



Stanislaus County
Sustainable Groundwater Management Act
Non-District East Landowner Event

January 25, 2023

Agenda

1. SGMA, STRGBA GSA & NDE Governance

Eric Thorburn, OID/STRGBA Chair

2. Stanislaus County's Jurisdictional Role

Christy McKinnon, Stanislaus Co.

3. Stanislaus East Mutual Water Company

Julia Stornetta, General Manager

4. GSP, GW Conditions & GSP Projects

Liz Elliott, Todd Groundwater

5. OID GSP Projects

Eric Thorburn, OID

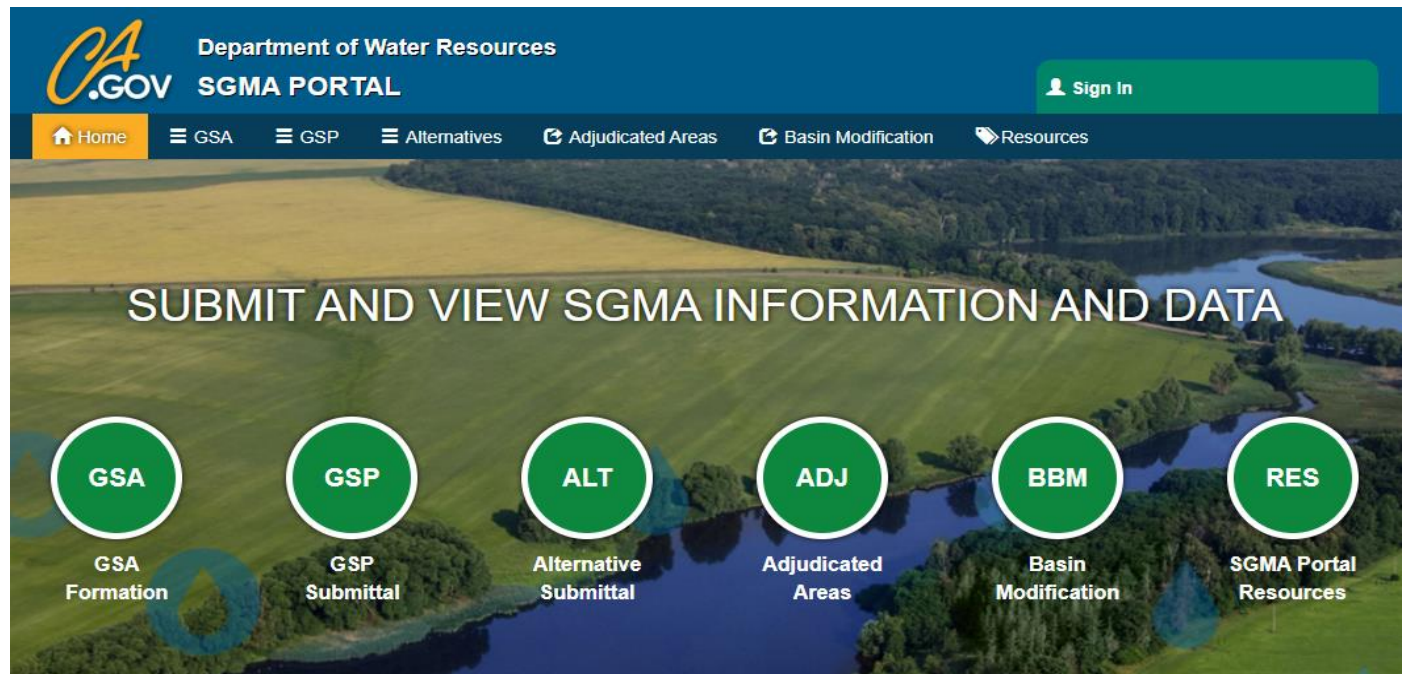
6. Q&As

Full Panel



Sustainable Groundwater Management Act

- Signed into law by Governor Jerry Brown in 2014
- Set framework for statewide sustainable GW management
- Recognizes GW management is best accomplished locally
- If a basin is found to be out of compliance, the state can intervene



SGMA Requirements

Jun. 30, 2017

Jan. 31, 2022

Every Five Years

2042



Form
Groundwater
Sustainability
Agencies

Medium and
High Priority
Basins Submit
Groundwater
Sustainability
Plan to State

Update
Groundwater
Sustainability
Plan

Modesto
Subbasin Achieves
Sustainability

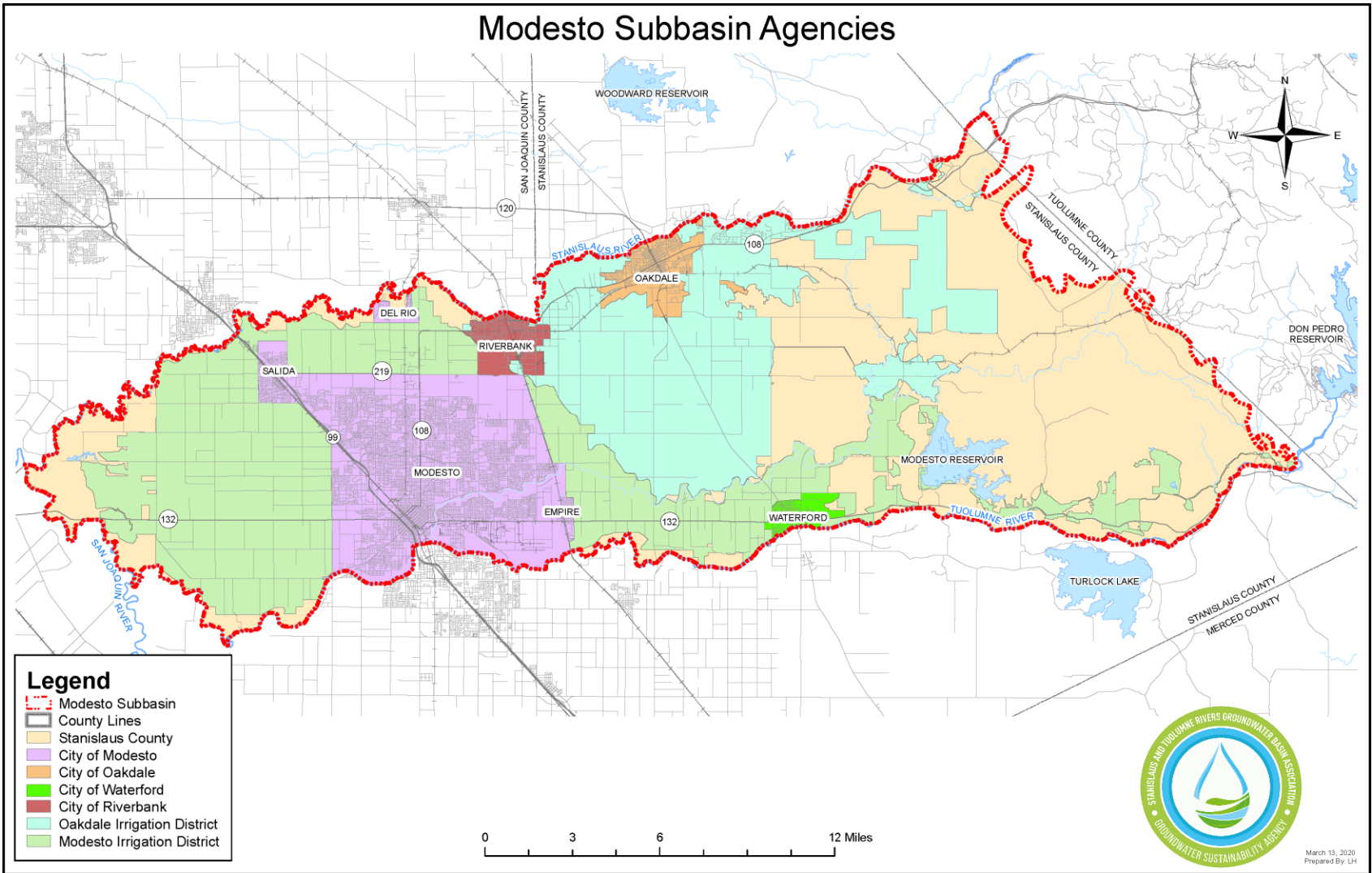
STRGBA GSA

- Formed through an MOU in 2017 in response to SGMA
- Coordinated with the Tuolumne County GSA to develop a single GSP for the Subbasin
- Has the authority and responsibility to manage a majority of the Modesto Subbasin
 - Under the CWC (Part 2.74) GSAs have authority to:
 - Require water measurement devices
 - Regulate, limit, or suspend GW extractions
 - Impose fees
 - Conduct compliance and enforcement investigations



Modesto Subbasin

Modesto Subbasin Agencies



Legend

- Modesto Subbasin
- County Lines
- Stanislaus County
- City of Modesto
- City of Oakdale
- City of Waterford
- City of Riverbank
- Oakdale Irrigation District
- Modesto Irrigation District



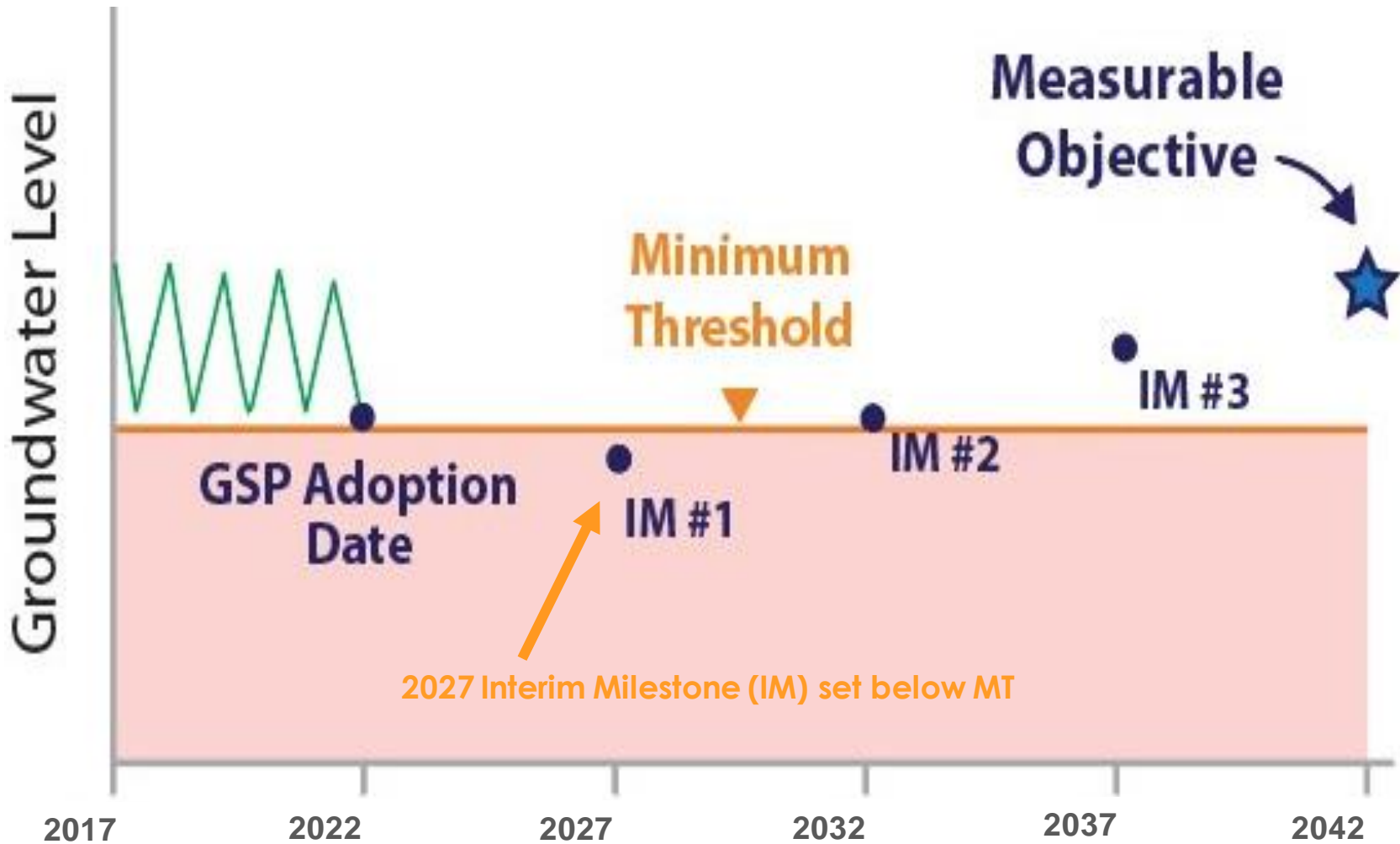
March 13, 2020
Prepared By: LH

Undesirable Results



- **Chronic lowering of groundwater levels**
- Reduction of groundwater storage
- Seawater intrusion (N/A)
- Degraded water quality
- Land subsidence
- **Depletions of interconnected surface water**

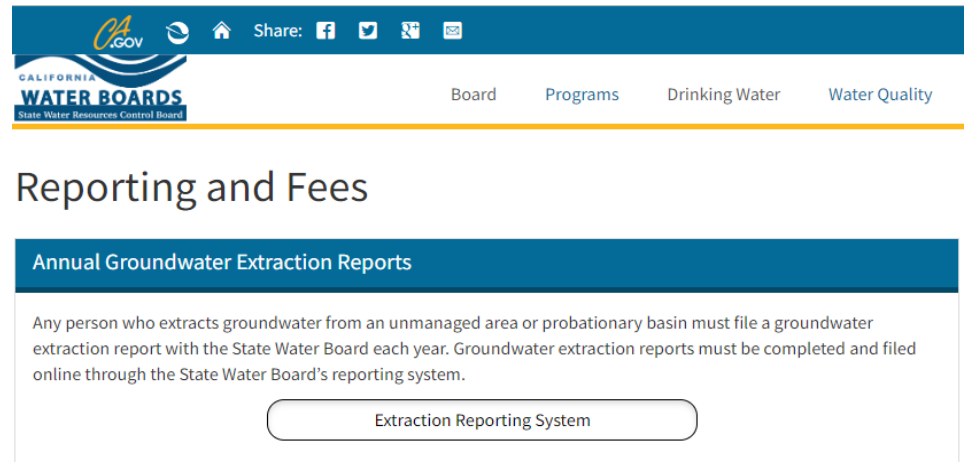
Projects and/or Management Actions



SGMA allows GSAs to define *Interim Milestones* as a “glide path” to sustainable management

NDE Governance/Representation Options

1. **STRGBA GSA w/ Stanislaus County as member agency**
2. **STRGBA GSA w/ other organization/representation**
 - *Stanislaus East Mutual Water Company*
 - *Under CWC § 107236.6(b), may participate in GSA*
3. **Stanislaus County**
 - *Unmanaged areas would default to County management*
 - *If County opts out...*
4. **SWRCB**
 - *Metering & reporting*
 - *Fees*
 - *\$300 per well*
 - *\$40 per acre-foot*



The screenshot shows the California State Water Boards website. The header includes the CA.GOV logo, a home icon, and social media share buttons for Facebook, Twitter, LinkedIn, and Email. The main navigation menu includes 'Board', 'Programs', 'Drinking Water', and 'Water Quality'. The page title is 'Reporting and Fees'. Below the title is a section for 'Annual Groundwater Extraction Reports' with the following text: 'Any person who extracts groundwater from an unmanaged area or probationary basin must file a groundwater extraction report with the State Water Board each year. Groundwater extraction reports must be completed and filed online through the State Water Board's reporting system.' A button labeled 'Extraction Reporting System' is located at the bottom of this section.

Stanislaus County Department of Environmental Resources Groundwater Resources Division

STRGBA GSA

Sustainable Groundwater Management Act

**County Jurisdictional Roles and Subbasin
Management Responsibilities**



Modesto Subbasin Non-District Landowner Event #1

Presented by: Christy McKinnon, Water Resources Manager
January 25, 2023

Overview of Well Permitting

State Well Standards

- DWR Bulletin 74-81/90
- Defines minimum statewide standards for water quality protection; Currently being updated by DWR

Well Ordinance

- Protects **groundwater quality**; Adopts State Well Standards
- Can define local standards that are more restrictive

Groundwater Ordinance

- Protects **groundwater quantity** by prohibiting unsustainable extraction
- If Groundwater Sustainability Agencies do not find wells consistent with their Groundwater Sustainability Plans, applicants must include substantial evidence extraction is sustainable; Subject to CEQA review

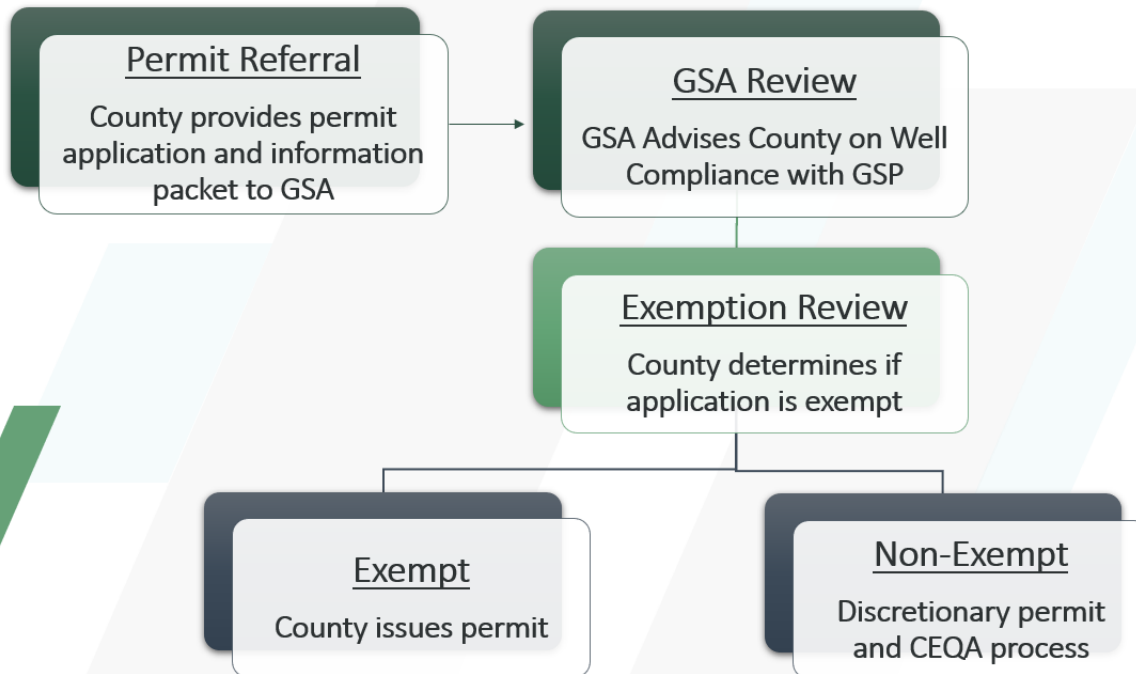
Ministerial Permits

- Require little or no judgment or deliberation
- Can be issued “over the counter”

Discretionary Permits

- Require judgment or deliberation
- Trigger requirement of a CEQA review unless Categorical Exempt

Stanislaus County Well Permitting Process



Stanislaus County Groundwater Ordinance

Chapter 9.37.050 Exemptions

- Replacement wells (similar capacity and construction)
- De minimis wells (less than 2 acre-feet/year)
- “Water resources management practices of public water agencies that have jurisdictional authority within the county, and their water rate payers, that are in compliance with and included in ... an approved groundwater sustainability plan” (GSP).

Chapter 9.37.045 Application

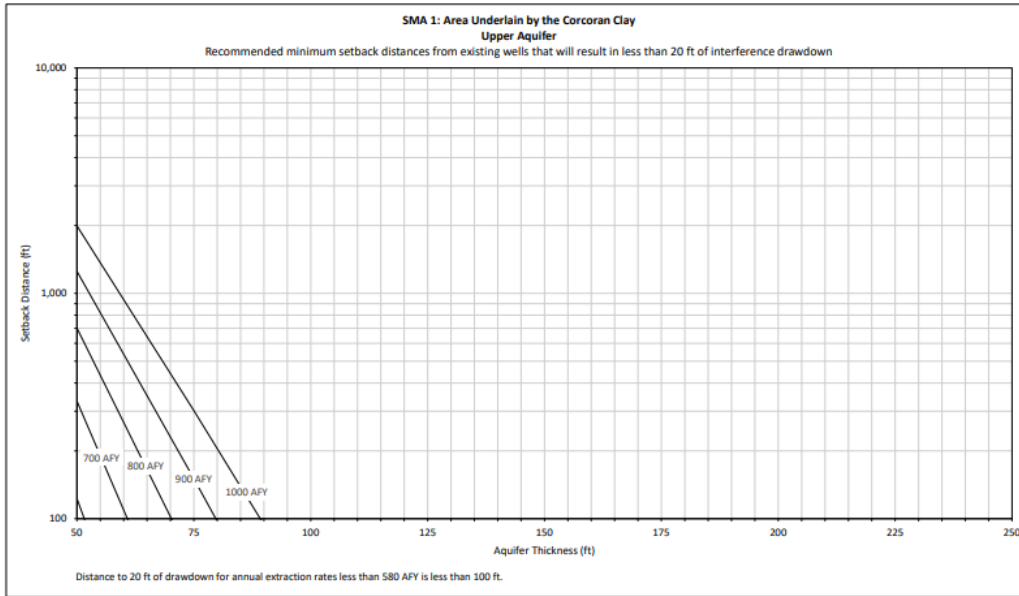
- Upon adoption of a GSP, the prohibition and requirements of the Groundwater Ordinance shall be applicable to any groundwater well from which the county reasonably concludes extraction is unsustainable.

State of California Executive Department

Executive Order N-7-22:

- a. “Approve a permit for a new groundwater well or for alteration of an existing well in a basin subject to the Sustainable Groundwater Management Act and classified as a medium or high-priority without first obtaining written verification from a Groundwater Sustainability Agency, managing the basin or area of the basin where the well is proposed to be located that groundwater extraction by the proposed well would not be inconsistent with any sustainable groundwater management program established in any applicable Groundwater Sustainability Plan adopted by that Groundwater Sustainability Agency and would not decrease the likelihood of achieving a sustainability goal for the basin covered by such a plan;” or
- b. “Issue a permit for a new groundwater well or for alteration of an existing well without first determining that extraction of groundwater from the proposed well is (1) not likely to interfere with the production and functioning of existing nearby wells, and (2) not likely to cause subsidence that would adversely impact or damage nearby infrastructure.

SCREENING PROCEDURE FOR COMPLIANCE WITH 9.B

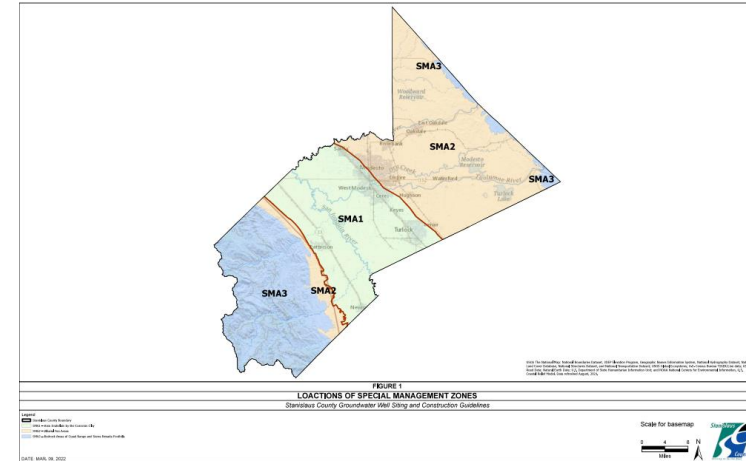


Instructions: Aquifer thickness is determined based on the vertical distance between the top of the uppermost screen interval to the base of the lowermost screen interval, plus 50 feet. The annual extraction rate is determined based on the long-term average annual demand (in acre-feet/year [AFY]) met by groundwater extraction from the well as explained in the text. Results for actual long-term extraction rates may be interpolated between the curves shown. For allowable interference drawdown values between 5 feet and 20 feet, the results for 5 feet and 20 feet should be determined and multiplied by a proportional scaling factor as described in the text.



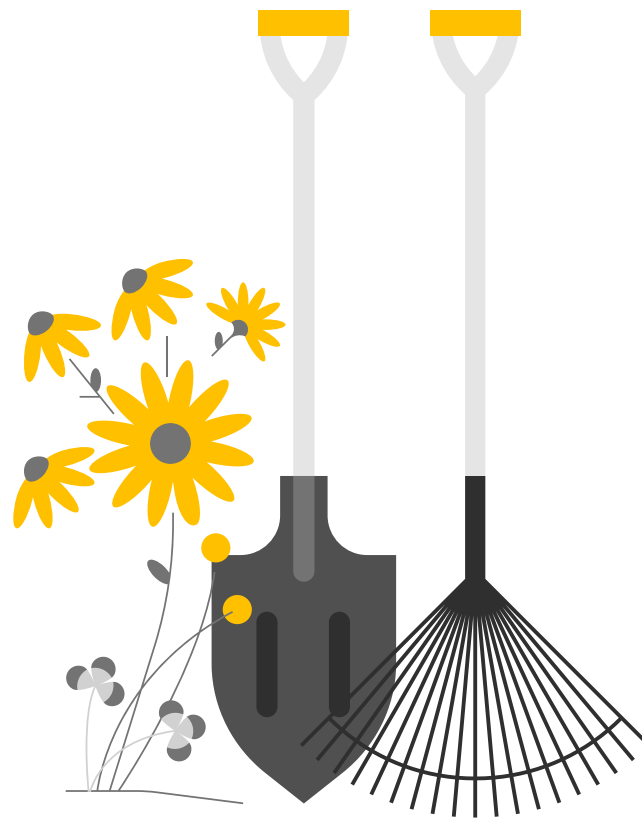
STANISLAUS COUNTY	
WELL PERMITTING	
FIGURE 1	
SMA 1: CORCORAN CLAY UPPER AQUIFER	
WELL INTERFERENCE NOMOGRAPHS	
DATE: MAY 2022	FORMATION
BY: CFJ	FOR: MTRK
	ENVIRONMENTAL

Stanislaus County Government and Executive Office - Compliance/Environmental/Well Permits - 2022/05/10/10:45:10 AM



1. Find well demand
 2. Find aquifer thickness
 3. Use nomograph to determine the Minimum Setback Screening Distance (MSSD) to other wells
 4. In Special Management Area (SMA) 1 (MSSD) applies to infrastructure.
- Fun Fact!** Subsidence has only been documented near the City of Patterson and measured 1 -2.5 inches from 2005-2018.

Programmatic
Environmental
Impact Report
(PEIR) for
Non-Exempt Wells
&
Discretionary Well
Permitting
Program



PEIR for Non-Exempt Wells

- Program goal is to prevent unsustainable ground water extraction from new wells.
- PEIR has evaluated the environmental impacts of issuing non-exempt well permits.
- Includes the regulation of wells found to be extracting groundwater unsustainably under the “Groundwater Ordinance.”

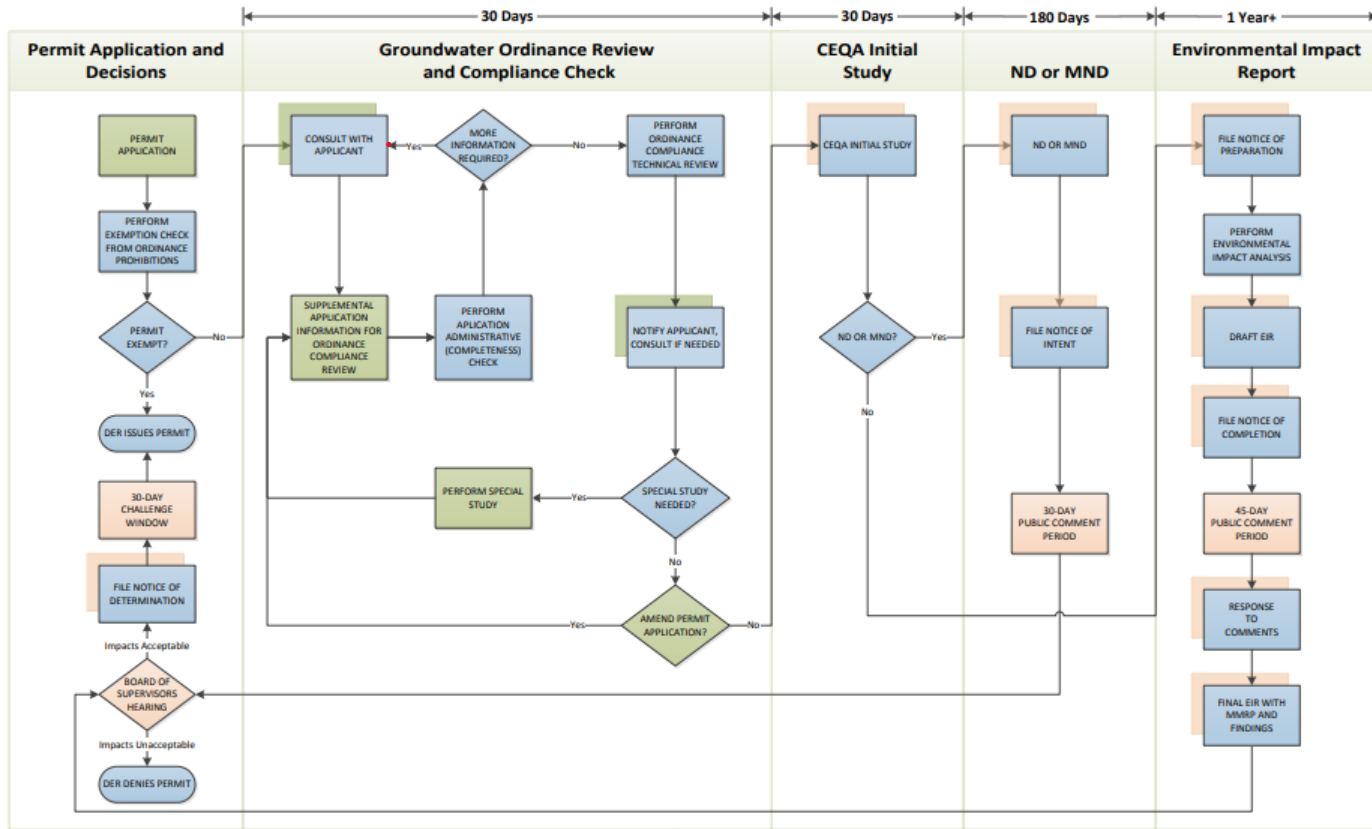


PEIR BENEFITS



- Evaluate resource areas with similar impacts and mitigation requirements (Air quality, recreation, cultural resources, etc.)
- Use thresholds to identify potentially significant impacts in certain resource areas, (Geology and Soils, Hydrology, and Water Quality).
- Streamline the permit process
- Decrease cost and burden
- Ability to prescribe effective county wide mitigation measures needed to avoid significant impacts and undesirable results as defined by SGMA
- Provides a framework for the consideration of cumulative impacts
- The Discretionary Well Permitting Program is a pathway for issuance of discretionary well permits in non-exempt areas. The expansion of land uses requiring groundwater such as irrigated agriculture would not occur without the program.
- Groundwater Extraction Permits for wells that support sustainable groundwater management and beneficial uses have 5-year permit terms and specific construction, monitoring and reporting conditions attached to the permit.

STANISLAUS COUNTY GROUNDWATER ORDINANCE WELL PERMITTING PROCESS



LEGEND



CEQA – California Environmental Quality Act
 DER – Department of Environmental Resources
 EIR – Environmental Impact Report
 MMRP – Mitigation Monitoring and Reporting Program
 MND – Mitigated Negative Declaration
 ND – Negative Declaration



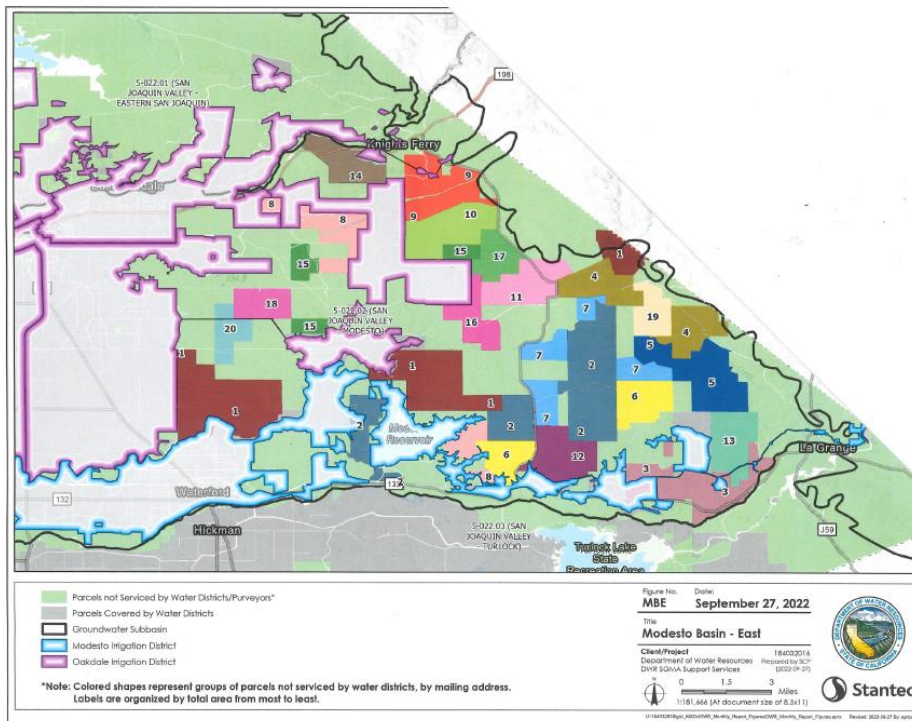
The Non-District East Management Area

Management Actions can be implemented *as needed* basin wide

Or separately *as needed* within each Management Area.

The Modesto Subbasin GSP states:

"PMAs implemented in one Management Area represent that Management Area's contributions to subbasin sustainability. As such, it is anticipated that responsibility for implementing MAs will correspond with the relative Management Area contribution to overdraft and impacts associated with other sustainability criteria within that Management Area"



20 parcels represent the majority of NDE land
212 Non-District East landowners identified and contacted



“To evaluate the status of the groundwater resources of Stanislaus County in order to identify and develop programs and practices that ensure a reliable and sustainable groundwater supply for the benefit of its citizens, present and future, and to make recommendations to the County Board of Supervisors to adopt public policy that empowers such identified actions.”

Stanislaus County Water Advisory Committee (WAC)

Questions???



[https://www.stancounty.com/er/groundwater/
cmckinnon@envres.org](https://www.stancounty.com/er/groundwater/cmckinnon@envres.org)

Modesto Subbasin Non-District East

Stanislaus East Mutual Water Company

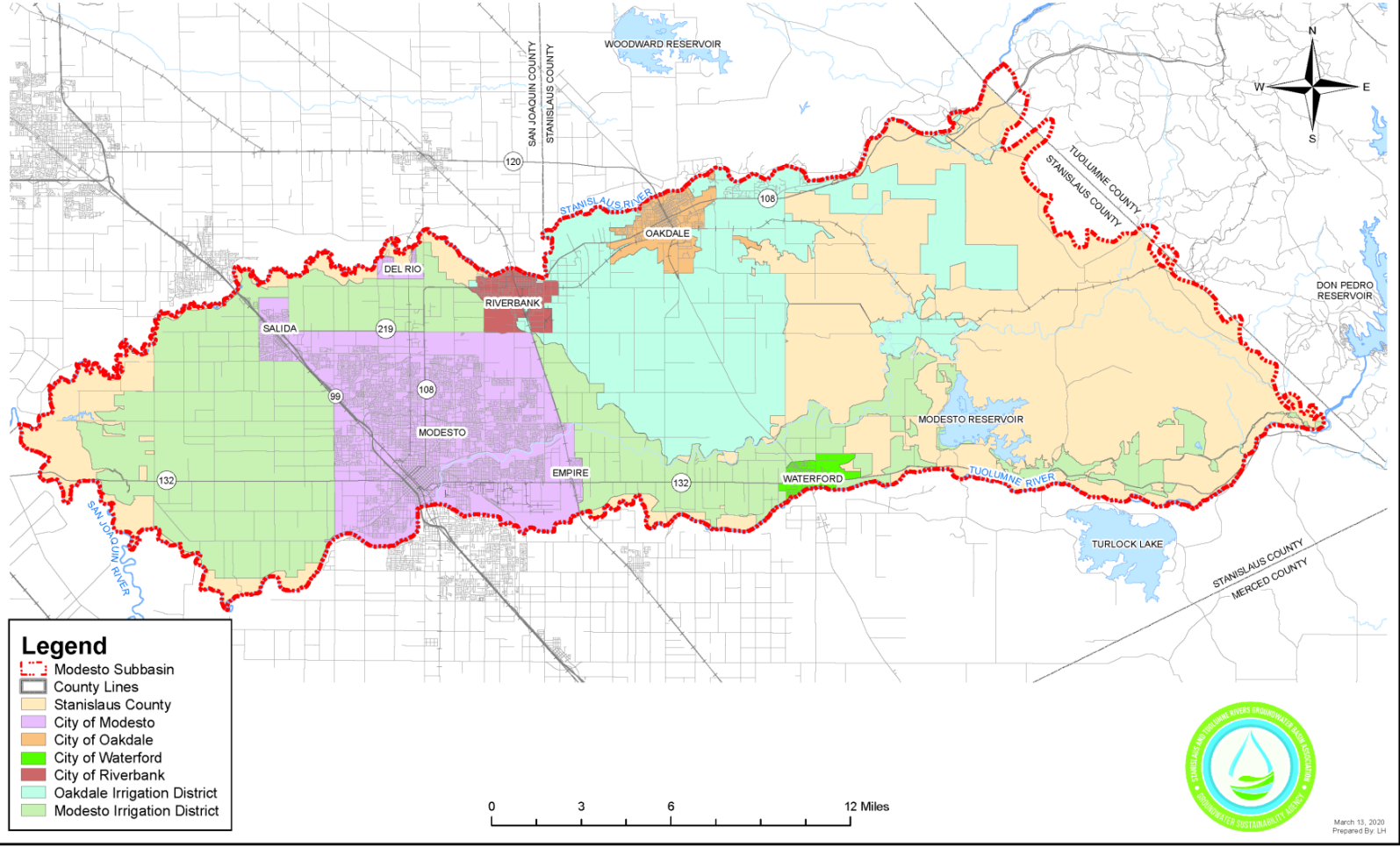
January 25, 2023

Stanislaus East Mutual Water Company

CA Mutual Benefit Corporation
Formed November 2022

Approximately 16,000 Gross Acres

Modesto Subbasin Agencies

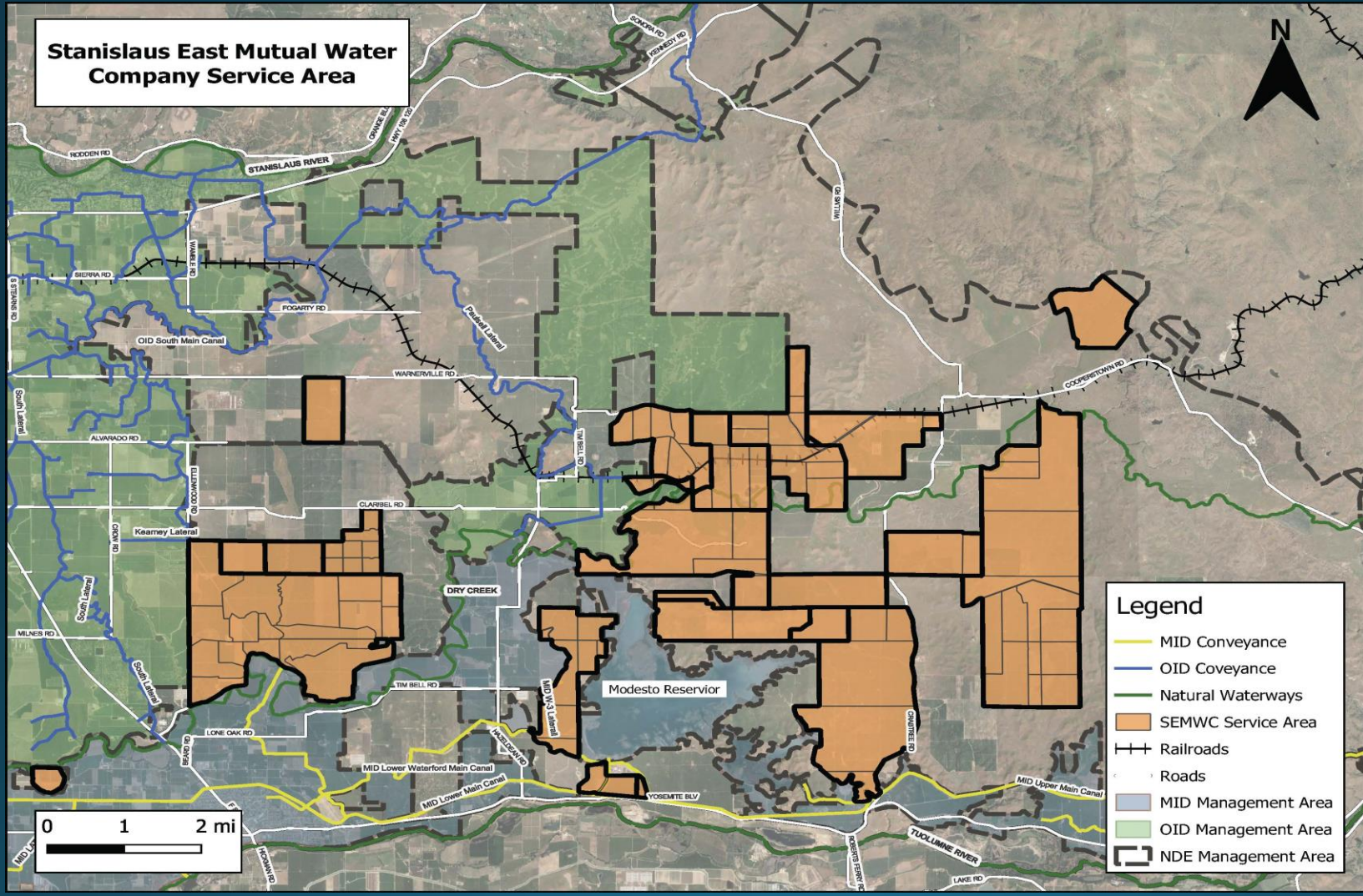


- Legend**
- Modesto Subbasin
 - County Lines
 - Stanislaus County
 - City of Modesto
 - City of Oakdale
 - City of Waterford
 - City of Riverbank
 - Oakdale Irrigation District
 - Modesto Irrigation District



March 13, 2020
Prepared By: LJI

Stanislaus East Mutual Water Company Service Area



Legend

- MID Conveyance
- OID Conveyance
- Natural Waterways
- SEMWC Service Area
- Railroads
- Roads
- MID Management Area
- OID Management Area
- NDE Management Area



Stanislaus
East
Mutual
Water
Company

5 Member Board of Directors

Monthly Meetings

Staff Support

General Manager, Engineering
Team & Legal Counsel

Stanislaus East Mutual Water Company

Eligible for Grant Funding

One Collective Voice

Contract for Surface Water Supply

Representation at Agency Meetings



Stanislaus East Mutual Water Company

Membership is Open to Landowners in the
Non-District East Area

Members Assessed by Irrigated Acreage

Questions

Julia Stornetta

General Manager

Stanislaus East Mutual Water Company

stornettagroup@gmail.com



GSP STATUS AND GROUNDWATER CONDITIONS MODESTO SUBBASIN

STANISLAUS COUNTY SUSTAINABLE GROUNDWATER MANAGEMENT ACT

NON-DISTRICT EAST LANDOWNER EVENT

JANUARY 25, 2023



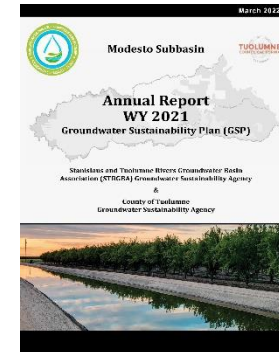
PRESENTATION OUTLINE



GSP Status

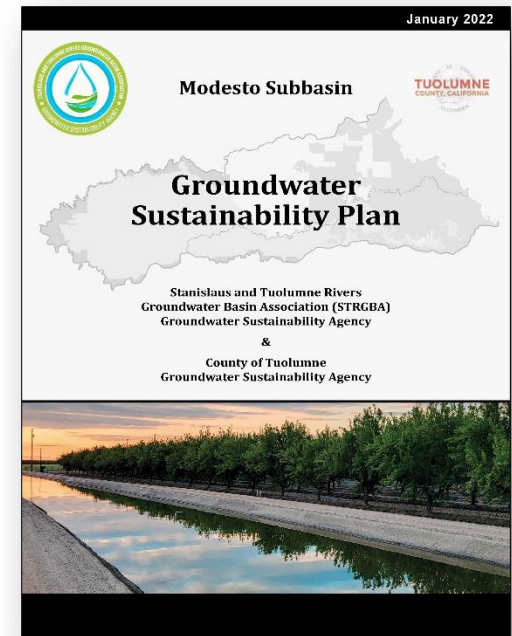
WY 2022 Water Levels

Projects and
Management Actions



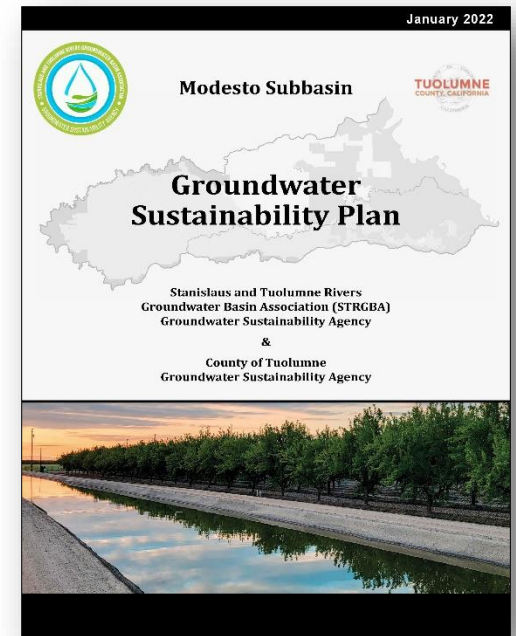
GSP – WHERE ARE WE?

- January 2022: GSP submitted to DWR
- April 2022: First GSP Annual Report submitted
- Spring 2022: First GSP monitoring event
- Fall 2022: Second GSP monitoring event
- April 2023: Second GSP Annual Report due (in progress)



GSP – WHAT'S NEXT?

- Semi-annual GSP groundwater level monitoring events in spring and fall
- Annual Reports due every year (by April 1)
- January 2024: DWR comments on GSP due
- January 2027: GSP 5-year update due

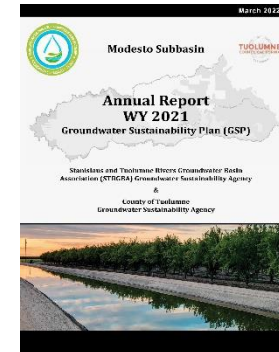


PRESENTATION OUTLINE

GSP Status

WY 2022 Water Levels

Projects and
Management Actions



GSP GROUNDWATER LEVEL MONITORING

GSP Monitoring Events (semi-annual)

- Spring: seasonal high groundwater levels (Feb 1 – Apr 15)
- Fall: seasonal low groundwater levels (Sep 1 – Nov 30)
- Groundwater levels are reported to DWR



Measuring Static Water Level at MW-1S

SPRING 2022 MONITORING EVENT

- Spring 2022 - 1st GSP monitoring event
- Measured groundwater levels in 58 representative monitoring wells (RMWs)
- Most wells measured February 2022
- Updated hydrographs through Spring 2022 to compare water levels to sustainable management criteria



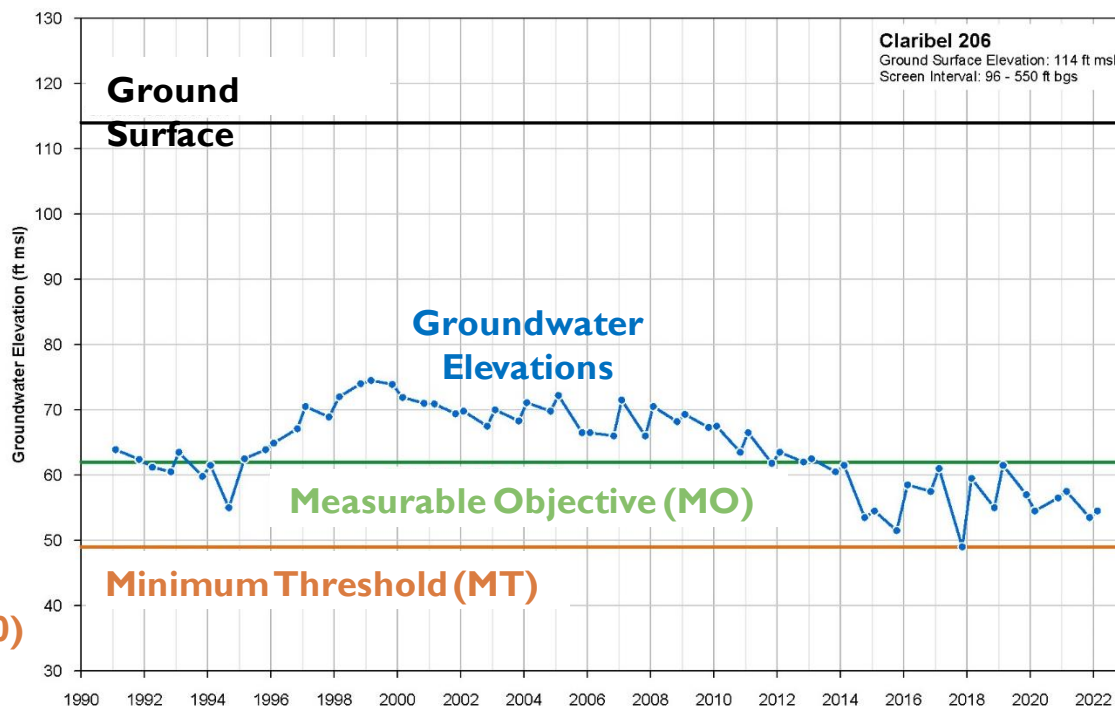
MW-8 installed 2021

MINIMUM THRESHOLDS (MTs)

Example Hydrograph

MO:
midpoint between
MT and historical
high

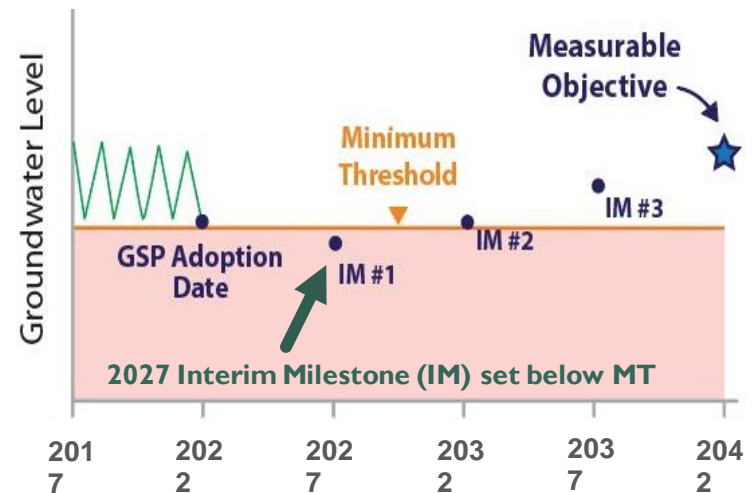
MT:
historical low
(WY 1991 – WY 2020)



INTERIM MILESTONES (IMs)

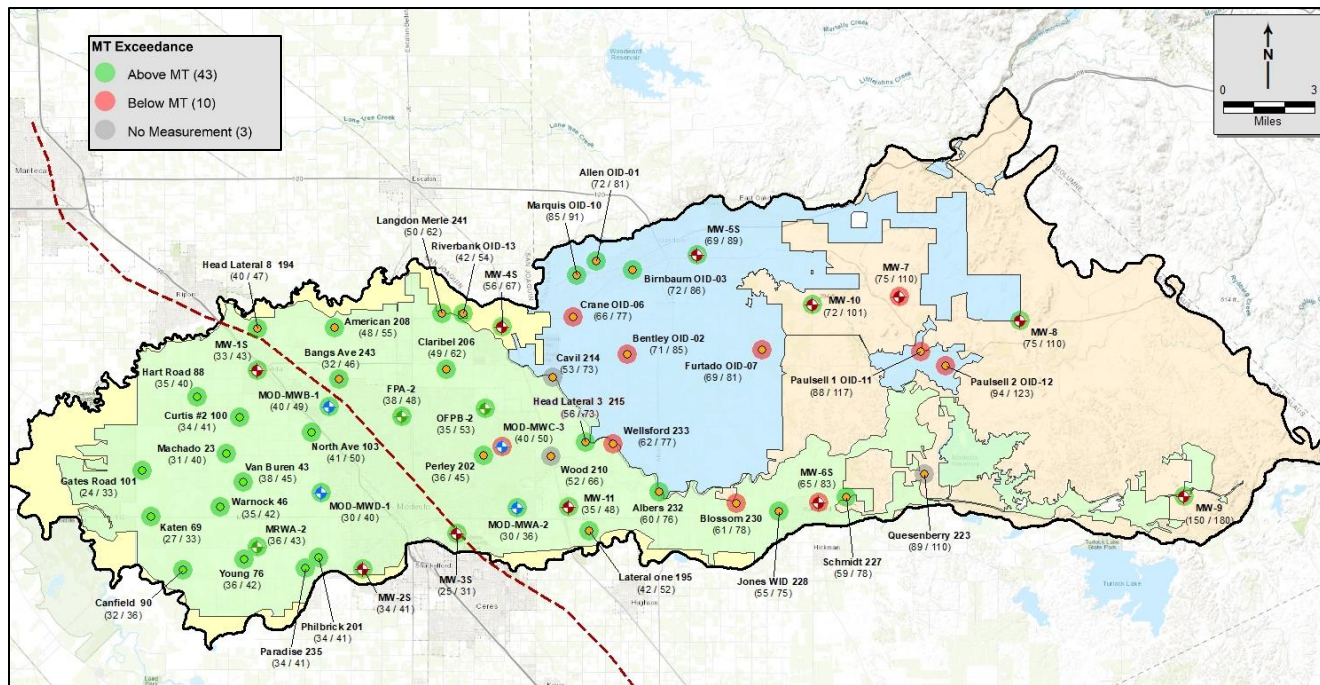
- MT exceedances were anticipated;
 - Persistent drought conditions
 - Water level declines expected to continue in eastern RMWs in short term
- Projects and Management Actions will take time to raise water levels above MTs
- Accordingly, 2027 IMs were designated below the MTs for some wells

SGMA allows GSAs to define *Interim Milestones* as a “glide path” to sustainable management



SPRING 2022

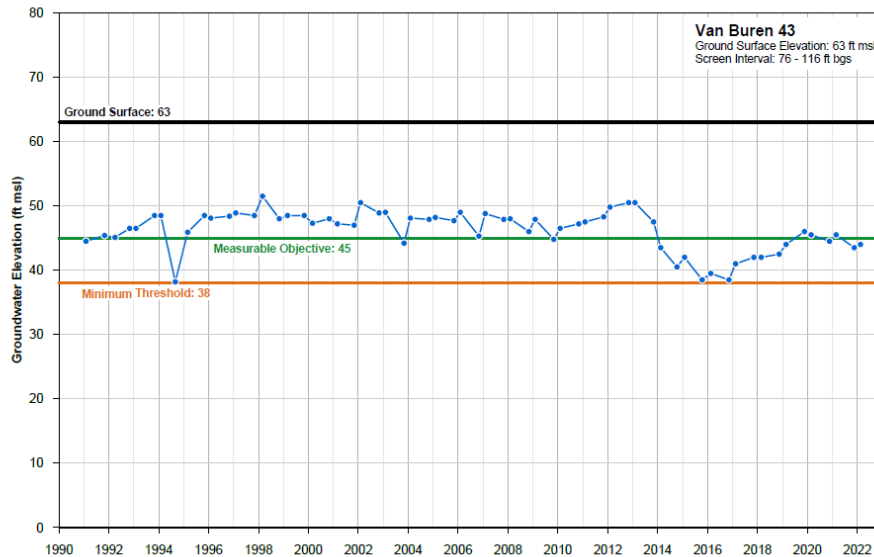
WESTERN UPPER AND EASTERN PRINCIPAL AQUIFERS



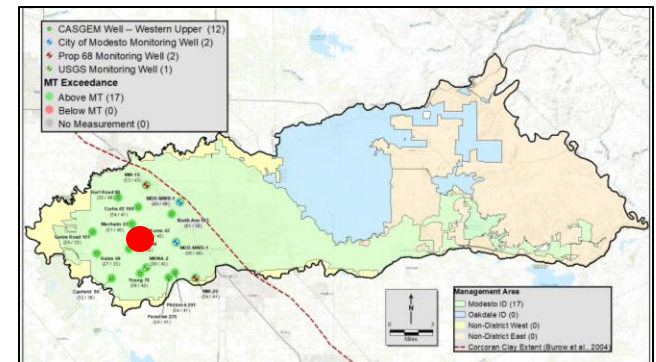
- Groundwater levels stable in the west
- Water levels continue to decline in east
- MT exceedances are in the eastern Subbasin (red dots)

HYDROGRAPHS

WESTERN UPPER PRINCIPAL AQUIFER

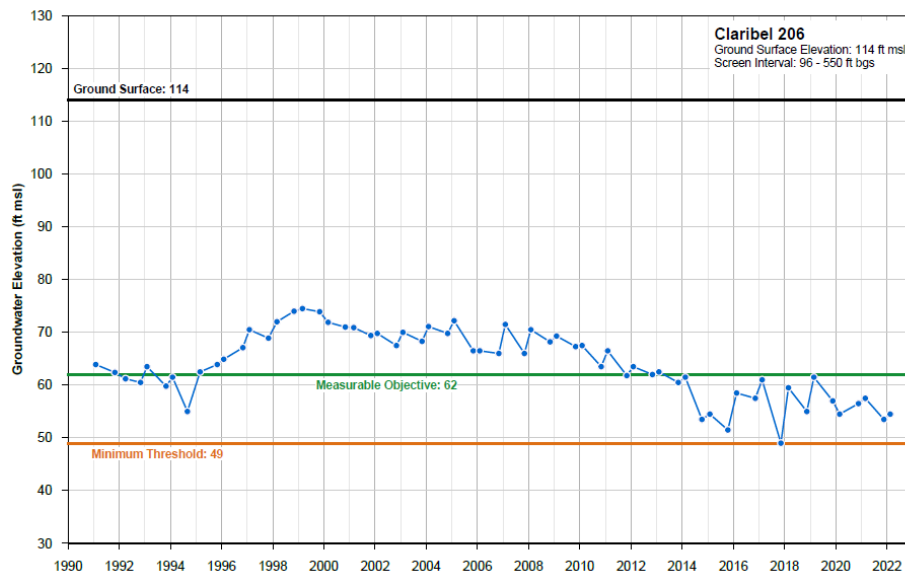


- Spring 2022 water level is near the MO
- Groundwater levels above MT since 2015-2016 drought levels

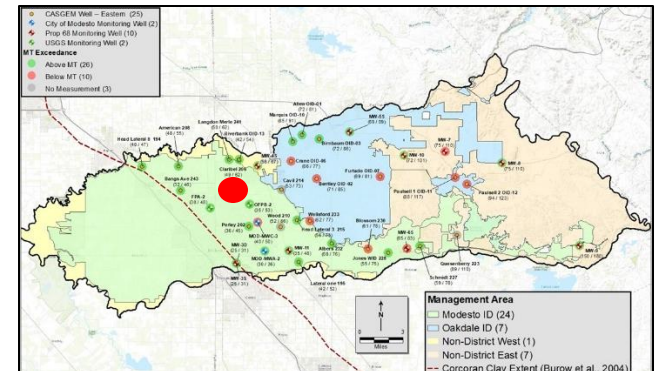


HYDROGRAPHS

EASTERN PRINCIPAL AQUIFER

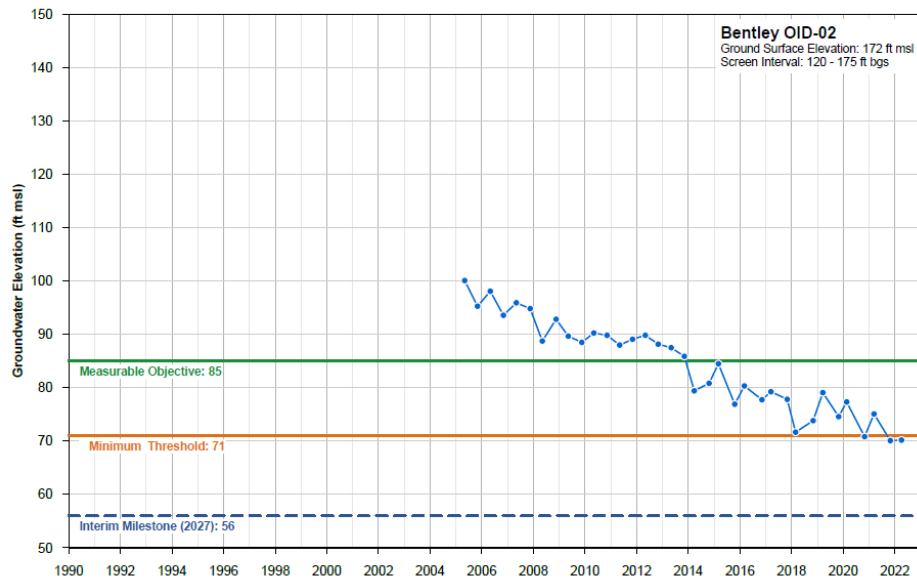


- Spring 2022 water level between MT and MO
- Most wells in western portion of Eastern Principal Aquifer have relatively stable levels since 2014

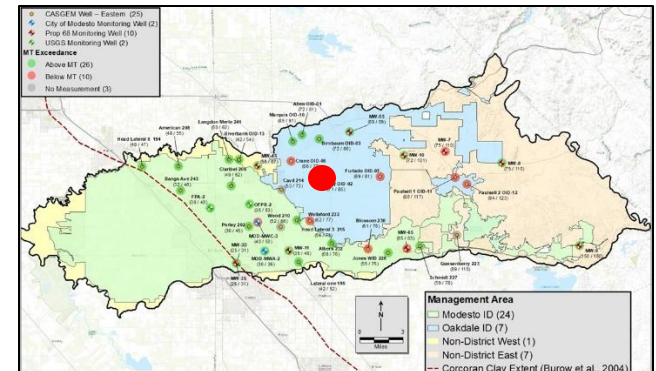


HYDROGRAPHS

EASTERN PRINCIPAL AQUIFER

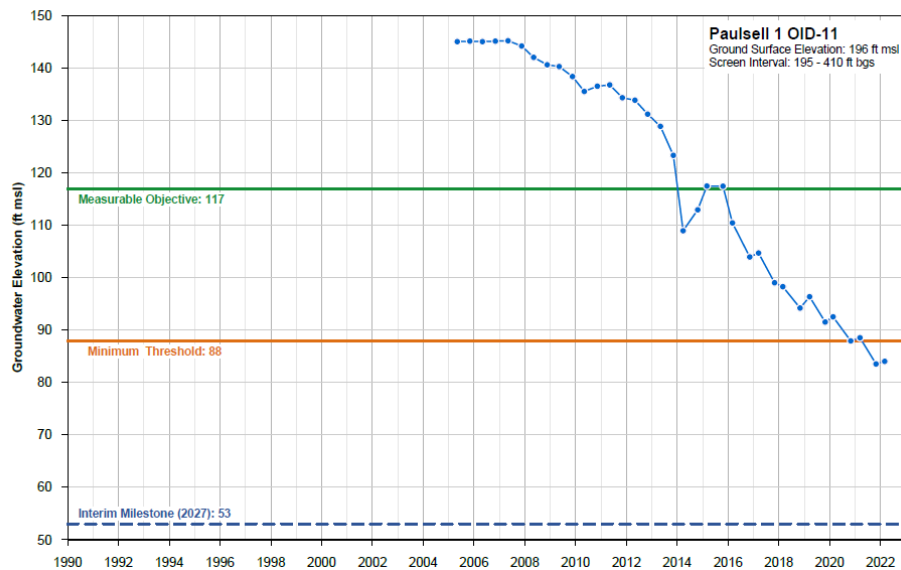


- Spring 2022 water level below the MT
- Decreasing water levels since first measurement in 2005
- Similar declines in nearby wells

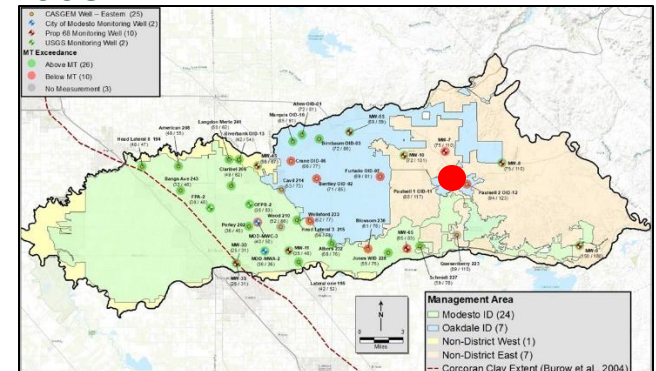


HYDROGRAPHS

EASTERN PRINCIPAL AQUIFER



- Spring 2022 water level below the MT
- Eastern wells have highest rates of water level declines
- Declining water levels since 2008



PUTTING THESE RESULTS IN PERSPECTIVE

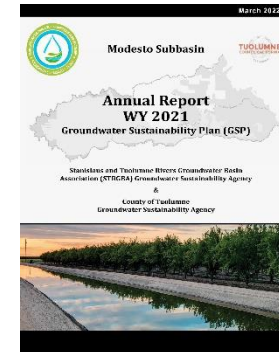
- First monitoring event since the GSP was submitted; projects and management actions will need time to affect water levels
- Continuing declines from persistent drought conditions; MT exceedances have occurred
- Even with drought, water levels above the MTs in 81% of the RMWs
- Undesirable results have not been triggered
- No wells are below IMs

PRESENTATION OUTLINE

GSP Status

WY 2022 Water Levels

Projects and
Management Actions



GSP PROJECTS

- 13 projects organized into 3 groups:
 - Group 1 – Projects already being implemented
 - Group 2 – Projects that are generally implementable but still in planning stages
 - Group 3 – Projects that have been identified for consideration in the future, subject to feasibility.
- All of the projects would support GSP implementation, contribute to the sustainability goal, and assist with meeting the Sustainable Management Criteria (SMC).

GSP PROJECTS

#	Proponent(s)	Project Name	Primary Mechanism(s)	Partner(s)	Group	Modeling Scenario
Urban Projects						
1	City of Modesto	Growth Realization of Surface Water Treatment Plant Phase II	In-lieu Groundwater Recharge	N/A	1	Baseline
2	City of Modesto	Advanced Metering Infrastructure Project (AMI)	Conservation	N/A	1	×
3	City of Modesto	Storm Drain Cross Connection Removal Project	Stormwater Capture	N/A	2	×
4	City of Waterford	Project 3: Waterford/Hickman Surface Water Pump Station and Storage Tank	In-lieu Groundwater Recharge	City of Modesto, MID	2	×
In-Lieu & Direct Recharge Projects						
5	NDE Areas	Modesto Irrigation District In-lieu and Direct Recharge Project	Direct or In-lieu Groundwater Recharge	Modesto ID	2	×
6	NDE Areas	Oakdale Irrigation District In-lieu and Direct Recharge Project	Direct or In-lieu Groundwater Recharge	OID	2	×
Flood Mitigation Projects						
7	NDE Areas	Tuolumne River Flood Mitigation and Direct Recharge Project	Direct Groundwater Recharge	Modesto ID	2	×
8	NDE Areas	Dry Creek Flood Mitigation and Direct Recharge Project	Direct Groundwater Recharge	Stanislaus County	2	×
Potential Future Projects						
9	NDE Areas	Stanislaus River Flood Mitigation and Direct Recharge Project	Direct Groundwater Recharge	Stanislaus County	3	
10	City of Modesto	Detention Basin Standards Specifications Update	Groundwater Recharge	N/A	3	
11	NDE Areas	Recharge Ponds	Groundwater Recharge	N/A	3	
12	City of Oakdale	OID Irrigation and Recharge to Benefit City of Oakdale	Direct or In-lieu Groundwater Recharge	N/A	3	
13	MID	MID FloodMAR Projects	Direct Groundwater Recharge	N/A	3	

GSP MANAGEMENT ACTIONS

If GSP Projects are not implemented or are insufficient to demonstrate progress toward sustainability, management actions may be necessary.

* No management actions are being proposed at this time.

Category	#	Proponent	Management Action	Primary Mechanism(s)	Partner(s)
Demand Reduction Strategies	1	Modesto Subbasin GSAs	Voluntary Conservation and/or Land Fallowing	Conservation/ Land Fallowing	N/A
	2	Modesto Subbasin GSAs	Conservation Practices	Conservation	N/A
Water Accounting Framework	3	Modesto Subbasin GSAs	Groundwater Extraction and Surface Water Reporting Program	Pumping Reduction	N/A
	4	Modesto Subbasin GSAs	Groundwater Allocation and Pumping Management Program	Pumping Reduction	N/A
	5	Modesto Subbasin GSAs	Groundwater Extraction Fee	Pumping Reduction	N/A
	6	Modesto Subbasin GSAs	Groundwater Pumping Credit Market and Trading Program	Pumping Reduction	N/A



QUESTIONS?



GSP PROJECT DEVELOPMENT UNDERWAY

10-YEAR OID OUT-OF-DISTRICT WATER SALES PROGRAM

OOD Water Sales Program Terms and Conditions (draft approved 8/2/22)

- No impact to in-district OID constituents
- Enrollment period closed September 2, 2022
 - Up to +/-10.5K irrigated acres, +/-6k in Modesto Subbasin
- Initial Study w/ proposed MND public review period closes 1/26/23
- Option for construction of new private delivery infrastructure at applicant's expense
- Potential for renewal for an additional 10-year period upon request at OID's discretion
- Up to 25k AF anticipated to be made available (+/-20k in the Modesto subbasin)
- Commitment by participants for annual purchase of a min. of 1.5 AF per irrigated acre
- First water deliveries anticipated in +/-March 2023 w/ ramp up to full scale in +/-3 years as new infrastructure is installed
- \$200/AF with a 3% annual escalator

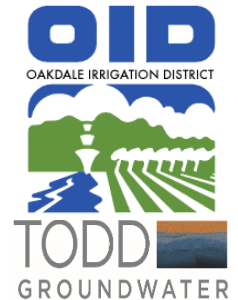


GSP PROJECT DEVELOPMENT UNDERWAY

ROUND 2 SGM GRANT PROGRAM

OID Paulsell Lateral Expansion Grant Application (submitted 12/16/22)

- Grant application prepared by Davids Engineering (OID funded)
 - +/- \$18.6M Project design and construction cost
 - Increase capacity of +/- 10 miles of open ditch, tunnel & culverts from 30 cfs up to 180 cfs
 - LOS and surface water supply benefits for Tier I/II in-district lands (+/- 5k acres)
 - OOD supply benefits (+/- 6k acres) when surplus water is available
 - Storm water recapture benefits?
-
- A total of 82 total applications were submitted requesting >\$780M w/ \$200M available





Question and Answer

January 25, 2023