



**EASTERN SAN JOAQUIN
GROUNDWATER AUTHORITY**

**Advisory Committee Meeting
January 8, 2020**

Agenda



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1. Approval of November Meeting Minutes
2. Recommendation to Support Development of Potential Water Related Sales Tax Measures
3. Data Collection for March Monitoring Event
4. Annual Report Overview
5. DMS Review
6. GSP Project Update Request for February



Recommendation to Support Development of Potential Water Related Sales Tax Measures



Data Collection for March Monitoring Event

Data Collection for March Monitoring Event



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- Groundwater levels and quality will be monitored semi-annually, in March and October, for both the representative and broad networks.
- Data will be used to determine whether minimum thresholds are being exceeded, and to determine if adaptive management is necessary.
- Data will be managed using the Eastern San Joaquin Subbasin Data Management System (DMS)

Monitoring Requirements



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Key components involved in the implementation of the monitoring network activities for the GSP include:

- Semi-annual groundwater level monitoring at 139 wells
- Coordinating between new GSP monitoring program and existing CASGEM program
- Semi-annual groundwater quality monitoring at 43 wells
- Documentation of groundwater quality monitoring protocols

Water Quality Monitoring



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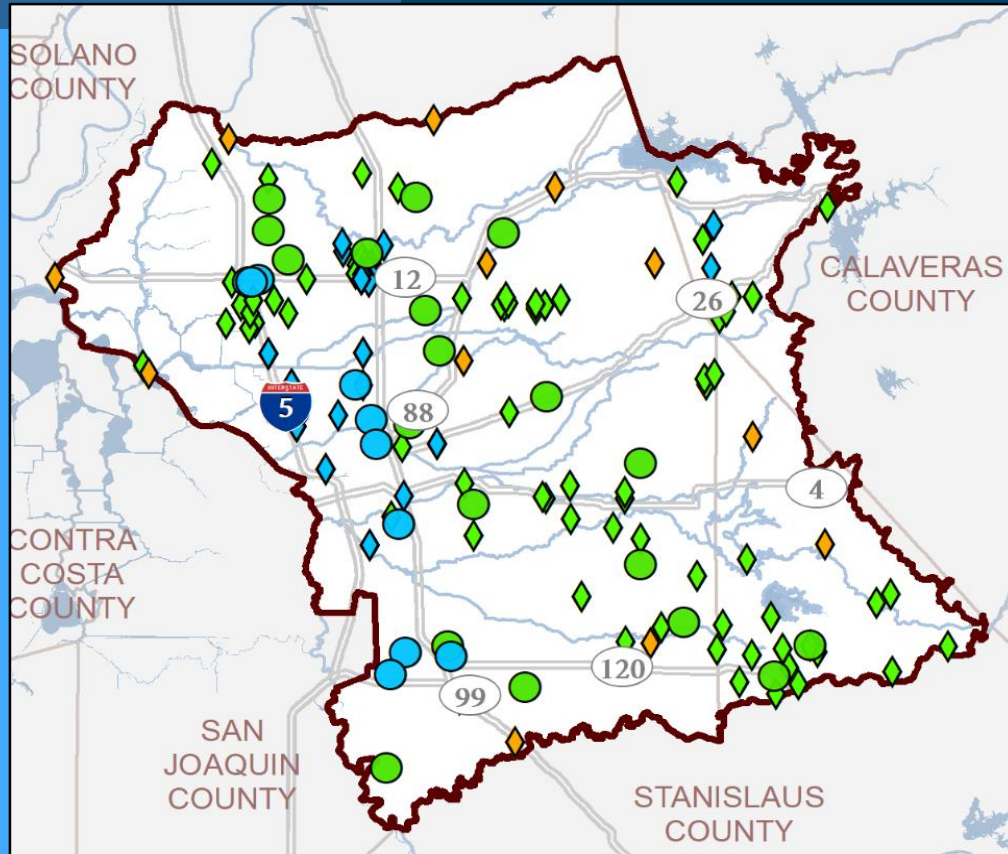
Water quality monitoring will test for:

- Total dissolved solids (TDS)
- Cations and anions (including chloride and nitrate)
- Arsenic
- Field parameters including pH, electrical conductivity (EC), and temperature.

Monitoring Networks



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Monitoring Network Type

○ Representative

◇ Broad

Sustainability Indicator Monitored

■ Water Quality & Water Levels

■ Water Levels

*Proposed new monitoring well locations are shown in orange



Annual Report Overview

Annual Report Overview



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- Annual reports must be submitted by April 1 of each year following GSP adoption
- Covers prior water year
- No mechanism for DWR to waive statutory requirements
- No time to seek legislative change

Annual Report Requirements



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- Groundwater elevation data from the monitoring network
- Hydrographs and contour maps of elevation data
- Change in groundwater storage, including maps
- Groundwater extraction data
- Surface water supply data
- Total water use data

Challenges



The challenging part for the first ESJ GWA annual report for Water Year 2018/19 (WY 18/19) are related to:

- Available data on groundwater conditions
- Quantification of groundwater extraction and changes to groundwater storage. Current model does not include WY 18/19.
- Surface water supply used or available for use, for groundwater recharge or in-lieu use
- Total water use. Requires the “best available measurement methods” (direct or estimate)

Approach



- Use as an opportunity to evaluate cost effective approaches to conducting the required analysis and producing information products
- Leverage existing data and analysis
- Expedite planned analysis
- Cite the GSP and incorporate by reference where possible
- Coordinate with DWR to identify if a proposed strategy will comply with SGMA
- Coalition with other high priority basins



DMS Review

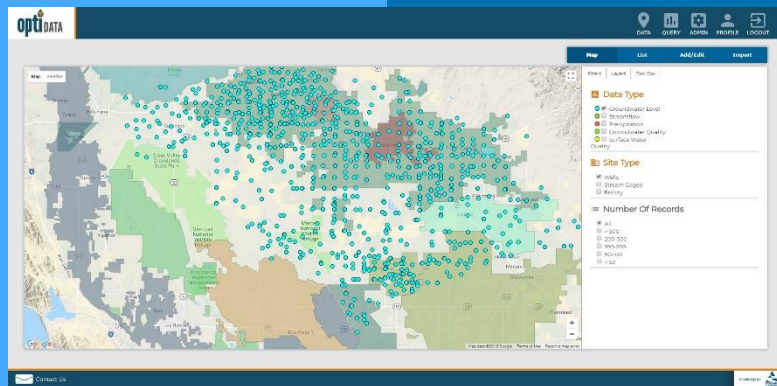
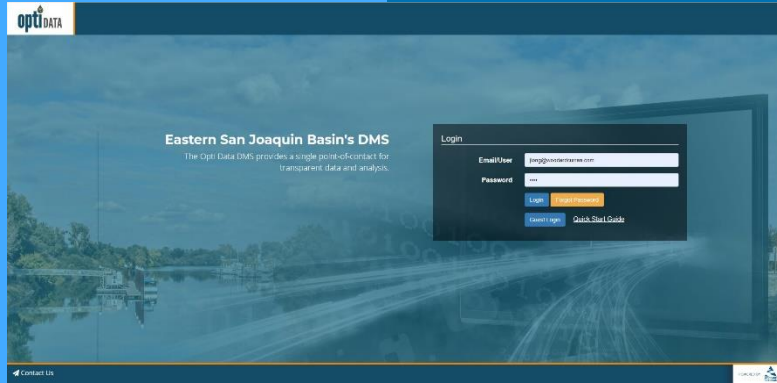
What is the Data Management System (DMS)?



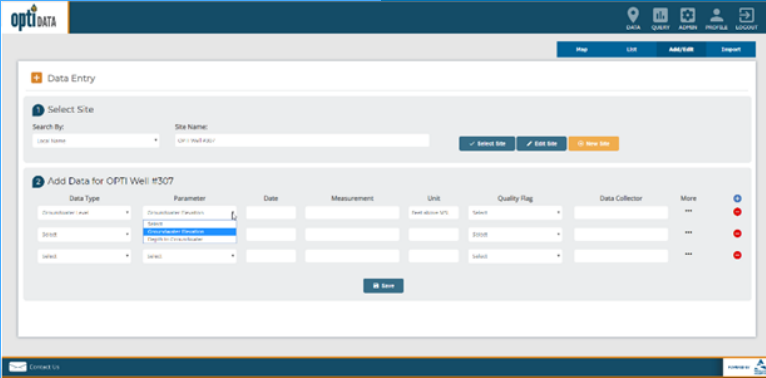
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A Flexible, One-Stop Shop for Managing Groundwater Data

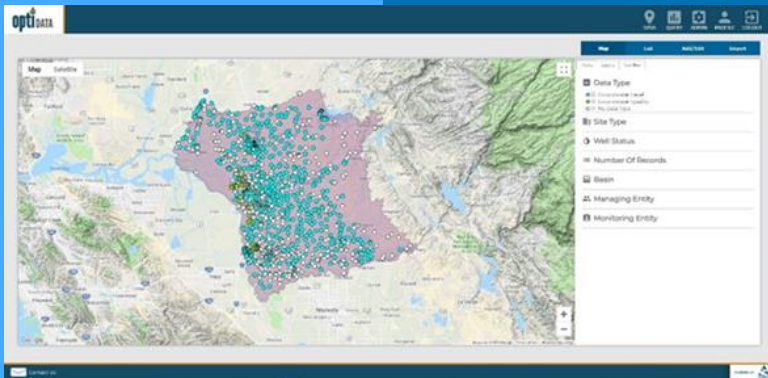
- Allows for transparent and efficient data entry and visualization
- Allows for coordination and sharing of data
- Allows for automated reporting
- Supports sustainable groundwater management monitoring and will give ESJ the ability to track undesirable results



DMS Features



Data Type	Parameter	Date	Measurement	Unit	Quality Flag	Data Collector	More
Groundwater Level	Groundwater Level			Feet above GTS	Select		...
Depth	Groundwater Temperature			Depth	Select		...
Depth	Depth			Depth	Select		...



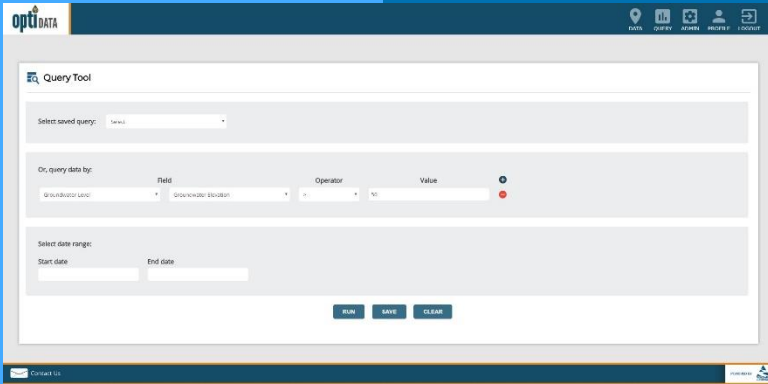
- Web-based, GIS-enabled
- Easy-to-Use
- Flexible Data Structure to Store and Manage Different Datasets
- User and Agency Security/Permissions
- Data Entry and Validation
- Visualization and Analysis
- Query and Reporting
- Framework to Link to other Data Management Systems and Modeling Results
- Viewing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

Data Sources Included in the DMS

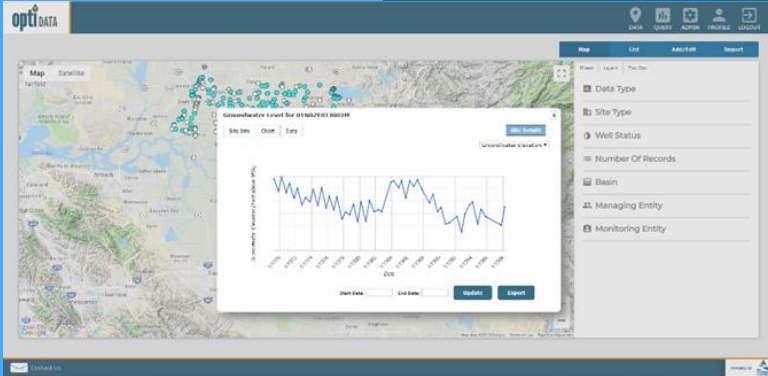


Data Sources Included in the DMS							
Data Source:	CVSALTS	CASGEM	EnviroStor	GeoTracker	GAMA	Local Data	San Joaquin County Flood Control and Water Conservation District
Datasets Collected:	<ul style="list-style-type: none"> Well Location Well Type (Limited) Well Depth (Limited) Groundwater Quality 	<ul style="list-style-type: none"> Groundwater Elevation Well Type (Limited) Well Depth (Limited) Well Location 	<ul style="list-style-type: none"> Groundwater Quality 	<ul style="list-style-type: none"> Groundwater Quality 	<ul style="list-style-type: none"> Well Type Well Depth (Limited) Well Location Groundwater Quality 	<ul style="list-style-type: none"> Groundwater Elevation (Limited) Well Type (Limited) Well Depth Well Location Groundwater Quality 	<ul style="list-style-type: none"> Groundwater Elevation Well Type (Limited) Well Depth (Limited) Well Location

How Will the DMS be Used to Support Data Collection and Annual Reporting



- The DMS will serve as a centralized and integrated repository for multiple data sources managed by participating agencies
- Provides tools for agencies to import and share data at any interval
- Enables visualizing and reporting of data for review and analysis
- Supports generating reports for management and other agencies (DWR, etc.)



Getting Started...



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- The DMS may be found here:
<https://opti.woodardcurran.com/esj/main.php>
- Please be sure to use a common modern browser, such as Chrome, Firefox, or Edge
- User accounts will be created as needed
- Administrators will be provided additional training

Definitions:

Data Access Permissions



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- Private: Only available for viewing, depending on user type, by the entity's associated users in the DMS
- Shared: Available for viewing by all users in the DMS (excludes Public Users)
- Public: Available publicly and can be viewed by all users in the DMS and may be published to other sites or DMSs as needed

Definitions: User Types



- System Administrators
 - Manage all user accounts and entity information
 - Set and modify data access permissions
- Managing Entity Users (Administrator, Power User, User)
 - Manage their entity's site/monitoring data and control data access permissions
- Public Users
 - View data that is published

Demo on How to Update Data in the DMS



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<https://opti.woodardcurran.com/esj/main.php>



GSP Project Update Request for February

GSP Project Update Request for February



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Planned Projects: Projects in this category are planned to be completed and online prior to 2040. The projected supply of projects in this category will be considered as offsetting the projected 2040 supply imbalance

Project Name	Project Proponent
Lake Grube In-lieu Recharge	SEWD
SEWD Surface Water Implementation Expansion	SEWD
City of Manteca Advanced Metering Infrastructure	City of Manteca
City of Lodi Surface Water Facility Expansion & Delivery Pipeline	City of Lodi
White Slough Water Pollution Control Facility Expansion	City of Lodi
CSJWCD Capital Improvement Program	CSJWCD
NSJWCD South System Modernization	NSJWCD
Long-term Water Transfer to SEWD and CSJWCD	NSJWCD

GSP Project Update Request for February



Potential Projects: Projects in this category represent a “menu of options” for the Subbasin to achieve long-term sustainability and offset the remaining imbalance above and beyond implementation of the “planned” projects

Project Name	Project Proponent
BNSF Railway Company Intermodal Facility Recharge Pond	CSJWCD
City of Stockton Advanced Metering Infrastructure	City of Stockton
South System Groundwater Banking with EBMUD	NSJWCD
NSJWCD North System Modernization/ Lakso Recharge	NSJWCD
Manaserro Recharge Project	NSJWCD
Tecklenburg Recharge Project	NSJWCD
City of Escalon Wastewater Reuse	SSJ GSA
City of Ripon Surface Water Supply	SSJ GSA
City of Escalon Connection to Nick DeGroot Treatment Plant	SSJ GSA



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Longer-term or Conceptual Projects: Projects in this category represent potential future projects that could conceptually provide a benefit to the Subbasin in the future, but that would need to be further developed

Project Name	Project Proponent
Farmington Dam Repurpose Project	SEWD
Recycled Water Transfer to Agriculture	City of Manteca
Mobilizing Recharge Opportunities	San Joaquin County
NSJWCD Winery Recycled Water	NSJWCD
Pressurization of SSJID Facilities	SSJ GSA
SSJID Storm Water Reuse	SSJ GSA
Other:	
Mokelumne River Loss Study	NSJWCD