



# Demand Management Working Group Meeting #3

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October 23, 2024



- 8:30 Welcome and round-robin introductions
- 8:35 Agenda review and participation
- 8:40 Updates
- 8:45 Revising the polygon approach for assessing sustainable yield
- 9:50 *Optional break*
- 10:00 Working Group Activities
- 10:25 Recap and Next Steps
- 10:30 Adjourn

# Agenda

## Participation Procedures

- Contribute
- Make room for others
- All thoughts have value
- Ask questions of one another
- Not consensus-seeking
- Consider those listening in (state name, one voice at a time)

- Meeting 2 and Updates
- Today's Meeting Objectives

## Working Group Updates

# Meeting 2 Recap and Updates

- Mtg 2 Topics Covered:
  - Affirming important data needs
  - Adding wells to monitoring network to assess sustainable yield
  - Initial prioritizing WG discussions
  
- New data viewer map tool (walk-through today)

Reminder: meeting materials on website

[tehamacountywater.org/demand-management-ad-hoc-working-group/](https://tehamacountywater.org/demand-management-ad-hoc-working-group/)

## Revising Polygon Approach for Assessing Sustainable Yield

- Data View Map Tool
- Discuss potential approaches for revising polygons

# Tutorial: Online Data Viewer Map

- View original polygons and original set of monitoring wells (e.g., have 20+ years of data)
- View groundwater levels, focal areas/special zones, reported dry wells, irrigated acreage, etc.
- **NEW:** View potential wells to add to the network (i.e., at least 5 years of data with no huge data gaps during that time).

# Revising Polygons: APPROACHES

## Potential Approaches

1. **True-Thiessen:** Auto-generated
2. **Groundwater Conditions-Based:** Where experiencing or predicting groundwater issues
3. **Land Use-Based:** Where water is being used
4. **Evapotranspiration-Based:** How much water is leaving the system



# Revising Polygons: CRITERIA

## Potential Criteria

- Equidistant from RMS wells
- Decent spread of wells for adequate coverage
- Minimized quirks and outliers
- Balance of using up-to-date data and ability to keep updated

# Revising Polygons: WG DISCUSSION

## Potential Approaches

1. **True-Thiessen:** Auto-generated
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4. **Evapotranspiration-Based:** How much water is leaving the system

## Potential Criteria

- Equidistant from RMS wells
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## Discussion Questions:

- What are the pros/cons for the different polygon designation approaches?
- Questions/considerations you might have while exploring the map tool?

- WG charge, role and responsibilities
- Anticipated activities
- Potential outputs
- Continue key information sources

## Working Group Activities

## WG Charge, Role & Responsibilities

1. Represent the interests and perspectives of their respective stakeholder group(s).
  1. O&E w/ respective stakeholder groups
  2. Liaison w/ the WG
2. Discuss and provide feedback on groundwater demand management strategies and other elements that will support implementation of the demand management programs
  1. Assist in identifying potential impacts and benefits of potential demand management strategies.
  2. Feedback goes to Commission Ad Hoc, who will make recommendations to the Groundwater Commission; BOD final decision-makers
  3. Feedback also helps staff draft specific materials (e.g., draft resolutions)

# Demand Management Programs | Ad Hoc and Working Group Meeting Framework / Timeline

## 1. Form Groups & Prepare

- Formation & Planning
- Defining Goals, Objectives, and Priorities

Mtg 1: Above items plus criteria and info requests

Mtg 2: Program Outline and WG Input

Mtg 3: WG Outputs

## 2. Gather Info and Generate Ideas

- Information Collection and Analyses/ Assessments
- Identify Management Strategies

Mtg 2: Info Requests Follow-Up, Assessing Sustainable Yield

Mtg 3: Revising polygon approach (map tool)

## 3. Explore and Package Ideas

- Build Out Specific Elements and Strategies
- Outreach Coordination

## 4. Refine

- Vet and refine program elements and strategies

## 5. "Finalize" and Implement

- Finalize elements for Ad Hoc recommendations
- Identify considerations and opportunities to improve implementation feasibility



**GSA Boards Review/Consider for Approval**

**Jan 2026:**  
RB, Ant, LM

**Jan 2027:**  
Corning

# Anticipated Activities

(not necessarily chronological)

- Identifying key information needs and sources (including partners)
- Helping refine management units (polygons) and documenting rationale
- Discussing range of demand management strategies (benefits, concerns, assumptions/uncertainties, other considerations)
- Exploring potential demand management frameworks
  - Select a set of representative areas (polygons and adjoining polygons, as appropriate)
  - Characterize groundwater situation
  - Consider which strategies are appropriate and how they could be implemented (triggers/thresholds for x,y,z strategies)
- Discussing key implementation elements
  - Program funding
  - Outreach and engagement
  - Etc.

# Potential Outputs

Compiled elements to inform demand management program write-up:

- Overview summary table of the potential demand management strategies (next slide)
- Outputs from the demand management exercises (DM framework with triggers and what DM would be triggered)
- Slides or memos outlining recommendations from the Working Group (documenting areas of alignment and divergence)
- Others? (What/how outputs will be used by staff, Ad Hoc, Commission, etc.)

# Summary Table (living, working doc)

## Overview Table of Potential Demand Management Options

Updated 10.12.2024

### Immediate and Voluntary Measures

Best Practices | Conservation | In-Lieu Surface Water | Land Repurposing | Land Use Change Incentives | Dry Farming | Fallowing

Demand Management Option (Voluntary & Immediate)	Benefits	Concerns
<b>Best Practices</b>  e.g., agronomic practices, soil moisture monitoring, and delayed irrigation to reduce groundwater extraction.	<ul style="list-style-type: none"> <li>Reduces water waste through precision agriculture (e.g., soil moisture monitoring, regulated irrigation).</li> <li>Increases efficiency of water use in crop production.</li> </ul>	<ul style="list-style-type: none"> <li>Upfront technical equipment costs.</li> <li>Requires expertise for implementation.</li> </ul>
<b>Conservation</b>  Efforts focused on reducing consumptive use and groundwater extraction.	<ul style="list-style-type: none"> <li>Immediate reduction in groundwater extraction through decreased water use.</li> <li>Protects water resources during dry years or droughts.</li> </ul>	<ul style="list-style-type: none"> <li>May change depth of water table.</li> <li>Potential for groundwater quality issues.</li> </ul>

### Phased and Adaptive Measures

Allocations | Well Restrictions | Pumping Restrictions | Water Market/Trading and Fee Structures

Demand Management Option (Phased & Adaptive)	Benefits	Concerns	Assumptions/ Uncertainties	Other Considerations for Implementation
<b>Allocations</b>  Implementing groundwater usage limits or quotas for specific areas or users, which can be gradually adjusted based on demand reduction needs.	<ul style="list-style-type: none"> <li>Provides a clear and controlled limit on groundwater usage, which can help manage demand and prevent overdraft.</li> <li>Ensures equitable distribution of groundwater resources based on user needs and availability.</li> </ul>	<ul style="list-style-type: none"> <li>Difficult to enforce and monitor, especially with numerous small-scale users.</li> <li>Potential conflicts between users, especially in agricultural communities where water needs vary greatly.</li> </ul>	<ul style="list-style-type: none"> <li>Assumes all users will comply with allocation limits.</li> <li>Uncertainty in determining the right allocation levels to meet sustainability goals without severely impacting economic productivity.</li> </ul>	<ul style="list-style-type: none"> <li>Requires accurate water usage data and robust monitoring systems.</li> <li>Allocation levels may need frequent adjustments based on climatic conditions or groundwater recovery rates.</li> </ul>
<b>Well Restrictions</b>  Limiting the number or depth of new wells, or imposing restrictions on existing wells, based on groundwater levels and usage trends.	<ul style="list-style-type: none"> <li>Limits further strain on the aquifer by controlling the number, location, and depth of wells.</li> <li>Reduces the risk of groundwater depletion in critical areas and can slow the decline in water levels.</li> </ul>	<ul style="list-style-type: none"> <li>May create economic hardship for new developments or expansions in agriculture or other industries dependent on new wells.</li> <li>Existing well owners may feel disadvantaged if restrictions are more stringent for new wells.</li> </ul>	<ul style="list-style-type: none"> <li>Assumes that limiting new wells will significantly contribute to groundwater sustainability.</li> <li>Uncertainty in the long-term impacts, as existing wells could continue to contribute to overdraft if usage isn't reduced.</li> </ul>	<ul style="list-style-type: none"> <li>Coordination with local agencies to implement fair and enforceable well restrictions.</li> <li>Existing wells might need retrofitting or deeper drilling to access deeper aquifers, raising costs for well owners.</li> </ul>



## Next Steps and Wrap-Up

### Upcoming meetings

Groundwater Commission | Nov 13

FCWCD Board | Nov 18

Public Meetings (Data Gaps) | Nov 14 Antelope;  
Nov 20 Corning

#### Next WG Meetings |

- Nov 20, 8:30-11:00a
- Dec 18. 8:30-11:00a

### Action Items and Next Steps