Corning Subbasin Advisory Board

Members
Matt Hansen -- Dave Lester -- Steve Gruenwald -- Ian Turnbull (Alternate)
John Amaro -- Brian Mori -- Julia Violich -- Grant Carmon (Alternate)

Tehama County Flood Control and Water Conservation District

Corning Subbasin Advisory Board Special Meeting Materials

March 6, 2024 | 1:30 p.m.
In-Person Location:
City of Corning Council Chambers
794 Third Street
Corning, CA 96021

Due to limited parking for Corning City Hall, meeting attendees are asked to park their vehicles in the parking lot across from City Hall, next to the railroad tracks.

Alternate Meeting Location:
1177 Magnolia Ave., Larkspur, CA 94939

Remote Public Participation Option:
Microsoft Teams meeting
Join the meeting now
Meeting ID: 267 626 551 501
Passcode: JdWLqm
Dial-in by phone
+1 323-676-6164,,717615980# United States, Los Angeles
Find a local number
Phone conference ID: 717 615 980#

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1. Call to Order

The meeting will be called to order.

2. Roll Call

Staff will conduct roll call.

3. Period of Public Comment

Members of the public are encouraged to address the Corning Subbasin Advisory Board. Public comment will be limited to three minutes. No action will be taken on items under public comment.

4. Groundwater Sustainability Agency Updates

Groundwater Sustainability Agency staff and members may provide activity updates to the CSAB.

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5. Groundwater Sustainability Plan Determination Response

a. *Discussion and potential recommendation to Groundwater Sustainability Agencies on Groundwater Level Sustainable Management Criteria

b. *Discussion and potential recommendation to Groundwater Sustainability Agencies on approach to develop a well mitigation program

c. *Discussion and potential recommendation to Groundwater Sustainability Agencies on approach to develop a demand management program

On October 26, 2023, the Department of Water Resources (DWR) determined the Corning Subbasin GSP to be “incomplete” The GSAs have 180 days to address the deficiencies and resubmit the GSP for evaluation no later than April 23, 2024.

The consulting team, Luhdorff & Scalmanini Consulting Engineers (LSCE), are supporting the efforts to revise the Corning Subbasin GSP to address DWR’s comments. LSCE will be looking for recommendations from the CSAB to the GSAs on specific components of the revision process, particularly related to projects and management actions (PMAs) and approach for determining minimum thresholds for groundwater levels. The PMAs discussion will focus on a well mitigation program and a demand management program.

Additional updates may be provided on activities relating to the Corning Subbasin GSP Revisions.

Attachments:

- GSP Revision and Implementation Status Presentation

GSP Revision and Implementation Status

Corning Subbasin Advisory Board Meeting

March 6, 2024

Luhdorff & Scalmanini Consulting Engineers

Outline

- Situation and Background
- GSP Revision
  - Dry Well Mitigation Program
  - Demand Management Program
  - Modification of Minimum Thresholds
- Groundwater Sustainability Plan Implementation
- Next Steps

LSCE

Situation

- DWR determination letter (10/26/2023) -incomplete GSP.
- Amended GSP due 4/23/2024
- Short timeframe to make decisions, implement changes to GSP, and conduct stakeholder engagement
- Uncertainty in information and estimates
- Tough decisions that will affect water use and economics
- Inadequate GSP will lead to State Water Resources Control Board intervention
- Tehama County working through similar process for three additional basins, desire for some similarities among all

LSCE

Background

DWR- Department of Water Resources
GSA- Groundwater Sustainability Agency
GSP- Groundwater Sustainability Plan
MO- Measurable Objective
MT- Minimum Threshold
PMA- Projects and Management Actions
SMC- Sustainable Management Criteria

Deficiencies:

1. **Overdraft conditions** – no reasonable assessment of conditions or means to mitigate overdraft.

   Corrective Actions:

   A. Reevaluate the assessment of overdraft conditions in the Subbasin.

   B. Provide a reasonable means to mitigate the overdraft that is continuing to occur in the Subbasin.

2. **Chronic Lowering of Groundwater Levels** –SMC is not compliant with GSP Regs for MO's and MT's.

   Corrective Actions:

   A. Refine the description of undesirable results to clearly describe the significant and unreasonable conditions the GSAs are managing the Subbasin to avoid.

   B. The GSAs should remove the water year type requirement from the GSP's undesirable result definition.

   C. The GSA should revise minimum thresholds to be set at the level where the depletion of supply across the Subbasin may lead to undesirable results and provide the criteria used to establish and justify minimum thresholds.

   D. Provide an evaluation of how minimum thresholds may affect the interests of beneficial uses and users of groundwater or land uses and property interests.

LSCE

General Feedback from DWR

- DWR consultation meetings – 12/20/23, 1/24/24 and 2/29/24
- DWR's View
  - Corning Subbasin is not on sustainability path based on existing conditions
  - Undesirable conditions are already occurring, dry wells and declining water levels
- Projects and Management Actions (PMAs)– Need backstop to recharge
- Well Mitigation is required for all wells

LSCE

General Feedback from DWR

- DWR wants commitment, specificity, funding, and timeline.
- Considering PMAs, from recharge to demand management, focused in special zones & commensurate with conditions (triggers)
- GSA resolutions, demonstrates commitment, would spell out agreement, a plan with specific timeline and conditions for action. Time to deliberate, plan, and better engage the community.
- SMC Revisions – more detail on analysis requested
- MTs should be tied to undesirable results definition, likely need to change

DWR- Department of Water Resources
GSA- Groundwater Sustainability Agency
GSP- Groundwater Sustainability Plan
MO- Measurable Objective
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PMA- Projects and Management Actions
SMC- Sustainable Management Criteria

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Dry Well Mitigation

- Well permitting and ordinance to spatially and vertically isolate new wells to minimize impact on wells
- Note: Well permitting is the jurisdiction of the Counties
- Delivery of water and storage tanks
- Well deepening
- Well consolidation (many to one)

LSCE

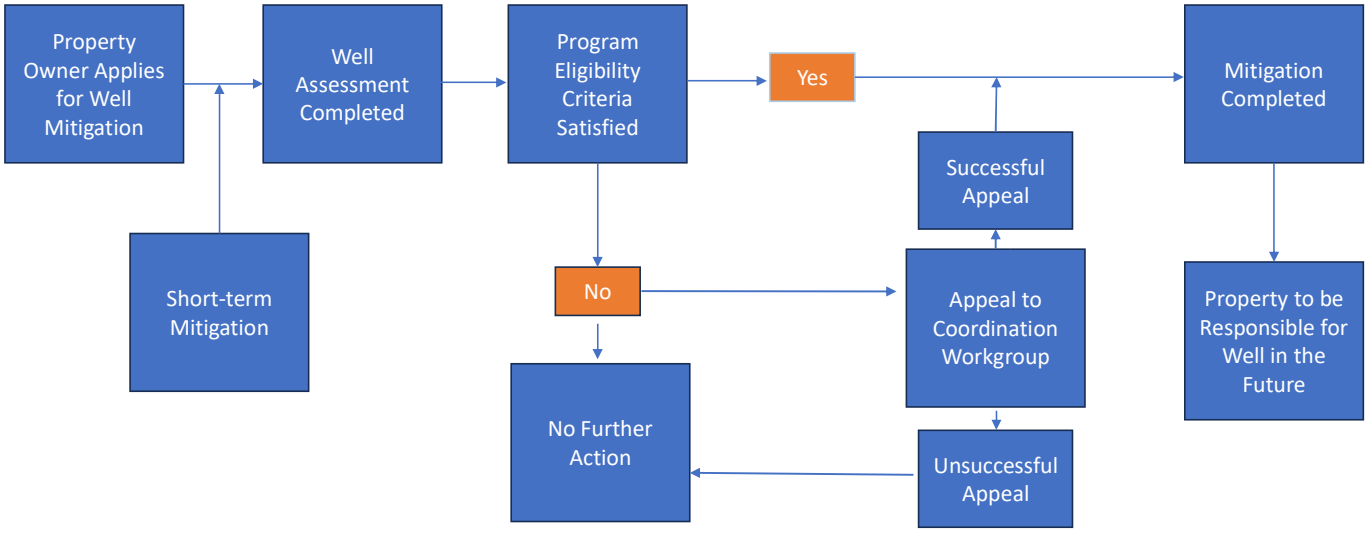
Dry Well Mitigation Program - Example

How will the program be implemented?

- Chowchilla Water District will administer the program
- No income threshold limit
- Implementation committee may be established to review the program
- Applicant must compete initial well assessment using preferred contractor
- Applicant must complete private well education online class
- Eligible mitigation includes drilling and well construction
- Program operates on first come, first serve basis
- Maximum award is $30,000
- Award may only be used once per specified well and is recorded with title

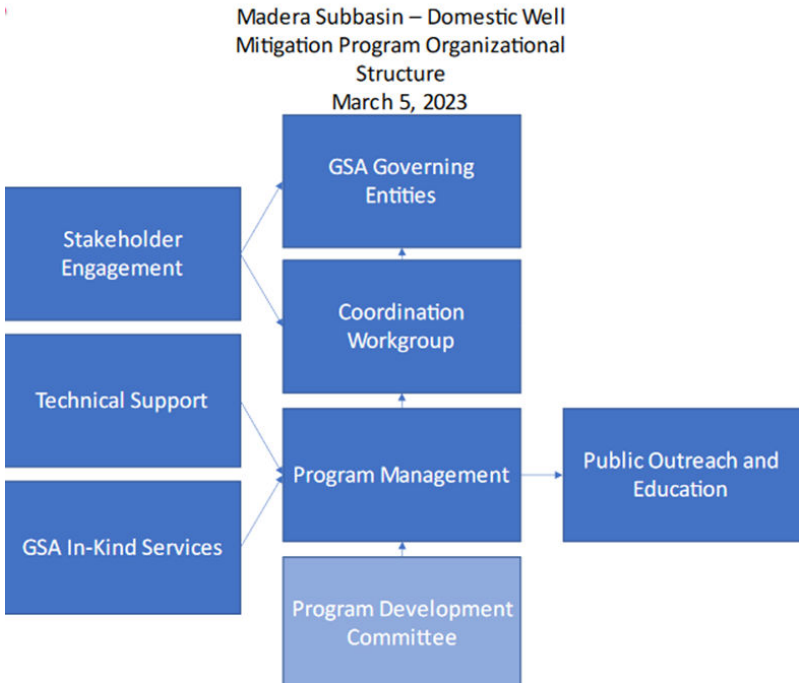
LSCE

Well Mitigation Example Flowchart



LSCE

Dry Well Mitigation Workplan - Example



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Dry Well Mitigation Workplan

Items to consider in Program development:

- Program application process
- Public outreach
- Eligibility criteria (property/property owner)
- Preferred contractors (reputable services)
- Initial well evaluation
- Program form development (participation terms, agreement, education process/requirement)
- Priority (first-come-first-served)
- Eligible mitigation (supply focused) vs. non-eligible services (landscaping, ongoing maintenance, etc.)
- Mitigation award (how costs will be reviewed/approved)
- Recordation of mitigation award
- Coordination with counties, other programs
- Post-mitigation responsibility

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Feedback and Recommendation

Feedback from CSAB on proposed content of the program.

The CSAB recommends that the GSAS in the Corning Subbasin pass a resolution to create and implement a dry well mitigation program with funding and specific timelines for creation.

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Demand Management Program, Overdraft

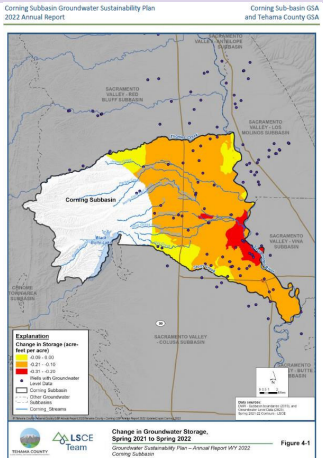
- GSP water budget water Year (Oct 1 – Sept 30) used model
- Annual report water budget water level measurements (Spring to Spring) and extrapolated/projected
- Different methodology and time frame

Sustainable yield is ~172,000 AF

1990-2022 Groundwater pumping is ~150,000 AF average

2022 Groundwater pumping is ~230,000 AF

~60% Area Contoured



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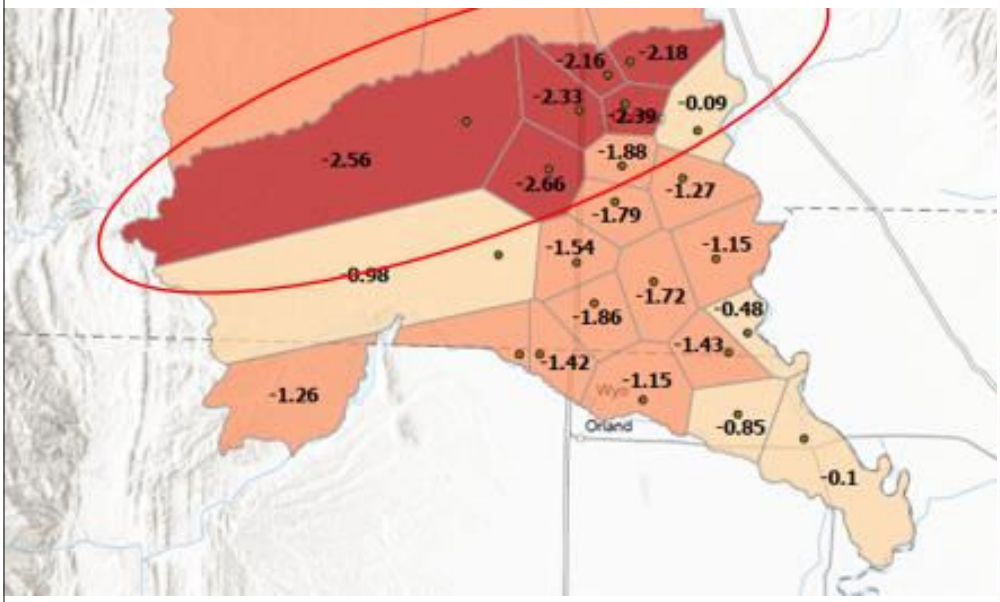
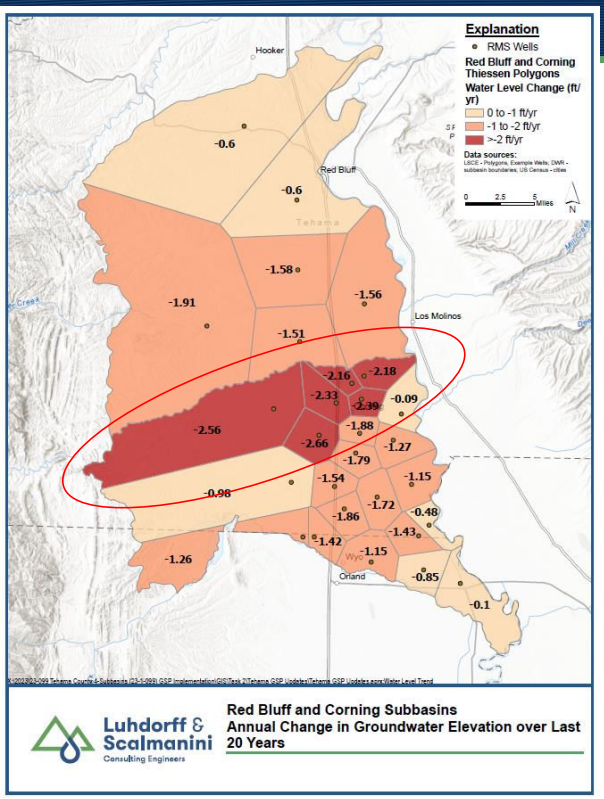
Overdraft - Analysis





Luhdorff & Scalmanini Consulting Engineers

Red Bluff and Corning Subbasins
Annual Change in Groundwater Elevation over Last 20 Years

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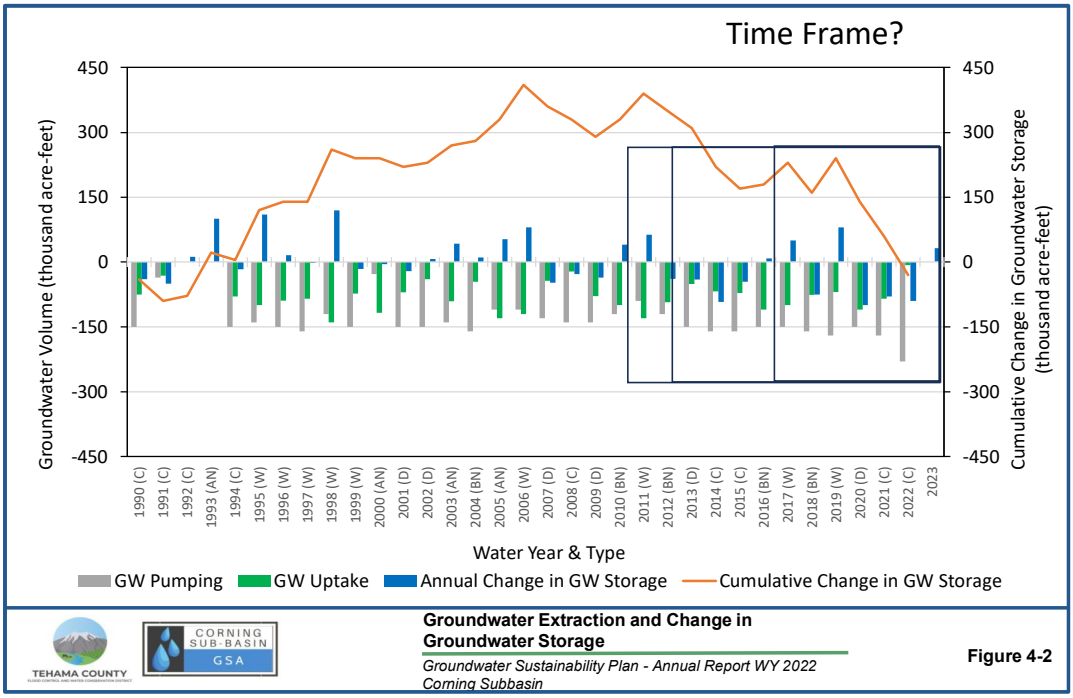
Overdraft Estimation



Groundwater Extraction and Change in Groundwater Storage

Groundwater Sustainability Plan - Annual Report WY 2022
Corning Subbasin

Figure 4-2

Overdraft Estimation

Average Change in Storage from 5 to 13 years

2011-2023	2012-2023	2013-2023	2014-2023	2015-2023	2016-2023	2017-2023	2018-2023	2019-2023
-25,385	-32,750	-32,182	-31,300	-24,556	-21,875	-26,143	-38,833	-31,600

A deficient of ~21,900 to ~38,800 AF

Considerations:

- Land Use Changes
- Variable Water Year types
- Hybrid of model and empirical-based methods
- Weighted for current conditions

Projects and Management Actions

- GSPs contain PMAs and describe benefits
- Annual Reports include updates on PMAs
- DWR wants specificity and details
- DWR wants commitment
- PMAs focused in special zones
- Considering implementing PMAs commensurate with conditions (triggers), from recharge to demand management

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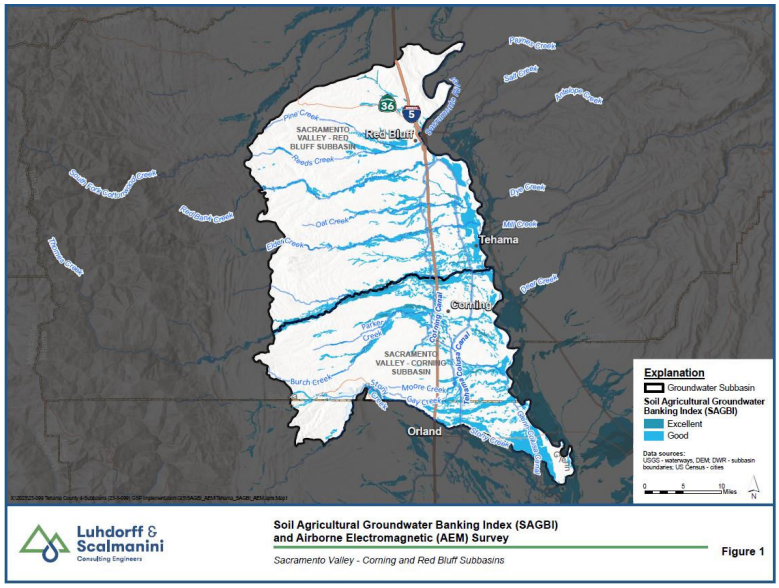
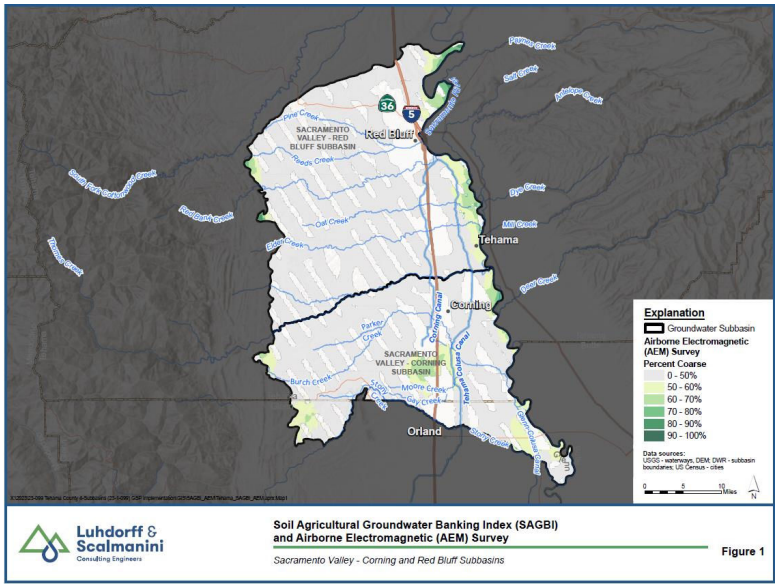
Projects and Management Actions





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Projects and Management Actions

PMA	PMA Type	Estimated Recharge	Estimated Capital Cost	Estimated Annual Cost
Use of Full Surface Water Allocations	In-Lieu Recharge	900 AF/Year	TBD	$787,500* *compared to $735,000 to $1,050,00 for groundwater pumping
OUWUA Infrastructure Improvements for In-Lieu Recharge	In-Lieu Recharge	12,000 – 25,000 AF/Year	$15,000,000 - $23,000,000	$350,000 - $550,000
Regional Surface Water Transfers for In-Lieu Recharge	In-Lieu Recharge	40,000 – 120,000 AF/Year	TBD	Up to $350/AF* *compared to $70-$100/AF for groundwater
Invasive Plant Removal	Demand Reduction	9,240 AF/Year	$21,000,000	TBD
Recycled Water use	In-Lieu Recharge	900 AF/Year	TBD	TBD
Groundwater Recharge through Unlined Conveyance Features	Direct Groundwater Recharge	25,000 AF/Year	TBD	TBD

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Demand Management Program

- Demand management range of actions could include
  - Voluntary: fallowing, dry farming, multi-benefit land repurposing (recreational spaces, renewable energy, habitat).
  - Involuntary: Irrigated land restrictions, pumping restrictions, allocations, water trading, and/or fee structures.
  - Demand management fee formulation includes Human Right to Water, beneficial use, and economic impacts.
  - Demand management will require legal review, and processes and resources to implement and enforce.

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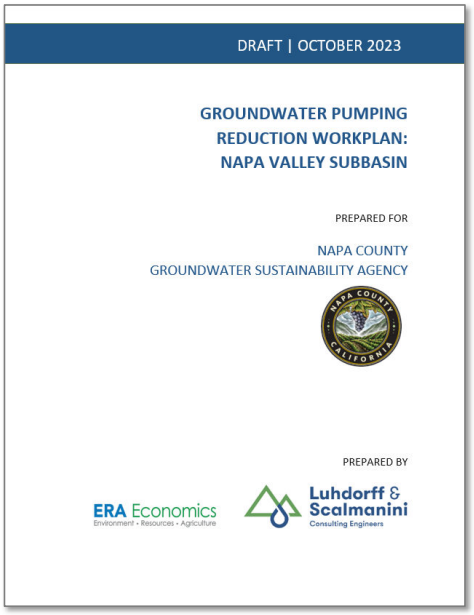
Demand Management - Demand Management Workplan Example

- Groundwater pumping reduction workplan
  - Groundwater Pumping Reduction Goal
  - Voluntary Approaches to Reduce Groundwater Pumping
  - Economic analysis of water conservation practices
  - Data Needs and Measuring Water Use
  - Steps for Implementation
  - Communication and Engagement
  - Pumping Allocations
  - Ordinances and Land Use Restrictions
  - Training and Education



LSCE

Feedback and Recommendation

Feedback from CSAB on proposed content of the program.

CSAB recommends that the GSAs in the Corning Subbasin pass a resolution to create and implement a demand management program with funding and specific timelines for creation.

Note: Colusa Subbasin GSAs are considering the use of an MOU to commit to the development of well mitigation and demand management programs

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Quantify Undesirable Results

"GSAs must describe the effect of undesirable results on the beneficial uses and users of groundwater. Quantitative values for minimum thresholds should be supported by information and criteria relied upon to establish and justify the minimum threshold, and a quantitative description of how conditions at minimum thresholds may affect the interests of beneficial uses and users of groundwater"

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Sustainable Management Criteria

The GSA must identify the number, location, and percentage of wells that may be impacted at the proposed minimum thresholds that will not receive assistance through the well mitigation program and explain how the interests of beneficial uses and users were considered.

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Sustainable Management Criteria

Feedback from DWR

- Any well (regardless of age) needs to be evaluated (part of the well mitigation program)
- Existing conditions don't indicate that the Corning Subbasin is on track to reach sustainability
- Overdraft is occurring, and as a result, wells have gone dry (Undesirable Results)

LSCE

Sustainable Management Criteria

<u>Overview of 2022 SMC Development for Groundwater Levels</u>

- Wells prior to 1991 were excluded
- A safety factor of 25 feet
- Approximately 16% of domestic wells installed since 1991 at risk of getting impacted.
- Similar approach as neighboring basins implemented

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GSP- Groundwater Sustainability Plan
MO- Measurable Objective
MT- Minimum Threshold
PMA- Projects and Management Actions
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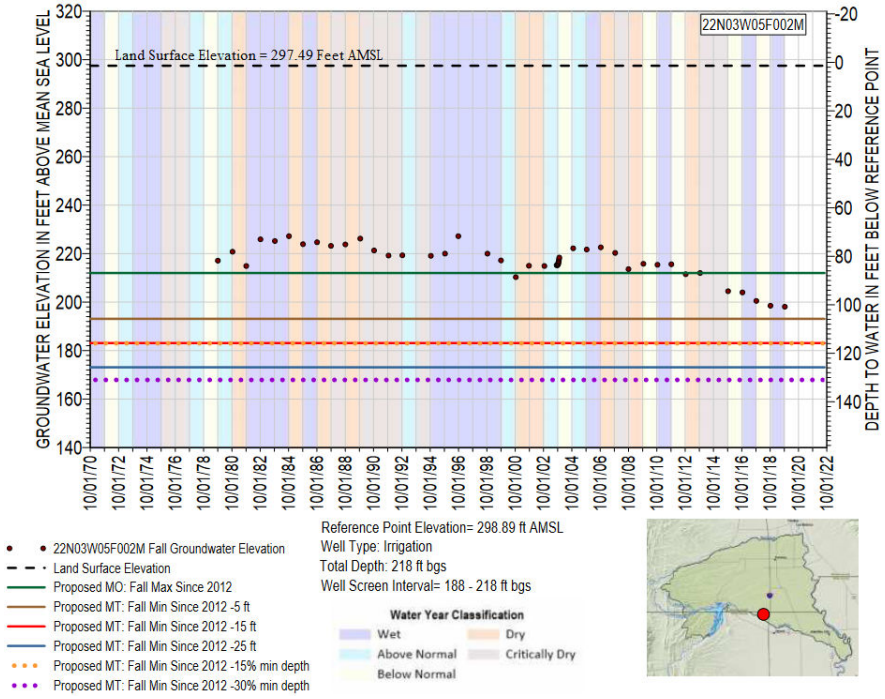
Modification of Minimum Thresholds, May 5, 2021



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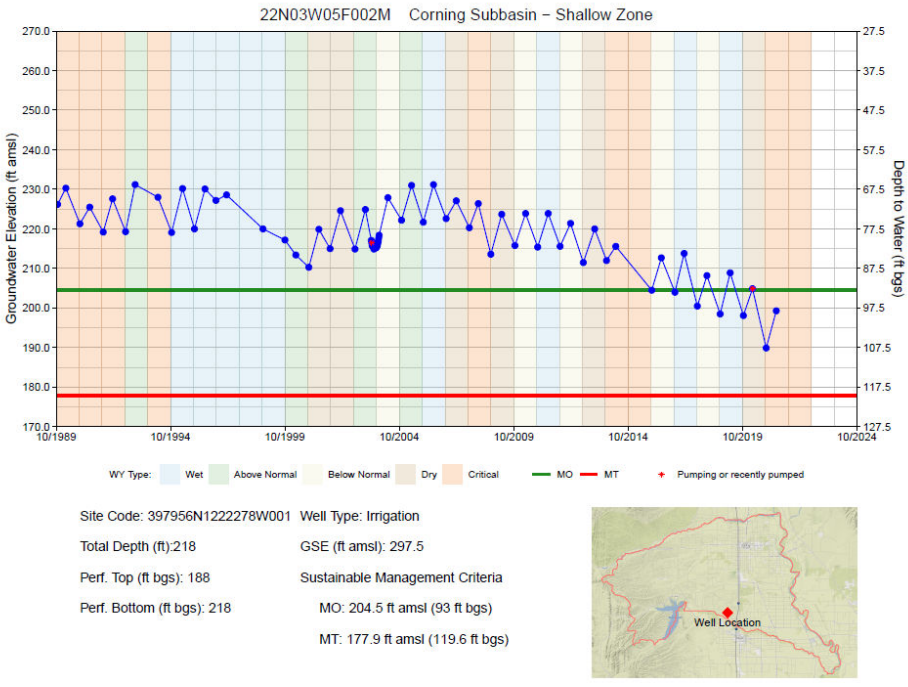
Modification of Minimum Thresholds



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Modification of Minimum Thresholds

Existing Minimum Thresholds

- **Stable wells** (2010 and 2019 stable groundwater elevations): Minimum fall groundwater elevation since 2012 minus 20-foot buffer
- **Declining wells** (2010 and 2019 stable groundwater elevations): Minimum fall groundwater elevation since 2012 minus 20% of minimum groundwater level depth.

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Minimum Thresholds – Colusa Subbasin

- Overview of Colusa Subbasin SMC for Groundwater Levels Considerations -DRAFT
  - Minimum Thresholds
    - Areas with dry wells (and/or subsidence) since 2015
      - 2020-2022 groundwater low
    - Areas without dry wells (and/or subsidence) since 2015
      - 2020-2022 low + 10 – 25ish feet deeper (confirm with domestic well depths) DRAFT

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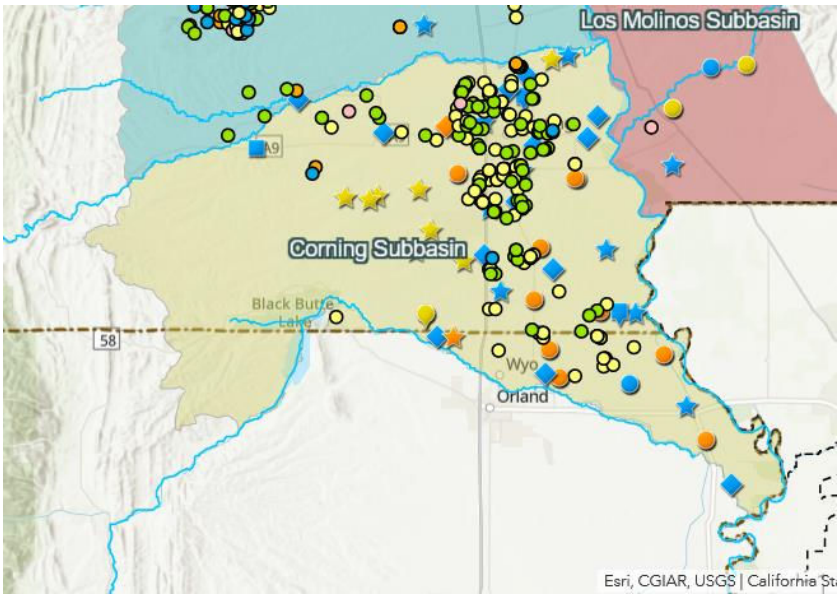
Minimum Thresholds – Groundwater Levels

Draft Web Mapping Tool



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https://infolsce.maps.arcgis.com/home/webmap/viewer.html?webmap=2191b21fa2f444b39a4d36d3b16ad552

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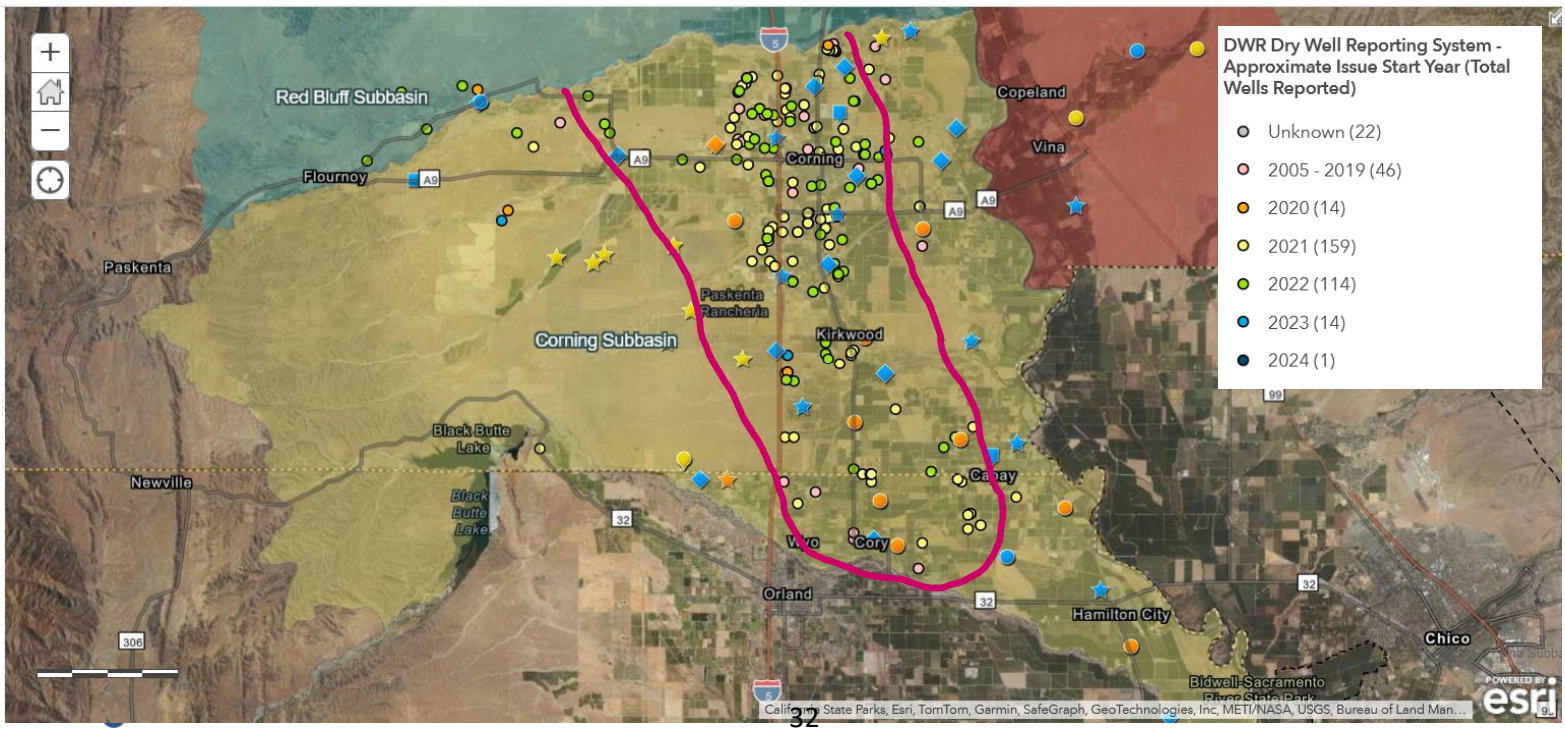
Special Zone Defined by Dry Wells, Illustrative only



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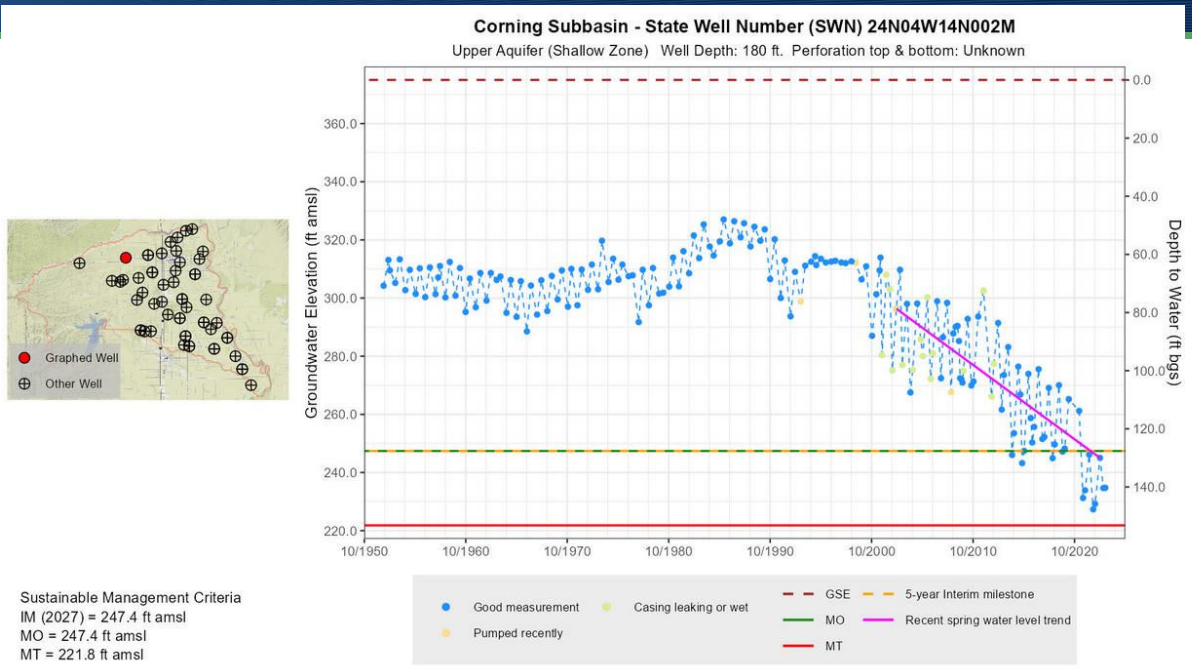
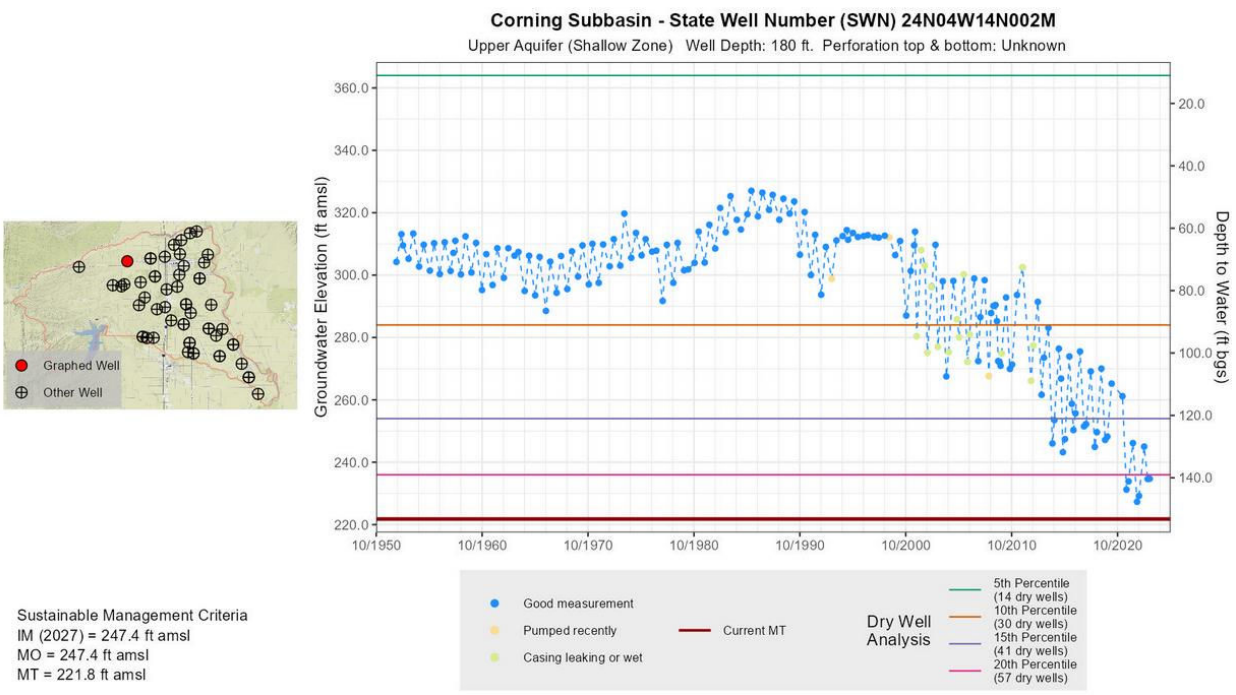
Special Zone May be Refined with Hydrographs



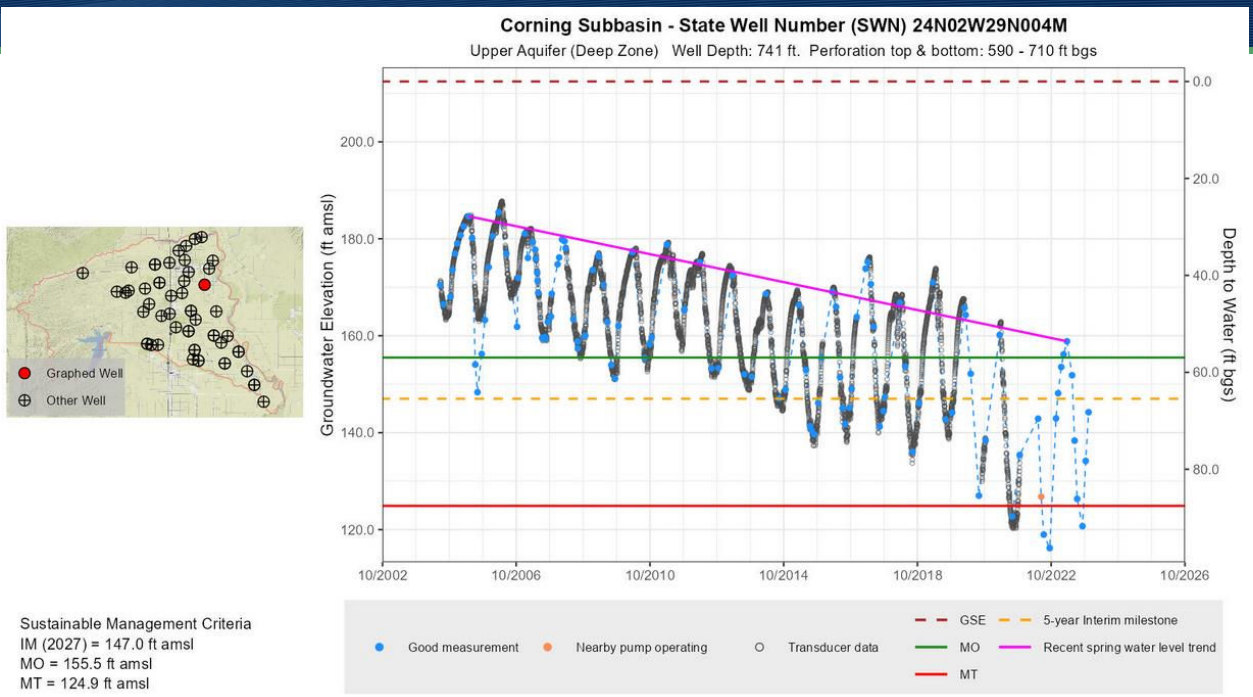
Sustainable Management Criteria
IM (2027) = 247.4 ft amsl
MO = 247.4 ft amsl
MT = 221.8 ft amsl

LSCE



Sustainable Management Criteria
IM (2027) = 247.4 ft amsl
MO = 247.4 ft amsl
MT = 221.8 ft amsl

LSCE



Sustainable Management Criteria
IM (2027) = 147.0 ft amsl
MO = 155.5 ft amsl
MT = 124.9 ft amsl

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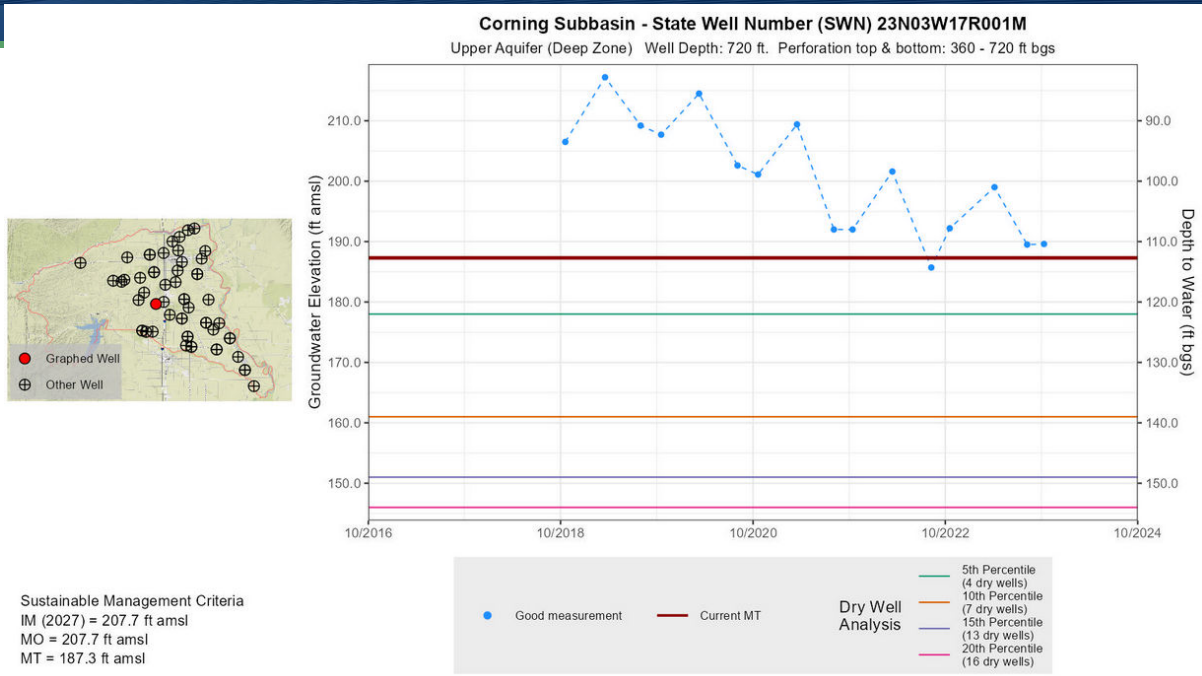

Sustainable Management Criteria
IM (2027) = 207.7 ft amsl
MO = 207.7 ft amsl
MT = 187.3 ft amsl

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Recommendation

Set groundwater level MTs higher:

1. MTs for chronic lowering of groundwater levels are "the groundwater elevation indicating a depletion of supply at a given location that may lead to undesirable results" DWR believes overdraft for Corning is underestimated they will expect MTs to be raised.
2. DWR not likely to approve MTs if greater than 10% wells dewater.
3. Closer to the goal, MOs
4. Undesirable results in 2020- 2022 indicate MTs surpassed

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Recommendation

- MT Options:
  1. Maintain the MTs, and provide better explanation
  2. 2020-2022 groundwater lows in focus areas, different metric elsewhere
  3. Set MTs based on Dry Well Reports
  4. Set MTs ~ 5% wells dewater.
  5. Set MTs ~ 10% wells dewater.
  6. May 5, 2021, MT options

MT #1: minimum fall water elevation since 2012 minus 5-foot buffer

MT #2: minimum fall water elevation since 2012 minus 15-foot buffer

MT #3: minimum fall water elevation since 2012 minus 25-foot buffer

MT #4: minimum fall water elevation since 2012 minus 15% of minimum water level depth

MT #5: minimum fall water elevation since 2012 minus 30% of minimum water level depth

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GSP- Groundwater Sustainability Plan
MO- Measurable Objective
MT- Minimum Threshold
PMA- Projects and Management Actions
SMC- Sustainable Management Criteria

LSCE

Feedback and Recommendation

Feedback from CSAB on MT values and methods.

Recommendation for the GSA to modify the existing Minimum Thresholds including the criteria used to establish and justify the minimum thresholds.

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Next Steps

- GSA to share draft well mitigation resolution
- GSA to share draft demand management resolution
- GSA to share definition of undesirable results, MOs and MTs
- DWR and GSA to set consultation meeting #4 in March

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Next Steps

Working Schedule- Subject to Change

- **February** – Approach for Revising GSPs & Draft Content
  - February 22 – CSGSA
  - February 26 – TC GSA
  - February 28 – Ad Hoc Comm.
  - February 29 – DWR Consultation Meeting

CSAB- Corning Subbasin Advisory Board
CSGSA- Corning Sub-basin GSA
TC GSA- Tehama County GSA (Tehama County Flood Control & Water Conservation District
TC GWC- Tehama County Groundwater Commission

- **March** – Draft Revised GSPs
  - March 6 – CSAB
  - March (TBD) – SGMA Implementation Public Workshop
  - March (TBD) - DWR Consultation Meeting, if necessary
  - Third week of March- Draft Revised GSP
  - March 27 – TC GWC
  - March 28 – CSGSA

- **April** – Final Revised GSPs
  - Early April (TBD) – Comments on draft GSPs
  - April 3 – CSAB
  - April 5 – TC GSA
  - April (TBD) – Final Draft Revised GSP
  - April 11 – CSGSA (adopt GSP)
  - April 15 – TC GSA (adopt GSP)
  - April 22 – Revised GSPs to DWR

*ad hoc committee meetings scheduled as needed

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Annual Report Status

- Updates on Groundwater Conditions
  - Groundwater Elevation (Hydrographs, Contour Maps)
  - Avg Spring WLs 172 ft amsl; Avg Fall WLs 158 ft amsl
  - 33 ft higher than MT in Spring
  - 16 ft higher than MT in Fall
- Change in Groundwater Storage
- Water Supply and Water Use
  - Groundwater Extraction
  - Surface Water Supplies
  - Total Water Use

2023 AR Data Not Yet Available

- Progress Toward Plan Implementation (e.g., implementation of planned projects and management actions)

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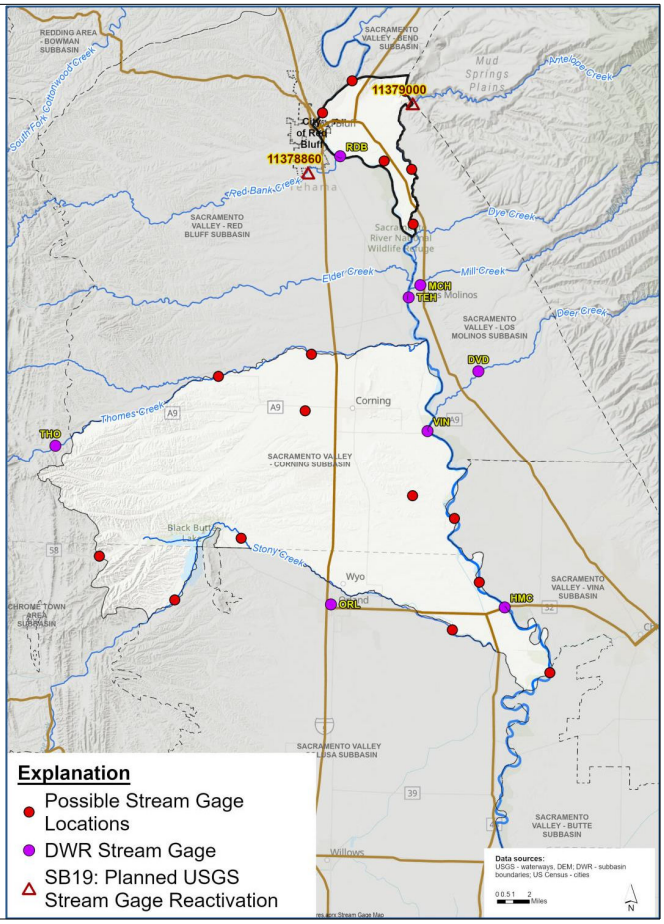
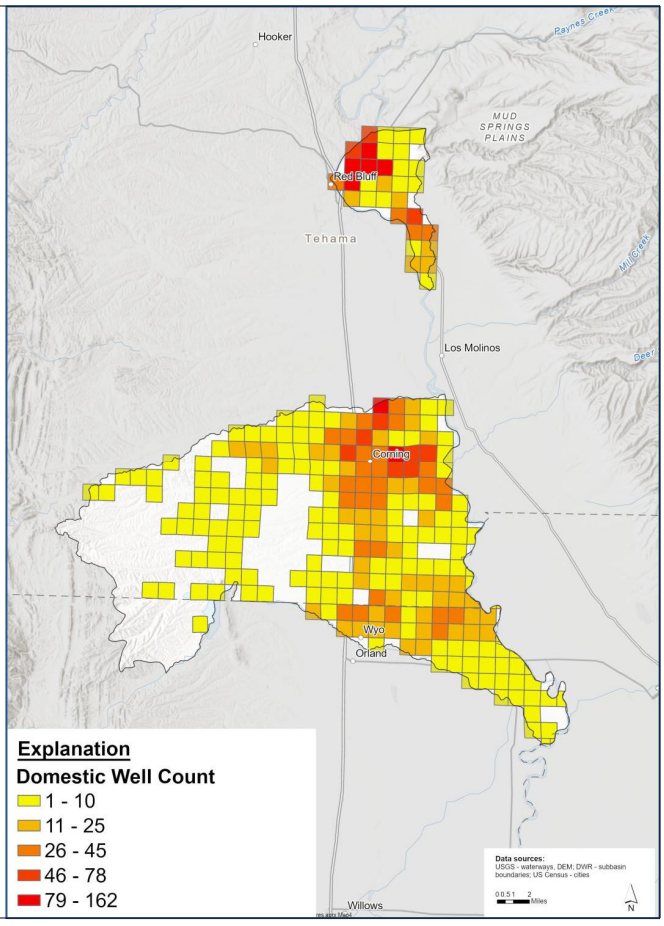
Progress: Surface Water/ Groundwater Site Identification

- Identified Stream Gages from:
  - DWR,
  - Ideal new locations, and
  - planned USGS reactivations for installing new gages and conducting synoptic stream gaging
- In progress: Identifying potential contacts for possible SW/GW locations



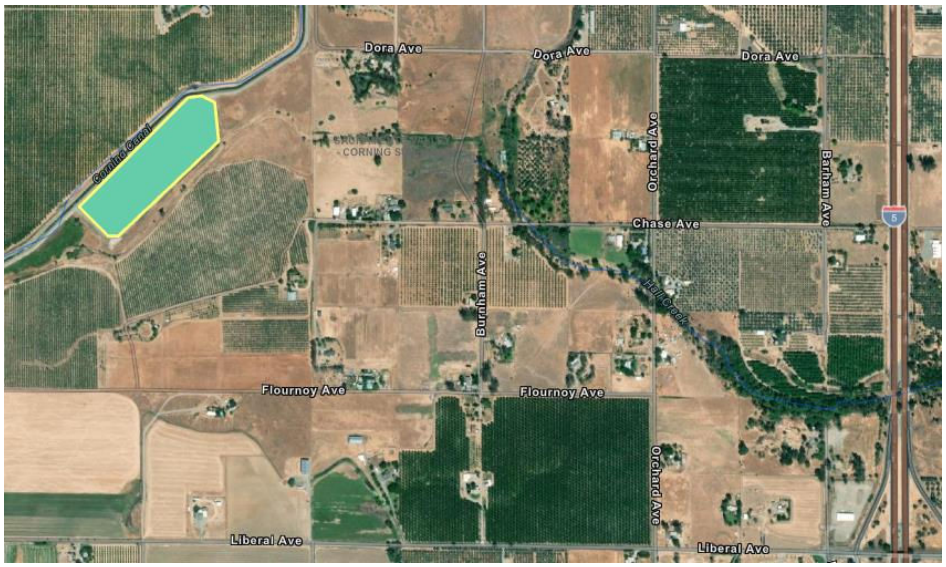
Progress: Domestic Monitoring

- In progress: Identifying potential contacts for domestic well monitoring
  - Volunteers being compiled from well registration program
  - Pilot volunteers have been contacted



Recharge Progress

- USBR Stormwater Pond (Corning Subbasin)
- 10-acre pond
- Potential Water sources:
  - Corning Canal
- 2 operating modes
  1) Irrigation Season
  2) Storm Season



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Recharge Progress

- Wolf Recharge Pond (Corning Subbasin)
- 14-acre pond
- Existing infrastructure
- Potential to divert 2.5 CFS from Corning Canal (existing diversion right)

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Questions?

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6. Groundwater Sustainability Plan Implementation

a. Update on Sustainable Groundwater Management (SGM) Implementation Grant

b. Update on Water Year 2023 Annual Report development

Luhdorff & Scalmanini Consulting Engineers (LSCE) are leading the Tehama County GSP Implementation Project, which includes the Corning Subbasin. This project is generally funded through the SGM Implementation Grants awarded to the Corning Subbasin and other subbasins in Tehama County. The following tasks are included in the project:

- Task 1. Grant Management and Administration
- Task 2. GSP Implementation, Outreach, and Compliance Activities
- Task 3. Ongoing Monitoring, Data Gaps, and Enhancements
- Task 4. Projects and Management Actions- Recharge Focused
- Task 5. Projects and Management Actions- Regional Conjunctive Use
- Task 6. General Consulting Services on an As Needed

The GSP revision work discussed during the Groundwater Sustainability Plan Determination Response item is included in Task 2 of the grant project.

LSCE staff will provide an update on the SGM Implementation Grant tasks and the development of the Water Year 2023 Annual Report.

The presentation for this item is included in the attachment for Item 5.

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7. Discussion and potential announcement of Special CSAB Meeting- A special CSAB Meeting may be called on March 13, 2024 at 1:30 p.m. at 794 Third Street, Corning, CA 96021

The CSAB will discuss and decide whether a special meeting is needed. A special meeting of the CSAB may be held March 13, 2024 at 1:30 p.m. at the Corning City Council Chambers located at 794 Third Street in Corning, CA.

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8. Corning Subbasin Advisory Board Member Reports and Comments

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

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9. Next Meeting

The next regular meeting is scheduled for April 3, 2024 at 1:30 p.m. Pending the outcomes of Item 7, a special meeting may be scheduled for March 13, 2024 at 1:30 p.m.

10. Adjourn

The meeting will be adjourned.