Glenn Groundwater Authority

Groundwater Sustainability Agency

225 N. Tehama Street, Willows, CA 95988 | 530.934.6540

Board of Directors Meeting Materials

September 14, 2021 | 1:30 PM

LOCATION: 225 North Tehama Street, Willows, CA 95988

And

Teleconference

The meeting can be accessed via telephone at **+1 (646) 749-3122** or by computer, smartphone, or tablet at:

https://global.gotomeeting.com/join/585971837

Meeting Access Code: 585-971-837

1. **CALL TO ORDER**

   The Chairperson will call the meeting to order and lead the flag salute.

2. **ROLL CALL**

   Roll call will be conducted.

3. **APPROVAL OF MINUTES**

   a. *Approval of meeting minutes from August 9, 2021

   Draft meeting minutes are attached.

   Attachments

   - August 9, 2021 GGA Board meeting minutes

Glenn Groundwater Authority

Groundwater Sustainability Agency

225 N. Tehama Street, Willows, CA 95988 | 530.934.6540

Meeting Minutes

Glenn Groundwater Authority Board of Directors

August 9, 2021 | 1:30 pm

LOCATION: 225 N. Tehama Street, Willows, CA. 95988

The meeting was also conducted via teleconference; accessible via telephone, computer, smartphone or tablet.

Director Members Present:		Alternate/2nd Alternate Directors		Agency Representing:
X	Grant Carmon	X	Tom Arnold	County of Glenn
X	Bruce Roundy		Pete Carr	City of Orland
			Ed Vonasek (2nd)	City of Orland
X	Gary Hansen (Vice Chair)	X	Evan Markey	City of Willows
	George Nerli	X	Leslie Nerli (teleconference)	Glide Water District
X	John Amaro (Chair)		Thad Bettner	Glenn-Colusa Irrigation District
X	Charles Schonauer		Emil Cavagnolo	Orland-Artois Water District
X	Randy Hansen		Wade Danley	Kanawha Water District
			Michael Alves (2nd)	Kanawha Water District
	Mark Lohse		Seth Fiack	Monroeville Water District
X	Gary Enos		Lance Boyd	Princeton-Codora-Glenn Irrigation District/ Provident Irrigation District

Others in attendance:
Lisa Hunter, GGA/Glenn County; Brooke Davis, Glenn County; Valerie Kincaid, GGA Counsel; Donald Rust, Glenn County, Planning Director; Holly Dawley, GCID; Leland Meibeyer; Ryan Soden; Ashlee Veneman, Glenn County; Jamie Lely, landowner; Holly Reimers; Mary Fahey, CGA/Colusa County; Hilary Reinhard; Pat Vellines, DWR; Jenny Scheer; Marc F.; Lisa Humphreys, Glenn County Farm Bureau

1. CALL TO ORDER
   Chair Amaro called the meeting to order at 1:32 pm.

2. ROLL CALL
   Roll call was taken as indicated above.

3. ELECTION OF OFFICERS TO TAKE EFFECT IMMEDIATELY AND SERVE THROUGH JUNE 30, 2022
   a. *Election of Chairperson
   b. *Election of Vice-Chairperson
   c. *Election of Secretary
   d. *Confirm appointment of Treasurer as County of Glenn

   - Director Gary Hansen nominated John Amaro to serve as Chair, which was seconded by Director Roundy. Director Enos nominated Gary Hansen to serve as Vice Chair, which was seconded by Director Randy Hansen. Director Enos nominated Lisa Hunter to serve as Secretary, which was seconded by Director Roundy. Director Carmon nominated the County of Glenn to continue serving as the Treasurer, which was seconded by Director Roundy. No other nominations were made.

   It was unanimously ordered by members present to elect John Amaro as Chairperson, Gary Hansen as Vice Chairperson, Lisa Hunter as Secretary, and the County of Glenn as Treasurer.

4. APPROVAL OF MINUTES
    a. *Approval of meeting minutes from July 12, 2021.

On motion by Director Gary Hansen, seconded by Director Randy Hansen, the meeting minutes of July 12, 2021 were approved as presented by members present.

5. PERIOD OF PUBLIC COMMENT
No comments were presented or heard.

6. STAFF UPDATES
    - Glenn Groundwater Authority (GGA) Program Manager, Lisa Hunter, stated the property related fee files were received from Provost & Pritchard and would be submitted to the Glenn County Department of Finance by August 10, 2021. The file includes 5,596 records for a total of $419,771.34.

    - Ms. Hunter reviewed the workshop regarding the Multi-Benefit Flood-MAR Incentive program she attended July 15, 2021, stating the meeting was well attended and great questions were presented.

    - Director Roundy asked if there is funding available to increase staffing for the GGA, and discussion ensued. The prior staffing arrangement was reviewed, with the Water Resources Department formerly housed at the Agriculture Department, as well as the current staffing arrangement, with a new part time assistant at the Planning Department. Member consensus was additional staff is needed, as workload is expected to increase, and members encouraged researching solutions to gain additional staffing services.

7. FINANCIAL REPORT
    a. *Review and accept Monthly Activities Report.
    b. *Review and consider approval of claims.

    - No monthly activity report was provided and no discussion was held regarding item 7.b.

On motion by Director Gary Hansen, seconded by Director Carmon, it was ordered to approve the claims as presented by members present.

8. COLUSA SUBBASIN GROUNDWATER SUSTAINABILTY PLAN
    a. Receive update on Plan development, activities, and outreach.
    b. Receive update on GSP Development Grants (Proposition 1 and Proposition 68).
    c. Receive update on Project Agreements.
    d. Discussion on GSP adoption process and schedule.

    - Ms. Hunter reviewed **GSP development, activities, and outreach** including the June and July GSP development status update memos provided by Davids Engineering. Ms. Hunter also provided an update on the Well Monitoring Pilot Program, stating instrumentation for four of the six wells have been installed and that two wells remain that are awaiting agreement signature.

    - Ms. Hunter stated there was agreement between CGA and GGA to include the Inter-Basin Coordination Report as an appendix to the GSP and the consultants will be updating the language within the text of the GSP accordingly.

- Ms. Hunter announced draft chapters five and six are out for review and comment, though no additional comments have been received to report. She highlighted the ten projects and management action submittals received. She also reported on the two public meetings held in July, stating both the in person and virtual meetings were well attended and allowed flexibility for additional attendance. Ms. Hunter noted that the review schedule has been updated to accommodate additional time to address public comment. Chapters seven and eight will be released for comments in mid-September 2021 as part of the complete draft GSP, with the comment period closing October 31, 2021. The month of November will allow for the consultants to review and address those comments, with the final GSP being released December 1, 2021.

- Ms. Hunter reviewed the status of the invoices to DWR relating to the **GSP Development Grants (Proposition 1 and Proposition 68).** She continued stating the amount currently encumbered in project agreements is $1,715,000, with $284,600 still needing to be allocated to project agreements. Director Roundy stated the City of Orland has concerns about minimum thresholds for groundwater levels and land subsidence and noted their Council is considering a well moratorium and asked if there is any funding available for a long-term program. Chair Amaro stated a solution may be found in leveraging the winter allotment of surface water that often goes unused for groundwater recharge, and discussion ensued about possible funding, re-distribution of surface water allotments and concerns over minimum thresholds for water wells. Director Gary Hansen reviewed past and present water well information for the City of Willows.

- Ms. Hunter stated the **Project agreements** amendment is still in review.

- Chair Amaro asked if the next public meetings could be a combination of virtual and in person to have one meeting versus two meetings; whereby, Ms. Hunter replied this could present some difficulty in coordination and impact the quality of the meeting, though it will be considered.

- Ms. Hunter reviewed the **GSP Adoption Schedule**, and encouraged members to consult with their respective agencies to ensure there is time to properly address any concerns. GGA Counsel, Valerie Kincaid, reviewed the plan adoption process, stating the plan would be adopted by the GGA after a public hearing is conducted. Ms. Kincaid further stated the public hearing cannot be before 90 days after providing notice to the cities and counties with an opportunity to engage. The public hearing could be noticed in the local newspaper and once the public hearing is conducted, the plan can be adopted. The process will commence as soon as the notification is sent to the cities and counties. Chair Amaro asked if each respective board or agency should be formally voting on these chapters; whereby Ms. Kincaid stated this is not a requirement. Director Enos asked if the draft GSP will be voted on at the September GGA meeting; whereby, Ms. Kincaid stated no. It was clarified that it would be appropriate for GGA staff to send the 90-day notice to cities and counties without Board approval. Director Gary Hansen asked if private pumpers and water districts need to be noticed as well; whereby, Ms. Kincaid stated no, SGMA only requires noticing to the cities and counties. Ms. Hunter offered to provide presentations to each of the respective boards and cities if needed, and that December 14, 2021 is the planned date for the GSP Public Hearing.

9. COMMITTEE UPDATES
    a. 2021/2022 Budget Ad Hoc Committee
    b. Executive Committee
        i. CGA/GGA Joint Executive Committee

c. Multi-Benefit Recharge Pilot Project Ad Hoc Committee
d. Stakeholder Engagement Committee
e. Technical Advisory Committee

- No updates were provided for the **Budget Ad Hoc Committee**, **Executive Committee**, **Multi-Benefit Recharge Pilot Project Ad Hoc Committee or Stakeholder Engagement Committee.**

- The next **Technical Advisory Committee** meeting will be held August 13, 2021.

10. REVIEW COMMITTEES AND CONSIDER ANY NECESSARY CHANGES
    a. *Confirm staff recommendation to dissolve the 2021/2022 Budget Ad Hoc Committee as discussed July 12, 2021.
    b. *Confirm staff recommendation to make no changes to the Executive Committee as discussed July 12, 2021.
    c. *Confirm staff recommendation to make no changes to the Multi-Benefit Recharge Pilot Project Ad Hoc Committee as discussed July 12, 2021.
    d. *Confirm staff recommendation to dissolve the Stakeholder Engagement Committee as discussed July 12, 2021.
    e. Receive update on potential changes to the Technical Advisory Committee as discussed July 12, 2021.

- Chair Amaro introduced the item and public member Jamie Lely requested the Board wait to dissolve the Budget Ad Hoc committee in light of current events; whereby, Director Gary Hansen stated the purpose of the Committee is to work on the annual operating budget and per-parcel fee, which has been completed.

On motion by Director Gary Hansen, seconded by Director Enos, it was ordered to dissolve the 2021/2022 Budget Ad Hoc Committee by members present.

- Board consensus confirmed no changes to the **Executive Committee** or the **Multi-Benefit Recharge Pilot Project Ad Hoc Committee.**

On motion by Director Roundy, seconded by Director Randy Hansen, it was ordered to dissolve the Stakeholder Engagement Committee by members present.

- Ms. Hunter stated she communicated with Michael Alves and confirmed he would like to be removed from the **Technical Advisory Committee**, and Director Leslie Nerli has offered to serve if the Board so desires. She clarified this item will be brought to the next board meeting as an action item.

11. MEMBER REPORTS AND COMMENTS

- Director Carmon stated the County extended the agricultural water well moratorium for ten months and fifteen days at the August 3, 2021 Board of Supervisors meeting, though if weather conditions change the moratorium may not last that long. Director Carmon announced the next Drought Task Force meeting would be August 12, 2021 at 3:00 pm in Orland at the Success Square Conference Center and that the Glenn County Farm Bureau would be providing a presentation.

- Director Schonauer asked what metrics are used to measure and monitor wells in each of the subbasins; whereby, Ms. Hunter stated the Colusa Subbasin has been using thiessen polygons to evaluate representativeness of monitoring wells to develop minimum thresholds. Tehama County is considering

using hexagons and the Butte Subbasin is also using thiessen polygons. Discussion ensued surrounding the monitoring wells and what they measure.

- Director Schonauer mentioned the estimated cost listed in the draft chapters for the Orland-Artois Water District annexation project was shocking to some and may create some challenges for implementation.

12. NEXT MEETING
    The next regular meeting is scheduled for September 14, 2021 at 1:30 pm.

13. ADJOURN
    The meeting was adjourned at 2:55 pm.

4. PERIOD OF PUBLIC COMMENT

Members of the public are encouraged to address the GGA Board of Directors on items relevant to the GGA. Public comments are limited to no more than 5 minutes. No action may be taken on public comments.

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5. STAFF UPDATES

The program manager will provide brief status updates. Reminders and/or clarifications may also be made at this time.

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6. FINANCIAL REPORT

a. *Review and accept Monthly Activities Report.
b. *Review and consider approval of claims.

The Monthly Activities Report will be sent under separate cover prior to the meeting. The Claims Summary is attached.

Attachments

- Claims Summary

Claims Summary

Glenn Groundwater AuthorityInvoices to be paidMeeting Date:
September 14, 2021

Invoice Date	Invoice Number	Description	Amount
7/31/2021	1178.03-4744	Davids Engineering, Inc. (GSP Development)	$ 141,215.51
8/10/2021	86668	Provost & Pritchard Consulting Group	$ 901.10
9/1/2021	1545	O'Laughlin & Paris LLP	$ 630.00
Total			$ 142,746.61

7. ***DISCUSSION AND CONSIDER PROVIDING SUPPORT FOR EPHEMERAL STREAM TRICKLE RECHARGE PILOT PROJECT**

Water & Land Solutions has contacted the GGA to propose a potential project and partnership between California Olive Ranch, the GGA, and Orland-Artois Water District. The project fits within the Tehama-Colusa Canal Trickle Flow to Ephemeral Streams project described in the draft Groundwater Sustainability Plan (GSP). The project overview is attached.

Attachments

- Sheep Corral Creek In-Stream Recharge Project Overview

P.O. BOX 2657, 643 "J" STREET, LOS BANOS, CALIFORNIA 93635 · WWW. WATERANDLANDSOLUTIONS.COM

Sheep Corral Creek In-Stream Recharge – Project Overview

The Sheep Corral Creek In-Stream Recharge Project (Project) will obtain a Temporary 180-day Diversion Permit from the State Water Resources Control Board (SWRCB) to divert excess flows from the Sacramento River through the Tehama-Colusa (T-C) Canal to an Orland-Artois Water District (OAWD) turnout and into Sheep Corral Creek. This project is located within the OAWD service area at the California Olive Ranch (COR) property near Artois, as shown in Figure 1.

Figure 1. Sheep Corral Creek In-Stream Recharge Project Map

1. Tehama-Colusa Canal
2. Sheep Corral Creek
3. White Cabin Creek
4. OAWD's turnout off the T-C canal
5. COR's OAWD farm turnout and point of diversion into Sheep Corral Creek

Water will be diverted into Sheep Corral Creek at a rate that ensures infiltration into the streambed before the flow leaves the COR property. Additional water can be diverted If downstream neighbors are interested in participating in the project. Recharge will be measured using the flow meter at the OAWD turnout to show total water discharged into Sheep Corral Creek. Sheep Corral Creek is an ephemeral stream with a primarily gravel bottom, which enhances infiltration. Water will only be diverted into Sheep Corral Creek when there is no natural flow.

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Chase Hurley, *Managing Member*
209.704.5105
churley@waterandlandsolutions.com

The request for this project is that the Glenn Groundwater Authority be the applicant for the permit, in collaboration with California Olive Ranch and Orland-Artois Water District. Cost-sharing is also appropriate given the public benefit of this recharge project. The anticipated cost of the project includes administrative costs including the permit application, cost of water including wheeling charges, and monitoring and reporting. The total cost estimate for a similar project on Buckeye Creek is between $60,000 and $123,000, as shown in Figure 2.

Figure 2. Preliminary budget for Buckeye Creek In-Stream Recharge Project

			High Cost		Low Cost			
Item/Task	Units	Unit Cost	Quantity	Line Cost	Quantity	Line Cost		
MBK Engineering	each	$10,000.00	1.00	$ 10,000.00	1.00	$ 10,000.00		
USBR NEPA	each	$ 5,000.00	1.00	$ 5,000.00	1.00	$ 5,000.00		
SWRCB Fees	each	$10,000.00	1.00	$ 10,000.00	1.00	$ 10,000.00		
Misc (Legal, Proj Mgmt)	each	$10,000.00	1.00	$ 10,000.00	1.00	$ 10,000.00	$35,000.00	
TCCA Wheeling	per AF	$ 15.00	2020.00	$ 30,300.00	1000.00	$ 15,000.00		
Warren Act	per AF	$ 21.00	2020.00	$ 42,420.00	0.00	$ -	$72,720.00	$15,000.00
Post Project Report	each	$ 5,000.00	1.00	$ 5,000.00	1.00	$ 5,000.00		
Weed Control/Erosion Control	each	$ 5,000.00	2.00	$ 10,000.00	1.00	$ 5,000.00	$15,000.00	$10,000.00
				$122,720.00		$ 60,000.00		
				$ 60.75		$ 60.00		

8. COLUSA SUBBASIN GROUNDWATER SUSTAINABILTY PLAN

a. Receive update on Plan development, activities, and outreach
b. Receive update on GSP Development Grants (Proposition 1 and Proposition 68)
c. Receive update on Project Agreements

GSP Development, Activities, and Outreach

The Davids Engineering GSP Development Status Update Memo describing activities during the month of August 2021 is attached.

The Well Monitoring Pilot Project continues to make progress. Site visits have been conducted and all six wells met the requirements to participate in the program. Agreements have been sent to the well owners to be executed prior to installation of the equipment. Four of the six wells have instrumentation installed. The agreements for two wells remain unsigned. Staff met with Ranch Systems to preview the data platform. A special Joint CGA/GGA Board meeting is being planned for late September/early October to share a preview of the platform with the GSA boards and discuss potential data summaries and templates for reporting.

The Consultant Team has been focused on the development of the complete draft GSP and addressed comments received during the earlier initial public review periods for Chapter 1-4 and Chapters 5-6. The final draft GSP in on track to be released September 13 for a public review period ending October 31.

Additionally, the Consultant Team presented funding options and potential financing needs at the August 13 CGA/GGA Joint TAC meeting. The GSA Boards will need to consider how to fund the GSA and its activities during GSP implementation.

An important component of GSP development is the collection and consideration of public comments and input relating to the GSP. Public input is being tracked by the outreach team and is currently being compiled in an Administrative Record spreadsheet in order to provide regular updates to the Colusa Subbasin GSAs to consider during GSP development. Updates to the Administrative Record spreadsheet will be provided at Board meetings and Board feedback on these items will be documented as part of the GSP. The spreadsheet is being maintained and updated regularly and is housed online in a "Box" account which can be viewed at the following link in its entirety: https://app.box.com/s/2w5ewrd7qmw3b8ngcslbg9wlsithey40

Comments included as attachments to this meeting packet include:

- General Comments: #35-64
- Draft Chapter review comments: #185-293
- PMA submittals: No new submittals

A key consideration for GSP adoption is informing and receiving input from Member Agencies as well as members of the public. Each Member Agency will need to decide how best to present the draft chapters to their Boards and Councils for review and discussion. It is strongly recommended that members provide the information to their respective Boards and Councils during the public review period.

The GSP Schedule is included below. A 90-day notice to cities and counties is required as well as a public hearing prior to the adoption of the GSP by the GGA. The 90-day notice to cities and counties was sent August 27, 2021 to the six entities including the County of Glenn, County of Colusa, City of Colusa, City of Orland, City of Williams, and City of Willows. The Complete Draft GSP will be released for review September 13. Comments from Member Agencies should be provided to the GSA staff to be incorporated into the record for review and consideration. All comments will be considered and incorporated as appropriate into the Complete Final GSP

during the month of November. A Joint CGA/GGA Board meeting may be held in November if comments received need policy direction or direct input from the Boards. The Complete Final GSP (after public comments are addressed) is scheduled for release December 1, 2021. The public hearing for consideration of adoption will be held in at the December 14, 2021 GGA Board meeting. The CGA will also need to approve the GSP prior to submitting the Final GSP to DWR before January 31, 2022.

GSP Chapter/Activity	Activity Start Date	Activity End Date	Activity Duration (days)	Outreach
Chapter 1 - Introduction	4/7/2021	5/5/2021	28	April 22 Joint CGA/GGA Board Mtg
Chapter 2 - Plan Area	4/7/2021	5/5/2021	28	
Chapter 3 - Basin Setting	4/7/2021	5/5/2021	28	
Chapter 4 - Monitoring Network	4/7/2021	5/5/2021	28	
Chapter 5 - Sustainable Management Criteria	7/16/2021	8/13/2021	28	July 28 (virtual); July 29 (in person)
Chapter 6 - Projects and Management Actions	7/16/2021	8/13/2021	28	
Chapter 7 - Plan Implementation	9/13/2021	10/31/2021	48	TBD
Chapter 8 - References and Technical Studies	9/13/2021	10/31/2021	48	
Executive Summary	9/13/2021	10/31/2021	48	
Complete Draft GSP	9/13/2021	10/31/2021	48	
Complete Final GSP	11/1/2021	11/30/2021	30	N/A
GSP Adoption by Agencies and Submittal to DWR	12/1/2021	1/31/2022	62	GGA Public Hearing 12/14/21; CGA Public Hearing 12/13/21

GSP Development Grants

The Proposition 1 and Proposition 68 GSP development grants are managed by the CGA. GGA staff coordinates regularly with CGA staff on grant processes and to complete necessary documentation. Progress report and invoice 11 were submitted to DWR. The Proposition 1 invoice totaled $215,996.98. The Proposition 68 invoice totaled $154,330.18.

Proposition 1 Grant Funds: $1,000,000.00
Expended: $931,622.65 (through June 2021- Invoice 11)
Remaining: $68,377.35

Proposition 68 Grant Funds: $999,600.00
Expended: $164,804.68 (through June 2021- Invoice 11)
Remaining: $834,795.32

Amount encumbered in Project Agreements: $1,715,000
Amount uncontracted: $284,600

Project Agreements

The GGA holds the agreements with Davids Engineering for two projects. Work from these projects is invoiced to CGA to include in the grant reimbursement requests (grant invoices). CGA reimburses the GGA after payment from DWR is received. Highlights of project work are included in the Davids Engineering GSP Development Status Update Memo.

The Hydrogeologic Conceptual Model & Water Budget Project
Contract Amount: $378,000.00
Expended: $378,000.00
Remaining: $0

Colusa Subbasin GSP Development Project
Contract Amount: $1,337,000
Expended: $859,556.15 (through July 2021)
Remaining: $477,443.85

Attachments

- Davids Engineering GSP Development Status Update Memo- August 2021 (9/6/21)
- Administrative Record- General Comment #35-64
- Administrative Record- GSP Draft Review Comments #185-293

Memorandum

To: Colusa Groundwater Authority, Glenn Groundwater Authority

From: Davids Engineering

Date: September 6, 2021

Subject: **GSP Development Status Update—August 2021**

This memorandum provides a summary of activities related to the Groundwater Sustainability Plan (GSP) Development Project for the Colusa Subbasin during the month of August 2021. In addition to activities occurring in August, upcoming activities are discussed.

Interbasin Coordination

Interbasin coordination during August included continued informal coordination between the Colusa and Butte Subbasin GSP consulting teams, both being led by Davids Engineering. The focus is on achieving sufficient consistency of Sustainable Management Criteria (SMC) considering differences in local interests and concerns, as well as in physical conditions, between the subbasins.

Sustainable Management Criteria

SMCs were finalized in July, with the draft SMC chapter (Chapter 5) issued on July 16 for public review. Comments were received by August 13 and the Consultant Team immediately began addressing comments in preparation for releasing the complete draft Groundwater Sustainability Plan (GSP) on September 13.

Projects and Management Actions

The draft PMA chapter (Chapter 6) was also issued for public review on July 16. Comments were received by August 13 and the Consultant Team immediately began addressing comments in preparation for releasing the complete draft Groundwater Sustainability Plan (GSP) on September 13.

Financing and funding options were presented by the Consultant Team to the Joint TACs at their August 13 meeting. The presentation covered the following topics:

- The kinds of costs that will need to be covered for PMA capital financing and operations and maintenance, and other costs for GSA administration and technical studies
- Options for acquiring PMA implementation capital via grants, bonds, and loans
- Options for funding GSP implementation costs and debt service costs via fees, taxes, and assessments
- Concepts, considerations, and options for cost allocation

Well Monitoring Pilot Program

As reported last month, equipment installation has been completed at four of the six selected wells and those owners/operators have remote access to well water level and flow rate data via smart phones and

computers. Contracts have not yet been executed for two of the six wells, and so equipment has not yet been installed. The Consultant Team presented a status report on the Well Monitoring Pilot Program at the August 13 Joint TAC meeting. A central point was that all well owners are favorably impressed with the data and reporting system.

GSP Document Preparation

The Consultant Team worked throughout August to assemble the complete draft GSP and to address public comments received on Chapter 5 (SMCs) and Chapter 6 (PMAs). The complete draft GSP is on track for public release on September 13. Public comments received though the initial comment period on Chapters 1-4 and Chapters 5-6 will be addressed in the complete draft. Comments on the complete draft will be due October 31. The final GSP will be prepared in November, allowing December 2021 and January 2022 for GSP adoption and submittal. The GSP must be submitted by January 31, 2022.

Public Outreach

No formal public outreach was conducted in August.

General Comments

Colusa Basin Groundwater Sustainability Plan Development Outreach
Comment Tracking Table
Last Revised: April 28, 2021

Comments with an * have been abridged. The entirety of this input including any reference documents provided may be found in column H
Comment Categories: General input, Question, Request, Suggestion, Clarification

#	Date Submitted	Commenter Name (if available)	Commenter Organization (if applicable)	Venue Received	Subject	Comment	Link to Full Comment/ Reference Materials (if applicable)	Categorized Comment	Response Needed
35	7/2/2021	Jim Wallace			DATA	Not sure if your challenge getting transfer data from reclamation is intentional or not, but a clear and complete picture of the water dynamics affecting the basin is a fundamental requirement to successful management. We can't manage what we don't understand. So ultimately, the business of water transfers, both inside and outside the basin, has to be transparent and well understood by the CGA. Gathering that data directly from USBR(as opposed to trying to collect from 33 separate districts/agencies) seems the most efficient way to do this. Perhaps a conference call with USBR that includes some CGA staff or board member to inquire how the CGA might best organize a formal request to gather this this information would help your efforts. Ultimately, a FOIA request might be necessary, but hopefully, USBR staff will be responsive to a reasonable request for the information relevant to the CGA's responsibilities.			Responded to by email Wednesday, July 7, 2021 8:02 AM
36	7/2/2021	Jim Wallace			BASELINE	I am not sure what kinds of practices or processes you have considered for capturing data and quantifying a recharge project, but establishing a baseline seems like it will be an important part of the process. A typical CDMWC shareholder, for example, uses a mix of well water and surface water in any given year. Once implemented should a recharge project consider all of the surface water diverted to be in-lieu recharge or only that portion in excess of some historical baseline diversion?			Responded to by email Wednesday, July 7, 2021 8:02 AM
37	7/2/2021	Jim Wallace			LEGAL	I have read and re-read a few times the December 18, 2020 memo directed to the Vina GSA from its Administrator, Paul Gosselin, and Legal Counsel, Valerie Kincaid that was circulated during a recent CGA TAC meeting. Admittedly, there is much in this memo that I do not yet fully understand. But what is clear, is that recharge projects will potentially have legal implications that affect stakeholders across the sub-basin and that we (CGA) should consider these implications as part of our project development. I attached this memo here in case you have not yet seen it. I would be interested in a meeting with CGA counsel to review this memo (or perhaps a white paper of our counsels own origination) to better understand these issues and then discuss potential policies and priorities that CGA should consider to address these issues.			Responded to by email Wednesday, July 7, 2021 8:02 AM
38	7/29/2021	Ben King	Land Owner	Public Meeting	PMAs	Ben King asks for clarification on process of approving PMAs. He also wants to		Question	Answer provided at the 7/29/2021
39	7/29/2021	Ben King	Land Owner	Public Meeting	PMAs	Ben King's question on the status of public approval and if the SMCs/PMAs been vetted through the TAC or had an approval process. Response: Presentations on the PMAs were presented to the Joint TAC along the way, but the full list of 33 PMAs were not formally approved by the TAC		Question	Answer provided at the 7/29/2021 meeting. See comment section.

Colusa Basin Groundwater Sustainability Plan Development Outreach
Comment Tracking Table
Last Revised: April 28, 2021

Comments with an * have been abridged. The entirety of this input including any reference documents provided may be found in column H
Comment Categories: General input, Question, Request, Suggestion, Clarification

#	Date Submitted	Commenter Name (if available)	Commenter Organization (if applicable)	Venue Received	Subject	Comment	Link to Full Comment/ Reference Materials (if applicable)	Categorized Comment	Response Needed
40	7/29/2021	Ben King	N/A	Public Meeting	PMA	Ben King would like to know who ranked the PMAs. Response: Lisa Hunter commented that they aren't ranked, but the top five are included because they are in process and ready to go. The ones that are in planning stage are in the next tier. Mary Fahey added that the PMA submittal process was very open and transparent and that projects are accepted on an ongoing basis. Ben King wanted there to be a TAC discussion for ranking, and including more PMAs possibly, as well as a process in place for adding and ranking them.		Question	Answer provided at the 7/29/2021 meeting. See comment section.
41	7/29/2021	Joe Carancho	N/A	Public Meeting	TAC	Joe Carancho wanted transparency in who is on the TAC committee and what decisions they are making. Response: Dave Ceppos responded that TAC members are listed on the websites. Thirteen TAC Meetings were held and publicly noticed, and the PMA list is available in the matrix within the PMA chapter.		General Input	Answer provided at the 7/29/2021 meeting. See comment section.
42	7/29/2021	Joe Carancho	N/A	Public Meeting	PMAs	Joe Carancho wanted more ideas for PMAs from local farmers and ranchers. Response: John Amaro let him know that people on the TAC and GSA Boards are local and any decisions the TAC makes have to be approved by the full board. This led to introductions of board and TAC members who were present to show they were local and involved in agriculture/local activities.		General Input	Answer provided at the 7/29/2021 meeting. See comment section.
43	7/29/2021	Darrin Williams	N/A	Public Meeting	MTs	Darrin Williams asks about the timing for MTs. Stating that there is a two-year period before we reach an UR. He asks when the two-year period starts – is it on January 31, 2022 or has it already started? Response: Grant Davids and Ken Loy clarified that the two-year period would only start when 25% of the wells get below the MT. Darrin Williams is concerned that some MTs for some of the wells may be something we will reach too quickly.		Question	Answer provided at the 7/29/2021 meeting. See comment section.
44	7/29/2021	Lester Messina	N/A	Public Meeting	Slide 16	Lester Messina asks a question about the hydrograph on Slide 16. Are there any wells in the monitoring network that stopped being monitored in the 2015 drought, and will they be monitored in 2022? Response: Ken Loy said there are one or two wells in the current monitoring network that have not had recent measurements and he is not sure why. They will be reviewed		Question	Answer provided at the 7/29/2021 meeting. See comment section.
45	7/29/2021	Sharon Ellis	Land Owner	Public Meeting	Well Monitoring Network	Sharon Ellis asks who is responsible for monitoring the 48 wells in the Monitoring network. Response: Ken Loy responded that the GSAs are making use of existing monitoring wells and DWR currently does the monitoring.		Question	Answer provided at the 7/29/2021 meeting. See comment section.
46	7/29/2021	Sharon Ellis	Land Owner	Public Meeting	UR	**Sharon Ellis** asks who is in charge of alerting DWR if we are experiencing UR, is it the County? Response: Ken Loy responded that the Groundwater Authorities will take the monitoring data and prepare annual and 5-year reports to DWR.		Question	Answer provided at the 7/29/2021 meeting. See comment section.

Colusa Basin Groundwater Sustainability Plan Development Outreach
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Last Revised: April 28, 2021

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47	7/29/2021	Sharon Ellis	Land Owner	Public Meeting	Dry Wells	Sharon Ellis expresses concern over dry wells on her property and drying of Stony Creek. She asks who to notify or who will address these concerns. She and Emil Cavagnolo discuss why people chose to use groundwater instead of surface water in a dry year. There is then a discussion of GSAs and the fact that they are the regulatory agency that has authority to take action. Sharon is implying that locally we are already experiencing UR.		General Input	Answer provided at the 7/29/2021 meeting. See comment section.
48	7/29/2021	Joe Carancho	N/A	Public Meeting	General Input	Joe Carancho mentions that farmers shouldn't be told how to farm. John Amaro comments that we have a fine line to walk to work locally to keep the management local.		General Input	Answer provided at the 7/29/2021 meeting. See comment section.
49	7/29/2021	Member of the Public	N/A	Public Meeting	GSP	Unknown person asks if we have to wait for the GSP to pass before taking action and moving forward with actions. He also asks who will police actions that will be needed if we fall below MTs. Does GSA have authority to place usage restrictions, etc.? Response: Darrin Williams responded that there can be self-regulation through the GSA and there should be regulation before MTs are reached. The goal is to operate at the MO. "SGMA has very few 'shalls', and very many 'mays'".		Question	Answer provided at the 7/29/2021 meeting. See comment section.
50	7/29/2021	Ben King	Land Owner	Public Meeting	General Input	Ben King mentions that the PMA section needs to be scrutinized as the Demand Management PMA will affect income and jobs in Colusa and Glenn County. He mentions the tomato subsidy to manage land and therefore use less water. Response: Grant Davids responded that there are 2 demand management actions in the Plan, but they are not preferred. In the end, it is one of the tools in the tool box that the GSAs can pull from as situations warrant actions. Just because it is in the toolbox does not mean it will be used. Discussion followed that Demand Management isn't the first choice for our area.		General Input	Answer provided at the 7/29/2021 meeting. See comment section.
51	7/29/2021	Member of the Public	N/A	Public Meeting	Surface Water Use	**Unknown person** addressed Emil Cavagnolo and asks if the GSAs have the power to have people use surface water to the extent its available before pumping? And can the price of the water be subsidized? Response: **Emil Cavagnolo** mentions that his district already works to lower surface water costs and make it more enticing to use it first. Discussion follows that surface water absolutely has to be used first to allow for recharge along with additional recharge projects. It was answered that a GSA can build incentive programs into it to encourage surface water, and use all available surface water.		Question	Answer provided at the 7/29/2021 meeting. See comment section.

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52	7/29/2021	Member of the Public	N/A	Public Meeting	Surface Water Cost	Unknown person asked how to reduce surface water costs? And how to keep discrepancies between districts low? Emil Cavagnolo offers an explanation of where Orland-Artois Water District comes from and how expensive transferred water is, as well as how different districts have access to different water.		Question	Answer provided at the 7/29/2021 meeting. See comment section.
53	7/29/2021	Sharon Ellis	Land Owner	Public Meeting	URs	Sharon Ellis asks to address her original question. If we get significant UR who is responsible? Response: Ken Loy described how a landowner would want to communicate with your GSA board member and they would make sure DWR has the most up to date data. Emil Cavagnolo pointed out that there is a monitoring well near Sharon's house and she can see that data.		Question	Answer provided at the 7/29/2021 meeting. See comment section.
54	7/29/2021	Ben King	Land Owner	Public Meeting	Recharge	**Ben King** asks if the board would consider giving incentives for people participating in recharge.		Question	N/A
55	7/29/2021	Darrin Williams	N/A	Public Meeting	General Input	Darrin Williams comments that he is happy to see new people at the meeting. We are really fortunate that we are in this subbasin and that we have had dry years since 2015 but aren't terribly bad off. He is positive about the projects on the horizon and the future. He states that using 100% of available surface water needs to be at the top of the list to protect groundwater.		Comment	Answer provided at the 7/28/2021 meeting. See comment section.
56	7/28/2021	Pete Carr		Virtual Public Meeting	Table 5.1	Pete Carr noted that Chapter five describes the methodology of how those minimum thresholds are established, but the practical result then as illustrated by the sample monitoring well hydro graph in figure five dash one shows that well levels can at least this well, I will could get all the way down to 208 feet before it exceeds the minimum threshold, so that would suggest unless i'm misunderstanding this that a domestic well or municipal well that's a 200 feet is still acceptable and not considered unreasonable, in other words, I mean 200 feet would run most domestic wells and half of our municipal wells dry and yet that's not exceeding the threshold I don't understand how that could be. Response: Ken Loy responded that the minimum thresholds are not like the example that we showed that's just for that specific well. Each one of the 48 representative monitoring network wells has its own on site specific minimum threshold and measurable objective.		Question	Answer provided at the 7/28/2021 meeting. See comment section.

Colusa Basin Groundwater Sustainability Plan Development Outreach
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57	7/28/2021	Member of the Public		Virtual Public Meeting		In the PMA you have a couple of these that are predicated on having an available surface water, and it was even brought into the equation that you have it tough to have the economics for the surface water. is maybe, as are more affordable than the groundwater and so when you bring this into the equation, knowing that it's outside of the base and where those economics are established i'm just wondering how that works. Response: Grant Davids responded that there are some entities with surplus water at times. Under the settlement contracts and some surplus project water and philosophically they might be predisposed to keeping that water in the sub basin for for local benefit rather than letting it go out but. Others, maybe not so much. I can't tell you how it's going to play out, but I think it comes down to negotiation and it depends kind of on the philosophy of the folks with the available surface water. Jeff Sutton added that project water held by the settlement contractors is only available for sale pursuant to section 3405 within the area of origin, so that water is not available to be sold outside of basin.		Question	Answer provided at the 7/28/2021 meeting. See comment section.
58	7/28/2021	H Brich		Virtual Public Meeting		H. Birch asked in the chat: You mentioned groundwater's impact on ecosystems, but can we say more specifically that groundwater is impacting forests, and that (lack of) groundwater is a contributing cause to the increased numbers and intensity of fires in CA? Response: Ken Loy responded that forests are not in the bounds of the ground water basin and to the extent that there are plants that are groundwater dependent that is something that we do look at, and we look at the routing depth of those plants that are generally along the riparian corridors of the sacramento river and other streams in the groundwater basin not up in the foothills that are you know up in the in the Highlands that are part of the counties that's those areas are not part of of the groundwater basin as defined by the Sigma regulations.		Question	Answer provided at the 7/28/2021 meeting. See comment section.

Colusa Basin Groundwater Sustainability Plan Development Outreach
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59	7/28/2021	Scott Bradford		Virtual Public Meeting		Scott asked in the chat: Please briefly discuss the water balance. What are the present values of groundwater outputs to inputs? How long will the proposed recharge projects take to bring groundwater into balance? Will recharge projects have adverse impacts on groundwater quality? Response: Grant Davids responded You know the the system is going to be fairly well unbalanced, meaning that there's no large negative or positive change in groundwater storage. 01:40:35So that's what we think about the future, you know, in the near term or in the present we've got and looking backward in time we've got. 01:40:43Obviously, declining groundwater levels in a couple of areas within the sub base and even more generally throughout the seven days in which we feel is primarily a consequence of drought. 01:40:54And then the extension of that would be that you know if drought debates and we get some good water years back on the books that the groundwater levels would recover.		Question	Answer provided at the 7/28/2021 meeting. See comment section.
60	7/28/2021	Arne Gustafson		Virtual Public Meeting		It sounds as if the management of issues that arise but don't yet meet the standards of Undesirable Results is critical to the success of SGMA. Can you speak a little more specifically to how those activities will be addressed? Response: Grant Davids responded that how you balance that and where you begin to take action, all depends on decision making and policies at the board level and let them know what you think.		Question	Answer provided at the 7/28/2021 meeting. See comment section.
61	7/28/2021	Pete Carr		Virtual Public Meeting		Pete asked in the chat: Plan is based on an assumption of 26-140 maf of underground aquifer volume, and that this has only been depleted 5% in recent years. How confident are we that at least 26 maf actually exists? How stable and reliable is this data? Response: Ken Loy responded the best place to go for the that water budget information is in chapter three of the groundwater sustainability, where the plan authors talk about the water budget which is really a flux, it changes its water moving through the system it's not a static number.		Question	Answer provided at the 7/28/2021 meeting. See comment section.

Colusa Basin Groundwater Sustainability Plan Development Outreach
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62	7/28/2021	Pete Carr		Virtual Public Meeting		Pete asked in the chat: 1/2 foot per year of subsidence may be acceptable out in the county, but even a couple of inches in a year could/would be devastating to municipal services like sewer, water and storm drainage underground infrastructure. How can subsidence of up to 1/2 foot / year be considered not significant or unreasonable enough to trigger action? Response: Ken Loy responded that in Chapter Chapter three you'll see that there is very little subsidence up in the Orland area, if that were to change, then that would be the whole adaptive management part of this, then the the GSA would be looking for the local feedback on on what's going on in that area and then what's the right thing to do to mitigate it.		Question	Answer provided at the 7/28/2021 meeting. See comment section.
63	7/28/2021	H Brich		Virtual Public Meeting		H Brich asked in the chat: Re Slide 24: you said it was dependent upon how many farmers sign up for the (Sacramento River?) program. How do farmers find out about what programs are available to them to participate in? We have a farm manager and several owners. Response: Lisa Hunter responded that you should email either LHunter@countyofglenn.net or mfahey@countyofcolusa.com and sign up for the interested parties list.		Question	Answer provided at the 7/28/2021 meeting. See comment section.
64	7/28/2021	H Brich		Virtual Public Meeting		H Brich asked in the chat: Re: Slide 17, how does the groundwater become electrically conducting when it is "degraded"? Is it full of metal contaminants? Response: Ken Loy responded that the Groundwater does become more electrically conducted as the salinity goes up and we want to pay attention to that, but it doesn't mean that it's full of metal contaminants you could have high conductivity and and low metal contaminants or vice versa, you could have low electrical conductivity and high metal contaminants you can't correlate one with the other necessarily.		Question	Answer provided at the 7/28/2021 meeting. See comment section.

Colusa Basin Groundwater Sustainability Plan
Section/Chapter Name
Comment Tracking Table

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185	Jim Wallace		3		3-86	Table 3-10		The table lists diversions only from Stony Creek (SC) and the Sac River (SR), and not the CBD.		
186	Brooke Davis		6	6.2	5	1	Summary of all PMAs	It is clear what Direct Groundwater recharge is, but not clear what In-Lieu Groundwater recharge is to someone not familiar with it. Is it meaning there is recharge happening simply because there is less ground water used?		
187	Ben King		5.3.1.3		5-6			Last paragraph should include impact of SWRCB water curtailments to TC Contractors. The example just refers to Federal curtailments. Comment should also highlight the fact that TC Member groundwater pumpers will have no alternative but to pump groundwater during curtailments because they need to irrigate their permanent plantings.		
188	Ben King		5	5.3.1.4				Comment should address the dewatering of small water systems and domestic wells and the impact on DAC and SDAC households in the affected areas. This is not a hypothetical issue – domestic wells in College City and Arbuckle have run dry. This should be highlighted in the GSP.		
189	Ben King		5	5.3.1.5				Discussion should include the impact on small water systems and domestic wells. The number of reported domestic wells should be recorded and highlighted. It is my understanding that over 19 domestic wells have already ran dry. The impact on households in SDAC and DAC areas should be highlighted.		
190	Ben King		5	5.3.4.1	5-10			Discussion of the role of the USEPA should be included. The USEPA has cited the small water systems of Grimes and Princeton for arsenic contamination. It is very important that that the discussion includes the degradation of fresh water aquifers caused by upwhelling of poor quality water. There is a possibility that over pumping could cause or exasperate this undesired outcome.		
191	Ben King		5	3.4.2	5-11			Impact on SDAC and DAC areas should be identified and discussed by the GSA. Water quality of monitoring wells with multi-completion stages should be documented for each depth stage to identify degraded fresh water aquifers caused by upwhelling. We should avoid water quality monitoring cherry picking and record the data for all depth stages and monitor trends over time to identify possible upwhelling.		

Colusa Basin Groundwater Sustainability Plan
Section/Chapter Name
Comment Tracking Table

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192	Ben King		5	3.4.3	5-11			If Sites is contructed, water quality may be adversely impacted by the elevation gradient between the elevation of sites and the bowels of wells on the valley flow. This gradient could be 600 to 900 feet of elevation head and may take decades to document. Especially around the Sutter Buttes Rampart we need to monitor for potential effects of a redox reaction when connate water upwhells and starts an oxidation process. Arsenic desorption is a predicted outcome when the pH of the connate water is greater than 8. There are also potential biotic outcomes again arsenic related when connate salt water starts the oxidation process. Certain anoxic microbes may add to the arsenic contamination similar to the cause of arsenic contamination in Chesapeake Bay. Earthquake activity could also affect the movement of upwelled contaminants. The west side of the valley has a history of geothermal conditions which could be impacted by earthquakes and earthquakes could also be a catalyst for upwhelling via active faults.		
193	Ben King		5	3.4.4.	5-12			How about birth defects, mother health and other arsenic contamination related outcomes Rather than adverse effect to property values – loss homeowner values and loss of housing if a domestic well becomes contaminated.		
194	Ben King		5	3.4.5	5.12			USEPA and SWRCB Citations should be evaluated.		
195	Ben King		5	4.1	5-16			The stakeholder input regarding the 80 pct level should be documented and recorded for future public comment. As you may know there has been over 20 domestic wells reported dry with several in the College City area. The domestic well threshold should be an area of future discussion and stakeholder input as the drought progresses. The advocates of the 80 pct threshold should be documented and disclosed and the issue of domestic wells should have a future public discourse. Was there a GSA vote on the 80 percent level?		

Colusa Basin Groundwater Sustainability Plan
Section/Chapter Name
Comment Tracking Table

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196	Ben King		5	5.4.1.1.1				The adverse degradation from the redox process for connate salt water will most likely be permanent. Significant lowering of groundwater near Grimes and the East Side of the Sacramento River could be the most vulnerable are for redox and potential adverse biotic outcomes. On the west side where there is natural geothermal pressures the lowering of groundwater levels could affect the hydrologic balance of groundwater and result in more upwhelling. Again another reason to measure all water quality at all observable depths.		
197	Ben King		5	5.4.4.1				There should be a Minimum Threshold for Arsenic Contamination. There are two small water supply systems in Colusa County with USEPA Citations, two abandoned wells at the southern part of the City of Colusa and a reported observation of 200 ug/L near Grimes. Trends in arsenic contamination should be monitored over time due to the potential for continued redox of connate salt water and potential movement via faults which could be adversely aggravated by future techtonic activity.		
198	Ben King		5	5.4.4.2				The Measurable Objective for arsenic should be the USEPA MCL of 10 ug/L		
199	Ben King		5	5.4.4.4				The Interim Milestone discussion should include the GSA's role in working with the State of California to guarantee the Human Right to Fresh Water to the residents of the Colusa Subbasin. The State has the responsibility to uphold this Human Right and the GSA will likely have to work with the State on targeted solutions or mitigation efforts.		
200	Ben King		Appendix 6A		1			The potential for In-Lieu Recharge within the service are of the Tehama-Colusa Canal needs to be evaluated on a month by month or week by week basis and at incremental delivery points on the Canal itself. The physical capacity of the Canal and the physical limitations of all the component irrigation systems that use delivered water will constrain the potential for In-Lieu Recharge. Additionally, there is no discussion about how the use of the Canal for groundwater conveyance under the Warren Act. To the extent the Canal infrastructure is used to store groundwater or convey groundwater from one irrigation system to another (potentially against the flow of the Canal) the potential for the use of In-Lieu deliveries will be constrained.		

Colusa Basin Groundwater Sustainability Plan
Section/Chapter Name
Comment Tracking Table

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201	Ben King		Appendix 6A					It was not clear from the analysis if any of these constraints were considered or analyzed in the potential for the target In-Lieu deliveries. Additional constraints may be relevant once the seasonality of water demand is considered and whether or not the cumulative capacity of the connected irrigation systems is considered since it is likely that both groundwater and surface water would be a required supply during peak ET demand periods.		
202	Ben King		Appendix 6A					Is there a model for monthly or weekly water availability at the various delivery points down the Canal infrastructure and monthly or weekly cumulative ET demand for the service area as the water flows southward. Currently water available for the CCWD has to traverse all the northern user service areas and also be of sufficient supplies to meet the needs of Dunnigan Irrigation District. If Sites is constructed, the water flows across both CCWD and DID service area will have be of sufficient volume to meet the delivery needs of the TC – Colusa Basin Drain interconnect pipeline.		
203	Ben King		Appendix 6B	Introduction				These demand actions are not "backstops" and should not be implemented without full and transparent support the Cities of Colusa, Williams, Willows and Orland and the Board of Supervisors of Glenn and Colusa Counties. If there is a need to implement this type of action it should be done by a member irrigation company and fully paid by the local irrigation company since there are substantial property rights at issue. Rather than a "back stop" the proposed demand actions should be considered the last and least desired option and should only be done extensive public discourse and public meetings. . As discussed on Page 10, any such Demand Action "..should include consideration of legal, economic, engineering, hydrogeologic, and political considerations".		
204	Ben King			Sponsor				There should be a sponsor disclosed for the two proposed demand actions. Grant Davies mentioned that Mary Fahey and Lisa Hunter were the sponsors which is obviously not correct because they are County Employees.		

Colusa Basin Groundwater Sustainability Plan
Section/Chapter Name
Comment Tracking Table

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205	Ben King						Table 1	What Does Rice Milling encompass? There are Tree Nut Farming and a Vegetable and Melon Farming, Grain Farming but no Rice Farming. Is Rice Farming part of Rice Milling or Grain Farming. Rice farming and related local jobs should be identified separately since some rice farmers already fallow ground as necessary for organic rice production and/or sell surface water. The data seems to be from 2014 and only one year which happens to be a drought year. Since it is 7 year old data if could be irrelevant and/or unrepresentative because it reflects the economic impact of the last drought. Has this data been assessed against more recent year's data? What kind of volatility is there in the IMPLAN data set? There should be more recent data presented and presented over a multiple year period. It is interesting to note that 3750 or approx. 31% of the 12,255 FTE jobs are local government. The dependent economic relationship between local government jobs and the local economy should be discussed and analyzed. Fallowed land and out of basin water sales and transfers take away local jobs and dimmish the tax base necessary for local government jobs. There is no discussion about seasonal employment and the positive add on revenue derived from unemployment benefits, fringe benefits and retirement/government payments that come with		

Colusa Basin Groundwater Sustainability Plan
Section/Chapter Name
Comment Tracking Table

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206	Ben King				3	Demand Management Costs		There is no reason to assume that Net Groundwater Pumping reduction assumed would actually provide a physical benefit to the stressed aquafers in the Colusa Subbasin. This type of program may work within irrigation districts but it needs to be applied within the sphere of adjacent wells or at least within an irrigation system. Paying a rice farmer not to plant a rice field near Grimes is not going to mitigate the pumping depletion caused by pumping groundwater to irrigate a tomato field on the west side of I-5. Perhaps this will with the accounting of a water budget but in reality do nothing to mitigate the short term or long term impact of dropping water levels in stressed parts of the aquifers. The most likely outcome of this type of Demand Action would be to pit certain ag industry vs ag industry. Many tomato farmers are tenant farmers who make substantial investment in buried drip lines. Many rice farmers are settlement contractors who can make money selling water especially during critically dry years and some of which are organic rice farmers who need to idle production fields for a growing season and who would have great incentive to idle and receive payment.		
207	Ben King						Figure 3	There is no transparency regarding the methodology, source or assumptions made for the water costs presented.		
208	Ben King				8			It is true that a specific allocation " would require careful analysis of the legal, hydrogeologic, economic and engineering implications, and **would require vigorous and informed discussion with stakeholders."** The Colusa Subbasin stakeholders should first have the opportunity to be informed and then have the vigorous discussion before considering these Demand Actions.		
209	Ben King				11			The following statemen as it applies to California is false : " Most GSA's in the state….use.. wellhead meters , to track and enforce allocations." Is it really true that the use of crop type and/or ET calculations are less common than wellhead metering. The DWR has spent extensive resources with the LandIQ crop mapping and many water budgets and irrigation systems are built on CIMIS ET Data and crop coefficients. Ultimately drip lines only have so much capacity so a lot can be done without metering especially when there is only one source of irrigation water. Metering for private pumpers with only source of water would seem like an unnecessary burden and regulatory overreach.		

Colusa Basin Groundwater Sustainability Plan
Section/Chapter Name
Comment Tracking Table

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210	Ben King				11			Secondary economic impacts **SHOULD** be considered **BEFORE** "future iterations" and more importantly any further consideration of the implantation or adoption of the Demand Management PMAs proposed in this Appendix.		
211	Ben King		Appendix 6D					Please consider my comments from Appendix 6A regarding the assumptions for Modeling Parameters as it relates to projects relying on surface water deliveries from the Tehama - Colusa Canal and Colusa County Water District in particular.		
212	Holly Dawley	GCID	5	5.1	5 1	N/A		The Sustainability Terminology could use some context. It might be helpful at the end of 5.1 before 5.1.1 to reiterate what the MTs and MOs are and how they relate.		
213	Holly Dawley	GCID	5	5.1.1	5 2	2nd bullet list		Would be helpful to carry symbols through to the bullet list indicating the five sustainability indicators that are relevant to the GSP		
214	Holly Dawley	GCID	5	5.1	Not specific			Since it has come up, it might be helpful to address that there is a layer of Ancient Seawater but why that does not trigger the indicator.		
215	Holly Dawley	GCID	5	5.1	5 2	1st after 2 bullet lists		Suggest add sentence after the 1st sentence quickly explaining why those 2 indicators are using proxies.		
216	Holly Dawley	GCID	5	5.2.1	5 3	3rd paragraph		Why are "planned projects" in quotes? This is a title/name not a nickname.		
217	Holly Dawley	GCID	5	5.3.1.1	5 5	2nd		What is "foreseeable?"		
218	Holly Dawley	GCID	5	5.3.1.3	5 6	Last paragraph in 5.3.1.3		Suggest add "or state" after federal in 1st sentence. Water use in the CVP can be dictated by State, too.		
219	Holly Dawley	GCID	5	5.3.4	5 10			Consistency: Add indicator symbols as in other sub-task titles.		
220	Holly Dawley	GCID	5	5.3.4.1	5 10	3rd paragraph		Suggest clarify "existing regulatory programs."		
221	Holly Dawley	GCID	5	Global				Suggest putting together a summary table to show indicators and thresholds and perhaps MOs, MTs for more visual/condensed readers. It's a lot of text with no easy summary or cross walk.		
222	Holly Dawley	GCID	6	6.1	6 2		Table 6-1	Units need to be better identified		
223	Holly Dawley	GCID	6	6.1	6 2			Changed storage is so small…it is within the error of the model?		
224	Holly Dawley	GCID	6		6 7		Table 6-2	GCID In-Basin Project: This is only potentially available in Shasta Non-Critical Years.		
225	Holly Dawley	GCID	6		6 8		Table 6-2	Delevan Pipeline Project. Might need to ground truth with Sites or Bill Vanderwaal. The way it is written up indicates an older understanding of the proposed Delevan		

Colusa Basin Groundwater Sustainability Plan
Section/Chapter Name
Comment Tracking Table

#	Commenter Name (if available)	Commenter Organization (if applicable)	Chapter	Section	Page Number	Paragraph Number (from top of page)	Figure/ Table Number (If Applicable)	Comment	Categorized Comment	Submitted Date
226	Ben King		5A		2	Outreach		Since the majority of the Outreach and Public Involvement Process was done before the severity of the current drought was known the outreach process does not reflect the impact on domestic well users nor does have domestic well users had the opportunity to give their input. The reported number of domestic well problems should be documented and there should be a concerted outreach program to get their input on the Minimum Threshholds and mitigation measures. The GSA has an opportunity to truly understand the impact on domestic wells from lowered groundwater levels and act in a proactive manner to help manage and mitigate adverse outcomes for the future. The current Memorandum does not reflect input from domestic well users.		
227	Ben King		5A			Hydrographs		The hydrograph for 14N02W22A002 does not have any data on the two pages it is presented.		
228	Ben King		5B		1			The statement " This appendix describes an economic analysis of MT's that was developed and presented to the TAC at the May 13,2021 Meeting" is false. While it is clear that the economic analysis was included in the presentation there is no indication that the economic analysis was presented or discussed at the meeting. The Minutes of the May 13, 2021 TAC Meeting do not reflect any discussion of the ERA proposal and states on Page 8 of the Minutes in Agenda Item 4.b Projects and Management Actions (PMAs) - **" This Agenda item was not discussed during the TAC meeting due to time constraints"**		
229	Ben King		5B		2			What are the assumed capital cost for refurbishing potentially dewatered domestic wells? What are the assumptions for energy costs caused by additional pumping? What rate schedule? As you probably are aware there are many critical assumptions depending on season and time of use.		
230	Ben King		5B		4		Figure 2	What does the Table Crop and Acres mean? There is not explanation for the inclusion of this table of the documentation for and reference source.		
231	Ben King		5B		2			Why does the economic analysis assume that demand management would be adopted by the GSA? The economic analysis in Chapter 6 appears to be highly speculative and is difficult to assess since the assumptions for the analysis have not been disclosed.		

Colusa Basin Groundwater Sustainability Plan
Section/Chapter Name
Comment Tracking Table

#	Commenter Name (if available)	Commenter Organization (if applicable)	Chapter	Section	Page Number	Paragraph Number (from top of page)	Figure/ Table Number (If Applicable)	Comment	Categorized Comment	Submitted Date
232	Ben King		5B		All	General Comment		Regarding the costs of replacing the domestic well it is hard to assess whether or not the analysis is based on representative costs because the assumptions were not disclosed. The analysis seems to make rudimentary assumptions and not real life assumptions. In the crisis of a drought, local drilling capacity and well repair services are very limited and usually focused on serving the biggest and best customers. Domestic well owners are likely to have to wait until the growing season is over and pay for the costs to maintain their personal health and livelihood during the loss of the well. Some domestic well owners may not have access to the capital they need to make the repairs and most would not be able to secure 20 year financing unless they had equity in their houses and could refinance. Having a well run dry and being ablet to get an appraisal for refinancing is probably near impossible and ultimately the loss of a well may mean substantial loss of market value of their house. To make this a meaningful analysis, there is a timely opportunity to contact the County administrators and survey the domestic well users that have lost their wells during the current drought and ask them about direct and consequential economic costs and costs due to loss of income due to their well depletions. There are more than 20 such dry domestic wells in Colusa County alone.		
233	Ben King		5C	General				Arsenic levels should be included for Grimes and Princeton since the USEPA has continuously reported that observed levels are above the USEPA MCL. Arsenic should also be reported for all the wells for the Colusa Supply system since there has been the Del Oro Walnut Ranch well abandonment and the CIP enforcement action. Also the well near Grimes with the 200 ug/L observation should be included and reported for each observable depth if it is a multi-completion well.		
234	Ben King		5C	General				All of the reported locations should have EC observations for each observable stage if any of the reported locations are multi-completion wells. The new well drilled by the County of Darrin Williams property should be included in the appendix and water quality observations should be tracked for each observable depth. Mr. Williams reported upwhelling near the 1000 foot depth and the water quality from the upwhelling aquifer should be observed and tracked.		

Colusa Basin Groundwater Sustainability Plan
Section/Chapter Name
Comment Tracking Table

#	Commenter Name (if available)	Commenter Organization (if applicable)	Chapter	Section	Page Number	Paragraph Number (from top of page)	Figure/ Table Number (If Applicable)	Comment	Categorized Comment	Submitted Date
235	Ben King		5C	General				Overall the Appendix needs to incorporate the wells discussed in Section 3.2.5.11. There is a multicompletion well near Maxwell with 4 stages and TDS levels as high as 1640 mg/L. There is a shallow well west of Grimes with a measurement of 2,040 mg/L. Wells near College City with TDS concentrations greater than 1000 should be of immediate concern since domestic wells are running dry and bowls are being lowered. Where are the measurements for the shallow wells west of Colusa with TDS levels greater than 2000 mg/L.		
236	Ben King		5C	General				Generally we should have up to date observations for all reported wells. The data for the Maxwell public supply system ends before 2013. The data for the Princeton public supply system ends before 2014 Arbuckle only has 3 observations ending in 2016. Since the Williams supply system has elevated EC levels, all the supply wells for Williams should be reported so as to avoid cherry picking and also to monitor any adverse trends.		
237	Mary Fahey	Colusa County/CGA	5	Intro	5 - 1	1		Second sentence, instead of "Colusa GSAs", please use either "Colusa Subbasin GSAs" or "Colusa Groundwater Authority and Glenn Groundwater Authority"		
238	Mary Fahey	Colusa County/CGA	5	5.3.1.3	5 - 6	3		Type-o, line 3, pumping would have to increase…		
239	Mary Fahey	Colusa County/CGA	5	5.3.4.1	5 - 11	1,2nd bullet		Type-o, increase in the number of...		
240	Mary Fahey	Colusa County/CGA	5	5.4.1	5 - 16	1		Is "Section 0" correct?		
241	Mary Fahey	Colusa County/CGA	5	5.4.7	5 - 33	5		Type-o, Stony Creek		
242	Mary Fahey	Colusa County/CGA	5	5.4.7	5 - 32			If you feel it's appropriate, this is a good opportunity to mention here that the CGA, GGA and neighboring GSAs have been coordinating throughout GSP development and will continue to coordinate and share technical data during GSP implementation.		
243	Mary Fahey	Colusa County/CGA	Appx 5A		2	1-3		It should be noted that the SMC were also vetted and approved by both the CGA and GGA Boards at open, publically noticed meetings.		
244	Mary Fahey	Colusa County/CGA	Appx 5A		2	3		Members of the public were welcome to attend all of these meetings and were encouraged to express their opinions and suggestions. There was very good stakeholder attendance and participation at these meetings.		
245	Mary Fahey	Colusa County/CGA	6	Section 6 -1	6-4			2nd bullet: Suggest removing the second sentence regarding demand management. This type of PMA is a last resort and should not be highlighted.		

Colusa Basin Groundwater Sustainability Plan
Section/Chapter Name
Comment Tracking Table

#	Commenter Name (if available)	Commenter Organization (if applicable)	Chapter	Section	Page Number	Paragraph Number (from top of page)	Figure/ Table Number (If Applicable)	Comment	Categorized Comment	Submitted Date
246	Mary Fahey	Colusa County/CGA	6		6-6		Table 6-2	First project: Colusa Subbasin Multi-Benefit Groundwater Recharge (TNC). This project concludes in the spring of 2021, not 2020.		
247	Mary Fahey	Colusa County/CGA	6	6.3.3.1	6-29			Add a program benefit – Groundwater conditions (via groundwater Recharge)		
248	Mary Fahey	Colusa County/CGA	6	6.3.3.1	6-29			Pilot program concludes in 2021. The program evaluated flooding that would provide habitat benefits for migrating shorebirds, and groundwater recharge. Both (habitat and recharge) are equal goals of the project.		
249	Mary Fahey	Colusa County/CGA	6	6.3.3.1	6-30			While the current project is limited to SDAC communities due to grant funding requirements, ongoing, the project would not be limited to benefitting water levels in DACs.		
250	Mary Fahey	Colusa County/CGA	6	6.3.3.2	6-32			Pilot program runs from 2018-2021. Also update dates in Table 6-13.		
251	Mary Fahey	Colusa County/CGA	6	6.3.3.4	6-32			Depending on the farm, there may be installation of monitoring equipment required (flow meters, groundwater level monitoring devices)		
252	Mary Fahey	Colusa County/CGA	6	6.3.3.6	6-32			Program completed in 2021		
253	Mary Fahey	Colusa County/CGA	6	6.3.3.6	6-33			Last three bullets should be indented further		
254	Mary Fahey	Colusa County/CGA	6	6.3.3.7	6-33			Could the CGA and GGA also serve permitting roles?		
255	Mary Fahey	Colusa County/CGA	6	General				General comment – excellent work on this chapter. This is a great set of tools that the GSAs can pull from as they implement SGMA in the Colusa Subbasin.		
256	Zac Dickens	GCID	6	6.2	pg 6-11	N/A	6 - 3	For chapter consistency, in the "Planned" section on the "In-lieu Groundwater Recharge" row, please move "GCID In-lieu Groundwater Recharge" to the "Potential" section on the "In-leu Groundwater Recharge" row.		
257	Zac Dickens	GCID	6 and associated appendix items	Throughout				Minor formatting request. Please use Word's find and replace for all instances of "Glenn Colusa Irrigation District" and substitute with "Glenn-Colusa Irrigation District".		

Colusa Basin Groundwater Sustainability Plan
Section/Chapter Name
Comment Tracking Table

#	Commenter Name (if available)	Commenter Organization (if applicable)	Chapter	Section	Page Number	Paragraph Number (from top of page)	Figure/ Table Number (If Applicable)	Comment	Categorized Comment	Submitted Date
258	Holly Reimers	West Side Landowner	6	Section 6.1,	Page 6-3			It should be noted that in the past 15 to 20 years the number of orchards has greatly increased while the number of flood irrigated acres had been greatly reduced. Flood irrigation aids in the recharging of the ground water. The number of acres that has been moved from flood irrigation to drip irrigation is quite substantial with the overall drop of the ground water levels. I have seen this personally when my neighbor changed his irrigated pastures to trees and drip irrigation. On property I own to the East of his now drip irrigated fields the old Oak trees started to suffer then die. These trees were in some cases well over 300 years old but had grown accustomed to the supply of water from the surface. When this water was reduced or eliminated they were unable to survive. Also the water level of my domestic well to the East dropped.		
259	Holly Reimers	West Side Landowner		Section 6.2	Page 6-8			Orland Unit Water Users Flood Water Conveyance. I would note that the conveyance is already in place to be able to run any flood waters from the South Canal into the "Low Line Ditch" then into Hambright Creek, just North of the Graves Cemetery. There is also the option to flood acres at the Black Butte Ranch to provide for additional groundwater recharge. Being on the upper end of the water recharge system it has been noted that when there is no surface irrigation waters applied to the grounds at the Black Butte Ranch the ground water levels in the areas to the East start to drop.		
260	Holly Reimers	West Side Landowner			Page 6-9		Table 6-2	There is no mention of Walker Creek of Hambright. Both of these creeks help in the ground water recharge.		

Colusa Basin Groundwater Sustainability Plan
Section/Chapter Name
Comment Tracking Table

#	Commenter Name (if available)	Commenter Organization (if applicable)	Chapter	Section	Page Number	Paragraph Number (from top of page)	Figure/ Table Number (If Applicable)	Comment	Categorized Comment	Submitted Date
261	Holly Reimers	West Side Landowner			Page 6-10		Table 6-2	OH one of my favorite points. Invasive species and the Eradication of such!! Arundo & Tamarisk, also known as Bamboo and Salt Cedar. Non-native and VERY invasive. Stony Creek has the largest overgrown population of Bamboo in the WHOLE state of California. I'm not sure that the Salt Cedar has been inventoried but it is just as invasive and a major user of ground/surface water. To anyone that is worried about the "riparian" habitat I would suggest they take a drive up 1-5 or drive Hwy. 32 between Orland and Chico. It takes water to make "riparian" habitat at this time there is NO WATER. **These no-native invasive plants need to be destroyed and eradicated.**		
262	Holly Reimers	West Side Landowner		Section 6.3.2.10			Table 6-11	Why is there even a conversation about water transfers. Especially when that water could be used to recharge our deleted groundwater basin? When there is conversations about putting meters on wells why would water be transferred out of the basin?		
263	Holly Reimers	West Side Landowner		Section 6.5.1.2			Figure 6-10	Should also list Hambright Creek and Walker Creek		
264	Holly Reimers	West Side Landowner		Section 6.5.1.5	Page 6-69		Table 6-33	Cost: There should be little cost to this as the conveyance system is already in place the proper gates just need to be opened.		
265	Emily Reinhart	Davis Ranches/Sycamore Mutual Water Company	6	5.1.7	6-70	1 (above Table 6-35)		Question: What do you mean by "newly formed water storage district"? We are already within an existing water district (Sycamore Mutual Water Company). Davis Ranches is the participating Landowner within the district that will be hosting the recharge site.		
266	Emily Reinhart	Davis Ranches/Sycamore Mutual Water Company	6	5.1.7	6-70	1 (above Table 6-35)		Water would be sources from Sacramento River during high flows in the system. Currently, Sycamore Mutual Water Company (a Sacramento River Settlement Contractor). We will be looking to rely on our Riparian water rights in order to do winter flooding (beneficial use). We will not have 215 water from the Colusa Drain. Should project start before Nov. 1, we would use some of our settlement contract water to recharge.		
267	Emily Reinhart	Davis Ranches/Sycamore Mutual Water Company	6	5.1.7	6-70	1 (above Table 6-35)		Habitat benefits also include winter floodplain habitat for migrating shorebirds/waterfowl as we pulse flood the field		

Colusa Basin Groundwater Sustainability Plan
Section/Chapter Name
Comment Tracking Table

#	Commenter Name (if available)	Commenter Organization (if applicable)	Chapter	Section	Page Number	Paragraph Number (from top of page)	Figure/ Table Number (If Applicable)	Comment	Categorized Comment	Submitted Date
268	Emily Reinhart	Davis Ranches/Sycamore Mutual Water Company	6	5.1.7	6-71	Table 6-35	Water Source & Reliability	Source is Sacramento River. Reliability is good, but still unknown at this time.		
269	Emily Reinhart	Davis Ranches/Sycamore Mutual Water Company	6	3.5.1	6-42	1		30 – 45 days during fall/winter. We aren't tied to a specific start date. There is flexibility built into the project to allow for water availability, etc. The target is Fall/Winter for the habitat benefits as well as availability of water in the system. Settlement contract waters would be used if the project starts before Nov. 1.		
270	Emily Reinhart	Davis Ranches/Sycamore Mutual Water Company	6	3.5.1	6-42	2		We do not have contract for 215 water. We do have riparian rights that we would be exercising for this project for beneficial use (habitat).		
271	Emily Reinhart	Davis Ranches/Sycamore Mutual Water Company	6	3.5.1	6-42	2		5,000 acre feet over 10-years is our goal.		
272	Emily Reinhart	Davis Ranches/Sycamore Mutual Water Company	6	3.5.5	6-44	1		No 215 water.		
273	Emily Reinhart	Davis Ranches/Sycamore Mutual Water Company	6	3.5.7	6-45	2		No 215 water.		
274	Emily Reinhart	Davis Ranches/Sycamore Mutual Water Company	6		6-8		Table 6-2	Diversion of winter flows from Sacramento River (riparian) or settlement contract flows (should project start before Nov.1).		

Colusa Basin Groundwater Sustainability Plan
Section/Chapter Name
Comment Tracking Table

#	Commenter Name (if available)	Commenter Organization (if applicable)	Chapter	Section	Page Number	Paragraph Number (from top of page)	Figure/ Table Number (If Applicable)	Comment	Categorized Comment	Submitted Date
275	Donald Bills	GGA/CGA TAC Member	5	5.2.1	5.3	1		Nothing in chapter 6 refers to sustainable yield. Should this be a reference to chapter 1 section 1.2? As I mentioned in my review comments there, sustainable/safe yield has not been considered a valid term by the hydrologic community for close to 20 years now (USGS Circular 1186, 1999 Alley and others., USGS SIR 2013-5079, The journey from safe yield to sustainability, Leake and Alley, 2005, A critical review of the Water-budget myth and safe yield, Zhou, 2009, Groundwater depletion in the U.S. 1900 to 2008), Konikow, 2013, The myth of safe yield Kathleen Ferris and Sarah Porter, May 2021, Kyl Center for Water Policy, . It would be better to confine this discussion in terms of the sustainable goal(s). This year proves the point. Estimates of sustainable yield based on historical records are being broken almost everywhere in the subbasin this year.		8/15/2021
276	Donald Bills	GGA/CGA TAC Member	5	5.2.1	5.3	2		"…it is uncertain that undesirable results will develop in the future." They are occurring now with wells drying up through the basin.		8/15/2021
277	Donald Bills	GGA/CGA TAC Member	5	5.2.2	5.3			"As discussed above, the Colusa Subbasin does not currently have undesirable results, which shows that the Subbasin is being managed sustainably." As of 2021 this is no longer true. It might be reasonable to add a second footnote here to indicate that extreme dry and heat in 2020 and 2021(not seen in the last 1,200 years) has exacerbated the already dry conditions pushing the basin into undesirable results.		8/15/2021
278	Donald Bills	GGA/CGA TAC Member	5	5.3.1.1	5.5	2		"…and are not currently occurring. Per the projected water budget (Chapter 3), these effects are not likely to occur in the foreseeable future." I would suggest amending this text possibly by adding reference to the proposed footnote 2 to account for the existing 2020/21 conditions that clearly have exceeded the undesirable result ("…sustained groundwater levels are too low to reasonably satisfy beneficial uses within the Subbasin").		8/15/2021
279	Donald Bills	GGA/CGA TAC Member	5	5.3.1.2	5.5	2		"…impact that would potentially harm the "long-term viability" of affected beneficial uses and users in the Subbasin." It may be necessary to re-evaluate this undesirable result given the current conditions in the subbasin. A significant number of domestic wells and shallow irrigation wells are currently dry or close to being dry while the required amount of representative monitoring wells does not appear to show chronic lowering of groundwater levels.		8/15/2021

Colusa Basin Groundwater Sustainability Plan
Section/Chapter Name
Comment Tracking Table

#	Commenter Name (if available)	Commenter Organization (if applicable)	Chapter	Section	Page Number	Paragraph Number (from top of page)	Figure/ Table Number (If Applicable)	Comment	Categorized Comment	Submitted Date
280	Donald Bills	GGA/CGA TAC Member	5	5.3.1.3	5.6			Suggest replacing sustainable yield with sustainable goals as mentioned earlier. I would also suggest adding a third bulleted Cause: Decrease in the annual precipitation and increase in maximin temperature days (above 100 degrees) related to the changing climate ("Climate Crisis").		8/15/2021
281	Donald Bills	GGA/CGA TAC Member	5	5.3.1.4	5.6			I would suggest adding two additional bulleted items here:\ Permanent loss of crops due to lack of water (farm failure?). Hauling of water to meet minimum household needs.		8/15/2021
282	Donald Bills	GGA/CGA TAC Member	5	5.3.2.2	5.7/5.8			"…provided the GSP demonstrates that there is a significant correlation between groundwater levels and the other metrics." The Freshwater zone of the aquifer extends from near the surface to as much as 2,200 ft below the surface with storage estimates of 26 to 140 maf, almost a full order of magnitude difference (chapter 3, section 3.2.3). But most domestic and shallowwells are located within the first 200 ft below the surface where storage is estimated at only about 13 maf. If all these wells were dewatered there would still be significant water in storage (1/2 to 9/10?) not to warrant an undesirable result for GW storage. The 48 monitoring wells represent storage of 1.4 to 7.7 maf… 5 percent of total estimated GW volumes. So, while GW storage is unlikely to see an undesirable result, most of the water wells can go dry anyway affecting beneficial uses and inflicting significant damage to the economy (as we are currently seeing; 2020/21). I realize it is too late in the game to change undesirable results, MTs and MOs now. But I would suggest that consideration for their revision be modified or changed when appropriate to reflect the differences between the unconfined (first 200ft) and confined/ semi-confined (2,000 ft) of the aquifer and more directly link then to climate impacts5.		8/15/2021
283	Donald Bills	GGA/CGA TAC Member	5	5.3.2.2	5.7/5.8	2		It is unreasonable to use "…groundwater levels ranging from historical lows…". As the current drought and heat crisis is showing us historic ranges can be misleading (e.g. the Colorado River compact based on only 20 years of record) if not used in context.		8/15/2021

Colusa Basin Groundwater Sustainability Plan
Section/Chapter Name
Comment Tracking Table

#	Commenter Name (if available)	Commenter Organization (if applicable)	Chapter	Section	Page Number	Paragraph Number (from top of page)	Figure/ Table Number (If Applicable)	Comment	Categorized Comment	Submitted Date
284	Donald Bills	GGA/CGA TAC Member	5	5.3.2.3	5.8	1		"Additional justification and information supporting the criteria used to define when and where the effects of the groundwater conditions cause undesirable results is provided in Appendix 5A." And from Appendix 5, footnote 1 under MTs, "The lack of shallow groundwater data is identified as a data gap and will be addressed along with other data gaps during plan implementation" …And already too late to identify a undesirable condition for 2020/21.		8/15/2021
285	Donald Bills	GGA/CGA TAC Member	5	5.3.2.3	5.8	2		"These criteria were determined based on the evaluation of best available data pertaining to the Subbasin's specific conditions and characteristics, as described in the Plan Area and Basin Setting sections of this GSP (Chapter 2 and Chapter 3, respectively),…" Based on 2020/21 conditions it would seem wise to consider adding an interim evaluation to the 5-year period. Suggest every 2 years.		8/15/2021
286	Donald Bills	GGA/CGA TAC Member	5	5.3.5.2	5.12	1		As I have commented before and backed up with references from the San Joaquin Valley and Salt River and Tucson Basins in Arizona, 0.5 to 0.6 ft (half a foot…) in a couple months much less 24 is too much to be able to stop or remediate.		8/15/2021
287	Donald Bills	GGA/CGA TAC Member	5	5.3.5.3	5.13	2		I would suggest adding another potential cause of undesirable result to the list: "decrease in hydraulic conductivity and the resultant increase in well M&O costs."		8/15/2021
288	Donald Bills	GGA/CGA TAC Member	5	5.3.6.1	5.13	1		I would suggest adding "Significant and unreasonable impacts to springs".		8/15/2021
289	Donald Bills	GGA/CGA TAC Member	6	6.2	page 6-12		Table 6.3	"Westside Streams Diversion for Direct or In-lieu Groundwater Recharge…" This type of GW recharge should help mitigate Land subsidence. Suggest you add an "X" to that column.		8/15/2021
290	Donald Bills	GGA/CGA TAC Member	6	6.5	Page 6-58		Figure 6.9	I would strongly suggest/recommend adding Walker Creek to the map and this section a one of the Westside larger Streams Diversion for Direct or In-lieu Groundwater Recharge. The Walker Creek Watershed drains an area at least as big as the Willow Creek watershed and bigger than either the Logan or Hunter Creek watersheds. In addition, the Walker Creek watershed contains a number of, as yet characterized springs that would be a source of potential recharge.		8/15/2021
291	Donald Bills	GGA/CGA TAC Member	6	6.5.1.2	page 6-61	1	Figure 6.9	Suggest/recommend adding Walker Creek to the list here. See reasons above.		8/15/2021
292	Donald Bills	GGA/CGA TAC Member	6	6.5.1.2	page 6-62		Figure 6-10	Suggest/recommend adding Walker Creek to the map.		8/15/2021

Colusa Basin Groundwater Sustainability Plan
Section/Chapter Name
Comment Tracking Table

#	Commenter Name (if available)	Commenter Organization (if applicable)	Chapter	Section	Page Number	Paragraph Number (from top of page)	Figure/ Table Number (If Applicable)	Comment	Categorized Comment	Submitted Date
293	Donald Bills	GGA/CGA TAC Member	6	6.5.1.2	page 6-63		Table 6-29	Water source and reliability: Add Walker Creek.		8/15/2021

9. ***POTENTIAL ALLOCATION OF UNCONTRACTED GRANT FUNDING**

At the August 13, 2021 meeting of the CGA/GGA Joint TAC, discussion was held regarding unallocated grant funding for GSP development. Note that the contract for GSP services between the GGA and Davids Engineering was recently reviewed and some errors were found in the total amount of contracted/uncontracted funds. Those adjustments are reflected below.

Unallocated Grant Funding - Status, discussion and possible recommendation

TOTAL AVAILABLE GRANT FUNDING	$1,999,600.00	
TOTAL CONTRACTED HCM/WATER BUDGET	$378,000.00	
TOTAL CONTRACTED GSP	$1,337,000.00	
TOTAL UNCONTRACTED	**$284,600.00**	
POTENTIAL TASKS	**Estimated Costs (rough)**	
Well Monitoring Pilot Program - Expand to add more sites and fill in for current shortages (recommended by TACs)	~$16K/site (varies depending on site)	*Requires a grant amendment to move funds
Annual Report (due in April 2022) (recommended by TACs)	$45-$50K	*Requires a grant amendment to add new task
Hydrogeologic Investigation	Costs under this category will vary based on level of effort	
- Subsidence benchmark installation **(recommended by TACs)**		
- Assess remaining data gaps and develop investigation work plan(s)		
- Field mapping of key geologic and hydrologic features		
- Test drilling		
- Monitoring well installation		
- Stream gage installation		
- Well Location database		

- Funding must be dedicated to GSP planning, not applicable for project implementation
- Potential tasks are listed, others may be considered
- Funding must be expended by April 30, 2022

JOINT TAC RECOMMENDATION (in order of priority):

1. Annual Report –Requires a grant amendment
2. Well Monitoring Pilot Program expansion and fill in current shortages - Requires a grant amendment
3. Subsidence benchmark installation

Annual Report

The first Annual GSP Report is due in April, 2022, shortly after the GSP submittal deadline. If this task is written into the Grant Agreement, there will be a seamless transition from GSP submittal to Annual Report submittal. The Joint TACs felt that this should be a first priority for allocating some of the unallocated grant funding. Adding this Task to the Grant Agreement and moving funds from a current Task to this new Task would require a Grant

Amendment. Staff has inquired with DWR if this Task can be added to the current Grant Agreement, and if so, if an amendment can take place in a timely manner. Currently waiting on response from DWR.

Well Monitoring Pilot Program

Expanding on the Well Monitoring Pilot Program (WMPP) was the second priority from the Joint TAC. Based on experience so far, the initial cost to enroll and equip each well for monitoring is estimated to be $16,000. That includes about $6,000 for the equipment itself plus $10,000 for landowner coordination, site inspection, equipment purchase and configuration, and equipment installation/calibration/communication configuration. Each site is different so a "cookie cutter" approach really does not work.

Then, once a site is equipped, annual maintenance costs are estimated to be about $5,000, including equipment maintenance and troubleshooting (when equipment or communications fail), replacement of faulty equipment, an annual site visit, and data processing and summarization.

These budget estimates assume the use of professional support services (such as DE and Ranch Systems have provided so far). If the WMPP was to be significantly scaled up and sustained over time, it probably would make sense for the GSAs to hire a technician to run the program and reduce cost.

With the original 6 wells equipped, commissioned, and operating there is currently just $5K budget remaining to cover of evaluation of initial pilot project results and development of recommendations for how the monitoring system could be scaled up most cost effectively. Enrolling, spec'ing and equipping the 6 original wells cost more than planned, and so the remaining budget probably will not be adequate to conduct a robust program evaluation. The Consultant team suggests that in addition to allocating additional budget to the pilot program for adding new wells, the Boards should also consider adding budget for a more robust program evaluation. Alternatively, recognizing that grant funds need to be spent by about April 2022 and that the pilot program will last for ~2 years beyond that (till the end of the Ranch Systems subscription), maybe potential future grant funds could be found to support a program evaluation in 2023 and/or 2024.

Per the WMPP Agreement, the GSA will cover the primary costs of monitoring well production and groundwater levels, including the cost of a new or upgraded flow meter (as needed) and pressure transducer, a datalogger, a solar panel, and a cellular modem. The GSA will also cover the cost of a 3-year subscription to web and mobile access for the data gathered. The Cooperator will be responsible for equipment installation and maintenance, as well as the monthly cellular modem data costs. Program participation may be extended beyond three years, as mutually agreed by the Cooperator and the GSA.

Subsidence Benchmark Installation

The Joint TAC identified this Task as a third priority for allocating the uncontracted funding. Additional subsidence benchmarks in targeted areas will help us understand the extent of any subsidence issues in the basin. DWR would be heavily involved in assisting with identifying the best locations for additional benchmarks. This Task would not require a Grant Amendment.

Attachments

- SGM Grant Work Plan

EXHIBIT A
WORK PLAN

Project Title: Colusa Subbasin GSP Development
Project Description: Prepare a GSP for the Colusa Subbasin (Basin).

Category (a): Grant Administration
Prepare reports detailing work completed during reporting period as outlined in Exhibit F of this Agreement. Progress Reports will include sufficient information for DWR Project Manager to understand and review backup documentation submitted with invoices. Quarterly invoices will accompany the Progress Reports and should be submitted to the DWR Project Manager for review to receive reimbursement of Eligible Project Costs. Collect and organize backup documentation by task and prepare a summary Excel document detailing contents of the backup documentation organized by task.

Submit a deliverable due date schedule within 30-days of the execution date of Amendment 1 of this agreement or any future amendments, where the amendment would result in a change in the deliverables and/or schedule, for DWRs Project Manager's review and approval. Edits made to the schedule must be approved by the DWR Project Manager in advance.

Prepare Draft Grant Completion Report and submit to DWR for Project Manager's comments and review no later than 90 days prior to the work completion date listed on Page 1, Paragraph 2. Prepare Final Grant Completion Report addressing the DWR Project Manager's comments and submit within 30 days prior to the work completion date listed on Page 1, Paragraph 2. The reports will be prepared and presented in accordance with the provisions of Exhibit F of this Agreement.

Deliverables:
- Quarterly Progress Reports and invoices with all required backup documentation
- Environmental Information Form
- Deliverable due date schedule
- Draft Grant Completion Report
- Final Grant Completion Report

Category (b): Stakeholder Outreach and Coordination
Provide professional facilitation services and support as necessary for GSP development and adoption meetings. Communicate, outreach, and engage with interested parties and beneficial users of groundwater within the basin. Conduct coordination meetings between basin GSAs and representatives of neighboring basins as necessary during the plan development and adoption process.

Deliverables:
- Public Outreach Plan
- Meeting summaries included as attachments in the quarterly Progress Report

Category (c): GSP Development
The Counties of Colusa and Glenn, in the Colusa Subbasin, each received Proposition 1 Sustainable Groundwater Management Planning grant funding for Counties with Stressed Basins (Stressed Basins). Some of the tasks in Category (c) will utilize data from the Stressed Basins grants. Quarterly progress reports will note when tasks use and build upon work that was previously completed during implementation of both the Colusa and Glenn Counties Stressed Basins grant projects. There will be no duplication of previous work under this Project.

Prepare a GSP that meets SGMA requirements and the DWR regulations and is based upon work and findings as described below. Submit the adopted GSP via the SGMA GSP Submittal Portal and submit the email response to DWR's Project Manager as proof of submittal.

1. Data Collection and Analysis
   Compile, evaluate, and analyze data necessary for development of the GSP. Identify data gaps and develop a plan for obtaining that data.

2. Integrated Hydrologic Modeling
   Evaluate the available options and develop an integrated hydrologic model for the Basin. Compile, evaluate, and compare simulated and local water budget information. Select and refine integrated hydrologic model for water budget development and other GSP model scenario analysis. Develop model scenarios, complete model runs, evaluate model results. Develop model scenarios to support evaluation of potential projects and management actions or other analysis.

3. Monitoring Protocols
   Identify and compile existing monitoring protocols, evaluate monitoring protocols for consistency with GSP regulations, and document final monitoring protocols for GSP data.

4. Data and Reporting Standards
   Develop data and reporting standard procedures for GSP-related data sets, inventory compiled data, refine and expand data gap action plan.

5. Data Management System
   Evaluate and select Data Management System (DMS) and implement a DMS for GSP-related data sets. Build upon the initial evaluation of the DMS and consider a range of available options, including proprietary systems, open-source systems developed by DWR or others, and custom applications.

6. GSP Administrative Information
   Compile and organize information necessary for completing GSP Administrative Information section.

7. Basin Setting
   Develop a GSP Basin Setting section for the Basin including, but not limited to, management areas as applicable, hydrogeologic conceptual model, current and historical groundwater conditions, and water budget. Perform hydrogeologic investigations, data collection, data analysis, and related stakeholder outreach to fill data gaps in Basin Setting. This may include installation of new monitoring wells, Airborne Electromagnetic (AEM) studies, or other data-gathering methods. Map potential Groundwater Dependent Ecosystems (GDEs). Evaluate susceptibility of potential GDEs to groundwater conditions. Prepare summary of GDE conditions for GSP incorporation.

8. Sustainable Management Criteria
   Develop GSP Sustainable Management Criteria for the Basin, including analysis and determination of Sustainability Goals, Undesirable Results, Minimum Thresholds, Measurable Objectives, as appropriate.

9. Monitoring Network
   Develop monitoring network capable of collecting sufficient data to demonstrate short-term, seasonal, and long-term trends in groundwater and related surface conditions, and yield representative information about groundwater conditions as necessary to evaluate GSP implementation. Evaluate and designate representative monitoring sites that represent general groundwater conditions and are adequate to act as proxy for other sustainability indicators, if

appropriate. Assess monitoring networks for adequacy, determine data gaps, and develop a plan to address inadequacies and gaps. Develop reports and forms to be used with the DMS for reporting required data to DWR in a format consistent with the GSP regulations.

10. Projects and Management Actions
    Develop Projects and Management Actions to achieve Sustainability Goals for the Basin, describe the implementation feasibility, and the method by which each will be evaluated for effectiveness.

11. Funding Mechanisms Evaluation
    Review and evaluate potential funding mechanisms and options to pay for projects, management actions, and other GSP implementation costs including annual reporting and 5-year GSP updates. Consider options including regulatory fees, other property-related fees, benefit assessments, and special taxes. Compare the potential mechanisms to identify which may be appropriate, acceptable, and well-suited for different GSP implementation activities. Evaluate implications of potential groundwater allocation scenarios.

Deliverables:

- Draft GSP
- Proof of Final GSP submittal to DWR

Category (d): Monitoring/Assessment

Design and implement a well monitoring pilot program to collect information from voluntary participants utilizing existing wells regarding groundwater extraction and groundwater levels at individual wells. Identify selection criteria for participating wells, considering well location, groundwater use, equipment specifications, and other factors as identified. Conduct stakeholder outreach to enlist program participants. Evaluate options for data collection including periodic field visits and telemetry. Implement data collection activities and incorporate available data into GSP development process. Identify and evaluate options for basin-wide implementation, including estimation of initial and ongoing program costs.

Deliverables:

- Technical documentation of program design, well selection criteria, stakeholder outreach, and evaluation of data collection options
- Monitoring data for incorporation into GSP
- Technical documentation of options for basin-wide implementation including associated costs.

EXHIBIT B
BUDGET

Project Name: **Colusa Subbasin GSP Development**

Grantee: **Colusa Groundwater Authority**

Grant serves a need of a Disadvantaged Area?: **Yes**

Local Cost Share Required: **0%**

Budget Category	Round 2 Grant Amount	Round 2 Local Cost Share	Round 2 % Local Cost Share	Round 3 Grant Amount	Round 3 Local Cost Share	Round 3 % Local Cost Share	Total Cost
(a) Grant Administration	$16,320	$0		$58,240	$0		**$74,560**
(b) Outreach and Coordination	$180,200	$0		$49,560	$0		**$229,760**
(c) GSP Development	$803,480	$0		$825,680	$0		**$1,629,160**
(d) Monitoring/Assessment	$0	$0		$66,120	$0		**$66,120**
TOTAL COSTS	**$1,000,000**	**$0**	**0%**	**$999,600**	$0	**0%**	**$1,999,600**

EXHIBIT C
SCHEDULE

Project Name: Colusa Subbasin GSP Development

Categories	Start Date[1]	End Date[1]
(a) Grant Administration	01/01/2017	06/30/2022
(b) Outreach and Coordination	01/01/2017	04/30/2022
(c) GSP Development	01/01/2017	04/30/2022
(d) Monitoring/Assessment	12/01/2019	09/30/2021

NOTES:
[1]Exhibit C Schedule only dictates the work start date and the work end date for the Budget Category listed. The Grantee should refer to the Deliverable Due Date Schedule that has been approved by the DWR Grant Manager to obtain the estimated due date for the deliverables listed in Exhibit A. The dates listed in Exhibit C Schedule are date ranges that correlates to the activities listed within that Budget Category in Exhibit A. Eligible costs for each Budget Category will only be approved if the work completed falls within the date ranges listed in Exhibit C.

10. TECHNICAL ADVISORY COMMITTEE MEMBER APPOINTMENTS

a. *Acknowledge resignation of Michael Alves from the Technical Advisory Committee
b. *Appoint Leslie Nerli to the Technical Advisory Committee

At the August 9, 2021 meeting, it was discussed that Michael Alves had confirmed he wished to be removed from the Technical Advisory Committee (TAC) and that Leslie Nerli has offered to serve as a TAC member. It was also clarified the item would be brought to the September board meeting for consideration and possible action.

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11. COMMITTEE UPDATES

c. Executive Committee
    i. CGA/GGA Joint Executive Committee
d. Multi-Benefit Recharge Pilot Project Ad Hoc Committee
e. Technical Advisory Committee

The **GGA Executive Committee** last met January 27, 2021. Meeting topics were discussed at the February 8, 2021 Board meeting. The July 28, 2021 meeting was cancelled. The next meeting is scheduled for September 22, 2021. The CGA/GGA Joint Executive Committee has not met.

The **Multi-Benefit Recharge Pilot Project Ad Hoc Committee** met on June 28, 2021 and provided a recommendation to the GGA Board on July 12, 2021. The committee has no additional items to report.

The **Technical Advisory Committee** (TAC) last met jointly with the Colusa Groundwater Authority (CGA) Technical Advisory Committee on August 13, 2021. The committees received a presentation on financing and funding mechanisms, received an update on the well monitoring pilot program, and discussed current project agreements and unallocated grant funding. The September 10, 2021 meeting was cancelled in order to focus on completing the draft GSP for release on September 13, 2021. The next CGA/GGA Joint TAC meeting is scheduled for October 8, 2021.

Full page slides of TAC presentations and other meeting materials are available on the GGA website at:

https://www.countyofglenn.net/dept/planning-community-development-services/water-resources/glenn-groundwater-authority/gga

Attachments

- August 13, 2021 TAC meeting presentation slides

COLUSA AND GLENN GROUNDWATER AUTHORITIES

Colusa Subbasin

Joint Technical Advisory Committee
GSP Development

August 13, 2021

Meeting Topics

- 4.a. Groundwater Sustainability Plan Schedule
- 4.b. Financing and Funding Mechanisms—Presentation and Discussion
- 5. Well Monitoring Pilot Program—Update and Discussion
- 6. Grant Funding
  - 6.a Current Project Agreements – Status and Discussion
  - 6.b Unallocated Grant Funding—Status, Discussion and Possible Recommendation

4.a. Groundwater Sustainability Plan Schedule

Groundwater Sustainability Plan Schedule

GSP Chapter/Activity	Activity Start Date	Activity End Date	Activity Duration (days)
Chapter 1 – Introduction Chapter 2 – Plan Area Chapter 3 – Basin Setting Chapter 4 – Monitoring Networks	4/7/2021	5/5/2021	28
Chapter 5 – Sustainable Management Criteria Chapter 6 – Projects and Management Actions	7/16/2021	8/13/2021	28
Chapter 7 – Plan Implementation Chapter 8 – References and Technical Studies Executive Summary Complete Draft GSP	9/13/2021	10/31/2021	48
Complete Final GSP	11/1/2021	11/30/2021	30
GSP Adoption by Agencies and Submittal to DWR	12/1/2021	1/31/2022	62

4.b. Financing and Funding Mechanisms

Financing and Funding Mechanisms

- **Purpose**: Provide an overview of costs, financing and funding, and cost allocation approaches

- GSP Plan Implementation (Chapter 7)
  - Summary of approach to cover costs per §354.44(b)(8) and §354.6(e)
  - Technical appendix with supporting information

Financing and Funding Mechanisms

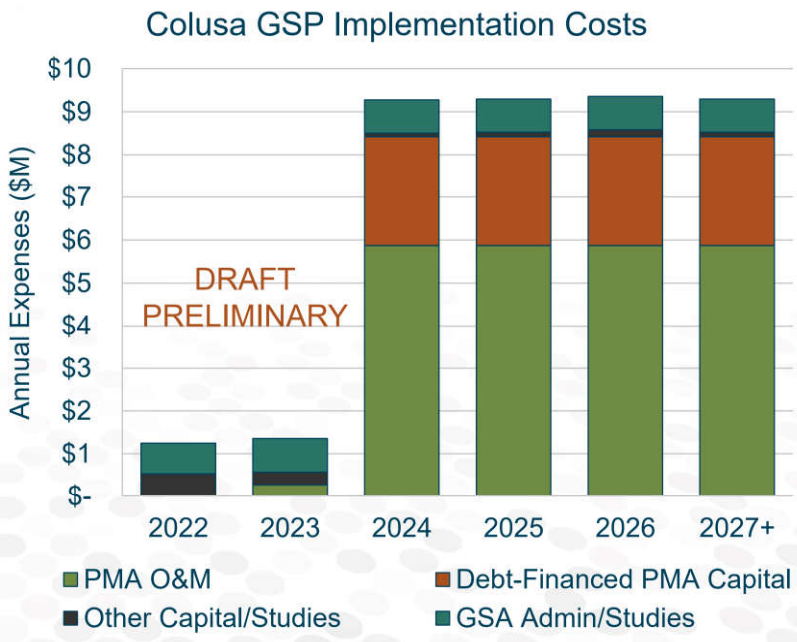
- Financing to pay for project capital and other one-time large expenses
- Funding to repay debt-financed projects and ongoing annual administration, operating, and maintenance costs
- GSP Implementation
  - GSA and PMA costs
  - Financing and funding options
  - Cost allocation considerations
  - Multi-benefit project considerations

GSP Costs

- Projects and Management Actions
  - Capital
  - Planning/design studies
  - Annual administration, operations, and maintenance
- Groundwater Sustainability Agencies
  - Administration (legal, staff time, coordination, monitoring, finance, etc.)
  - GSP technical studies to support implementation and data gaps
  - GSP Annual Reports (§356.2)
  - GSP 5-Year Assessments (§356.4)

Draft Preliminary GSP Costs

- PMA O&M
  - Planned PMAs (5 in the GSP)
- GSA Admin/Studies
  - Coordination and GSP implementation
  - GSP technical studies
- Other Capital/Studies
  - One-time expenses for PMA development (e.g., technical studies) that are not debt-financed
- Debt-Financed PMA Capital
  - Annual repayment of debt-financed PMA capital



GSP Implementation Capital Costs

Capital Project Financing Type	Programs	Notes
Grant	State (DWR) Grants (Prop. 68 and future bonds)	Solicitations are typically targeted to general types of projects and specific benefits that are in the State's interest
Grant	US Bureau of Reclamation WaterSmart Grants	Project-specific funding that can support planning studies (e.g., water market strategy grants); cost-share obligations
Grant	Other targeted potential grant programs (e.g., AB 252)	Potential for multi-benefit projects (see next slide)
Bonds	Local bond issuance	Local borrowing based on agency authority
Loans	Private borrowing	Current low interest rate environment may make these options attractive
Loans	State or Federal low interest loans	This could include future bond funded loan programs

Multi-Benefit Projects

- Funding opportunities for multi-benefit projects
  - Including Multi-Benefit Recharge Basin project (Planned PMA)
- Sources are for capital costs
  - O&M would require additional revenue funding sources (see other options)
- Some current options
  - AB 252. *Multibenefit Land Repurposing Incentive Program*
  - Other federal programs/partners (e.g., USDA CREP)
  - Other potential private partnerships (e.g., TNC, other conservancies)

GSP Implementation O&M and Debt Service Costs

GSP Funding Type	Notes
Fee – General	General options for legal authority pre- and post-GSP development: Prop. 26, Prop. 218, Water Code §10730, Water Code §10730.2
Regulatory Fee	Typically, pre-GSP fee that is related to regulatory cost. Prop. 26 and Water Code §10730
Service Fee	Related to cost of service. Prop 218 and Water Code §10730 and §10730.2. Subject to majority protest vote
Special Tax	Subject to 2/3 majority approval vote
Special Benefit	Special benefit assessment subject to majority protest vote

- Any of these funding types could be:
  - Per acre, per well, per parcel, per acre-foot, or a hybrid approach
  - Establish appropriate nexus between costs/benefit and the fee

Discussion

Options for Allocating Costs

- Define the entity that is allocating costs
  - GSAs, districts, other agencies
- Define parties that will pay for costs
  - Irrigated and non-irrigated, districts, or only groundwater dependent lands?
  - Are costs uniform or vary by area?
  - Are costs fully paid by an entity or distributed more broadly?
- General options for allocating GSP costs/benefits include:
  - Cost of service: How much it costs to serve individual users/areas
  - Benefits based: Establish link between costs and benefits received

Cost Allocation Considerations

- What entities contributed to the development and operation of the project?
- What costs were incurred, and by which parties?
- When were costs incurred?
- What parties receive benefits from the project?
- When are benefits received?
- Are there other non-monetized benefits or costs associated with the project?

Cost Allocation Example 1

- Uniform fee
  - All costs are annual
  - This would apply when all lands benefit from the implementation of the PMA or other GSA activity
  - Examples from other GSAs where this is applied to specific PMAs

Project Annual Cost	**$2 million**
Total Assessed Acres	**500,000**
Annual Assessment	**$4 per acre**

Cost Allocation Considering Benefits

- Local benefits (e.g., near the PMA)
  - Reduced pumping costs
  - Reduced impacts to nearby domestic wells
  - Potential water quality benefits
- General subbasin benefit for achieving sustainability goal (i.e., avoiding undesirable results)
  - Reducing impacts on surface streams
  - Reduced depletion of groundwater storage
  - Broader benefits for SGMA compliance

Cost Allocation Example 2

- Quantify benefits attributable to the PMA
  - Groundwater pumpers near the PMA have lower pumping costs
  - Subbasin-wide sustainability benefit

Total Project Cost	**$2 million**
Reduced Pumping Cost Benefit	**$200,000**

Project Annual Cost Allocation	**$200,000**
Total Assessed Acres	**20,000**
Benefit Assessment	**$10 per acre**
Total Assessment	**$13.60 per acre**

Alternative Charge
$2.5 per AF
$3.60 per acre

Project Annual Cost Allocation	**$1.8 million**
Total Assessed Acres	**500,000**
Assessment	**$3.60 per acre**

Summary of Example Cost Allocation Steps

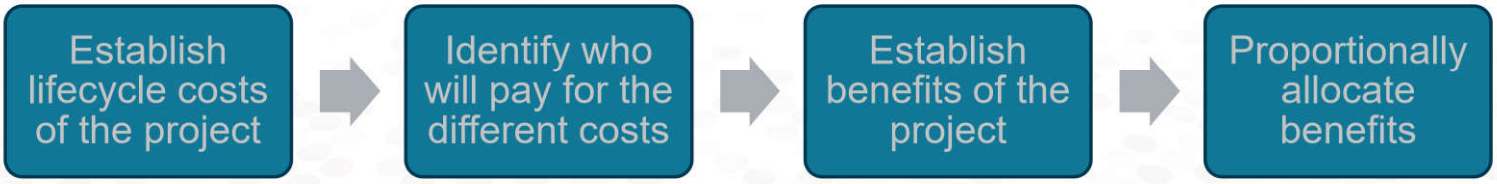
- Estimate PMA costs
- Quantify PMA benefits
  - General to the broader subbasin (assessable acres)
  - Specific to certain areas (or different groups)
- Allocate costs to areas receiving specific benefits
- Allocate remaining cost to the broader subbasin

Discussion

Example of Benefit Allocation for a Recharge PMA

- Madera County GSA recharge program
  - Initially funded under a Prop 68 grant award
- Conceptual approach considers proportional cost shares to allocate benefits
- Actual GSP PMA example is used to illustrate concepts
  - Colusa subbasin conditions are different

Benefit Allocation Approach



Numerical Example (Hypothetical)

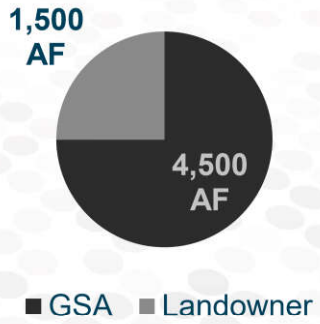
Estimated Recharge Lifecycle Costs	Present Value Amount	Responsible Party
Design and permitting	$0.5 M	GSA
Land and water rights	$2.5 M	Landowner
Construction	$5 M	GSA
OM&R	$2 M	GSA
Total	**$10 M**	

GSA Cost Share	**75%**
Landowner Cost Share	**25%**

Example Recharge Benefit Allocation

Project Benefits	Estimated Annual Benefit
Applied Water	7,000 AFY
Calculated Evaporation	300 AFY
Net Recharge Benefit	6,700 AFY
Leave Behind	700 AFY
Net Benefit for Allocation	**6,000 AFY**

Benefits to Share	6,000 AFY
GSA Cost Share	75%
Landowner Cost Share	25%



GSA Total

4,500 AFY
+ 700 AFY
5,200 AFY

Summary

- The purpose is to present options and ideas for funding and financing
- The types and schedule of GSP implementation costs determine funding and financing options
  - Financing for capital needs
  - Funding mechanisms to repay capital and operations
- Cost allocation considerations depend on policy decisions by the GSA
  - Example illustrated general cost allocation approaches

Discussion

5. Well Monitoring Program Update

Item 5. Well Monitoring Pilot Program: Review

- 21 applications received, scored, and ranked
- 6 applications selected (3 in each county)
- Landowner-GSA agreements
  - 4 fully executed
  - 2 pending landowner signature
- 6 well inspections completed (in May/June; all 6 qualified)

Item 5. Well Monitoring Pilot Program: Progress

- Ranch Systems (http://www.ranchsystems.com/) selected for turnkey equipment provision and installation, communications, data hosting, and reporting
- Monitoring equipment installed on 4 wells with agreements executed
  - Pump discharge and water level being monitored
  - Growers have access to real time flow rate and water level data via Ranch System mobile and web applications
  - Reports customizable for growers and GSAs (currently in progress)
  - Potential for future remote control of pump (on/off)
  - Initial grower response very positive

Item 5. Well Monitoring Pilot Program: Costs

- Initial Costs
  - ~$4,000 per site for program design (technical evaluation, site visits, landowner coordination, equipment specifications, technical coordination with Ranch Systems, etc.)
  - $4,500 to $5,000 per site for equipment and installation
- Recurring Costs (communications, data hosting, reporting)
  - "Base plan" $445 per site per year
  - Substantial discounts depending on number of sites and number of prepaid years of service
  - Bundled service; hard to split costs between GSAs and landowners as assumed for pilot program

Item 5. Well Monitoring Pilot Program: Next Steps

- Evaluate and specify report formats
- Evaluate data quality and potential data uses
  - On-farm purposes
  - GSA/GSP purposes (e.g., near-realtime GW level contouring)
- Evaluate landowner satisfaction and recommendations
- Evaluate options and costs for scaling up program

Discussion

6. Unallocated Grant Funding

Unallocated Grant Funding

TOTAL AVAILABLE GRANT FUNDING	$1,999,600.00	
TOTAL CONTRACTED HCM/WB	$378,000.00	
TOTAL CONTRACTED GSP	$1,337,000.00	
TOTAL UNCONTRACTED	**$284,600.00**	
POTENTIAL TASKS	**Estimated Costs (rough)**	
Well Monitoring Pilot Program	~$16K/site (variable depending on site)	*This would require a grant amendment to move funds
Hydrogeologic Investigation	Costs under this category will vary based on level of effort	
Assess remaining data gaps and develop investigation work plan(s)		
Field mapping of key geologic and hydrologic features		
Test drilling		
Monitoring well installation		
Subsidence benchmark installation		
Stream gage installation		
Well Location database		
Annual Report (due in April 2022)	$50K - $75K	

- $284,600.00 in grant funding remains that has not been contracted
- Funding must be dedicated to GSP planning, not applicable for implementation
- Funds should be dedicated to projects that are currently in the Prop. 1 / Prop. 68 grant Agreement with DWR
- Potential tasks are listed, others may be considered
- Funding must be expended by April 30, 2022
- TAC recommendation to CGA/GGA Boards for consideration

Discussion

12. MEMBER REPORTS AND COMMENTS

Members of the GGA Board are encouraged to share information, reports, comments, and suggest future agenda items. Action cannot be taken on items brought up under this item.

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13. NEXT MEETING

The next regular meeting is scheduled for October 11, 2021 at 1:30 PM.

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14. ADJOURN

The meeting will be adjourned.

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*Indicates Action Item