
GWA
EASTERN SAN JOAQUIN
GROUNDWATER AUTHORITY
GWA Advisory Committee
October 10, 2018

Agenda

EASTERN SAN JOAQUIN GROUNDWATER AUTHORITY

- Approval of September Meeting Minutes
- Announcement: Second Informational Meeting
- Projects and Management Actions
  - Project Descriptions
  - Develop Assessment Criteria
- November Agenda Items

Reminder: Projects and Management Actions Workshop 12:30-2:30pm following Board meeting

Second Informational Meeting

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

Manteca Transit Center
220 Moffat Blvd.
Manteca, CA 95336

- Format will be open house style beginning with a brief presentation
- GSAs are strongly encouraged to attend
- Outreach materials (press release, flyer, social media) have been sent to GSAs and posted to website

Projects and Management Actions

Approach

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- Review Approaches to Meeting Projected Demand
- Introduce Project Descriptions
- Identify Selection Criteria
- Discuss Further in Projects and Management Actions Workshop
  - ✓ Discuss potential future projects and management actions
  - ✓ Identify project types and areas of benefit
  - ✓ Identify potential management actions and associated areas of application (Basin-wide or by GSA)

Projects and Management Actions

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Challenge: Reduce groundwater pumping to meet sustainable yield while meeting water demand

1. Define required decrease in groundwater pumping
2. Determine available surface water
3. Identify deficit additional surface water to meet total demand
4. Identify projects and management actions to eliminate shortage by either:
   - increasing available groundwater through recharge projects
   - increasing available surface water

Review – Sustainable Yield

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- Assume ramping from current water use to sustainable yield between 2020-2040
- To maintain sustainability, long-term GW use to be reduced by approximately 12-15% (depending on project implementation)

Next Steps:

- Supply-side sustainability actions: Identify project and management actions to achieve sustainability

Project and Management Actions – Project Descriptions

Overview for Today

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Advisory Committee Goals:

- Review project descriptions
- Determine evaluation criteria for board discussion

Board Meeting Goals:

- Review project descriptions
- Finalize criteria for workshop
- Discuss workshop process

Workshop Goals:

- Assess projects relative to criteria

Projects Summary – Part 1 of 2

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Project #	Project Description	Submitting GSA	Category
1	Farmington Dam Repurpose Project	SEWD	Recharge
2	Lake Groupe 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 Summary – Part 2 of 2

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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	SCJWCD	Recharge
15	CSJWCD Capital Improvement Program	SCJWCD	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

Project Locations

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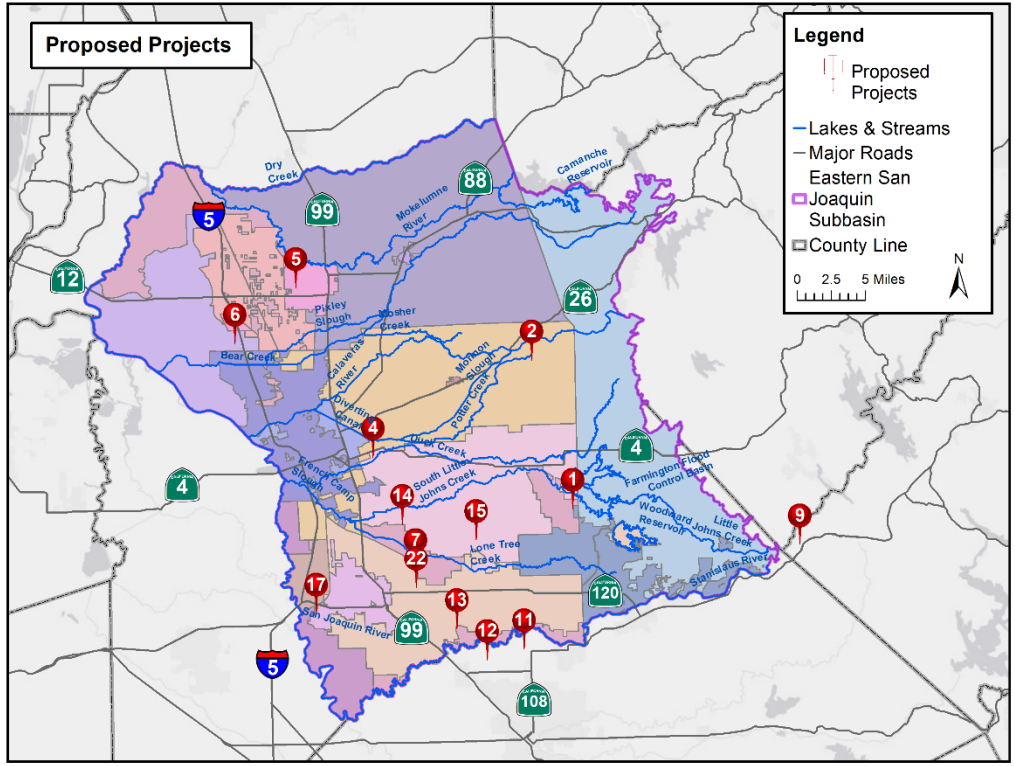

1 – Farmington Dam Repurpose Project
2 – Lake Groupe In-Lieu Recharge
4 – SW Implementation Expansion
5 – SW Facility Expansion & Delivery Pipeline
6 – White Slough WPCF Expansion
7 – Recycled Water Transfer to Agriculture
9 – Water Transfers to SEWD and CSJWCD
11 – City of Escalon Wastewater Reuse
12 – South San Joaquin Stormwater Reuse
13 – Pressurization of SSJID Facilities
14 – BNSC Intermodal Facility Recharge Pond
15 – CSJWCD Capital Improvement Program
17 – LAS-3 Percolation Basin
22 – City of Ripon Surface Water Supply

Project 1: Farmington Dam Repurpose Project

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Submitting GSA: Stockton East Water District
Other Participating Agencies: USACE
Project Size: Increased capacity of 60,000 AF
Project Costs: $175M Capital Cost; $2M Annual O&M Costs
Planning Horizon: Pre-planning stage with completed reconnaissance study

Project Description: This project would convert Farmington Dam, currently a flood control structure, into a water supply reservoir. The existing dam has a flood control capacity of 52,000 AF. The proposed project would increase reservoir capacity to 112,000 AF, which includes 60,000 AF for water supply and 52,000 AF for flood control.

Project 2: Lake Groupe In-Lieu Groundwater Recharge Project

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Submitting GSA: Stockton East Water District
Other Participating Agencies: N/A
Project Size: Size is determined upon user application
Project Costs: $75,000 Capital Costs, $3,000 Annual O&M Costs
Planning Horizon: Can be implemented immediately

Project Description: This project would assist landowners in establishing a surface water diversion turnout on the Calaveras River to supply and distribute SW to farms and growers currently using GW. The District would assist applicants in obtaining permits for river diversion. The applicant would deliver water via pipeline and overland flow, with diverted water flowing through ravines on private lands, recharging the GW basin.

Project 4: Surface Water Implementation Expansion Project

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Submitting GSA: Stockton East Water District
Other Participating Agencies: N/A
Project Size: 18,000-20,000 AF per year
Project Costs: $750,000 Capital Costs; $100,000 Annual O&M Costs
Planning Horizon: 20 years

Project Description: The District would require landowners adjacent to SW conveyance to utilize SW, increasing in-lieu recharge benefits. Currently there are ~6,000 acres irrigated with GW that could be converted to SW and 1,500 acres with inactive SW accounts. The District would lead env. review and assist in establishing a turnout for irrigation and with necessary permitting.

Project 5: Expansion of SW Treatment Facility and Delivery Pipeline

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Submitting GSA: City of Lodi
Other Participating Agencies: WID
Project Size: 4,500-5,000 AF per year GW savings, as high as 6,000 AF
Project Costs: $4M for expansion, cost for delivery pipe unknown; $240,000 Annual O&M Costs
Planning Horizon: 1-2 years from initiation

Project Description: This project would extend the filter room at the Lodi Water Treatment Plant to add 10 MGD capacity of SW treatment. A second sedimentation basin would be constructed and pumps added throughout the facility. This project would extend the 36” transmission pipeline ~5,000 feet to facilitate water deliveries to locations further from the water treatment facility.

Project 6: White Slough WPCF Storage Expansion and Supply Improvements

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Submitting GSA: City of Lodi
Other Participating Agencies: N/A
Project Size: Annual 160-210 million gallons reduced discharge to Dredger Cut
Project Costs: $6M
Planning Horizon: December 2018

Project Description: This project includes the construction of a 70 acre pond expansion with a storage capacity of 388 AF, providing tertiary-treated Title-22 effluent for use as irrigation water on approximately 890 acres of agricultural land surrounding the White Slough water pollution control facility to offset GW pumping.

Project 7: City of Manteca Recycled Water Transfer to Agriculture

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Submitting GSA: City of Manteca
Other Participating Agencies: CSJWCD
Project Size: Larger: 9.87 MGD (up to 5,190 AF per year); Smaller: 3.6 MGD
Project Costs: Larger: $37,645,000 Capital Cost; $679,000 Annual O&M
Smaller: $27,676,000 Capital Cost; $360,000 Annual O&M
Planning Horizon: Timeline unknown

Project Description: The City of Manteca would sell RW to agricultural users in the CSJWCD service area to offset GW pumping. There are two cost scenarios, dependent on the amount of water delivered. Under the first, it is assumed that agricultural users would receive water during the 6-month irrigation season, resulting in a demand of 1,990 AFY under current conditions and 5,190 AFY at buildout.

Project 9: Water Transfers to SEWD and CSJWCD

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Submitting GSA: South San Joaquin GSA
Other Participating Agencies: OID, SEWD, CSJWCD, other GSAs
Project Size: Up 45,000 AF per year
Project Costs: Dependent on market; ~$9,000,000
Planning Horizon: 1.5 years

Project Description: This project would provide long-term transfers from OID/SSJIC to other agencies within the basin to allow for increased average annual SW delivers to the subbasin, reducing GW reliance and overdraft within the subbasin. No new facilities would need to be constructed to convey water to SEWD and CSJWCD.

Project 11: City of Escalon Wastewater Reuse

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Submitting GSA: South San Joaquin GSA
Other Participating Agencies: N/A
Project Size: ~600,000 gallons per day
Project Costs: $18M Capital Costs; $400,000 Annual O&M
Planning Horizon: 2028

Project Description: The City of Escalon has proposed a wastewater reuse project that would include tertiary treatment of the City's effluent and blending in SSJID's irrigation distribution system. This additional source of supply could then be used for GW recharge, or transfer within the basin to offset GW demands using SSJID facilities and/or water right entitlements to facilitate the transfer.

Project 12: South San Joaquin Stormwater Reuse

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Submitting GSA: South San Joaquin GSA
Other Participating Agencies: N/A
Project Size: 1,100 AF per year
Project Costs: $30M Capital Costs; $30,000 Annual O&M
Planning Horizon: Unknown

Project Description: SSJID, and the cities of Ripon and Escalon have proposed stormwater capture for storage and irrigation reuse, or for recharge. Capturing and storing excess stormwater would allow for quantities of water that could be used to offset or enhance GW in multiple ways.

Project 13: Pressurization of SSJID Facilities

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Submitting GSA: South San Joaquin GSA
Other Participating Agencies: N/A
Project Size: 30,000 AF per year reduction in pumping
Project Costs: $328M Capital Costs; $8.5M Annual O&M
Planning Horizon: Phase 1 initiated

Project Description: SSJID currently operates a 3,800 acre pilot pressurized irrigation project within its service area and is considering expanding this type of irrigation service to the rest of its service territory. The project provides irrigation water at pressure to a grower's turnout and has promoted and influenced the adoption of high-efficiency irrigation systems, as well as the use of SW over GW.

Project 14: BNSC Intermodal Facility Recharge Pond

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Submitting GSA: Central San Joaquin Water Conservation District
Other Participating Agencies: N/A
Project Size: Drainage pond is 20 acres
Project Costs: Less than $150,000
Planning Horizon: 2 years

Project Description: CSJWCD would form an agreement with the BNSC railroad owner to access an existing drainage pond located near the CSJWCD delivery channel for use as a recharge area.

Project 15: CSJWCD Capital Improvement Program

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Submitting GSA: Central San Joaquin Water Conservation District
Other Participating Agencies: N/A
Project Size: To be determined on user application (est. ~ 5,000 AF per year)
Project Costs: To be determined on user application (est. ~$50,000 per year)
Planning Horizon: N/A

Project Description: The District would provide assistance to users to move from GW to SW use. Users would apply for water credits based upon new SW acres and would be responsible for constructing the diversion facility. As water is diverted, the District would reduce the water charge until credit is used.

Project 17: LAS-3 Percolation Basin

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Submitting GSA: City of Lathrop
Other Participating Agencies: N/A
Project Size: 330,000 GPD capacity
Project Costs: ~$750,000 Capital Cost; ~$25,000 Annual O&M Costs
Planning Horizon: Construction is complete; RW to be sent in Fall 2018

Project Description: The City of Lathrop has the ability to convert former agricultural land application area (LAS-3) into a percolation basin for land disposal of RW with an estimated capacity of 330,000 GPD. In addition to disposal of RW needed for sewer treatment capacity, this would provide the benefit of GW recharge for the ESJ Subbasin.

Project 22: City of Ripon Surface Water Supply Project

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Submitting GSA: South San Joaquin GSA
Other Participating Agencies: N/A
Project Size: 6,000 AF per year
Project Costs: $8.6M Capital Costs
Planning Horizon: December 2023

Project Description: The purpose of this project is to supplement the City of Ripon's municipal water supply with treated surface water from the South San Joaquin Irrigation District (SSJID) by constructing a 5-mile pipeline from the SSJID existing surface water transmission pipeline to Ripon's water distribution system, along with a booster pump station.

Develop Assessment Criteria

Assessment Criteria

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- Projects will be assessed against a set of criteria (to be identified today)
- Criteria may include
  - Can be implemented within SGMA timeline
  - Size
  - Cost
  - Environmental Benefit/Impact
  - DAC Benefits
  - Others
- Criteria can be assigned different weights or levels of importance

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

Discussion: Defining Selection Criteria

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- What criteria should be included in the assessment process?
  - Can be implemented within SGMA timeline
  - Size
  - Cost
  - Environmental Benefit/Impact
  - DAC Benefits
  - Others
- What criteria are most important and should they be weighted?

Ranking Criteria

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Criteria	Importance (1-3)
Implement in SGMA Timeline	Pass/Fail
Size	3
Cost	2
Environmental Benefit/Impact	3
DAC Benefit	2
Criteria X	?

Assessment Criteria Polling Activity

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- Advisory Committee members will use their smart phones or tablets to provide polling input
- For those without smart phones, alternate devices will be provided
- Code to be provided, which can be accessed by laptop or phone

Assessment Criteria Polling Activity – Survey Code

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- Please follow the instructions on the sheet provided to access the survey
- For those without smart phones, alternate devices will be provided
- **Name field is optional**

November Agenda Items

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EASTERN SAN JOAQUIN GROUNDWATER AUTHORITY

- Projects and Management Actions
- Data Gaps


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