

Final Draft Project & Management Actions

Cosumnes Subbasin Groundwater Sustainability Plan
2022-2042

SWAG, Feb. 26, 2021

Overview

- **Legal Requirements**

- Stop groundwater depletion in our subbasin
- Spread costs of solutions across users
- Adopt plan that State will accept

- **Priorities**

- Minimize fallowing of farmland
- Minimize costs
- Emphasize carrot (voluntary) rather than stick (mandatory)

- **Goal**

- Craft a diverse portfolio of solutions across the Subbasin that will meet the 20,000 AFY target

Suite of Projects

Demand Reduction

- Fallowing
- Conservation - new

Supply Augmentation

- Galt WWTP
- Harvest Water
- OHWD Flow Augmentation
- OHWD Cosumnes River Recharge

- Flood-MAR with SAFCA
- Other (TBD)

Revenue Generation

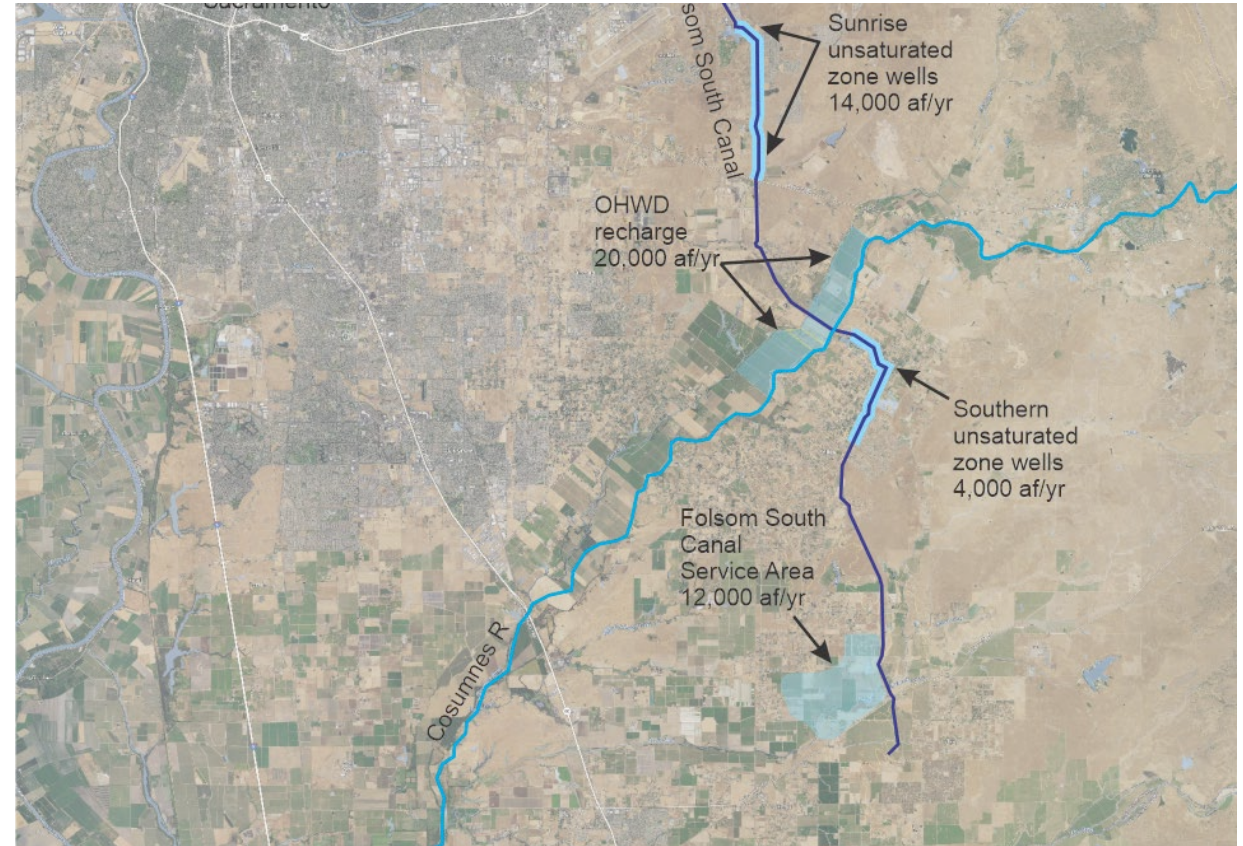
- Groundwater Banking
 - “Renting” out space in our subbasin for a water purveyor for later use

- GW Banking and Selling
 - “Add” water to our bank at low prices (fallowing and/or recharge)
 - “Sell” water at high price to an urban water purveyor for dry year augmentation

This revenue will help lower the overall costs to our constituents.

SAFCA Flood-MAR Program

- Create more reservoir storage space for flood control upstream of Folsom.
- Hold excess winter flood water in Folsom Reservoir (Bureau of Reclamation water): ~125,000 AF in 4 out of 10 years
- Divert stored water down FSC for storage in So American and Cosumnes Basins
- Reserve 25-35% of stored water for use by Bureau of Reclamation
- 65-75% (TBD) of stored water available for GW deficit reduction and American/Cosumnes Rivers flow augmentation



Managed aquifer recharge locations

Combined Portfolio of Solutions: Startup Years (2022-2024)

PMA	Activity
Following/Conservation	Secure agreements with landowners
Galt WWTP	Develop project
GW Banking	Develop a relationship with water purveyor
SAFCA Flood-MAR	Pursue partnership with SAFCA, secure recharge agreements with landowners, construct infrastructure to serve recharge land
Other PMAs	To be developed
S. Am. Subbasin Projects	Develop monitoring protocols and facilities to assess Cosumnes benefits
Grant funding	Secure funds for metering, monitoring, and recharge infrastructure

Combined Portfolio of Solutions: Early Years (2024-2027)

PMA	Activity
Fallow/Conservation	Fallow-2000 AFY; Conservation-1700 AFY (assume 8000 acres opt-in, 8% conservation rate).
Galt WWTP	Continue developing project
GW Banking	Enter into GW banking agreement with urban water purveyor to store water for dry year augmentation, use revenue to pay for infrastructure for extraction, other PMAs, and reserve
SAFCA Flood-MAR	Develop agreements with Flood MAR partners, secure state and federal funding, construct infrastructure
Other PMAs	Begin implementation of feasible projects
S. Am. Subbasin Projects	Quantify groundwater benefit to Cosumnes basin

Combined Portfolio of Solutions: Later Years (2027-2042)

PMA	Activity
Fallowing/Conservation	Fallow 5000 AFY; conservation 1700 AFY
Galt WWTP	Implement project
GW Banking + Sale	Amend agreement with water purveyor to sell fallowed water for dry year augmentation, use revenue to pay for other PMAs and build up reserve
SAFCA Flood-MAR	Receive winter water from American River for GW recharge, use revenue from GW sale to cover program operation and maintenance costs
Other PMAs	Implement other PMAs as feasible
S. Am. Subbasin Projects	Continue monitoring groundwater impacts on Cosumnes basin

Proposed Plan Early
Years: Annual Water
budget, Costs &
Funding Sources
2024-2027

PMA	Annual volume	Cost	Revenue
Fallowing	2,000	\$300,000	
Conservation	1,700	\$80,000	
SAFCA Flood-MAR: Payment to farmers for recharge		\$400,000	
GW Banking infrastructure		\$1,000,000	
Harvest Water	2,000	\$50,000	
OHWD Cos Riv Flow Augmentation	600	\$100,000	
OHWD Cosumnes River Recharge	250	\$50,000	
Administration		\$500,000	
Reserve / Other		\$50,000	
Total	5950	\$2.25M	
Fees (parcel and pumpage)			\$850,000
GW Banking			\$1.4M
Total	5950		\$2.25 M

Estimated pumpage fee:
\$10.00 acre

Proposed Plan Later
Years: Annual Water
budget, Costs &
Funding Sources
2027-42

Estimated pumpage fee
increases to \$20.00/acre

PMA	Annual vol (AF)	Cost	Revenue
Fallowing Conservation	5000 1700	\$750,000	
Galt WWTP	1,400	\$50,000	
SAFCA Flood-MAR: (including payment to farmers for recharge)	12,000	\$1,980,000	
GW Banking		\$600,000	
Harvest Water	2,000	\$50,000	
OHWD Cos Riv Flow Augmentation	600	\$100,000	
OHWD American River Recharge	4,000	\$660,000	
Administration		\$500,000	
Reserve / Other PMAs	2000	\$460,000	
Total	28,700	\$5.1M	
Sale of water	-6,000		\$3.9M
Fees (parcel and pumpage)			\$1.2M
Total	22,700		\$5.1M



Exploring Opportunities for Recharge

- Recharge on conservation lands
 - TNC
 - SVC
- Recharge on private lands
 - Cosumnes River near FSC
 - OHWD, CC, SAFCA
 - Combined MAR & dry well pilot project

Final Thoughts

- PMAs will evolve and be managed adaptively. Many options.
 - Increase fallowing
 - Increase conservation (mandatory or voluntary)
 - Acquire winter water from other sources
 - Injection and recovery
- WG has not had the opportunity to review the letter from ECOS.
 - Recognize the importance of partnerships and multi-benefit projects
- Interested in maintaining dialogue regarding PMA options in years to come.