Eastern San Joaquin Subbasin

Groundwater Sustainability Workgroup

November 13, 2018

EASTERN SAN JOAQUIN
GROUNDWATER AUTHORITY

Agenda

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- Comments on Meeting Notes
- Projects and Management Actions
- Data Management System (DMS) Demo
- Public Meeting Recap and Outreach
- Follow-Up from Last Meeting
- Announcements

    Other Topics

Comments on Meeting Notes

Comments Received

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To address:

- Communicating our discussions to the GWA Board
- Is groundwater recharge a “beneficial use”?

Communicating Our Discussions to the GWA Board

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- Concerns about communicating Workgroup messages to the GWA Board
  - Each month at the Board meeting, we give an overview of the Workgroup discussion including attendees, discussion topics, and key takeaways
  - Meeting summaries are provided in the Board packet

Is Groundwater Recharge a "Beneficial Use"?

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- Is groundwater recharge a beneficial use?
  - Groundwater recharge itself is not a beneficial use. After it is withdrawn, the following uses of recharge are beneficial uses.

Projects and Management Actions

Projects and Management Actions Will Be Used to Meet Overdraft

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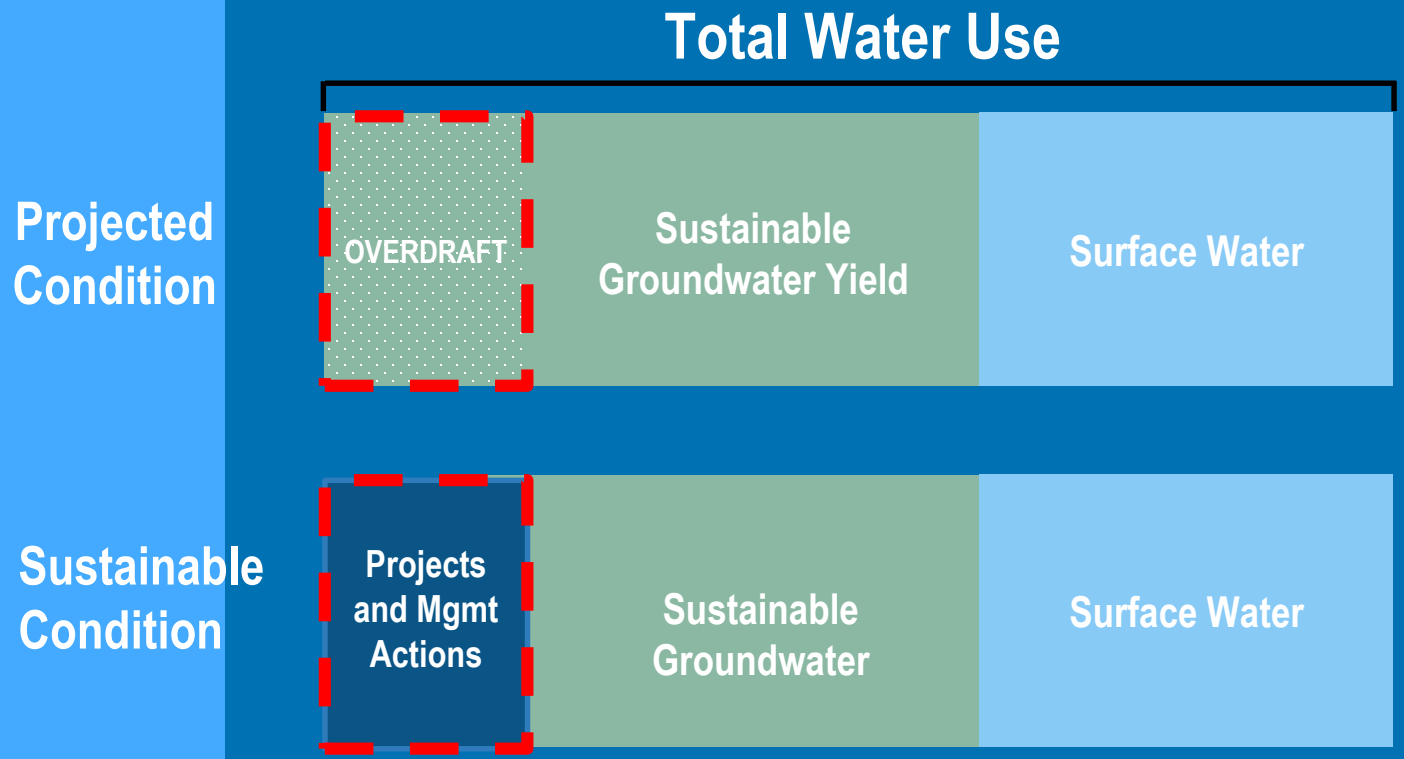

Review – Categories of Projects and Management Actions

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Flood/Stormwater Management

Recycling

Conservation

Recharge

Transfers

Project Locations

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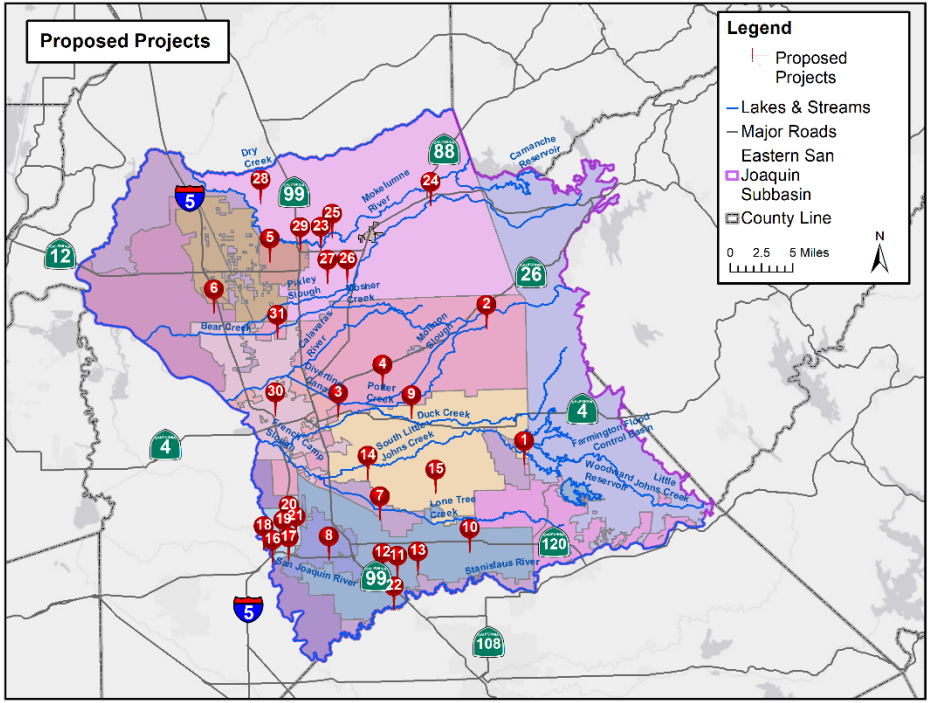

31 Proposed Projects Received To-Date

1 – Farmington Dam Repurpose Project
2 – Lake Grupe In-Lieu Recharge
3 – Raw Water Reliability and Recharge
4 – SW Implementation Expansion
5 – SW Facility Expansion & Delivery Pipeline
6 – White Slough WPCF Expansion
7 – Recycled Water Transfer to Agriculture
8 – Demand Management Measures
9 – Water Transfers to SEWD and CSJWCD
10 – Increase Nick DeGroot SW Deliveries
11 – City of Escalon Wastewater Reuse
12 – South San Joaquin Stormwater Reuse
13 – Pressurization of SSJID Facilities
14 – BNSC Intermodal Facility Recharge Pond
15 – CSJWCD Capital Improvement
16 – Recycled Water Program Expansion
17 – LAS-3 Percolation Basin
18 – Conjunctive Use of GW and SW
19 – UWMP Water Conservation
20 – NPDES Phase 2 MS4 Compliance
21 – Water Meter Improvements
22 – City of Ripon Surface Water Supply
23 – Cal Fed GW Recharge Project
24 – Mokelumne River Loss Study
25 – North System Modernization
26 – PDA Banking
27 – South System Modernization
28 – Tracy Lakes GW Recharge
29 – Winery Recycled Water
30 – Advanced Metering Infrastructure
31 – Mobilizing Recharge Opportunities

Projects Received – Part 1 of 3

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Project #	Project Description	Submitting GSA	Category
1	Farmington Dam Repurpose Project	SEWD	Recharge
2	Lake Grupe In-Lieu Recharge	SEWD	Recharge
3	Raw Water Reliability and Recharge	SEWD	Recharge
4	SW Implementation Expansion	SEWD	SW Supply
5	SW Facility Expansion & Delivery Pipeline	City of Lodi	SW Supply
6	White Slough WPCF Expansion	City of Lodi	Recycling
7	Recycled Water Transfer to Agriculture	City of Manteca	Recycling/Transfers
8	Demand Management Measures	City of Manteca	Conservation
9	Water Transfers to SEWD and CSJWCD	SSJ GSA	Transfers
10	Increase Nick DeGroot SW Deliveries	SSJ GSA	SW Supply
11	City of Escalon Wastewater Reuse	SSJ GSA	Recycling

Highlighted projects included in baseline

Projects Received – Part 2 of 3

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Project #	Project Description	Submitting GSA	Category
12	South San Joaquin Stormwater Reuse	SSJ GSA	Stormwater
13	Pressurization of SSJID Facilities	SSJ GSA	Conservation
14	BNSC Intermodal Facility Recharge Pond	CSJWCD	Recharge
15	CSJWCD Capital Improvement Program	CSJWCD	SW Supply
16	Recycled Water Program Expansion	City of Lathrop	Recycling
~~17~~	~~LAS-3 Percolation Basin~~	~~City of Lathrop~~	~~Recharge~~
18	Conjunctive Use of GW and SW	City of Lathrop	SW Supply
19	City of Lathrop UWMP Water Conservation	City of Lathrop	Conservation
20	NPDES Phase 2 MS4 Compliance Program	City of Lathrop	Stormwater
21	Water Meter Improvements	City of Lathrop	Conservation
22	City of Ripon Surface Water Supply	SSJ GSA	SW Supply

Highlighted projects included in baseline

Projects Received – Part 3 of 3

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Project #	Project Description	Submitting GSA	Category
23	Cal Fed GW Recharge Project	NSJWCD	Recharge
24	Mokelumne River Loss Study	NSJWCD	Accounting
25	North System Modernization	NSJWCD	SW Supply
26	PDA Banking	NSJWCD	SW Supply
27	South System Modernization	NSJWCD	SW Supply
28	Tracy Lakes GW Recharge	NSJWCD	Recharge
29	Winery Recycled Water	NSJWCD	Recycling/Recharge
30	Advanced Metering Infrastructure	City of Stockton	Accounting
31	Mobilizing Recharge Opportunities	San Joaquin County	Recharge

Project Assessment

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Projects were reviewed using the criteria developed by the Advisory Committee:

1. Implementability
2. Location / Proximity to Area of Overdraft
3. Cost per Volume Water Savings
4. Environmental Benefit / Impact
5. Disadvantaged Community Benefit
6. Water Quality Impact (Positive or Negative)

Question 1: Completeness of Projects List

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Is this preliminary project list complete as a starting point for developing the GSP implementation plan? Somewhat (52%), Yes (26%), No (22%)

What's missing?

- ***Discussion of NSJWCD projects***
- Discussion of projects in baseline
- Basin-scale fallowed lands program
- More stormwater capture and grey water uses
- Projects that provide drinkable water to contaminated water users
- Water banking programs
- Hybrid of proposed projects

Question 2: Range of Project Types

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Does this list reflect a wide enough range of project types to be considered for the implementation plan? Yes (56%), Somewhat (32%), No (12%)

Additional suggested projects include:

- Projects upstream of overdraft areas rather than downstream solutions
- Direct benefits to areas of depression
- Conservation projects (farm improvements demonstration)
- Recharge ponds and field flooding
- Large storage projects
- Water rights modifications

Question 3: Consistency with Regional Values

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Are the projects in the preliminary list consistent with regional groundwater values (see next slide)? Somewhat (52%), Yes (44%), No (4%)

Why not?

- ***Feasibility and affordability concerns***
- Not enough information provided
- Heavy reliance on SW supply projects may increase vulnerability

Regional Groundwater Values

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Be implemented in an equitable manner	Be affordable and accessible	Exhibit multiple benefits to local land owners and other participating agencies	Minimize and mitigate adverse impacts to the environment including climate change
Maintain or enhance the local economy	Minimize adverse impacts to entities within the Subbasin	Maintain overlying landowner and Local Agency control of the Subbasin	Protect the rights of overlying land owners
Protect groundwater and surface water quality	Provide more reliable water supplies	Restore and maintain groundwater resources	Increase amount of water put to beneficial use within the Subbasin

Question 4: Addressing All 6 Sustainability Indicators

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Are there any sustainability indicators that are not adequately addressed through the preliminary projects list (see next slide)? No (41%), Somewhat (33%), Yes (26%)

Which sustainability indicators are not addressed?

- ***Water Quality***
- Depletion of interconnected surface waters and GDEs

Six Sustainability Indicators

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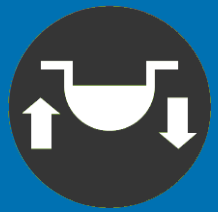
Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply

Significant and unreasonable degraded water quality

Significant and unreasonable reduction of groundwater storage

Significant and unreasonable land subsidence

Significant and unreasonable seawater intrusion



Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water

Question 5: Reducing Demand or Increasing Supply

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Which do you feel is more important to achieving sustainability, reducing total demand or increasing surface water supply to meet projected demands? Equally Important (42%), Increasing SW Supply (39%), Reducing Demand (19%)

What considerations should be made?

- Affordability
- Unpredictable variation in hydrology (drought) and regulatory conditions
- Projected future demands

Question 6: Significant Concerns on Any Projects

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Are there any projects in the preliminary list with which you have significant concerns? No (44%), Yes (37%), Somewhat (19%)

Which projects?

- High cost/volume projects
- Recycled water programs
- Projects that rely on landowner expenditure
- Projects that rely on additional surface water supplies from Calaveras River
- Localized projects

Question 7: Fatal Flaws

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Are there any projects on the preliminary list with “fatal flaws you are aware of that would preclude them from being able to be implemented within the SGMA timeframe”? Somewhat (38.5%), No (38.5%), Yes (23%)

Which projects?

- Those with higher costs
- Projects with funding, costs, permitting challenges
- Large scale projects (but these would make a good longer-term projects)

Question 8: Small or Large Projects?

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Should the GSP implementation plan include a small number of large projects or a large number of small/medium projects? Large number of small/medium projects (87.5%), Small number of large-sized projects (12.5%)

Others?

- Include a mix of both
- Whichever is most cost-effective and feasible
- Prioritize projects with biggest GW gain and regional benefit

*General consensus that costs, location, feasibility, and benefit are more important that size. Overall support for a mix of sizes.

Question 9: Targeting DAC Benefits

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Should the implementation plan include projects targeting disadvantaged communities (DAC) benefits even if they are not the most cost-effective options for overall regional sustainability? Yes (60%), No (40%)

Comments:

- ***Projects should be developed to align with grant funding***
- This is more important for water quality benefits
- Project accommodation to deepen wells or provide alternate water sources would be beneficial

Data Management System (DMS) Demo

What is the Data Management System (DMS)?

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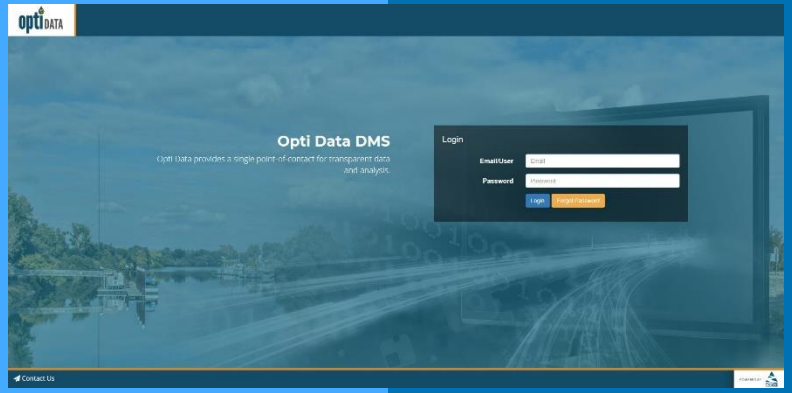

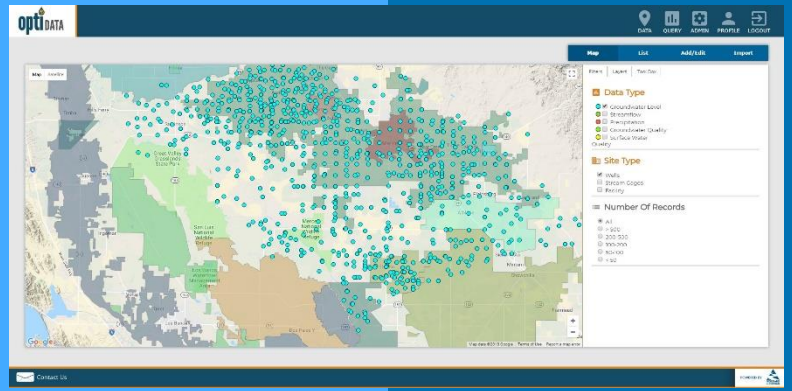

A Flexible, One-Stop Shop for Managing Groundwater Data

- Allows for transparent and efficient data entry and visualization
- Allows for coordination and sharing of data
- Allows for automated reporting
- Will support sustainable groundwater management monitoring and give ESJ the ability to track undesirable results

DMS Features

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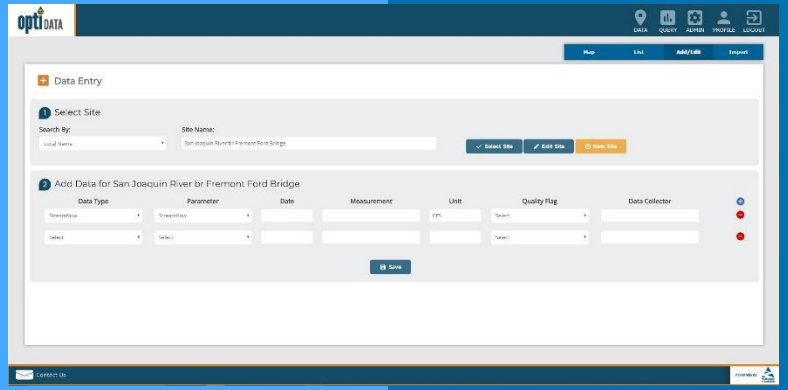

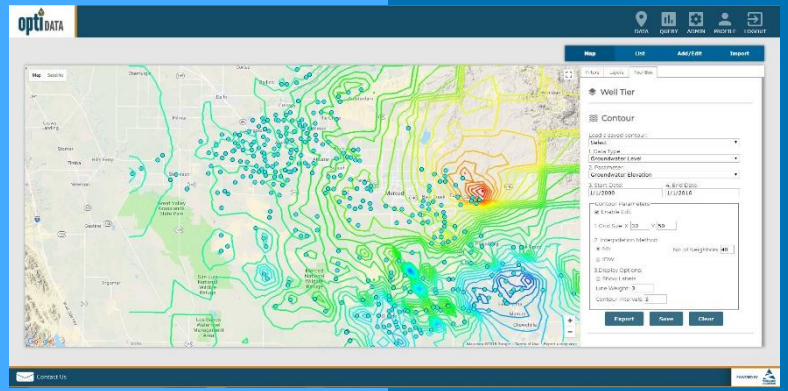

- Web-based, GIS-enabled
- Easy-to-Use
- Flexible Data Structure to Store and Manage Different Datasets
- User and Agency Security/Permissions
- Data Entry and Validation
- Visualization and Analysis
- Query and Reporting
- Framework to Link to other Data Management Systems and Modeling Results
- Viewing capabilities for publicly available information

How Will the DMS be Used?

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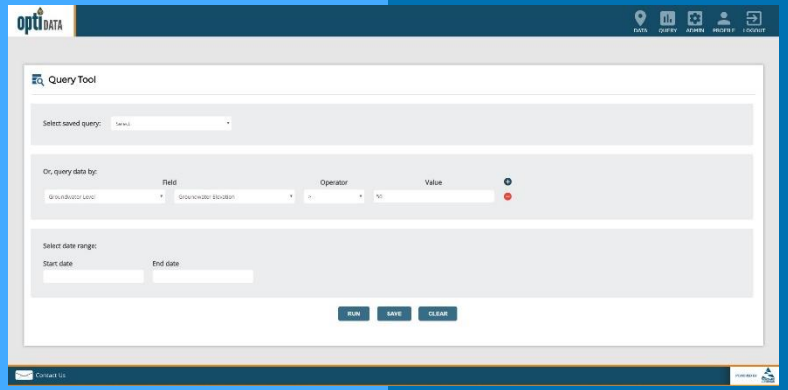

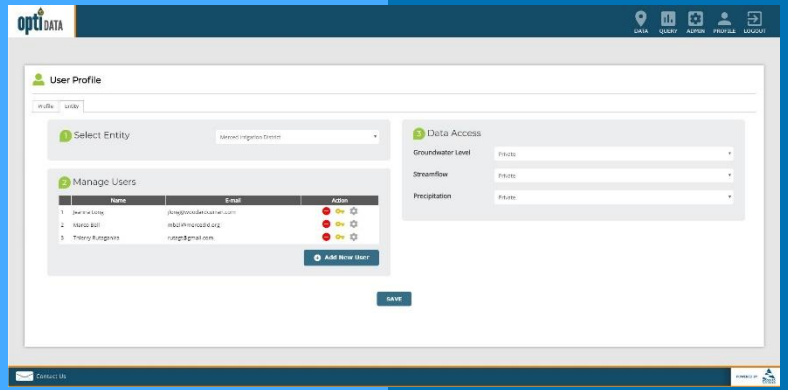

- The DMS will create a centralized and integrated repository for multiple data sources managed by stakeholders
- Data sharing portal to enable utilization of the same data and tools for visualization and analysis
- Interface with model results to support groundwater modeling and analysis
- Generate reports for management and other agencies (DWR, etc.)
- Track sustainability criteria and management objectives

How the DMS Will Evolve?

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- Collect and input additional data – member agency and other stakeholder data sets, GIS, etc.
- Onboard stakeholders for local control and efficient data management
- Integrate model viewing capabilities and model results to support water budget development
- Implement reporting capabilities compatible with DWR SGMA portals

DMS Demo

Public Meeting Recap and Outreach Update

Second Informational Meeting

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November 7th , 6:30-8:00 PM

Manteca Transit Center
220 Moffat Blvd.
Manteca, CA 95336

- For those of you who attended, do you have any comments or feedback on the event?

Outreach Update

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How might sustainable groundwater management affect growers?

The goal of the Groundwater Sustainability Plan is to establish sustainable management of groundwater through local control while meeting state requirements.

What is SGMA?

The Sustainable Groundwater Management Act, or SGMA, is new statewide legislation that establishes a path for the sustainable management of groundwater for the first time in California's history.

What does SGMA require?

The development and implementation of a basin-specific Groundwater Sustainability Plan (GSP) by Groundwater Sustainability Agencies (GSAs) that outlines a plan for achieving long-term groundwater sustainability. The Eastern San Joaquin Groundwater Authority, acting collectively on behalf of their 17 member GSAs, must complete their GSP by January 31, 2020 because the subbasin is classified as critically overdrafted.

How do I learn more?

esjgroundwater.org

Get involved:

Attend GWA Board Meetings
2nd Wednesdays, 11 a.m.
Robert J. Cabral Center, Assembly Room 1

Attend Advisory Committee Meetings
2nd Wednesdays, 9 a.m.
Robert J. Cabral Center, Assembly Room 1

Attend GW Sustainability Workgroup Meetings
Approximately monthly (see website for updates)

Participate in Informational Meetings
Nov. 7, 6:30–8 p.m., and approximately quarterly thereafter (see websites for updates)

- Based on feedback from last month's meeting, we have developed a flyer for distribution at the November applicator meetings

Follow-Up From Last Time

The DAC Map Has Been Updated with New Data from DWR

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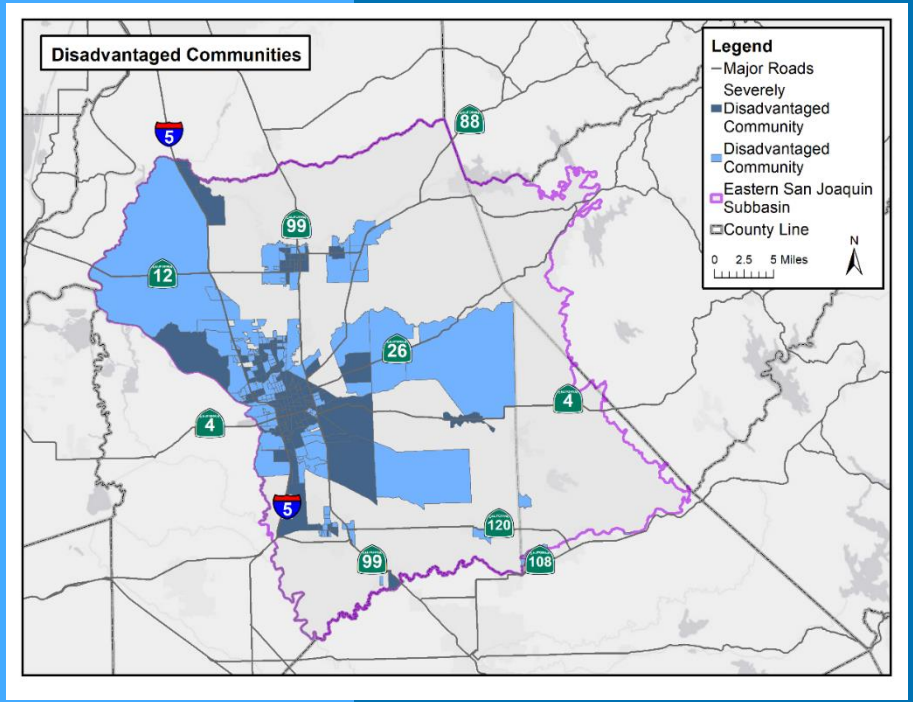
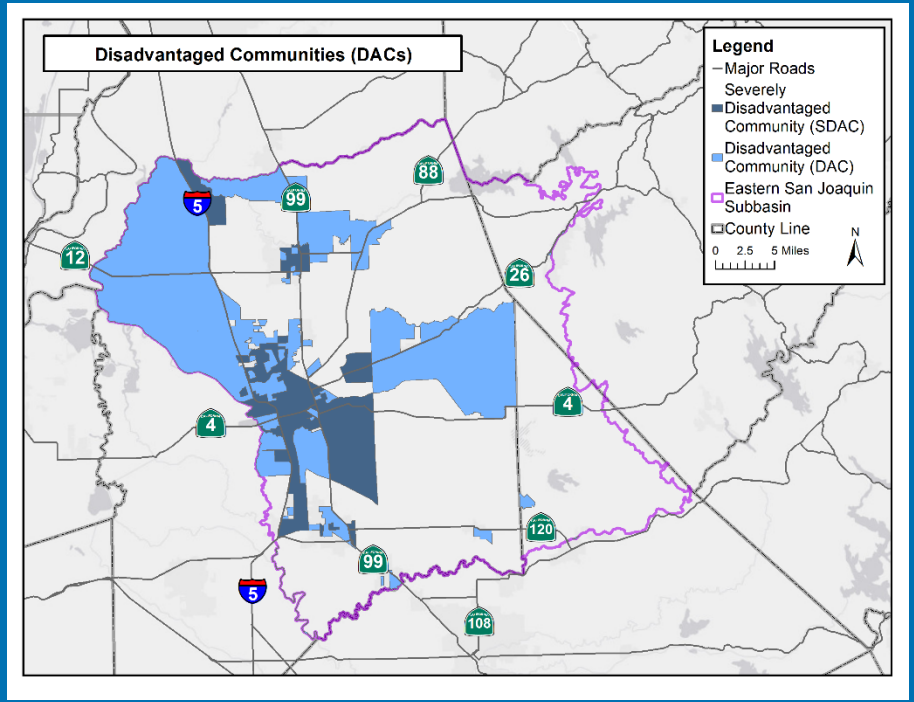
Previous Version (2015)



Updated Version (2016)



Changes to DAC Areas

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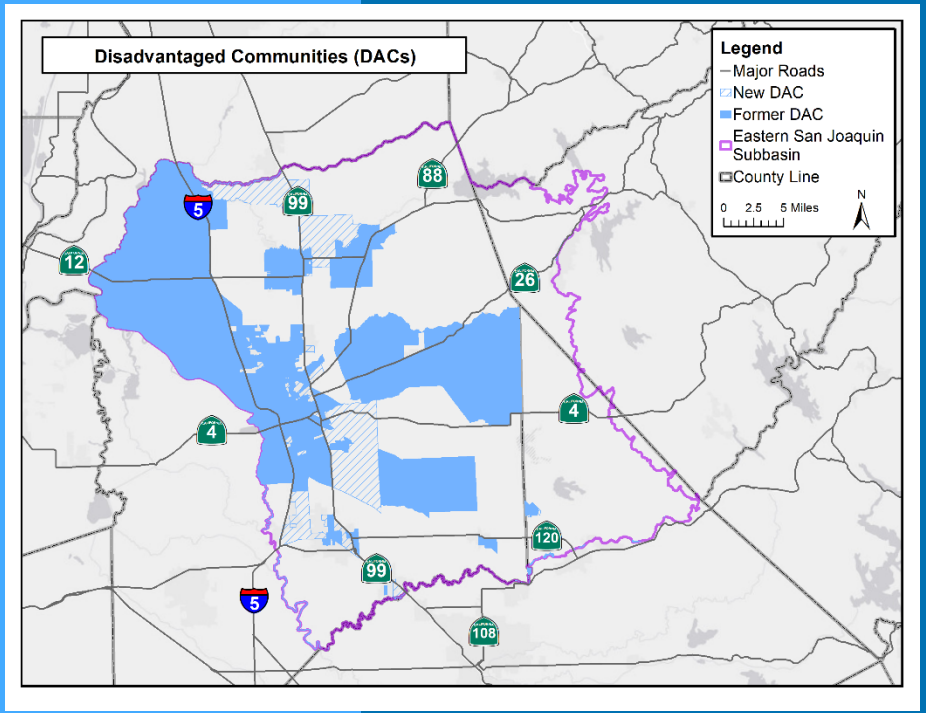
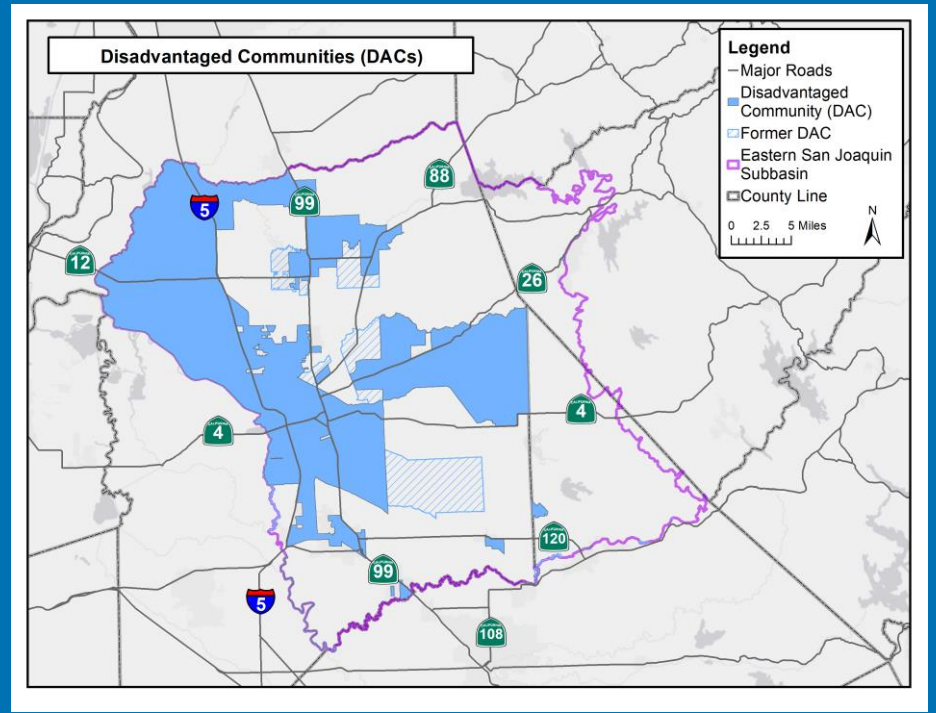
Areas that Became DAC



Areas No Longer DAC



DAC Statistics

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	Average Domestic Well Depth (ft)	Domestic Well Count
Basin-Wide	230.2	10,034
Outside DACs	235.4	7,829
Within DACs	211.6	2,205

2,205 domestic wells located in DAC areas

DAC average domestic depth = **211.6 ft**

GSA	% of GSA that is a DAC	% of GSA that is not a DAC
Lockeford Community Services District	67%	33%
Linden County Water District	50%	50%
City of Manteca	33%	67%
City of Lathrop	50%	50%
Central San Joaquin Water Conservation District	50%	50%
North San Joaquin Water Conservation District	40%	60%
South Delta Water Agency	33%	67%
South San Joaquin GSA	30%	70%
Woodbridge Irrigation District	44%	56%
City of Lodi	75%	25%
Stockton East Water District	45%	55%
City of Stockton	58%	42%
Central Delta Water Agency	50%	50%
Oakdale Irrigation District	33%	67%
Eastside San Joaquin GSA	17%	83%
San Joaquin County	43%	57%
San Joaquin County No. 2	60%	40%

Confirming City of Stockton Urban Demand

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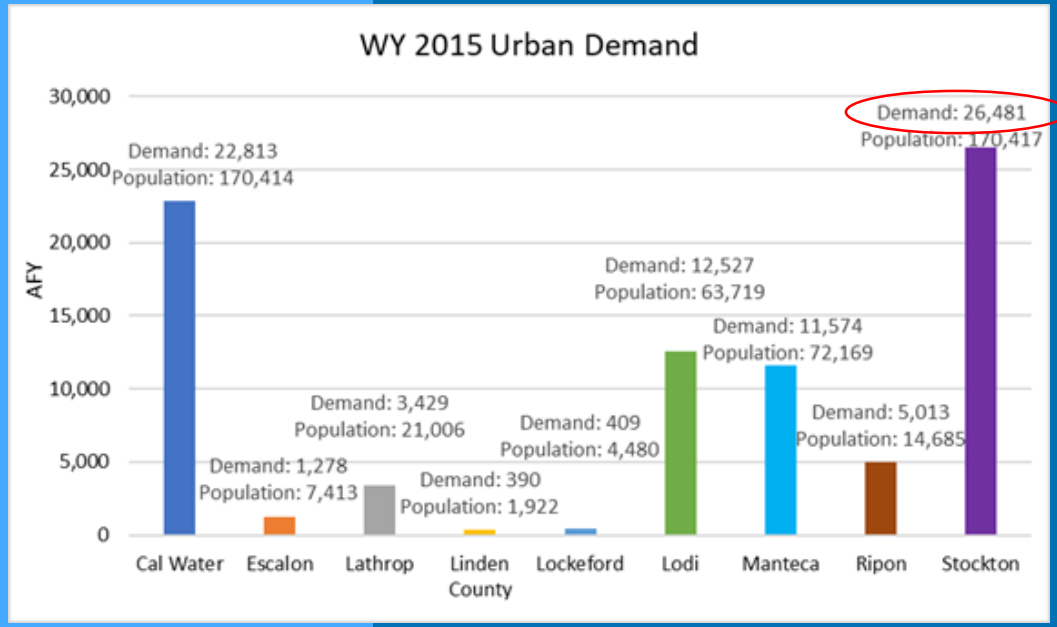

1) This number does not include Cal Water's demand or the portion covered by San Joaquin County GSA

2) In 2015, demand was low due to mandatory drought reductions

Current Conditions Baseline – GPCD Calculations

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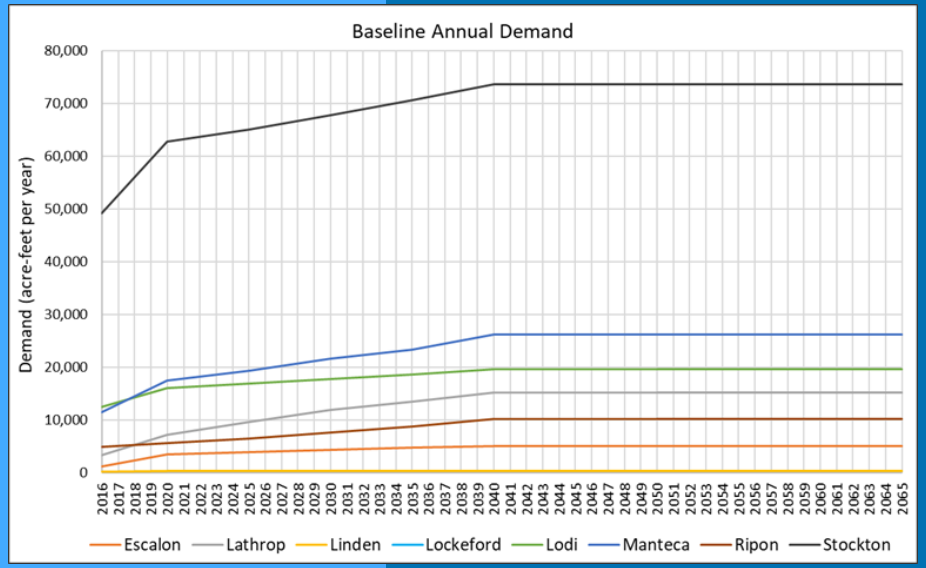
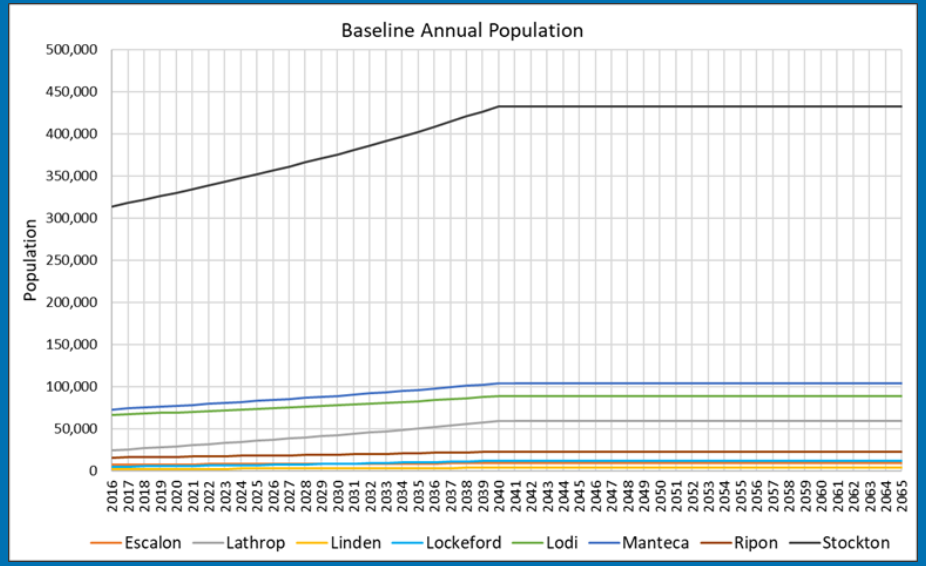
Demand Values Used to Calculate GPCD for Model



Population Values Used to Calculate GPCD for Model



Announcements

Situation Assessment

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- Situation Assessment interviews have wrapped up
- We anticipate Lisa Buetler will present at the next Workgroup meeting, giving an overview of findings and next steps

Eastern San Joaquin Subbasin

Groundwater Sustainability Workgroup

November 13, 2018

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