

CGA/GGA Joint Technical Advisory Committee
Meeting Packet

September 9, 2022



CGA/GGA Joint Technical Advisory Committee

Meeting Agenda

September 9, 2022 | 1:00 p.m.

Sites Project Authority Office, 122 Old Highway 99 W, Maxwell, CA 95955

Alternate Meeting Location: 4485 Spring Meadows Circle, Flagstaff, AZ 86004

Public input is welcome in person or via Microsoft Teams

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* Indicates an Action Item

1. Call to Order, Roll Call, and Introductions

2. Approval of Minutes (CGA TAC, GGA TAC)

a. *August 12, 2022 CGA/GGA Joint TAC Meeting Minutes

3. Period of Public Comment

At this time, members of the public may address the Technical Advisory Committee (TAC) Members regarding items that are not on the agenda but are of relevance. The TACs may not act on items not on the agenda.

4. Presentation: Orland-Artois Water District Annexation Project

5. Discussion of 2022/2023 Grant Application/Project Prioritization

a. *Recommendation to GSAs on projects to include in the 2022/2023 Sustainable Groundwater Management Round 2 grant application.

6. Drought Update

7. Member Reports and Comments

8. Next meeting: October 14, 2022 at 1:00 p.m.

9. Adjourn

A complete agenda packet, including back-up information, is available for inspection during normal business hours at 1213 Market Street, Colusa, CA 95932 or 225 N. Tehama St., Willows, CA 95988. The full agenda packet can also be found on the CGA and GGA websites: [Agendas and Minutes 2022 | Colusa Groundwater Authority \(CGA\)](#)
<https://www.countyofglenn.net/dept/planning-community-development-services/water-resources/glenn-groundwater-authority/gga>

In compliance with the Americans with Disability Act, if you require special accommodation to participate in this meeting, please contact the Colusa County Water Resources Division at 530-458-0891 or Glenn County Water Resources Division at 530-934-6540 prior to any meeting and arrangements will be made to accommodate you.

Staff Report

To: CGA-GGA Joint TAC

Agenda Item: 2. Approval of Minutes

Date: September 9, 2022

Background

The August 12, 2022 CGA/GGA Joint TAC Meeting minutes have been prepared for review.

Recommendation

CGA and GGA Action: Approve the August 12, 2022 CGA/GGA Joint TAC Meeting minutes.

Attachments

- August 12, 2022 CGA/GGA Joint TAC Meeting minutes

CGA/GGA Joint Technical Advisory Committee Meeting

MEETING MINUTES

August 12, 2022 | 1:00 p.m.

In Person Meeting Locations:

Sites Project Authority Office, 122 Old Highway 99 W, Maxwell, CA 95955

4485 Spring Meadows Circle, Flagstaff, AZ 86004

Public input was also welcomed in person or remotely via Microsoft Teams.

1. Call to Order, Roll Call, and Introductions

Lisa Hunter called the meeting to order at 1:05 p.m.

In Attendance:

Committee Members:

GGA: Zac Dickens, Mark Lohse, Emil Cavagnolo and Don Bills.

CGA: Denise Carter, Deke Dormer, Darrin Williams, Ben King, and Jim Wallace. Brandon Davison (DWR, ex-officio) attended remotely as a member of the public. Ms. Carter was absent upon roll call but arrived at 2:27 p.m.

Others in Attendance: Lisa Hunter (GGA Staff), Carol Thomas-Keefer (CGA Staff), Grant Davids (Davids Engineering, Inc.), Katie Klug (Davids Engineering), Anna Reimer (West Yost), Hawkeye Sheene (West Yost), Arne Gustafson, Shelly Murphy, Holly Dawley (GCID), Patricia Vellines (DWR), Jenny Scheer, Kamie Loeser, and Ryan Fulton.

2. Approval of Minutes (CGA TAC, GGA TAC)

- a. ***July 8, 2022 CGA/GGA Joint TAC Meeting**
- b. ***March 11, 2022 CGA/GGA Joint TAC Meeting**
- c. ***May 13, 2022 CGA/GGA Joint TAC Meeting**

On motion made by Mr. King, seconded by Mr. Wallace, and unanimously carried, CGA TAC approved the minutes of the July 8, 2022 CGA/GGA Joint TAC Meeting.

On motion made by Mr. Bills, seconded by Mr. Cavagnolo, and unanimously carried, GGA TAC approved the minutes of the July 8, 2022 CGA/GGA Joint TAC Meeting.

On motion made by Mr. Cavagnolo, seconded by Mr. Dickens, and unanimously carried, GGA TAC approved the minutes of the March 11, 2022 and May 13, 2022 CGA/GGA Joint TAC Meetings. It was

noted the CGA TAC approved the March 11, 2022 and May 13, 2022 CGA/GGA Joint TAC minutes at the July 8, 2022 meeting.

3. Period of Public Comment

No public comment was heard.

4. Joint TAC Meeting Schedule for Remainder of 2022

Ms. Hunter reviewed the staff report recommending the Joint TAC schedule monthly meetings through October to meet the DWR grant submittal schedule this fall, with a meeting also scheduled for December. Due to holidays, no meeting was proposed for November. Ms. Hunter also noted that the CGA TAC approved the schedule at the July 8 meeting.

On motion made by Mr. Dickens, seconded by Mr. Lohse, and unanimously carried, the GGA TAC approved the proposed Joint TAC meeting schedule for the remainder of 2022.

5. Discussion of 2022/2023 Grant Application/Project Prioritization

Grant Davids introduced a presentation to review the 2022/2023 SGMA grant funding opportunity, noting that the second solicitation is scheduled to open in October 2022, with approximately \$200 million total available to medium and high priority basins. Only one application per subbasin will be funded, with grants capped at \$20 million per application. Mr. Davids stated that the purpose of today's item was to review the grant application timeline and guidelines, continue discussions on prioritization of potential projects for the grant application, and work to develop a project list that can be brought back to the CGA and GGA boards for recommendation by September or October.

Mr. Davids noted that, as a result of the project prioritization spreadsheet developed and circulated for the last Joint TAC meeting, a few responses from TAC members had been received and the TAC should further that discussion. Mr. King stated that, in preparation for its grant application, Yolo County had sent out a request to stakeholders for additional projects to be considered, and he asked if the same should be done for the Colusa Subbasin application. He noted that he had offered a project last year to staff that was apparently overlooked, and he thought there may be others to consider. Mr. Davids acknowledged the Yolo action and stated that the solicitation had a very condensed timeline. Mr. Williams asked if there was a form available for project submittal that would not require a great deal of outreach.

Mr. Brandon Davison (DWR) reported that the grant solicitation process may be pushed back a month or two, but felt that September/October is still appropriate for finalizing project lists for the application. He also reported that Ms. Kelley List of DWR will host a webinar on August 30 at 11 a.m. regarding the upcoming SGMA implementation grant guidelines, including a question-and-answer period.

Ms. Katie Klug provided details on the upcoming grant opportunity, stating that projects for Disadvantaged, Severely Disadvantaged (SDAC) and Underrepresented Communities would receive higher priority scoring. She also stated that each project within an application would be individually scored, with those scores averaged for the final application score, so all projects within an application should be strong. She noted that projects that would not be eligible for grant funding included water purchases, funding rebate programs, water markets and trading programs, and various travel and expense items. She stated that projects must also comply with any applicable program requirements. Mr. Davison stated that he thought that stormwater discharge requirements (MS4) would not apply due to the size of the communities.

Ms. Klug noted that the following considerations would receive highest priority: applications for basins that have not previously received SGMA Implementation Grant funds; projects that directly benefit SDACs; projects that leverage other funds (private, federal or local) or produce the greatest public benefit, and projects that include water conservation or efficiency, stormwater capture, use of recycled water, or carbon sequestration.

Ms. Klug then reviewed the considerations for prioritization of grant projects, including: support for ongoing development and implementation of Projects and Management Actions (PMAs); support of recharge project implementation; addressing critical data gaps identified in the GSP; updating and improving analytic tools needed to support groundwater management and 5-year GSP updates; supporting interbasin coordination; and addressing GSP deficiencies that may be noted from DWR or others. She pointed out that the potential projects and needs exceed available grant funding, so additional criteria may be considered in the prioritization process, including project cost, eligibility, and time to complete. Some larger projects could potentially be broken into components that could be implemented within the grant timeframe (currently ending June 2025). Other considerations may include broad or basin-wide benefits, benefits in areas of concern (i.e., subsidence), benefits to SDACs and/or Underrepresented Communities, positive impacts to small systems and domestic well owners, cost-sharing potential, shovel-ready status, and quantifiable benefits. Finally, Ms. Klug advised that the group should consider how much funding should be devoted to monitoring (filling data gaps, data management), how much should go to planning, and how much should go toward construction and project implementation. Consideration should also be given to projects proposed by the GSAs versus those proposed by others, and projects with multiple or basin-wide benefits.

Discussion then followed regarding how best to prioritize projects in terms of implementation versus monitoring and planning. Mr. King, Mr. Williams and Mr. Wallace expressed a preference for identifying several strong subbasin projects, preferably shovel-ready, for implementation, and then considering planning and/or monitoring projects. Mr. Davids suggested that a groundwater model update would be very helpful in better evaluating projects and potential benefits. Mr. Bills spoke to the need for additional monitoring wells, and Mr. Williams agreed that additional monitoring was needed along the ephemeral streams, not only for recharge projects but also for general information. Mr. Wallace recommended that TAC members rank their key projects and return the spreadsheet to Mr. Davids to tabulate results.

Discussion followed regarding the use of ag wells for a groundwater level monitoring network; however, Mr. Davids noted that the fluctuations due to seasonal usage would be too great to be useful on a monthly basis. Additional discussion ensued regarding potential ways to make use of ag wells for monitoring data, especially to monitor effectiveness of recharge projects.

Ms. Carter asked about shallow well monitoring and evaluation of Groundwater Dependent Ecosystems, and stated that this is required and should be considered for project implementation soon.

Following additional discussion regarding the evaluation and prioritization process, it was agreed that Davids Engineering would send out the revised prioritization spreadsheet by August 15, and TAC members should complete the rankings and return to the GSA staff by August 22. Results would be reviewed at the September 9 meeting with additional discussion.

6. Discussion of Integrated Regional Water Management (IRWM) Project Submittal

Due to time constraints, this item was tabled for discussion at the next meeting.

7. Drought Update

Due to time constraints, this item was tabled for discussion at the next meeting.

8. Member Reports and Comments

Mr. Bills reported that he has heard from some drillers in the Glenn-Colusa area that some wells are starting to de-gas. Although this has been an existing issue in various areas for many years, drillers are now experiencing it while addressing declining water levels.

Ms. Carter mentioned that Eaton Drilling is consulting with some land owners on recharge projects.

9. Next Meeting: September 9, 2022

10. Adjourn

The meeting was adjourned at 3:47 p.m.

DRAFT

Staff Report

To: CGA-GGA Joint TAC

Agenda Item: 5. Discussion of 2022/2023 Grant Application/ Project Prioritization

Date: September 9, 2022

Background

DWR is administering the Sustainable Groundwater Management (SGM) Grant Program Sustainable Groundwater Management Act (SGMA) Implementation funding solicitation using funds authorized by the California Budget Act of 2021 (Stats. 2021, ch. 240, § 80) and the California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Act of 2018 (Proposition 68). The program is summarized below:

- Anticipated Opening Date: October 2022
- Period of Performance: 3 years
- Expected Award Announcement: July 2023
- Agreements executed: September/November 2023
- Total Est. Funding Available: \$202,500,000, from General Fund and Proposition 68
- Estimated amount per award: \$1,000,000 to 20,000,000
- Description: DWR will solicit proposals to award funding through a competitive application basis for tasks and activities that help the basins reach sustainability through investments in groundwater recharge and/or projects that prevent or clean up contamination of a groundwater that serves as a source of drinking water. Tasks and activities can also include updating/revising/modifying a GSP(s)
- Work Allowed: Planning & Implementation Projects.
- **Only one application will be accepted per basin.**
- No match funding required. Funding is provided in arrears as reimbursement, quarterly invoices.

As this opportunity draws nearer, it is critical that the CGA and GGA coordinate on a single application for the Colusa Subbasin. The Colusa Subbasin GSP Projects and Management Actions (PMAs) (planned, ongoing, and potential) should be reviewed, along with any new potential PMAs.

At the May 13, 2022 meeting, staff reviewed the SGM grant program schedule and highlighted the cooperative effort to submit an application.

At the July 8, 2022 meeting, Davids Engineering provided an overview of the SGM grant funding opportunity. Table 6-2 *Summary of all Projects and Management Actions* and Table 7-1 *Summary of GSP Implementation Studies* from the GSP were provided to facilitate discussion on the types of projects included in the GSP that may be a good fit for this opportunity. The CGA/GGA Joint TAC held initial discussion on the SGM application. TAC members were asked to provide initial thoughts for prioritization of these projects and send to GSA staff to further the discussion at the following TAC meeting.

At the August 12, 2022 meeting, Davids Engineering provide a more in-depth overview of the SGM grant funding opportunity. The consultant team prepared a spreadsheet with projects, management actions, GSP studies, and other activities that support the goals of the GSP (collectively termed projects) to facilitate continued discussion on project prioritization. An updated prioritization form was prepared following the meeting and sent to the TAC members to provide input on potential prioritization of projects to include in the grant. TAC members were asked to submit their rankings to GSA staff which would be consolidated and results shared at the September meeting to facilitate further discussion and make a recommendation to the CGA and GGA on projects to include in the grant application.

On August 26, 2022, a PMA submittal form and new online submittal form were posted to the GSAs websites and a solicitation announcement was sent out to GSA members and interested parties. Submittals were requested by September 8, 2022.

More information about the grant program can be found on DWR's website at: <https://water.ca.gov/work-with-us/grants-and-loans/sustainable-groundwater>

Recommendation

Receive information from consultant team and staff; hold discussion to prioritize projects for inclusion in the SGM grant application.

Possible Action: Make a recommendation to the GSAs on projects to include in the 2022/2023 SGM Round 2 grant application.

Attachments

- TAC member prioritization results from the SGM Round 2 Grant Funding Application Project List spreadsheet
- TAC member Proposed Weights for Prioritization Criteria

Prioritization (Scale of 1-3, 1: low priority, 3: high priority)	Reviewer 1	Reviewer 2	Reviewer 3	Reviewer 4	Reviewer 5	Reviewer 6	Reviewer 7	Reviewer 8	Project, Management Action, or GSP Study	Planned, Ongoing, or Potential	Project & Management Action or GSP Study Name	Project & Management Action Type	Proponent	Brief Description	Notes
2.88	3	3	3	2	3	3	3	3	Project	Potential	Tehama-Colusa Canal Trickle Flow to Ephemeral Streams	Direct Groundwater Recharge	RD108	Operate Tehama-Colusa Canal (TCC) existing gates for discharge into ephemeral streams at a rate where they do not flow out of the Subbasin but recharge the groundwater system.	D. Bills note: Use of gradient control structures in Walker Creek and other westside streams would make this more effective.; E. Cavagnolo priority, note: A. Need to make these projects come to life.
2.75	3	3	3	3	3	3	1	3	Project	Planned	Orland-Artois Water District (OAWD) Land Annexation and Groundwater Recharge	Direct and In-lieu Groundwater Recharge	OAWD	OAWD is planning to annex approximately 12,000 acres of groundwater-dependent agricultural lands. Additional direct recharge may be considered on suitable annexed lands. The project is an area where groundwater levels have been in decline in recent years. It is estimated that a long-term average of approximately 23 taf/yr of surface water would be available, reducing groundwater pumping by approximately 23 taf/yr.	D. Bills note: Gradient control structures (see DJB alternate in-stream recharge suggestions) are ideally suited for this type of recharge, are very cost effective can result in about a 20 percent increase in recharge. Should be applied to Walker Creek; E. Cavagnolo priority, note: A. This project includes improved and new infrastructure. It also includes the annexation of 11,400 +/- acres. The project is in the planning stages and environmental work is starting. Costs will need to be updated, it has been reduced substantially. Most of the acres being annexed are in an area of depleted groundwater and subsidence.
2.63	3	3	3	2	3	3	1	3	Project	Planned	Colusa County Water District (CCWD) In-Lieu Groundwater Recharge	In-lieu Groundwater Recharge	CCWD	CCWD will utilize 30 taf of additional surface water for irrigation in all years but Shasta Critical years for in-lieu recharge. The additional surface water will be made available through full use of the district's existing Central Valley Project (CVP) contract and annual and multi-year water purchase and transfer agreements. Additional surface water deliveries are estimated to be 27 taf/yr, enabling reduction of groundwater pumping by a like amount.	E. Cavagnolo priority, note: A. This is something that should be done as part of using surface water first. If the grant will not pay for water, I am not sure what the money will pay for. Will there be New infrastructure?
2.63	3	3	3	2	3	3	1	3	Project	Planned	Colusa Drain MWC (CDMWC) In-Lieu Groundwater Recharge	In-lieu Groundwater Recharge	CDMWC	CDMWC diverters use both ground and surface water because Colusa Drain supplies are insufficient to satisfy all irrigation requirements. This project would provide additional surface supplies averaging approximately 28 taf/yr in the Drain allowing CDMWC diverters to increase their diversions of surface water to provide in-lieu groundwater recharge of a like amount.	E. Cavagnolo priority, note: A. This is something that should be done as part of using surface water first. If the grant will not pay for water, I am not sure what the money will pay for. Will there be New infrastructure?
2.63	2	3	3	3	3	3	2	2	Project	Ongoing	Orland Unit Water Users Association (OUWUA) Irrigation Modernization for Increased Surface Water Delivery and Reduced Groundwater Pumping	In-lieu Groundwater Recharge	OUWUA	Modernization of OUWUA southside system for more reliable and flexible farm deliveries that will provide incentive for growers to use more surface water and less groundwater.	E. Cavagnolo priority, note: B. Not ready yet, but an important Project
2.63	3	3	3	2	3	3	2	2	Project	Potential	Orland Unit Water Users Association (OUWUA) Flood Water Conveyance	Direct Groundwater Recharge	OUWUA	Divert Stony Creek water at OUWUA's south diversion and convey it to various locations for direct recharge within the OUWUA service area.	E. Cavagnolo priority, note: A. Need to make these projects come to life.
2.63	2	3	3	2	3	3	3	2	Project	Potential	Orland-Artois Water District (OAWD) Direct Groundwater Recharge	Direct Groundwater Recharge	OAWD	OAWD would directly recharge groundwater. A pilot project was conducted in 2017.	D. Bills note: Need more detail on the pilot project to rate.; E. Cavagnolo priority, note: B. This project mostly needs money for water, which the grants do not pay for. TNC may be helpful.
2.50	2	3	3	2	3	3	1	3	Project	Ongoing	Reclamation District 108 (RD108) and Colusa County Water District (CCWD) Agreement for Five-Year In-Lieu Groundwater Recharge Project	In-lieu Groundwater Recharge	RD108 and CCWD	CCWD (and Dunnigan Water District [DWD]) purchases surface water from RD108 for distribution within its service area. The agreement expires in 2022. This project supplies additional surface water to CCWD (and DWD) that provides in-lieu recharge.	E. Cavagnolo priority, note: A. This has become an important practice amongst water districts, and an important one. Not sure why it would need grant money.
2.50	3	3	3	2	3	2	2	2	Project	Ongoing	Sycamore Marsh Farm Direct Recharge Project	Direct Groundwater Recharge	Landowner	Sycamore Marsh Farm is developing a groundwater recharge plan to store groundwater. The plan provides for 205 acres of year-round recharge basins and 163 additional acres of winter recharge areas.	E. Cavagnolo priority, note: A.
2.50	3	3	3	2	1	3	3	2	Project	Potential	Westside Streams Diversion for Direct or In-lieu Groundwater Recharge	Direct and In-lieu Groundwater Recharge	CGA and GGA	A portion of western ephemeral stream flows could be diverted for in-lieu or direct groundwater recharge.	D. Bills note: In addition to diversion of ephemeral flow to direct recharge sites, gradient control structures (see DJB alternate in-stream recharge suggestions) are ideally suited for this type of recharge, are very cost effective can result in about a 20 percent increase in recharge. Should be applied to Walker Creek and other suitable west side streams; E. Cavagnolo priority, note: A. Need to make these projects come to life.
2.50	3	3	3	2	1	3	3	2	Project	Potential	Enhanced Infiltration of Precipitation on Agricultural Lands	Direct Groundwater Recharge	CGA and GGA	Develop and adoption of on-farm cultural practices to reduce precipitation runoff and increase infiltration, which would result in increased storage of precipitation in the crop root zone, thereby reducing irrigation water requirements and achieving some direct groundwater recharge.	E. Cavagnolo priority, note: B. We need to look for recharge opportunities in gravels and drains and be careful of risking orchards
2.50	1		3	2	3	3		3	GSP Updates	N/A	GSP Updates and/or Revisions	GSP Updates	CGA and GGA	Complete updates and/or revisions to the GSP, particularly in response to comments and feedback from DWR (anticipated in 2023-2024).	E. Cavagnolo priority, note: B.; J. Wallace note: To the extent that GSP updates are a requirement for the authority and that the grant application funding this expense, then the annual update should be included in the application

Prioritization (Scale of 1-3, 1: low priority, 3: high priority)	Reviewer 1	Reviewer 2	Reviewer 3	Reviewer 4	Reviewer 5	Reviewer 6	Reviewer 7	Reviewer 8	Project, Management Action, or GSP Study	Planned, Ongoing, or Potential	Project & Management Action or GSP Study Name	Project & Management Action Type	Proponent	Brief Description	Notes
2.38	3	3	3	2	1	2	2	3	Project	Planned	Subbasin Multi-Benefit Groundwater Recharge	Direct Groundwater Recharge	CGA, GGA and TNC	The Nature Conservancy (TNC) is partnering with entities for an on-farm, multi-benefit groundwater recharge incentive program. The pilot program was initiated in Colusa County in 2018 and concluded in the spring of 2021, with plans to expand and continue into the future. DWR is a partner in the Subbasin Multi-Benefit Groundwater Recharge project as it moves into the expanded program.	D. Bills note: Gradient control structures (see DJB alternate in-stream recharge suggestions) are ideally suited for this type of recharge, are very cost effective can result in about a 20 percent increase in recharge. Should be applied to Walker Creek; E. Cavagnolo priority, note: A.
2.38	3	3	3	3	1	3	1	2	Project	Ongoing	Glenn-Colusa Irrigation District (GCID) Strategic Winter Water Use for Groundwater Recharge and Multiple Benefits	Direct and In-lieu Groundwater Recharge	GCID	GCID holds a water right for winter water. This project will increase the groundwater recharge and habitat enhancement benefits of winter water use by increasing use for rice straw decomposition, irrigation, and frost control provided that certain constraints can be alleviated.	D. Bills note: CDFW and USFWS have similar programs for central valley ranchers to use existing riparian rights to provide habitat for migrating shorebirds during fall/winter. Ranchers should be encouraged to participate in the programs for the additional groundwater recharge they provide.; E. Cavagnolo priority, note: A. This is a must do project.
2.38	3	3	3	3	1	3	1	2	Project	Ongoing	Glenn-Colusa Irrigation District Expansion of In-Basin Program for In-lieu Groundwater Recharge	In-lieu Groundwater Recharge	GCID	GCID has developed arrangements to supply district surface water to neighboring non-district agricultural lands that primarily use groundwater. These temporary arrangements expired in 2020. There is interest in continuing and expanding this in-basin surface water use for in-lieu groundwater recharge. Supplies would potentially be available only in Shasta Non-Critical years.	E. Cavagnolo priority, note: B. These types of transfers will allow water districts to increase the use of surface water and protect groundwater.
2.38	3	3	3	1	1	3	3	2	Project	Potential	Reclamation District 108 "Boards In" Program	Direct Groundwater Recharge	RD108	RD108 would institute a voluntary or financially incentivized program in which landowners leave spill boards in place during the winter to capture rainfall and hold it on the fields for recharge.	E. Cavagnolo priority, note: A.
2.38	2	3	1	2	3	3	3	2	Management Action	Potential	Domestic Well Mitigation Program	Management Action	CGA and GGA	To mitigate the effects of domestic well stranding due to groundwater level decline, the CGA and GGA will investigate implementing domestic well mitigation programs in their respective portions of the Subbasin.	E. Cavagnolo priority, note: B. Definately needs to be looked at. Much of the problems for domestic wells are due to over pumping for ag. Another problem is increased population and the use of old shallow wells which are no longer viable.
2.38	3	2	2	3	1	3	3	2	Management Action	Potential	Preservation of Lands Favorable for Recharge	Management Action	CGA and GGA	Working cooperatively with the counties, investigate, design, and implement a program providing incentives to landowners with lands favorable to groundwater recharge to preserve them as agricultural or undeveloped lands on which groundwater recharge.	E. Cavagnolo priority, note: C. With increasing populations, this will become important, but not right now.
2.38	2	3	2	2	2	3	3	2	Management Action	Potential	Review of County Well Permitting Ordinances	Management Action	CGA and GGA	Review and revise the county well permitting processes in the Subbasin to ensure that future well permitting aligns with the Subbasin sustainability goal and that future changes to well permitting are reviewed by the GSAs. The GSAs would work with the counties to review and suggest revisions to ordinances (these are outside of the jurisdiction of the GSAs).	E. Cavagnolo priority, note: B. Ongoing
2.25	3	3	2	2	3	1	2	2	Management Action	Ongoing	Urban Water Conservation in Willows	Management Action	California Water Service – Willow District	This project includes urban water conservation measures through water waste prevention ordinances, metering, conservation pricing, public education, and outreach programs to assess and manage distribution system real loss, water conservation program coordination and staffing support, and other demand management measures.	D. Bills note: that other communities in the CGA/GGA adopt this urban water conservation management action also; E. Cavagnolo priority, note: C. Glenn and Colusa Counties do not have enough poulation for these types of projects to make much of a difference.
2.25	3	3	2	2	1	2	3	2	Project	Potential	Westside Off-stream Reservoir and In-Lieu Groundwater Recharge	In-lieu Groundwater Recharge	TCCA Contractors	Construct off-stream surface reservoirs along the western edge of the Subbasin and up-slope from the TCC to divert surplus Sacramento River flows (e.g., Section 215 water) into these storage reservoirs. Release stored water on demand to serve lands otherwise served by groundwater.	D. Bills note: Off-stream sites could also be constructed to provide direct groundwater recharge; E. Cavagnolo priority, note: B. Needs a lot of work, but will be important.
2.25	2	3	3	2	2	3	1	2	Management Action	Potential	Development of a Dedicated Network of Shallow Monitoring Wells for GDE Monitoring	Management Action, Closing Data Gaps	CGA and GGA	Evaluate and develop a dedicated network of shallow monitoring wells specifically planned and sited for monitoring conditions in areas of the Subbasin where GDEs are most likely to be found. This action is also expected to incorporate biological monitoring to inform the location of new shallow monitoring wells and monitor whether GDEs are being impacted by changing groundwater conditions.	D. Bills note: Critically important for perennial and intermittent streams and springs (over 26 I have located by map but can not determine if they have been inventoried) and sand and gravel operations that are exposing acres of open water at the water table to evaporation.; E. Cavagnolo priority, note: A.
2.14	2		3	2	2	3	1	2	GSP Study	N/A	Expand Shallow Groundwater Level Monitoring Network	GSP Study	CGA and GGA	To expand the shallow groundwater monitoring network, additional monitoring wells must be evaluated. This includes existing monitoring wells and suitable locations for the construction of new monitoring wells.	E. Cavagnolo priority, note: A.
2.14	2		1	3	3	2	2	2	GSP Study	N/A	Expand Water Quality Monitoring Network	GSP Study	CGA and GGA	This study will evaluate and expand additional groundwater quality monitoring wells.	E. Cavagnolo priority, note: A.

Prioritization (Scale of 1-3, 1: low priority, 3: high priority)	Reviewer 1	Reviewer 2	Reviewer 3	Reviewer 4	Reviewer 5	Reviewer 6	Reviewer 7	Reviewer 8	Project, Management Action, or GSP Study	Planned, Ongoing, or Potential	Project & Management Action or GSP Study Name	Project & Management Action Type	Proponent	Brief Description	Notes
2.14	2		1	1	3	3	3	2	GSP Study	N/A	Colusa Subbasin Western Boundary Investigation	GSP Study	CGA and GGA	This study will evaluate data to better understand the physical characteristics and groundwater conditions of the principal aquifer along the western margin of the Subbasin.	E. Cavagnolo priority, note: B.
2.14	2		2	2	3	3	1	2	GSP Study	N/A	GSA Coordination with Water Quality Coalitions and Regulatory Agencies	GSP Study	CGA and GGA	GSA will coordinate with the various water quality coalitions, water stakeholders, and regulatory agencies regarding GSP and other regulatory program implementation. This will include helping to identify and address water quality problems across the Subbasin, including those affecting disadvantaged communities (DACs) and severely disadvantaged communities (SDACs), and consideration of opportunities to expand public water systems and consolidate small public systems to improve drinking water quality delivered to DACs and SDACs.	E. Cavagnolo priority, note: C. Cities do this now and it is paid for by the rate payers. For those on wells, the owners should be doing this, it is not that expensive. There is a cost whether a person lives in a city or in the country.
2.13	3	2	3	3	1	2	1	2	Project	Potential	Glenn-Colusa Irrigation District In-lieu Groundwater Recharge	In-lieu Groundwater Recharge	GCID	GCID will investigate, develop, and implement measures to incentivize additional use of surface water supplied by GCID, which will provide in-lieu recharge through reduced groundwater pumping.	E. Cavagnolo priority, note: A.
2.00	0	3	3	2	3	0	3	2	Project	Planned	Sycamore Slough Groundwater Recharge Pilot Project	Direct Groundwater Recharge	Landowner	Proctor and Gamble (P&G) and Davis Ranches have entered into an agreement to implement a 10-year groundwater recharge pilot project. A 66-acre field on Davis Ranches will receive surface water for groundwater recharge and provide habitat for migrating shorebirds. Water would be diverted from the Sacramento River during fall/winter months using existing riparian rights or would be available from settlement contract supplies (should the project begin before November 1). An expansion of the project is planned for recharge and revegetation in the neighboring Sycamore and Dry Sloughs.	Project already funded through P&G grant; D. Bills Note: CDFW and USFWS have similar programs for central valley ranchers to use existing riparian rights to provide habitat for migrating shorebirds during fall/winter. Ranchers should be encouraged to participate in the programs for the additional groundwater recharge they provide.; E. Cavagnolo priority, note: A.; J. Wallace note: This project, while already secured funding from P&G has great potential to cost share, cooperate with, and coordinate with the other re-charge projects proposed in the area of the Davis Family Mutual Water Company. So while the project might not qualify for direct funding, it should be considered for inclusion of the overall grant package.
2.00	2	2	3	2	3	1	1	2	Project	Potential	Sycamore Slough Colusa Basin-Drain Multi-Benefit Recharge Project	Direct Groundwater Recharge	Landowner	Restoration of portions of Sycamore Slough would support diversion of winter flows from the Colusa Drain for recharge and restoration.	E. Cavagnolo priority, note: A. Need to make these projects come to life.
2.00	3	3	1	2	1	3	1	2	Management Action	Potential	Drought Contingency Planning for Urban Areas	Management Action	CGA, GGA, and cities (GSA member agencies)	The CGA and GGA will coordinate with M&I water suppliers dependent on groundwater to encourage drought planning consistent with the GSP.	D. Bills note: Should and Can develop drought management plans. See examples from adjacent states.; E. Cavagnolo priority, note: B. This work is done currently by cities. Ratepayers fund this work now.
2.00	2	2	3	2	1	2	2	2	Management Action	Potential	Long-Term Demand Management Action	Management Action	CGA and GGA	Demand management broadly refers to any water management activity that reduces the consumptive use of irrigation water. A demand management action is one that incentivizes, enables, or possibly requires water users to reduce their consumptive use.	D. Bills note: Probably not going to be popular with irrigation users. Will require significant outreach and public education programs; E. Cavagnolo priority, note: C. These types of actions are great with groundwater. They have increased production and conserved water. When use with surface water they tend to not work as well. Due to the cost of filtering, many water users have been drawn to using groundwater even when surface water is available, thereby depleting aquifers. Even when surface water is used, there is zero recharge value.
2.00	2		3	2	1	3	1	2	GSP Study	N/A	CV2SimFG-Colusa Model Updates and Enhancement	GSP Study	CGA and GGA	This program will implement the periodic model data updates necessary to adequately represent near-term and future conditions within the Subbasin, and to support annual and five-year periodic GSP reporting to the DWR.	E. Cavagnolo priority, note: B.
2.00	3		2	2	1	3	1	2	GSP Study	N/A	Participation in Interagency Drought Task Forces	GSP Study	CGA and GGA	The CGA and GGA should coordinate their responses to droughts with their respective county and state agency partners through existing Interagency Drought Task Forces established in each county by the Colusa and Glenn County Boards of Supervisors.	E. Cavagnolo priority, note: C.
1.88	2	1	3	2	1	2	2	2	Project	Potential	Subbasin Flood-MAR	Direct Groundwater Recharge	CGA and GGA	The CGA and GGA would investigate, develop, and implement a program to divert flood waters within the Subbasin, when available, for spreading across agricultural lands for direct groundwater recharge.	E. Cavagnolo priority, note: A.
1.88	2	2	2	1	3	2	1	2	Project	Potential	Sycamore Marsh Farm In-lieu Recharge Project	In-lieu Groundwater Recharge	Landowner	Sycamore Marsh Farm is developing an in-lieu groundwater recharge plan, and could partner with additional lands in the CDMWC, allowing for diversion of surface water from CDMWC.	E. Cavagnolo priority, note: C.
1.88	3	2	2	2	1	2	1	2	Management Action	Potential	Strategic Short-Term Demand Management	Management Action	CGA and GGA	Develop a voluntary, flexible, short-run financial incentive program to alleviate impacts of drought in target areas through idling lands in drought-affected areas or in participating surface water-using portions of the Subbasin and conveying the saved surface water to the drought-affected areas.	E. Cavagnolo priority, note: C. Idling land has very negative results for the economy. Starting with job loss. We need to do better.
1.86	2		2	2	1	3	1	2	GSP Study	N/A	Groundwater Financial Incentives Investigation	GSP Study	CGA and GGA	This analysis will quantify the total costs of groundwater use and switching to surface water. The analysis will also identify greater financial incentives for in-lieu recharge and options for structuring those incentives.	E. Cavagnolo priority, note: B.
1.86	3		2	2	1	2	1	2	GSP Study	N/A	Increasing GSA Involvement in County Well Permitting and Land Use Planning	GSP Study	CGA and GGA	CGA and GGA will explore options for allowing GSA input to the counties' well permitting processes and land use planning. The objective of GSA input would be to ensure that wells are permitted and land uses are planned in a manner consistent with sustainable groundwater management according to the GSP.	E. Cavagnolo priority, note: B. Will need more staff.

Prioritization (Scale of 1-3, 1: low priority, 3: high priority)	Reviewer 1	Reviewer 2	Reviewer 3	Reviewer 4	Reviewer 5	Reviewer 6	Reviewer 7	Reviewer 8	Project, Management Action, or GSP Study	Planned, Ongoing, or Potential	Project & Management Action or GSP Study Name	Project & Management Action Type	Proponent	Brief Description	Notes
1.86	1		2	1	3	3	1	2	GSP Study	N/A	Evaluate Infrastructure Sensitivity to Subsidence	GSP Study	CGA and GGA	This study will evaluate the sensitivity of infrastructure in the Subbasin to potential subsidence rates.	E. Cavagnolo priority, note: B.
1.75	1	2	2	2	1	3	1	2	Management Action	Potential	Reduce Non-beneficial Evapotranspiration/Invasive Species Eradication	Reduce Groundwater Demand, Management Action	CGA and GGA	Removal of invasive, non-native plant species from riparian corridors and other areas to reduce evapotranspiration from shallow groundwater and support native ecosystem restoration.	E. Cavagnolo priority, note: B. Not sure on this, is it better to remove the plants, or leave them be. Do they use more water then the recharge they create by slowing down flows in streams. The answer may be a combination of the two. Or, streams could be altered for better infiltration.
1.71	1		1	2	1	3	1	3	GSP Study	N/A	Groundwater Well Monitoring Program	GSP Study	CGA and GGA	This pilot program will evaluate the costs and benefits of continuous groundwater monitoring data collection via six irrigation production wells. Program expansion throughout the Subbasin will be considered based on the data utility and costs of the pilot program.	E. Cavagnolo priority, note: B.; J. Wallace note: Funding for this program should be extended. Despite the observation of the project review that the cost of the project is perhaps prohibitive when considered for deployment basin wide, the project can still provide valuable information at the most cost effective price.
1.71	1		1	1	3	3	1	2	GSP Study	N/A	Sacramento Valley Subsidence Interbasin Working Group	GSP Study	CGA and GGA	The CGA and GGA should consider participating in a Sacramento Valley Subsidence Interbasin Working Group with DWR, the other GSAs in the Sacramento Valley and federal partners. The working group would provide a forum for collaborative discussions, consensus-building, and planning to address inelastic land subsidence in the Sacramento Valley.	E. Cavagnolo priority, note: B.
1.57	1		1	1	1	2	3	2	GSP Study	N/A	Westside Streams Monitoring Program	GSP Study	CGA and GGA	Streams originating from the Coastal Range west of the Subbasin will be evaluated for potential recharge volumes, water quality, and the interconnectedness of the streams and the groundwater system within the Subbasin.	E. Cavagnolo priority, note: C.
1.57	1		1	2	2	2	1	2	GSP Study	N/A	Well Inventory Program	GSP Study	CGA and GGA	This program will inventory the estimated 20% of groundwater wells unaccounted for within the Subbasin, and would seek to identify wells that are no longer active.	E. Cavagnolo priority, note: B.
1.57	2		1	1	2	2	1	2	GSP Study	N/A	Well Registration Program	GSP Study	CGA and GGA	This study will evaluate the potential of a program for landowners to inventory their well data. This will complement the well inventory program.	E. Cavagnolo priority, note: B.
1.57	2		1	2	3	0	1	2	GSP Study	N/A	Sutter Buttes Rampart Water Quality Interbasin Working Group	GSP Study	CGA and GGA	The CGA, GGA and the GSAs in the Butte, Sutter, Yolo, North Yuba and South Yuba Subbasins should participate in an interbasin working group focused on collaborative discussions, consensus-building and planning to address groundwater quality matters associated with the unique geology of the Sutter Buttes area.	E. Cavagnolo priority, note: C.
1.50	1	1	3	2	1	1	1	2	Project	Potential	Glenn-Colusa Irrigation District Water Transfers to Tehama-Colusa Canal Authority (TCCA) CVP Contractors	In-lieu Groundwater Recharge	GCID	Evaluate potential for transferring water to CVP contractors served by the TCC for in-lieu groundwater recharge.	E. Cavagnolo priority, note: This is being done.
1.38	3	1	3	0	1	0	1	2	Project	Potential	Sites Reservoir	Direct and In-lieu Groundwater Recharge	Sites Project Authority	The Sites Project is a new off-stream storage facility that is currently in development. Depending on project operation and yield, there is potential for groundwater benefits to accrue to the Subbasin from Sites Reservoir.	Project scope and timeline expected to exceed grant timeline. D. Bills note: the sites reservoir has been under consideration for over 40 years at least. Someone from the CGA/GGA should be on the Sites Project Authority to insure Colusa Subbasin benefits.; J. Wallace Note: This is a large project and perhaps beyond the scope of this grant application. However, the necessity for the groundwater authorities to cooperate and coordinate with the Sites project seems of the highest importance given the long term and significant impact that Sites will have on the sub-basin. This project scope should be re-written as a 1 or 2 year study to investigate the necessary consideration of the operation of sites and potential opportunities for sites to cooperate with the groundwater authorities to ensure sustainability of the sub-basin.
1.13	1	1	1	1	1	1	1	2	Management Action	Potential	Well Abandonment Outreach and Funding Program	Management Action	CGA and GGA	Create a program providing outreach and education to landowners regarding the proper procedures for well decommissioning and abandonment, as well as funding sources. This effort would be accomplished by working with well permitting agencies.	E. Cavagnolo priority, note: C.

Prioritization (Scale of 1-3, 1: low priority, 3: high priority)	Reviewer 1	Reviewer 2	Reviewer 3	Reviewer 4	Reviewer 5	Reviewer 6	Reviewer 7	Reviewer 8	Project, Management Action, or GSP Study	Planned, Ongoing, or Potential	Project & Management Action or GSP Study Name	Project & Management Action Type	Proponent	Brief Description	Notes
1.00	2	1	2	0	2	0	1	0	Project	Potential	Delevan Pipeline Colusa Basin Drainage Canal System (Colusa Drain) Intertie	Direct and In-lieu Groundwater Recharge	Interested Stakeholder	Intertie between proposed Delevan Pipeline component of the Sites Reservoir Project and the Colusa Drain, providing a connection to downstream water users, and providing protection for the ecosystems, and earthquake resilience.	<i>Project scope and timeline expected to exceed grant timeline. D. Bills note: If there is an intertie, it should be extended into Glenn co. to provide the greatest benefit for all CSB downstream users</i>
1.00	1	1	1	0	2	0	1	2	Project	Potential	Colusa County Public Water System Water Treatment Plant	In-lieu Groundwater Recharge	Interested Stakeholder	Construct a water treatment plant on the Sacramento River between Colusa and Grimes to provide treated surface water to public water supply systems in Colusa and possibly Sutter and Yolo Counties.	<i>Project scope and timeline expected to exceed grant timeline. D. Bills note: Dependent on if communities have a water right to Sacramento water; J. Wallace note: This is a large project and perhaps beyond the scope of this grant application. However, the project could be re-written as a 1 or 2 year feasibility study to investigate the potential for such a project. This project, if feasible, could be of significant long term value to communities located proximate to the river.</i>
1.00	1	1	1	0	1	1	1	2	Project	Potential	Subbasin In-lieu Recharge & Banking Program	In-lieu Groundwater Recharge	South Valley Water Resources Authority	Incentivize taking available contract surface water in-lieu of pumping groundwater, providing dedicated contribution to local groundwater sustainability, with a portion available to San Joaquin Valley partners.	<i>E. Cavagnolo priority, note: C. Projects like this only after we fix the problems in the North Valley.</i>

Proposed Weights for Prioritization Criteria

Prioritization Criteria	Proposed Weight	Notes
Achieves Basin-wide or Broad Benefits	10	2nd priority to Areas of Concern
Achieves Benefits in Areas of Concern	50	Action is needed now to prevent irreversible subsidence and quality degradation
Directly Benefits SDACs, Under-represented Communities	10	2nd priority to Areas of Concern
Positively Impacts Small Water Systems, Domestic Wells	20	Human Right to Water is a Human Right and drinking water is highest priority
Potential for Cost-Sharing	10	Best way to address Basin wide concerns
Level of Project Development (e.g., conceptual vs. planned in detail)	0	Lets focus on cost sharing for developed projects and financing them
Has Quantifiable Benefits (with supporting information)	0	The priority quantifiable benefit is helping Areas of Concern

Staff Report

To: CGA-GGA Joint TAC

Agenda Item: 6. Drought Update

Date: September 9, 2022

Background

The ongoing drought and declining groundwater levels have created challenges in groundwater management for GSAs and other local agencies. The drought conditions have affected all beneficial groundwater users throughout the Colusa Subbasin.

Counties, GSAs, and others may share drought-related information including conditions, mitigation measures, pending actions, and similar topics to create a shared understanding of the impacts to the stakeholders in the Colusa Subbasin.

Recommendation

No action necessary. Updates only.

Attachments

- None