Cosumnes Groundwater Authority

Project and Management Actions Committee Meeting

Agenda

When: **Wednesday, May 25th 2022**
3:00p.m. – 5:00p.m.

Where: Galt Police Department Community Room and Via Zoom
455 Industrial Drive
Galt, CA 95632

Virtual Meeting via Zoom

Via Zoom: https://us02web.zoom.us/j/86330221924
Meeting ID: 863 3022 1924
Call in Number: +1 669 900 9128

ACCESSIBILITY - If you have a disability and require a reasonable accommodation to fully participate in this event, please contact Austin Miller (CGA Secretary) before May 24th, 2022 via email [info@CosumnesGroundwater.org] or telephone [916-526-5447] to discuss your accessibility needs.

1. CGA Board Meeting Update
2. Project Priority List Review and Discussion
3. Request for Proposal – Project Scoping
    i. Identify Needs and Questions
    ii. Evaluation Methods
4. Future Meeting Times
5. Action Items for Next Meeting

Adjourn Meeting

Project Priority List

May 2022

DRAFT

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Introduction to Projects and Management Actions in the Cosumnes Subbasin

Achieving and maintaining sustainability will require phased implementation of Projects and Management Actions (PMAs), which will address groundwater storage conditions that could lead to Undesirable Results. During the development of the Cosumnes Subbasin Groundwater Sustainability Plan (Cosumnes GSP), the Groundwater Sustainability Agencies (GSAs) in the Subbasin identified 6 PMAs (PMAs #1-6) for potential implementation within the Subbasin. Supplementary PMAs are also under consideration but were not included/modelled in detail in the Final Cosumnes GSP. This document will assign PMA numbers to those supplementary PMAs with significant detail (PMAs #7-8) and include a list of other PMAs still in need of additional scoping.

The purpose of the Cosumnes Subbasin Priority Projects List is to summarize the information presented in the GSP and augment this information as appropriate based on developments since the adoption of the GSP with the aim of providing direction to the Cosumnes Groundwater Authority (CGA) Board and Staff, informing development of grant applications, informing CGA budgets, and providing coordination of activities amongst Cosumnes Subbasin GSAs and other partners.

The Cosumnes Subbasin Priority Project List was initially developed by CGA Staff, further developed and recommended for adoption by the CGA Projects Committee, and finally adopted by the CGA Board of Directors on <Month> <Date>, 2022.

Within this document, the following information relating to each PMA is identified:

- **Lead Organization:** This is the organization that is managing the PMA. This may be CGA, a GSA, or another type of organization. If CGA is not the lead organization, this section will explain CGA's role in the PMA.
- **Project Description:** An overview of the PMA.
- **Expected Benefits:** The expected benefits of the PMA related to the Cosumnes Subbasin GSP.
- **Project Status:** An explanation of the PMA's current status.
- **Next Steps:** Specific activities will be identified to inform the Board and all partners of what is needed to advance CGA's efforts on the PMA.
- **Estimated Costs:** Estimated costs of identified activities. If CGA is not the lead organization, this section will articulate total project costs and CGA specific costs.
- **Suggested Funding Sources:** Potential funding sources for the identified activities will be considered. These should be considered as suggestions, not final funding priority decisions of the CGA Board.

Cosumnes Subbasin Groundwater Sustainability Plan PMAs

As part of developing the Cosumnes GSP, the GSAs in the Subbasin identified 6 PMAs (PMAs #1-6) for potential implementation within the Subbasin. These PMAs focus principally on augmenting groundwater storage in the Subbasin by securing potentially available surface water from within and outside the Subbasin. This water would be used to recharge groundwater supplies through a variety of infiltration strategies including winter field spreading, installation of passive injection wells, and small-scale infiltration projects scattered throughout the Subbasin. The PMA's also include a focus on demand reduction to be achieved through a combination of land repurposing and water conservation measures. Recognizing the uncertainties and lead times associated with the water supply augmentation PMAs, the GSP calls for a phased implementation approach involving an early phase (Phase 1 occurring from 2022 to 2028) during which the demand reduction PMAs would take center stage while the groundwork is laid for supply augmentation; and a later phase (Phase 2 occurring from 2028 to 2042) during which the supply augmentation PMAs would come fully on line. This phased approach is reflected in the PMA descriptions below.

PMA #1 Omochumne-Hartnell Water District (OHWD) Agricultural Flood Managed Aquifer Recharge (Flood-MAR)

Lead Organization: Omochumne-Hartnell Water District

Project Description:
As part of the OHWD Agricultural Flood-MAR project, winter diversions will be applied on up to 1,800 acres of dormant vineyards, orchards, and other farmlands for recharge to increase groundwater levels and groundwater storage. Although the targeted farmlands are located directly north of the Cosumnes River (in the South American Subbasin, as shown on GSP Figure PMA-1, the resulting storage changes are expected to increase groundwater levels in the Cosumnes Subbasin and provide an almost 100 AFY augmentation to groundwater storage. During Phase 2 of project implementation (anticipated to start in 2028), additional winter flood water from the American River will be delivered to the OHWD recharge area from Folsom Reservoir by way of the Folsom South Canal (FSC) to supplement the recharge from diversions under Phase 1 an increase the expected augmentation to groundwater storage to 700 AFY.

<CGA's role in this PMA.>

Expected Benefits:

Aquifer Storage Augmentation	
Phase 1 (2022-2028)	100 AFY
Phase 2 (2028-)	700 AFY

Project Status:
As of February 2022, a temporary diversion permit has been approved, but water levels are too low to divert water onto fields. An application for a 5-year diversion permit is currently being prepared.

Next Steps:
Phase 1 (2022-2028)

- Apply for extended diversion permit
- Identify parcels for project expansion by conducting outreach to landowners along the Cosumnes River
- Participate in the Water Forum 2.0 to discuss sending American River system water in the FSC service area/transportation to the project area.

Phase 2 (2028-)

- Secure excess American River water; secure ability to utilize FSC for conveyance
- SAFCA reservoir operation changes

Estimated Cost:

Activity	Total Project Budget	CGA Project Expenses
Diversion Permit		
Infrastructure		

Suggested Funding Sources:

- South American Subbasin contribution
- CDFW Streamflow Stream Flow Enhancement Program
- DWR Round 2 IRWM Implementation Grant

PMA #2 Sacramento Area Flood Control Agency Flood-MAR

Lead Organization: Sacramento Area Flood Control Agency
Omochumne-Hartnell Water District
Cosumnes Groundwater Authority

Project Description:
The Sacramento Area Flood Control Agency (SAFCA) Flood-Managed Aquifer Recharge (MAR) project includes augmenting Subbasin storage with excess flood water from the American River. The project involves changes in the current operation of Folsom Dam that allow dam operators to hold more water during the winter flood season and release this water down the Folsom South Canal (FSC) for storage in the South American and Cosumnes Subbasins. Recharge will be accomplished through a combination of spreading winter water on farm fields (Flood-MAR) and infiltrating the water into the ground through a network of passive injection wells installed in the corridor along the FSC. The project will require substantial collaboration among federal, state, and local agencies.

Expected Benefits:

Aquifer Storage Augmentation	
Spreading – Phase 1 (2022-2028)	
Dry Wells – Phase 1 (2022-2028)	
Spreading – Phase 2 (2028-)	9,000 AFY
Injection – Phase 2 (2028-)	6,000 AFY

Project Status:
The first pilot project, Laguna Del Sol, will begin flooding a 2-acre field and infiltrating water into one injection well. Water will be delivered to the field and dry well via existing irrigation and domestic wells, thus, it is not limited to winter months. Larry Walker Associates has been contracted by OHWD to perform monitoring for the project. Dry well installation will occur of Summer 2022.

Next Steps:
Phase 1 (2022-2028)

- Laguna Del Sol: 2022 -pilot project; 2023-2025 - expansion of project, limited to LDS property; 2025-2027 – expansion to other properties; 2028-2042 – full project implementation
- Injection well installation, connecting wells, installing monitoring equipment, project monitoring
- Conduct pilot studies to assess the feasibility of aquifer recharge in various locations throughout the Subbasin
- Conduct outreach to landowners to assess interest in participating in a recharge program
- Secure agreements for water deliveries to participating farm fields.

Phase 2 (2028-)

- Secure excess American River water
- Secure ability to utilize FSC for conveyance
- SAFCA reservoir operation changes

Estimated Cost:

Activity	Total Project Budget	CGA Project Expenses
Laguna Del Sol Pilot Project	$100,000	

Suggested Funding Sources:

- DWR Round 2 IRWM Implementation Grant

PMA #3 OHWD Cosumnes River Flow Augmentation

Lead Organization: Omochumne-Hartnell Water District

Project Description:
The OHWD Cosumnes River Flow Augmentation PMA releases water from the FSC into the Cosumnes River during late-October through December when the Cosumnes River typically does not flow continuously between reaches. The discontinuity in surface flows impedes fish migration and spawning. The introduction of additional instream flows will support fish requirements and provide additional flows to increase leakage from the river that will recharge the Basin. A pilot project was completed in 2005, and full implementation is contingent on securing a water source and funding

Expected Benefits:

Interconnected Surface Waters	
Phase 1 (2022-2028)	17 cfs streamflow
Phase 2 (2028-)	17 cfs streamflow
Aquifer Storage Augmentation	
Phase 1 (2022-2028)	100 AFY
Phase 2 (2028-)	100 AFY

Project Status:

Next Steps:
Phase 1 (2022-2028)

- Secure an agreement with the United States Bureau of Reclamation (USBR) for Central Valley Project (CVP) water (or other source) for release into the Cosumnes River from the FSC.

Phase 2 (2028-)

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Estimated Cost:

Activity	Total Project Budget	CGA Project Expenses

Suggested Funding Sources:

- CDFW Streamflow Stream Flow Enhancement Program
- DWR Round 2 IRWM Implementation Grant
- South American Subbasin contribution

PMA #4 City of Galt Recycled Water Project

Lead Organization: City of Galt

Project Description:
The City of Galt currently provides secondary treated wastewater (recycled water) to more than 160 acres of nearby farmland for summer irrigation. This PMA will expand the program to apply more of the existing recycled water supply (secondary or tertiary treated as determined) to 640 acres of Basin farmland year-round.

Expected Benefits:

Aquifer Storage Augmentation	
Phase 1 (2022-2028)	
Phase 2 (2028-)	300 AFY

Project Status:

Next Steps:
Phase 1 (2022-2028)

- Agreements will be secured with landowners to expand the area of fields that will receive recycled water and the discharge permit from the National Pollutant Discharge Elimination System (NPDES) will be modified to include year-round irrigation.

Phase 2 (2028-)

- Application area will be expanded, and treated wastewater will be applied year-round

Estimated Cost:

Activity	Total Project Budget	CGA Project Expenses

Suggested Funding Sources:

PMA #5 Voluntary Land Repurposing

Lead Organization: Cosumnes Groundwater Authority

Project Description:
Land repurposing involves changing the land use practice to another practice that uses less groundwater. Regardless of the method, verification of reduced water use needs to be documented. Repurposing could occur on a permanent basis or on a rotating basis. During Phase 1 of the GSP implementation, it is estimated that 750 – 1000 acres could be repurposed (approximate savings of 2,700 AFY). In initial estimates, farmers would be compensated depending on the land repurposing measure that is implemented. Program details, including compensation rates, still need to be developed.

Expected Benefits:

Aquifer Storage Capacity	
Phase 1 (2022-2028)	2,700 AFY
Phase 2 (2028-)	6,000 AFY

Project Status:

Next Steps:
Phase 1 (2022-2028)

- Develop a pilot program to conserve 2,700 - 3500 AFY.
    - Identify farms with high water use within the Subbasin and develop an outreach program to assess farmers' interest.
        - Aerial imagery analysis.
        - Public workshop, survey, etc.
    - Determine acceptable land repurposing methods and compensation.
        - Technical analysis.
        - Model Inputs
    - Develop legal, administrative, and accounting infrastructure for the program.
        - Program costs
- Implement pilot land repurposing program.

Estimated Cost:

Activity	Total Project Budget	CGA Project Expenses

Suggested Funding Sources:

- California Department of Conservation Multi-Benefit Land Repurposing Program
- Local assessments

PMA #6 Groundwater Banking and Sale

Lead Organization: Cosumnes Groundwater Authority

Project Description:
This management action involves CGA's participation in a regional water bank. The Regional Water Authority (RWA) has formed a regional consortium of local organizations to create a regional groundwater bank. As part of CGA's recharge and fallowing/conservation programs, there is a need to develop a system for tracking the addition or withdrawal of groundwater. The recharge account would be created, in partnership with the Sacramento Area Flood Control Agency (SAFCA), through deposits of winter water imported from the American River. The fallowing/conservation account would be created through voluntary participation of interested Cosumnes Basin landowners. These accounts would be managed to permit withdrawals for export and sale under policies developed by CGA that ensure that at no point will the volume of the water withdrawn and sold exceed 30 percent of the volume of the water deposited, consistent with the estimates contained in the Cosumnes GSP. In addition to SAFCA and CGA, organizations engaging in the process are expected to include SMUD, the City of Sacramento, the County of Sacramento, the Sacramento Central Groundwater Authority, Friends of the River, the Sierra Club, and the Environmental Council of Sacramento (ECOS).

In conjunction with this process, SAFCA intends separately to engage in a series of discussion with urban water purveyors regarding their interest in participating in a regional water banking program, including the Cosumnes. Based on the interest generated by these discussions and the progress of the regional engagement process described above, CGA would join the discussions, establish a framework for the export of banked water, and flesh out the details of the Groundwater Banking Program. This work would be conducted by CGA members and/or staff on an in-kind basis with any costs for technical support likely being shared by SAFCA.

It will likely take several years (2022-28) to create the institutional arrangements necessary to implement the Groundwater Banking Program. The estimated timing of developing these arrangements is dependent on many factors,

Expected Benefits:

Project Status:

Next Steps:
Phase 1 (2022-2028)

- 2022-26: Groundwater banking is dependent on the results of feasibility studies to assess the potential for infiltration at various locations and with various methods. Once those studies have been completed, we can proceed with implementing a bank. While these studies are being conducted, SAFCA will seek grant funding to support engagement with other local interests (Regional Water Authority, Water Forum, etc.) to identify challenges and potential outcomes of a coordinated approach to water management for the Sacramento region that would among other things accommodate the Cosumnes Groundwater Banking Program. Using the existing Sacramento Water Forum negotiation structure, SAFCA will work with representatives of local

flood and water management organizations and environmental groups and seek a consensus approach that can maximize multiple objectives.

- Coordinate with water purveyor(s) and water rights holders
  SAFCA
  Water Forum
  RWA

Estimated Cost:

Activity	Total Project Budget	CGA Project Expenses

Potential Funding Sources

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Other PMAs

Supplementary PMAs are also under consideration but were not included/modelled in detail in the Final Cosumnes GSP. This document will assign PMA numbers to those supplementary PMAs with significant detail (PMAs #7-8) and include a list of other PMAs still in need of additional scoping.

PMA #7 – Conservation (Agriculture)

Lead Organization: Cosumnes Groundwater Authority
Sloughhouse Resource Conservation District

Project Description:

- Provide technical and financial incentives that support landowners interested in implementing local water use efficiency/conservation projects;

Expected Benefits:

Aquifer Storage Augmentation	
Phase 1 (2022-2028)	
Phase 2 (2028-)	

Project Status:

Next Steps:

Phase 1 (2022-2028)

- Working with a consultant, implement the following:
  - Gather ideas and interest among farmers, especially pasturelanders, in conservation efforts
  - Identify specific conservation practices relevant to farmers in the basin (specific practices/actions to improve irrigation efficiency, repurposing a portion of land with solar, etc.)
  - Assess feasibility of compensation to farmers for implementing conservation practices
  - Prepare grant(s) to fund results of the above assessment.

Phase 2 (2028-)

- Expand the efforts initiated in Phase I_

Estimated Cost:

Activity	Total Project Budget	CGA Project Expenses

Suggested Funding Sources:

- Local assessments
- NRCS
- DWR
- CDFA
- BoR

- DoC

PMA #8 – Nature Based and Managed Aquifer Recharge

Lead Organization: Cosumnes Groundwater Authority
Omochumne-Hartnell Water District

Project Description:

- Evaluate the efficacy of small scale recharge projects such as catch ponds, dry wells, seepage pits, and other water substitution practices. For example, a distributed network of dry wells throughout the Basin could help manage stormwater and increase groundwater recharge om private lands;
- Explore recharge projects that utilize potentially available surface water from Amador County and existing infrastructure;
- Explore multi-benefit opportunities for diversions to interior Basin drainages to increase recharge from leakage and reconnect their lower reaches in the floodplains;
- Explore opportunity for multi-benefit project along Laguna Creek that would involve assessment of channel capacity, stabilization of bank, reconnection of creek with floodplain to improve recharge capacity and wildlife habitat

Expected Benefits:

Aquifer Storage Augmentation	
Phase 1 (2022-2028)	
Phase 2 (2028-)	

Project Status:

Next Steps:

Phase 1 (2022-2028)

- Working with the Citizen's Advisory Committee gather ideas for distributive projects. Survey community interest in participating in suggested efforts
- Work with consultants to assess the potential benefit of distributive recharge projects as well as costs and financing options
- Incorporate proposed projects into DWR and other grants.

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Phase 2 (2028-)

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Estimated Cost:

Activity	Total Project Budget	CGA Project Expenses

Suggested Funding Sources:

List of Other PMAs

Other potential PMAs that may contribute to sustainable groundwater conditions which may be considered by the GSAs and partners include:

- Explore multi-benefit opportunities for off stream impoundments to store floodwater, including potential stormwater diversions from the Cosumnes River to augment storage/recharge on the south side of the river;
- Coordinate with Agency and Nongovernmental Organization (NGO) partners working with willing landowners near the Cosumnes River to develop multi-benefit projects that offer recharge and agricultural and/or habitat preservation benefits;
- Implement Low Impact Development practices in the City of Galt (including the use of dry wells to redirect stormwater runoff for recharge);
- Implement the Drought Resilience Impact Platform for verifying Basin pumping, conservation efforts and land repurposing effectiveness;
- Participate in regional water supply and water banking projects, such as the Harvest Water Project;
- Review implementation of the Deer Creek Hills Aquifer Storage and Recovery (ASR) project, initially proposed in 1997 as part of the water supply for the proposed Deer Creek Hills development, which utilizes high flows from the Cosumnes for ASR immediately north of the community of Rancho Murieta. Based on the initial application to appropriate water by permit with the SWRCB, 4,800 AFY of excess high flows (10 cfs max diversion rate) from the Cosumnes River (between November and June) would be diverted from the existing Rancho Murieta Community Service District Pump Station near Granlees Dam. The diversions are then injected into nearby private wells (consolidated aquifer) for storage and recovery at a later time; and,
- Construct a new well for Arcohe School and develop a groundwater recharge program for the students.

PHASE I PRIORITY PROJECTS (2022 – 2028)

The following section of this document focuses on priority projects, those that we seek to implement in the next 5-6 years. The GSP identifies those projects in Chapter 18 and 19 as Early Phase projects that occur during the period in which the CGA will seek to establish new 5-year assessment, build the capacity of CGA and trust within the community. The goal of these early phase projects is to meet the reduction in groundwater use identified in the GSP – between 3000 – 4500 AFY. However, the suggested approach includes modifications to the original set of PMAs identified in GSP by including two types of projects that were referenced, but not developed to any significant extent in the plan. First, this list adds a focus on conservation. In the GSP, demand reduction efforts emphasized fallowing as a means to address the groundwater deficit. Multiple members of the community have suggested that more emphasis should be placed on conservation. Consequently, the proposed projects lists adds a significant component addressing ways to improve water use efficiency/conservation. Second, it has also been proposed that small projects on private land be explored and implemented where feasible. The following list summaries the early phase priority projects:

To be continued…..