



Groundwater Sustainability Plan Public Draft Review

Public Outreach Meetings

October 13, 2021, 1:00 – 3:30 pm

October 15, 2021, 5:30 – 8:00 pm



Colusa Groundwater Authority &
Glenn Groundwater Authority

**Colusa Subbasin Groundwater
Sustainability Plan**

FINAL DRAFT REPORT – SEPTEMBER 2021



Opening Remarks

Meeting Agenda

Dave Ceppos

Consensus and
Collaboration Program

CSU - Sacramento

- 1. Overview**
 - Sustainable Groundwater Management Act (SGMA)
 - Groundwater Sustainability Plan (GSP) Preparation
 - Making Public Comments
- 2. GSP Schedule and Informative/Supporting Materials**
- 3. Chapters 3-5**
 - Basin Setting
 - Monitoring Networks
 - Sustainable Management Criteria (SMC)
- 4. Chapter 6-7:**
 - Projects & Management Actions (PMA)
 - Plan Implementation
- 5. Questions and Answers**

Groundwater Sustainability Plan (GSP) Preparation

In response to the 2014 Sustainable Groundwater Management Act (SGMA), the GSP is being prepared by the Colusa Groundwater Authority (CGA), the Glenn Groundwater Authority (GGA) and their member agencies.

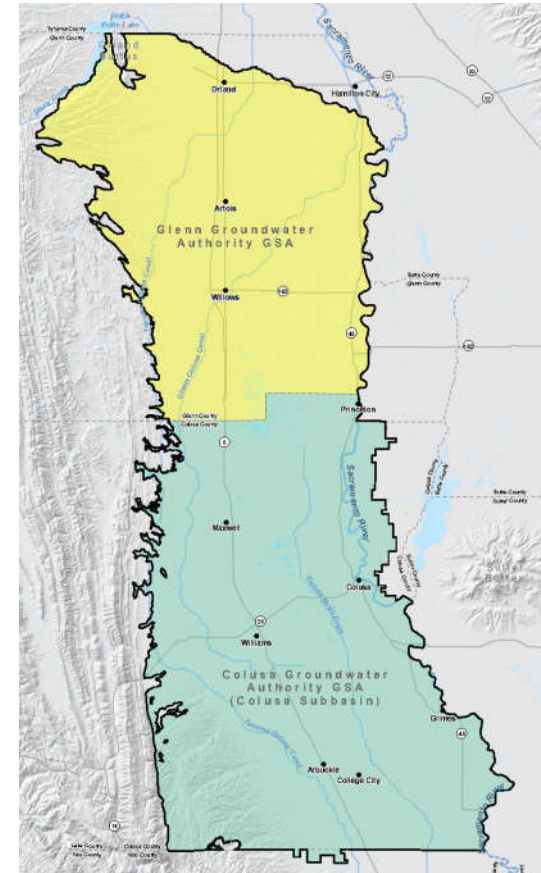
GSP is a roadmap for how groundwater will be managed over the next two decades.

GSP describes groundwater conditions and how groundwater management will avoid adverse impacts to beneficial users, including domestic, municipal, tribal, agricultural, industrial, and environmental uses.

Avoiding adverse impacts is based on the evaluation of 6 Sustainability Indicators:



Note: Seawater intrusion was determined to be not applicable in the Colusa Subbasin.



Making Public Comments

The Draft GSP is available for public review and comment through October 31, 2021.

CGA Website:

<https://colusagroundwater.org/projects/groundwater-sustainability-plan/>

GGA Website:

<https://www.countyofglenn.net/water-resources/colusa-subbasin-groundwater-sustainability-plan-public-review-draft>



Colusa Subbasin Groundwater Sustainability Plan Public Review Draft Input

Commenter Name: _____ Commenter Affiliation (if applicable): _____

This file introduces a table that allows you to easily enter the following key information so we have certainty about your input. The table includes the following categories:

- Chapter Number
- Section Number
- Page Number
- Paragraph Number (starting with the first full paragraph at the top of a given page)
- Figure/Table Number (if applicable)
- Comment

INSTRUCTIONS

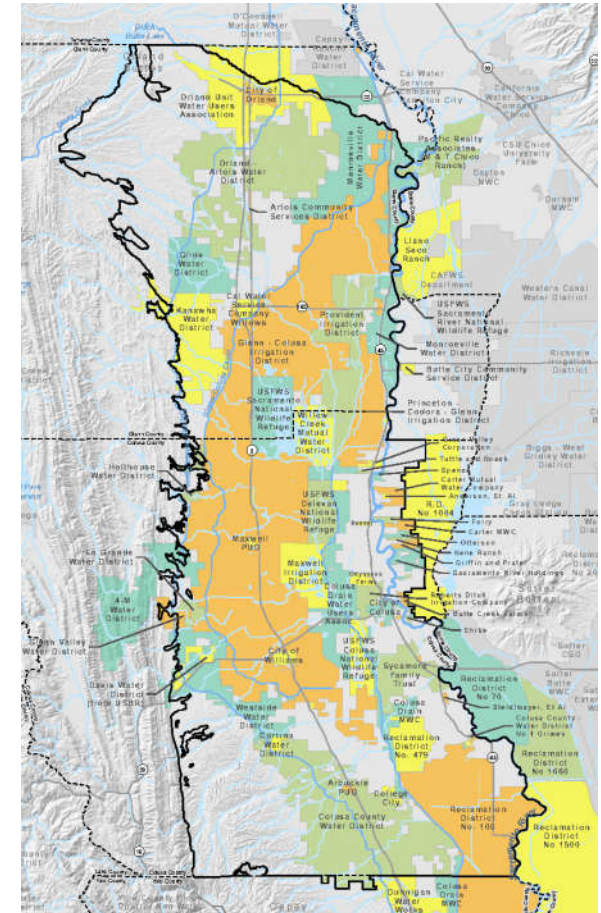
1. Please use the MS Word or PDF document titled "Colusa Subbasin GSP Input 9.2021" to submit your comments.
2. Review all applicable text and note each Chapter, Section, Page, and Line number associated with a comment you'd like to make.
3. Enter your name and if applicable, an organizational affiliation at the top of your table.
4. Once you have completed all your comments, please save the file with your last name at the end in parentheses. For example:
 - Colusa Subbasin GSP Input 9.2021 (Jones).docx
5. If you are located in the Glenn Groundwater Authority, please send your comment file to:
 - Lisa Hunter – Program Manager - Glenn Groundwater Authority: lhunter@countyofglenn.net
6. If you are located in the Colusa Groundwater Authority, please send your comment file to:
 - Mary Fahey – Program Manager - Colusa Groundwater Authority: mfahey@countyofcolusa.com
7. If you don't affiliate specifically with either the CGA and/or GGA, please send your comments to both Mary and Lisa.
8. Please make sure that your comments are submitted by 11:59 p.m. October 31, 2021.

GSP Schedule

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

GSP Introductory and Supporting Materials

- **Preface**
 - Addresses current drought
- **Executive Summary**
- **Chapter 1: Introduction**
 - Purpose of the GSP
 - Sustainability Goal
 - Agency Information
- **Chapter 2: Plan Area**
 - Jurisdictional Boundaries
 - Water Resources Monitoring and Management Programs
 - Land Use
 - Notice and Communication
- **Chapter 8: References and Technical Studies**
- **Appendices**

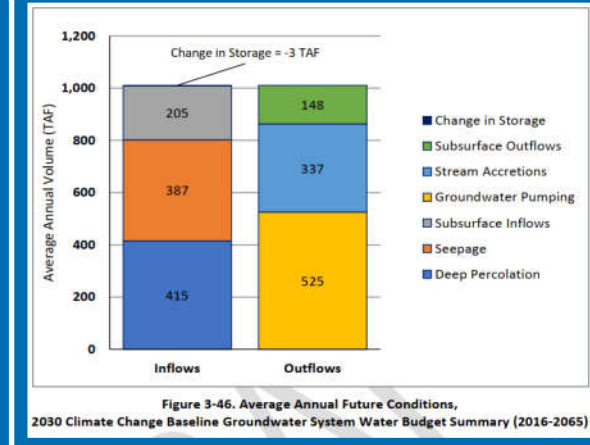
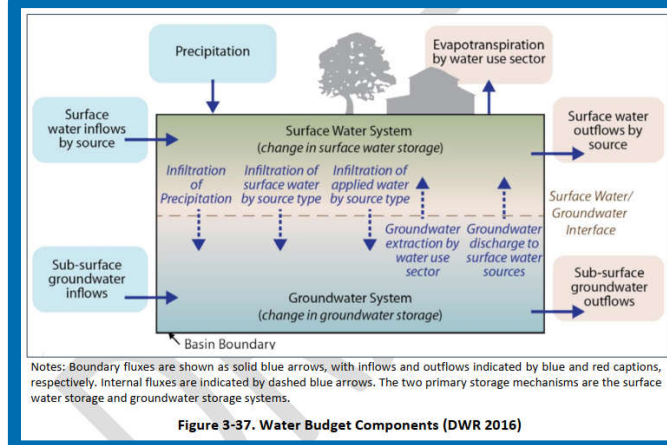
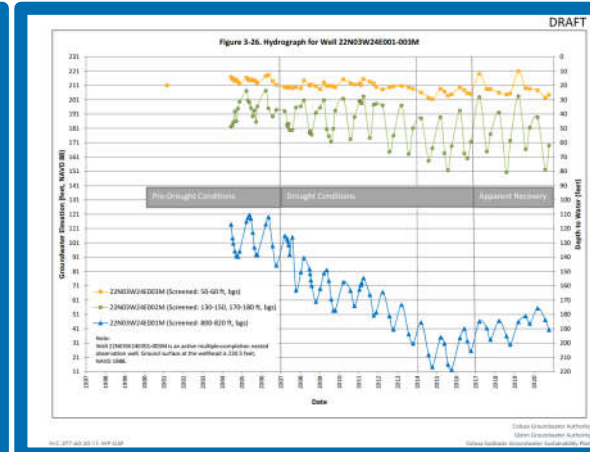
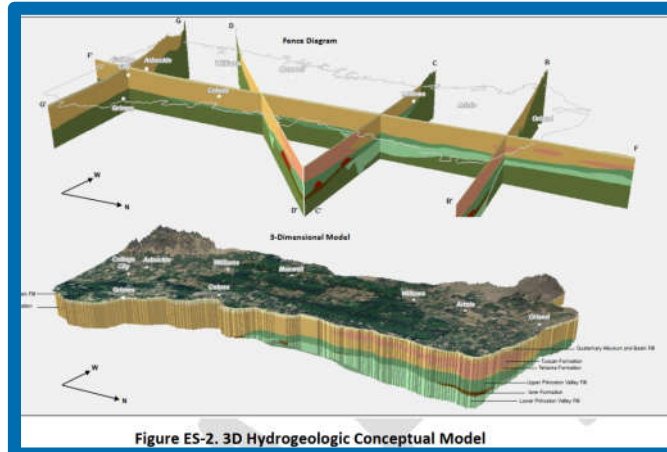


Chapter 3: Basin Setting
Chapter 4: Monitoring Networks
Chapter 5: Sustainable Management Criteria

Ken Loy PG, CEG, CHG
West Yost

GSP Chapter 3—Basin Setting

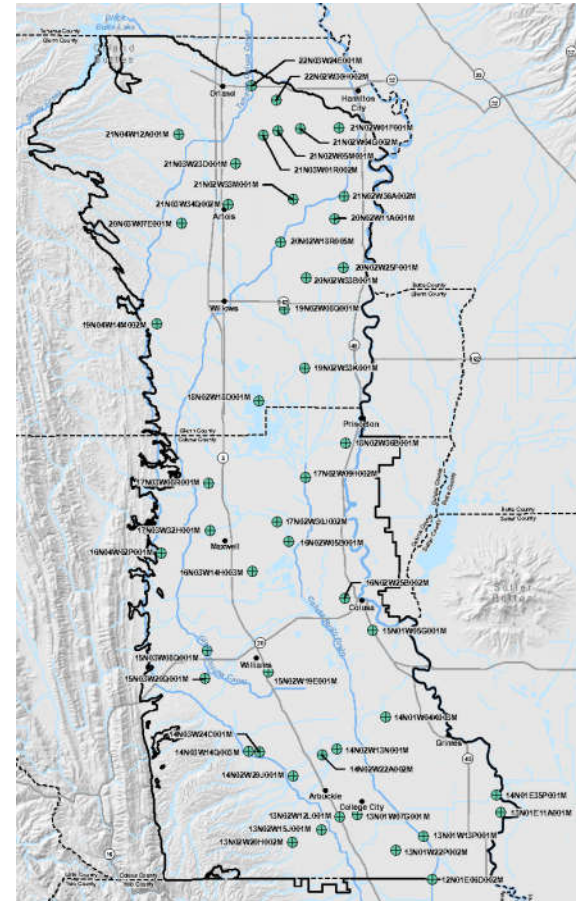
- Hydrogeologic Conceptual Model (HCM)
 - Depicting surface and subsurface features
- Existing and Historical Groundwater Conditions
- Water Budget Information



GSP Chapter 4—Monitoring Networks

- Groundwater Level Monitoring
- Groundwater Quality Monitoring
- Land Subsidence Monitoring
- Surface Water Monitoring

Collaborating with a variety of other agencies to collect and share data.



GSP Chapter 5 – Sustainable Management Criteria (SMC)

Sustainability Indicators

1. Chronic Lowering of Groundwater Levels
2. Reduction of Groundwater Storage
3. Seawater Intrusion*
4. Degraded Water Quality
5. Land Subsidence
6. Depletions of Interconnected Surface Water



** Seawater Intrusion was assessed and determined to be not applicable; undesirable results are not occurring and are unlikely to occur in the Colusa Subbasin.*

Chapter 5 – Sustainable Management Criteria (SMC)

SMC Definition of Terms

- Minimum Thresholds (MT)
 - Level to Avoid
- Measurable Objectives (MO)
 - Goal
- Undesirable Results (UR)
 - Condition in which the basin is not sustainable
- SMC are set for each applicable Sustainability Indicator



Note: Seawater intrusion is not applicable to the Colusa Subbasin.

Undesirable Results

“The description of undesirable results...shall be based on a quantitative description of the combination of minimum threshold exceedances that cause significant and unreasonable effects in the basin.”

SMC Development Approach

- 13 publicly-noticed meetings of Technical Advisory Committees appointed by the Colusa and Glenn Groundwater Authorities over 14 months
 - “Joint TAC” meetings usually 3 hours long
- Supporting technical analyses and guidance from the GSP Consultant Team
- TAC recommendations to the CGA and GGA Boards
- Adoption by respective Boards
- Robust, inclusive process

Summary of Sustainable Management Criteria

Sustainability Indicator	Monitoring Network	Undesirable Result	Minimum Threshold	Measurable Objective
Chronic Lowering of Groundwater Levels	48 Representative Monitoring Network (RMN) wells monitored at least 2-3 times annually by DWR	25% (12 of 48) RMN wells fall continuously below the minimum threshold for 24 consecutive months	The lower of 50% of measured historical groundwater elevation range below the historical measured low elevation and the elevation corresponding to the 20th percentile of domestic well depths in the RMN well's Thiessen polygon, subject to interbasin coordination and consistency to ensure operational compatibility	Mean of last 5 years available groundwater elevation measurements subject to interbasin coordination and consistency to ensure operational compatibility. A fixed value, not a rolling average.
Reduction in Groundwater Storage	48 RMN wells monitored at least 2-3 times annually by DWR (same as Groundwater Level monitoring network)	Use groundwater levels as proxy	Use groundwater levels as proxy	Use groundwater levels as proxy
Degraded Groundwater Quality	23 RMN wells monitored by others at variable intervals under existing State of California regulatory programs.	Electrical conductivity (EC) in 25% (6 of 23) of the RMN wells exceeds the Minimum Threshold for two (2) consecutive years.	The higher of EC of 900 μ S/cm (the recommended California Secondary Maximum Contaminant Level) OR the pre-2015 historical maximum measured EC.	EC of 700 μ S/cm (corresponding to an agricultural water quality objective providing for no yield reduction for crops commonly grown in the Colusa Subbasin).
Land Subsidence	Existing Sacramento Valley Height Modernization Project (SVHMP) benchmarks (63 sites)	A percentage of monitoring sites (benchmarks) experience subsidence rates above the MT ^(a)	0.50 foot per five-year period.	0.25 foot per five-year period.
Depletions of Interconnected Surface Waters	12 RMN wells less than 200 feet deep and between 2,000 feet and five miles of interconnected stream (Sacramento River, Colusa Basin Drain, Stony Creek)	25% (3 of 12) RMN wells fall below their MT for 24 consecutive months.	Ten (10) feet below the observed fall 2015 groundwater level. (Fall 2015 level is the measured elevation recorded on the date closest to Oct 15.)	Mean of last 5 years available groundwater elevation measurements subject to interbasin coordination and consistency to ensure operational compatibility. A fixed value, not a rolling average.

^(a) The percentage of benchmarks with MT exceedances triggering an undesirable results for land subsidence is under development.

Chapter 6: Projects and Management Actions

Chapter 7: Plan Implementation

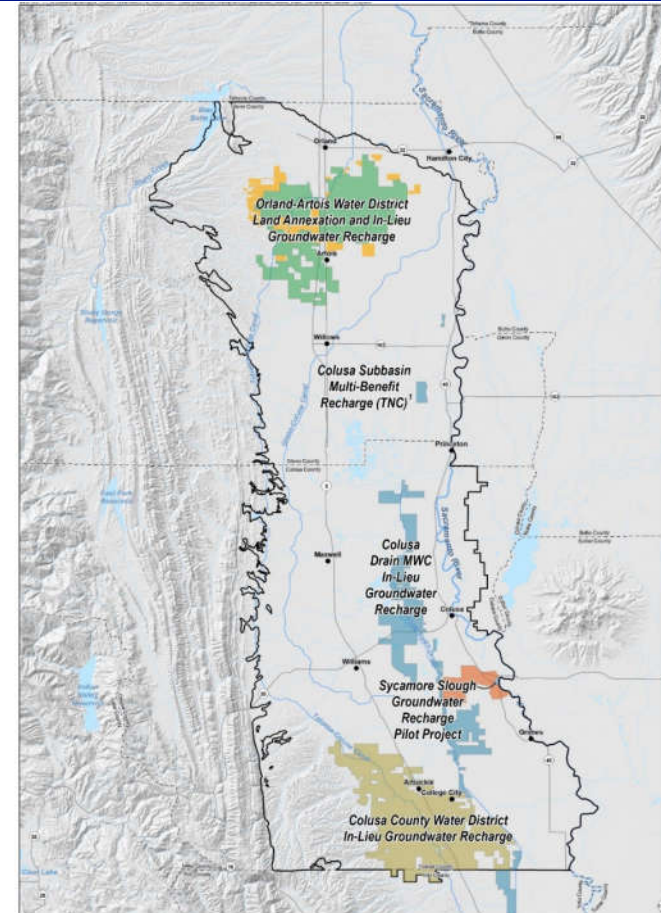
Grant Davids, PE
Davids Engineering

Chapter 6: Projects and Management Actions (PMAs)

- PMAs describe what needs to be done to achieve sustainable management of the Colusa Subbasin by 2042 and maintain sustainability thereafter
- Uncertain future calls for an adaptive management approach
- Current *actual* drought is more compelling than *modeled* future sustainability challenges
- PMAs cast in GSP as being more aligned with near-term drought mitigation, recognizing that they will contribute to long-term sustainable groundwater management
- Thirty-four (34) PMAs described in the GSP:
 - Five (5) Planned PMAs: identified project proponents, “on track for implementation”
 - Six (6) Ongoing PMAs: existing PMAs that could be continued and/or expanded
 - Twenty-three (23) Potential PMAs: various stages of piloting and conceptual development

Planned PMAs

1. Colusa Subbasin Multi-Benefit Groundwater Recharge
2. Sycamore Slough Groundwater Recharge Pilot Project
3. Orland-Artois Water District Land Annexation and Groundwater Recharge
4. Colusa County Water District In-Lieu Groundwater Recharge
5. Colusa Drain Mutual Water Company In-Lieu Groundwater Recharge



Adding and Implementing PMAs

- PMAs can be added anytime
 - January 31, 2022, is the starting line, not the finish line
- PMA Proponents
 - Colusa and Glenn Groundwater Authorities (either separately or together)
 - Existing and potential newly-formed districts
 - Landowners/coalitions of landowners
 - Cities and counties
 - IRWM groups
 - Interested parties
 - State and federal agencies (potential PMA partners)
 - **Collaborative combinations of the above**

Chapter 7: Plan Implementation

- Describes the schedule and costs to implement the GSP over the first 5 years
- Two cost categories
 - GSA Costs – GSP admin, GSP annual reports and 5-year evaluations, studies (14) to fill various data gaps and update/maintain analytic tools
 - PMA Costs – Specific to the five (5) identified planned projects; how costs will be shared remains to be determined
- Potential financing and funding mechanisms
 - Grants and low-interest loans
 - Groundwater extraction charge (e.g., fee per acre-foot pumped)
 - Other fees and charges (e.g., new well permitting fees)
 - Assessments (e.g., per acre or per parcel)
 - Taxes (e.g., general or special taxes)

Public Review of Draft Groundwater Sustainability Plan

- Download and comment on Colusa Subbasin Public Draft
 - <https://colusagroundwater.org/projects/groundwater-sustainability-plan/>
 - <https://www.countyofglenn.net/water-resources/colusa-subbasin-groundwater-sustainability-plan-public-review-draft>
- Comments due October 31, 2021
- Questions and additional information?

Mary Fahey

Program Manager
Colusa Groundwater Authority
530.458.0891 office
mfahey@countyofcolusa.org

Lisa Hunter

Program Manager
Glenn Groundwater Authority
530.934.6540 office
lhunter@countyofglenn.net

Questions and Answers

Closing Remarks