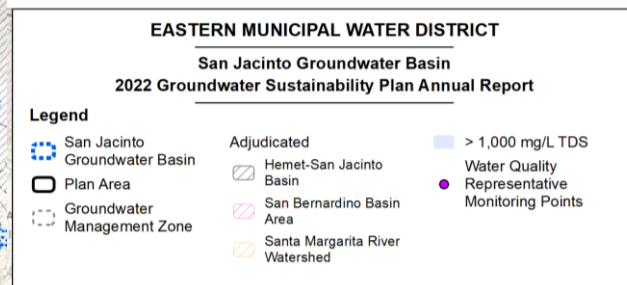


FIGURE 2-14
Water Quality Representative Monitoring Points
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Projects Identified In the GSP

Project Number	Project Name	Project Objective
1	Assess Feasibility of Recycled Water Delivery to Private Producers in the Menifee Production Area	<ul style="list-style-type: none"> Assess of delivering recycled water to offset groundwater pumping. Project triggered if groundwater elevations approach the minimum threshold at EMWD 74
2	Conduct Additional Investigations and/or Technical Studies	<ul style="list-style-type: none"> Fill data gaps and improve the understanding of the primary controls on groundwater conditions in the Plan Area
3	Construct Additional Dedicated Monitoring Wells	<ul style="list-style-type: none"> Improve groundwater elevation and quality monitoring across the Plan Area
4	Determine the Location and Status of Domestic Wells in the Plan Area	<ul style="list-style-type: none"> Determine the number, location, and status of domestic well users and operators who extract less than 25 AFY

DWR's Recommended Corrective Actions

Status	EMWD Action	DWR Recommended Corrective Action	
		No.	Description
Addressed or Currently Being Addressed	Update reporting format / Continue implementing existing projects	1	Document imported water used in the Plan Area
		2	Provide additional characterization of groundwater quality
		5	Provide additional characterization of domestic well uses / users
		6	Establish representative GWQ monitoring point in North Perris
Will be addressed with future near-term projects	Implement new monitoring projects	4	Investigate GDEs
		7	Investigate ISWs
Will be addressed during 5-year GSP Update	Provide additional information	3	Provide a description of known data gaps in the GSP
		8	Establish a monitoring network for land subsidence

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DWR's Recommended Corrective Actions

Status	DWR Recommended Corrective Action		Active and Planned Projects
	No.	Description	
Addressed or Currently Being Addressed	2	Provide additional characterization of groundwater quality	<ul style="list-style-type: none"> • Perris II ROTF MRP Implementation • GSP and Monitoring Program (Prop 68. Grant Funded) • Perris North Program • Lakeview Focused Hydrogeologic Investigation • South Perris Brackish Well Siting Study
	5	Provide additional characterization of domestic well uses / users	<ul style="list-style-type: none"> • Domestic Well Investigation
	6	Establish representative GWQ monitoring point in North Perris	<ul style="list-style-type: none"> • Perris North Program
Will be addressed with future near-term projects	4	Investigate GDEs	<ul style="list-style-type: none"> • Scope Under Development – anticipated for WY 2024/25
	7	Investigate ISWs	

Perris II Reverse Osmosis Treatment Facility (ROTF)

Project Goal

Manage migration and treat degraded groundwater from the Perris South Groundwater Management Zone

Consistency with the GSP

Recommended Corrective Action 2 and 3

Activities Accomplished in WY 2023

- Implemented Perris II ROTF Monitoring and Reporting Plan
- Used nitrate and multi-parameter sondes to vertically profile 19 wells in the Plan Area
- Collected 64 snap samples from 24 wells in the Plan Area

Activities Anticipated in WY 2024

- Continued implementation of Perris II ROTF MRP
- Evaluate / identify needs for additional groundwater monitoring instrumentation



Perris North Groundwater Program

Project Goal

Improve groundwater quality in the Perris North Groundwater Management Zone and provide a safe and reliable water supply for surrounding communities

Consistency with the GSP

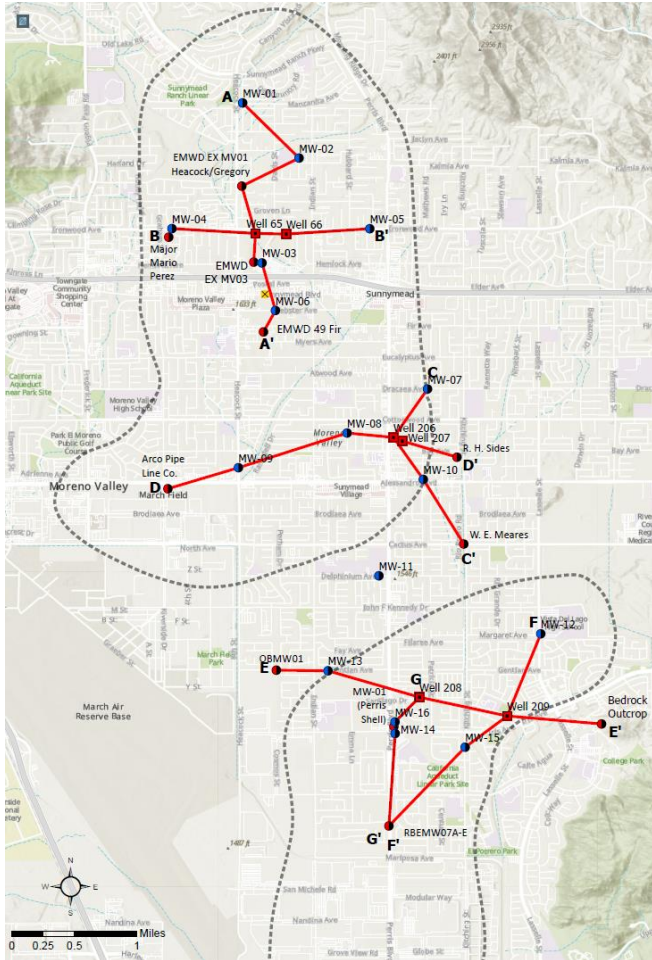
Recommended Corrective Action 2, 3, and 6

Activities Accomplished in WY 2023

- Construction of additional raw water conveyance to connect program wells to the Perris North Groundwater Treatment Facility

Activities Anticipated in WY 2024

- Siting, design, and construction of dedicated monitoring wells
- Phase 3 pipeline construction to connect program wells to the Perris North Groundwater Treatment Facility



South Perris Brackish Well Siting Study

Project Goal

Improve understanding of subsurface conditions in the Perris South Groundwater Management Zone to support expansion of EMWD's Desalter Complex

Consistency with the GSP

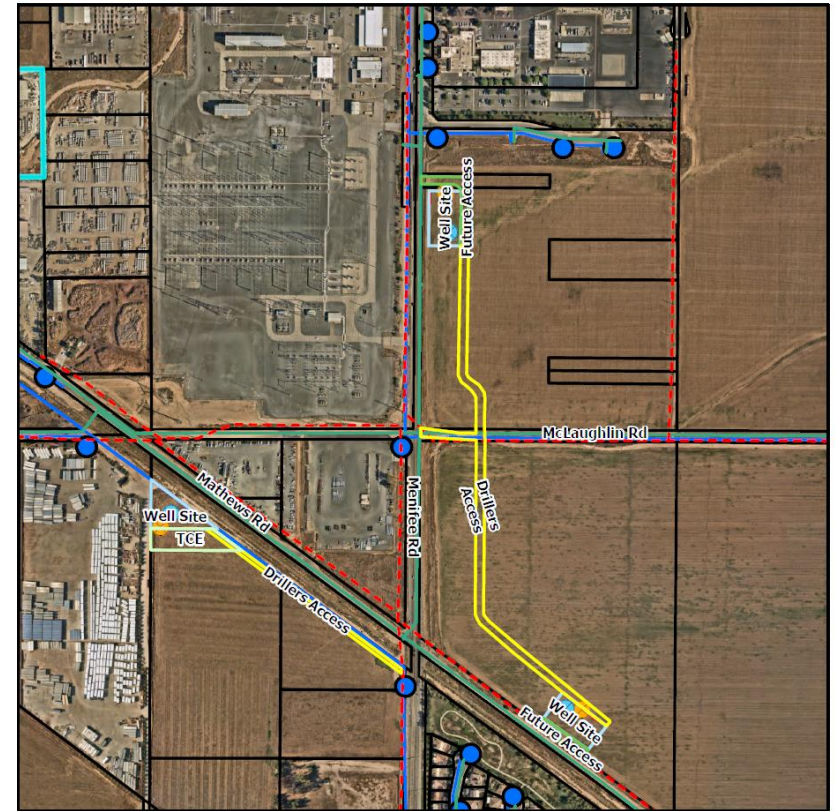
- Recommended Corrective Actions 2 and 3
- Consistent with the GSP Project No. 2 (Conduct Additional Investigations and/or Technical Studies)

Activities Accomplished in WY 2023

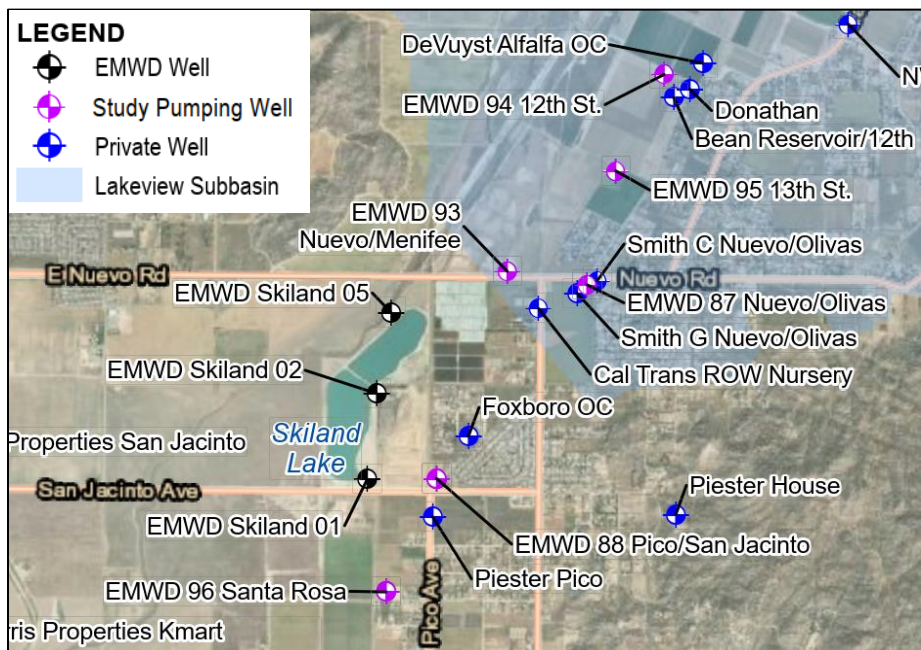
- Scope development / planning to identify locations of exploratory borings

Activities Anticipated in WY 2024

- Six (6) exploratory borings



Lakeview Focused Hydrogeologic Investigation



Activities Anticipated in WY 2024

- Aquifer tests and sampling expected to begin in the second quarter of 2024

Project Goal

Improve understanding of subsurface conditions in the Lakeview Groundwater Management Zone

Consistency with the GSP

- Recommended Corrective Actions 2 and 3
- Consistent with the GSP Project No. 2 (Conduct Additional Investigations and/or Technical Studies)

Activities Accomplished in WY 2023

- Scope development and design of:
 - Focused aquifer tests
 - High frequency water quality sampling
 - Continuous-time transfer function noise (TFN) analysis

West San Jacinto GSP and Monitoring Project

Project Goal

Develop and implement a SGMA compliant GSP, improve EMWD's groundwater level and quality monitoring program

Consistency with the GSP

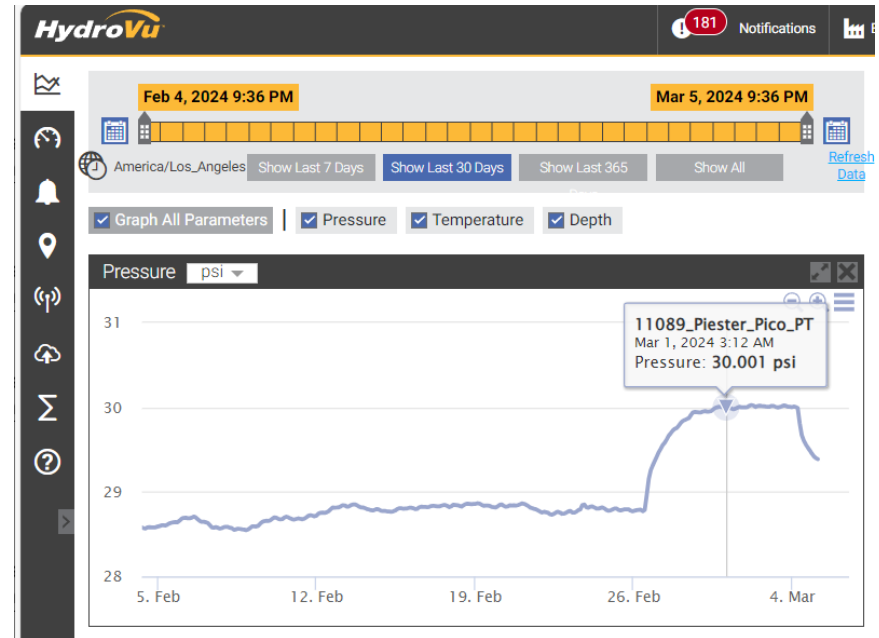
- Recommended Corrective Actions 2 and 3
- Addresses data gaps identified in the GSP

Activities Accomplished in WY 2023

- Analyzed high-frequency pressure transducer data from 27 wells to better characterize hydrogeologic conditions and groundwater elevation gradients in the Plan Area

Activities Anticipated in WY 2024

- Deploy monitoring equipment and analyze new monitoring data.
- Evaluate / identify needs for additional groundwater monitoring instrumentation



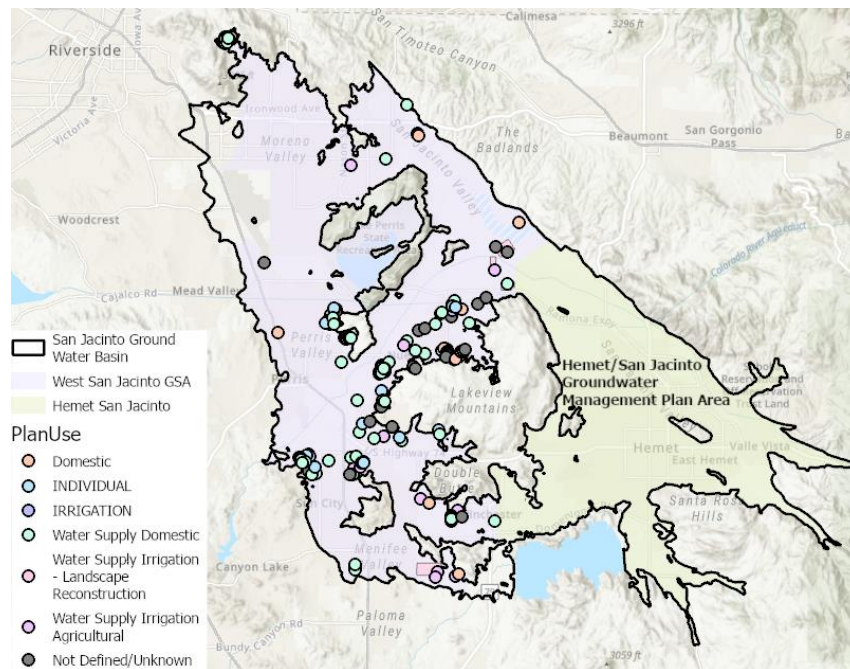
Investigation of Domestic and Non-Reporting Extraction Wells

Project Goal

Characterize the status and location of domestic wells and non-reporting well operators within the GSP Plan Area

Consistency with the GSP

- Recommended Corrective Action No. 5
- GSP Project No. 4 (Determine the Location and Status of Domestic Wells in the Plan Area)



Activities Accomplished in WY 2023

- Conducted field investigations to identify / verify the location of approximately 180 likely active domestic and non-reporting wells in the GSP Plan Area
- Developed geospatial datasets with property owner and land use information to support GSA coordination with well operators

Activities Anticipated in WY 2024

- Stakeholder / Well Owner outreach and communication

Groundwater Dependent Ecosystems and Interconnected Surface Waters

Project Goal

Improve characterization of habitat identified as potentially groundwater depended in the GSP

Consistency with the GSP

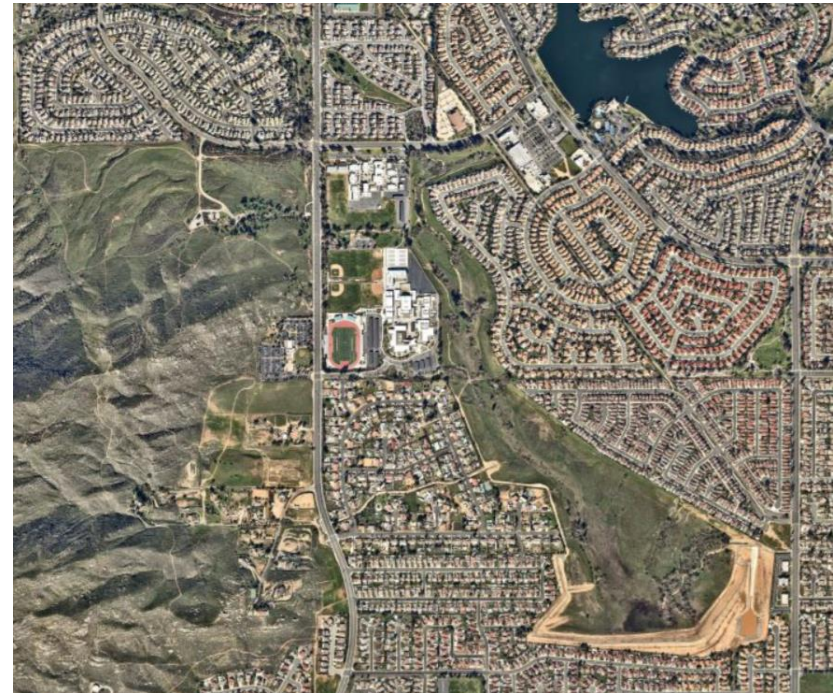
- Recommended Corrective Action No. 4 and 7
- GSP Project No. 2 (Conduct Additional Investigations and/or Technical Studies)

Activities Accomplished in WY 2023

- Developed preliminary scope of work to perform initial field investigations and habitat surveys

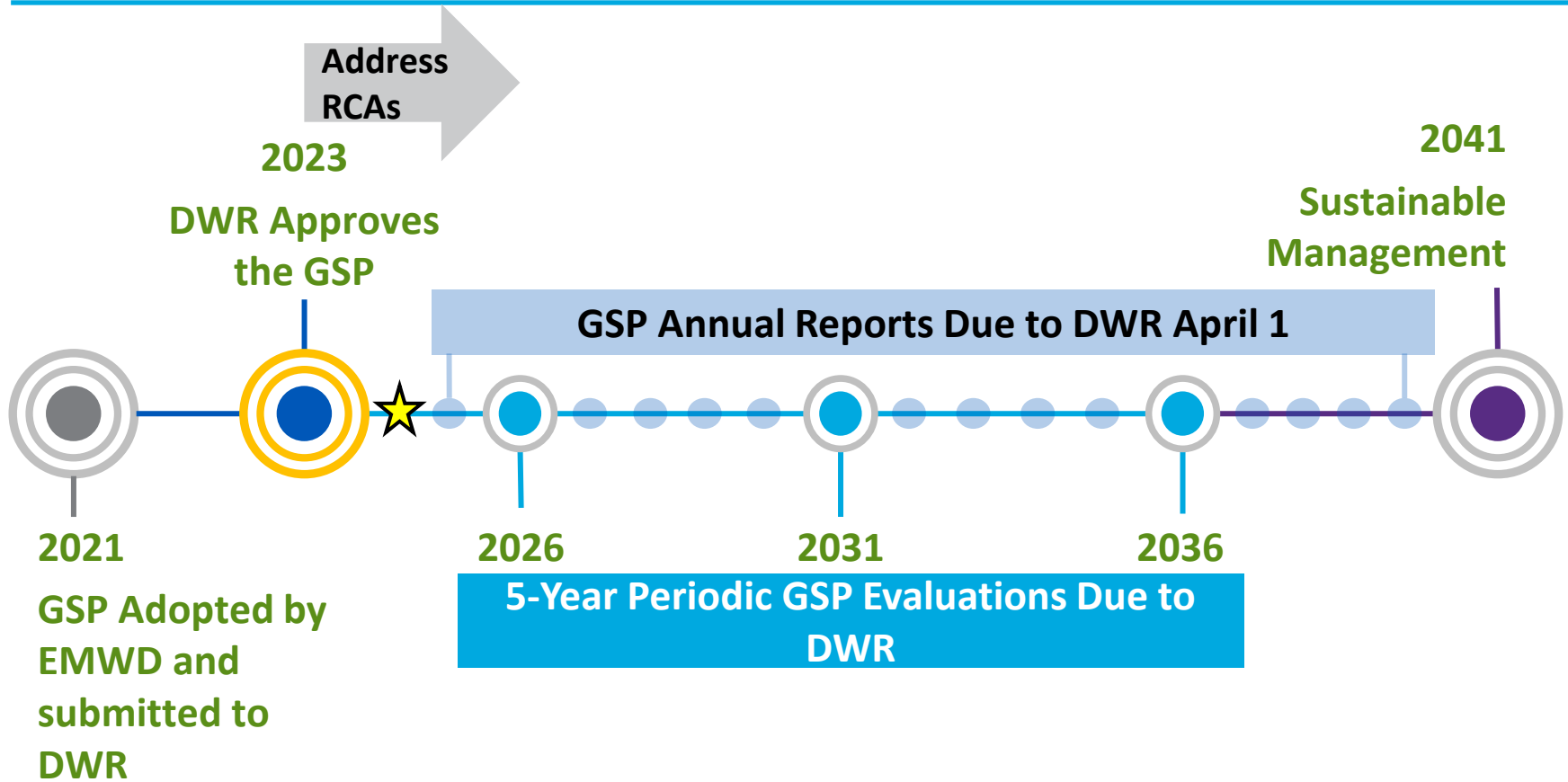
Activities Anticipated in WY 2024

- Procured consultant to perform initial field investigations and habitat surveys
- Initial implementation activities anticipated for water year 2024



Poorman's Reservoir, Moreno Valley, CA

EMWD's Groundwater Management Timeline



Ongoing GSP Implementation and Stakeholder Outreach

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DWR Technical Assistance Opportunities

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Open Discussion

- Are you a groundwater user within the West San Jacinto GSP Plan Area?
- What information do you find most valuable?
- What are you interested in learning more about?

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GSA Information and Upcoming Engagement Opportunities

Stay up-to-date with all SGMA related activities



Customers ▾ Stay WaterWise ▾ Education ▾ GWR Plus Doing B

GSA Board Meeting

May 15, 2024

GSA Stakeholder Meeting

Q3 2024

Sustainable Groundwater Management Act

The objective of the Sustainable Groundwater Management Act (SGMA) is sustainable groundwater management in a manner that prevents significant and unreasonable impacts to groundwater basins in California. Under SGMA, each high and medium priority basin, as identified by the California Department of Water Resources (DWR) [is required to have a Groundwater Sustainability Agency \(GSA\)](#) [that will be responsible for groundwater management and development of a Groundwater Sustainability Plan \(GSP\)](#) [. The EMWD Board of Directors is the GSA for the West San Jacinto Groundwater Basin and is responsible for development and implementation of a GSP.](#)

Background Legislation Public Notices Meeting Schedule Program Documents **Stay Informed**

Stay Informed

By subscribing to EMWD's mailing list, you will receive news and updates about the Groundwater Sustainability Agency Process and any upcoming stakeholder forums.

Subscribe to EMWD eNotifications. Select Calendar and/or News options for Sustainable Groundwater Management Act to stay informed.

<https://www.emwd.org/post/sustainable-groundwater-management-act>



Contact Information

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