



Stanislaus & Tuolumne Rivers Groundwater Basin Association
Groundwater Sustainability Agency
1231 11th Street | Modesto, CA 95354
Email: strgba@mid.org

TECHNICAL ADVISORY COMMITTEE AGENDA

August 11, 2021 (1:30 p.m. – 2:30 p.m.)

Webinar Digital Platform or Phone Meeting

<https://us02web.zoom.us/j/87846141611>

By phone: 1-669-900-9128

Webinar ID: 878 4614 1611

PUBLIC PARTICIPATION

The public may participate in this meeting in the two ways described below.

Instructions for Participating in STRGBA GSA & Technical Advisory Meeting via Zoom Webinar or
Phone

On your desktop/iPad or tablet/laptop:

1. To join the webinar, click the link published in the Agenda for the current meeting about 5 minutes before webinar begins.
2. Follow the on-screen instructions to install and/or launch the Zoom application.
3. If prompted, enter the Webinar ID published in the Agenda.
4. All public attendees will enter the meeting muted.
5. If you wish to speak under Business from the Public, or after the Chairman calls for Public Comment, click on the “Raise Hand” button to request to speak.

On your phone:

1. To join the meeting by phone, call the number published in the Agenda for the meeting.
2. Enter the Webinar ID published in the Agenda, then hit the # symbol.
3. All public attendees will enter the meeting muted.
4. If you wish to speak under Business from the Public, or after the Chairman calls for Public Comment, press *9 on your phone to “Raise Hand” or simply request to speak.
 - a. Wait until the last four digits of your phone number is called by the Host.



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1. Call to Order/Welcome and Introductions
(Four agencies needed for a quorum)
2. Business from the Public
Who: Public
Expected Outcome: Interested persons are welcome to introduce any topic within the Agency's jurisdiction. Matters presented under this heading may be discussed but no action will be taken by the Agency at this meeting.
3. Topic: Approve 7/28/21 Meeting Minutes [Action Item]
Who: Eric Thorburn, Committee
Expected Outcome: Approval
4. Topic: Recap on Reduction of Groundwater In Storage/ Land Subsidence
Who: Todd Groundwater, Committee
Expected Outcome: Discussion
5. Topic: Monitoring Well Network
Who: Todd Groundwater, Committee
Expected Outcome: Discussion
6. Next Meeting
Special TAC meeting August 25, 2021 at 1:30 p.m. via Zoom
7. Items too late for the agenda



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TECHNICAL ADVISORY COMMITTEE MEETING MINUTES

July 28, 2021 (2:00 p.m. – 4:00 p.m.)

The meeting was called to order at 2:00 p.m.

1. Welcome and Introductions

The following members of the Stanislaus and Tuolumne Rivers Groundwater Basin Association Groundwater Sustainability Agency (STRGBA GSA) attended via Zoom:

Modesto Irrigation District (MID): Chad Tienken
City of Waterford: Mike Pitcock
Stanislaus County: Walt Ward
Oakdale Irrigation District: Eric Thorburn
City of Modesto: Miguel Alvarez
City of Oakdale: Michael Renfrow

Other Attendees:

Dave Boucher	Bill Hudelson
Claudia Hidahl	Dennis Wittchow
Michael Moradian	Ryan Honnette
Stacy Henderson	Peter Drekmeier
John Mensinger	Louie Brichetto
Alexis Stevens	John Davids
Jacob DeBoer	Samantha Wookey, MID
Dane Mathis	Matthew Toste
Ryan Hackett	

2. Business from the Public

N/A



3. Approve 7/14/21 Minutes [Action item]

Tienken moved, 2nd by Alvarez, to approve 7/14/21 meeting minutes. Motion carried.

4. Reduction of Groundwater Storage

Stanin began with a presentation on Reduction of Groundwater In Storage. The presentation can be accessed at the STRGBA GSA website: www.strgba.org .

5. Land Subsidence

Stanin next presented on Land Subsidence.

- Tienken asked when will the critical infrastructure definition be discussed? Stanin responded that they need input from the TAC members on what the agencies consider to be critical infrastructure. For example, have existing road pavements or well-casings been damaged due to subsidence? Critical infrastructure damage is categorized by the “viability of use” definition, which usually refers to large scale damage or interruption of health-safety services, not just cracks in the pavement.
- Mensinger asked why would we tolerate any subsidence that would cause any damage? Stanin replied that the SGMA regulations will allow you to say zero subsidence is taking place. However, unless you have the whole subbasin well-instrumented, it would be difficult to guarantee that subsidence isn’t occurring. Keeping groundwater levels near historic levels assumes no subsidence is occurring, however, that assumption is limited in scope since we don’t know how much pumping is taking place in the lower aquifer.
- Mathis asked if the GSA should consider conducting a study using a proxy for a technical demonstration to see if MT’s are commensurate with certain rates of subsidence. Stanin responded that the InSAR data shows the rate of subsidence essentially at zero which is corroborated by historic water levels. The 0.5”/year subsidence rate can be related in general but not necessarily to the whole subbasin. Using the Chronic Lowering of Groundwater Sustainability Indicator as a proxy can be shown to be more protective even if you can’t show a specific subsidence rate.

6. Next Meeting

August 11, 2021 at 1:30 p.m. via Zoom

7. Items too late for the agenda

N/A



UPDATE ON MONITORING NETWORKS SUSTAINABLE MANAGEMENT CRITERIA TECHNICAL ADVISORY COMMITTEE (TAC) MEETING

August 11, 2021

TODD
GROUNDWATER

PRESENTATION OUTLINE

➔ ■ Update on GSP Monitoring Network

- Review of Sustainable Management Criteria
 - Recommendation for *Reduction of Groundwater in Storage* undesirable results and minimum thresholds
 - Recommendation for *Land Subsidence* undesirable results and minimum thresholds



GSP MONITORING NETWORK UPDATE

- Review Draft maps of GSP monitoring networks
 - Chronic lowering of groundwater levels
(same network as reduction of groundwater in storage)
 - Depletions of interconnected surface water
 - Land subsidence
- MT and MO development is in progress

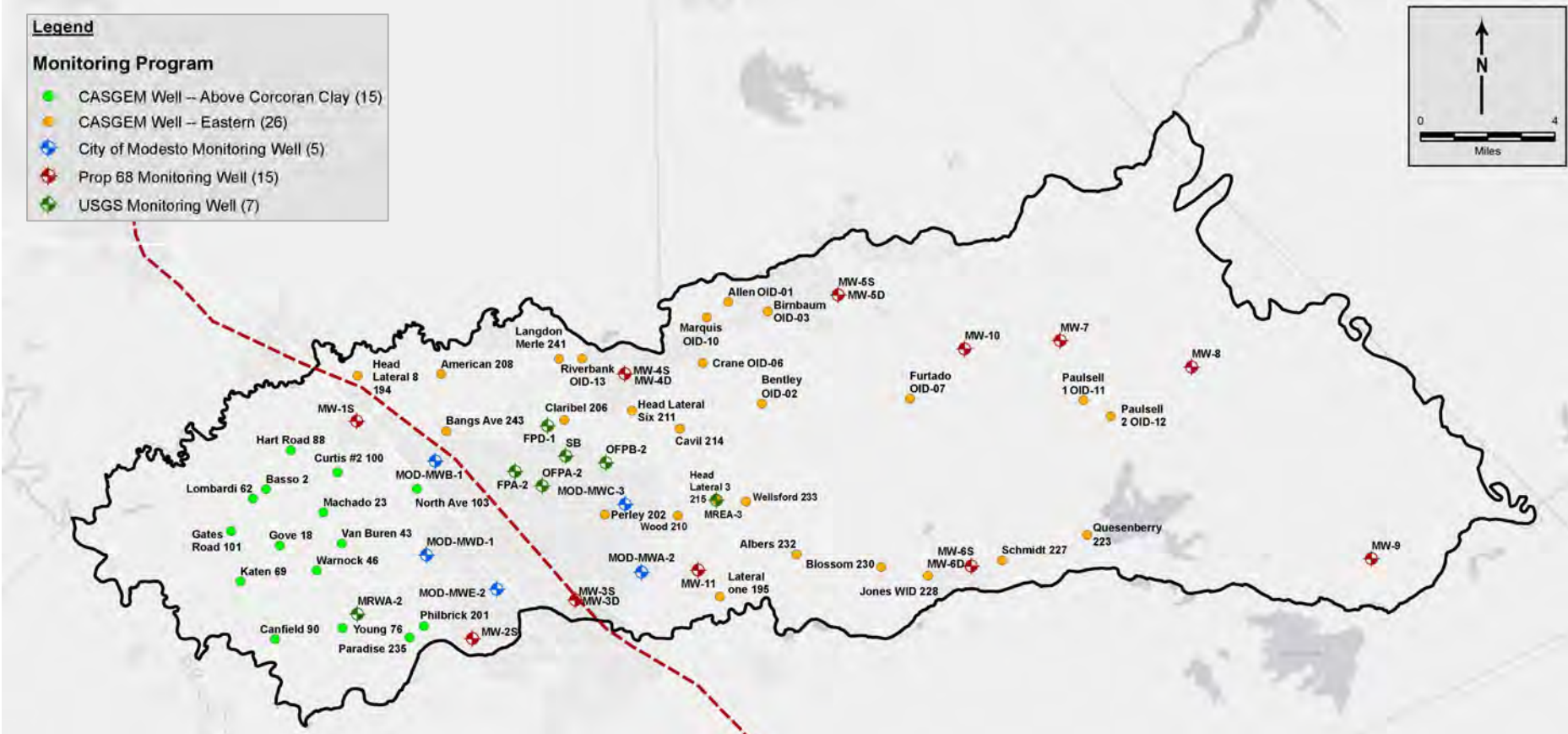
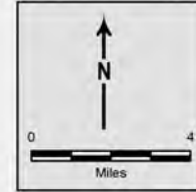
CHRONIC LOWERING OF GROUNDWATER LEVELS WESTERN UPPER & EASTERN PRINCIPAL AQUIFERS



Legend

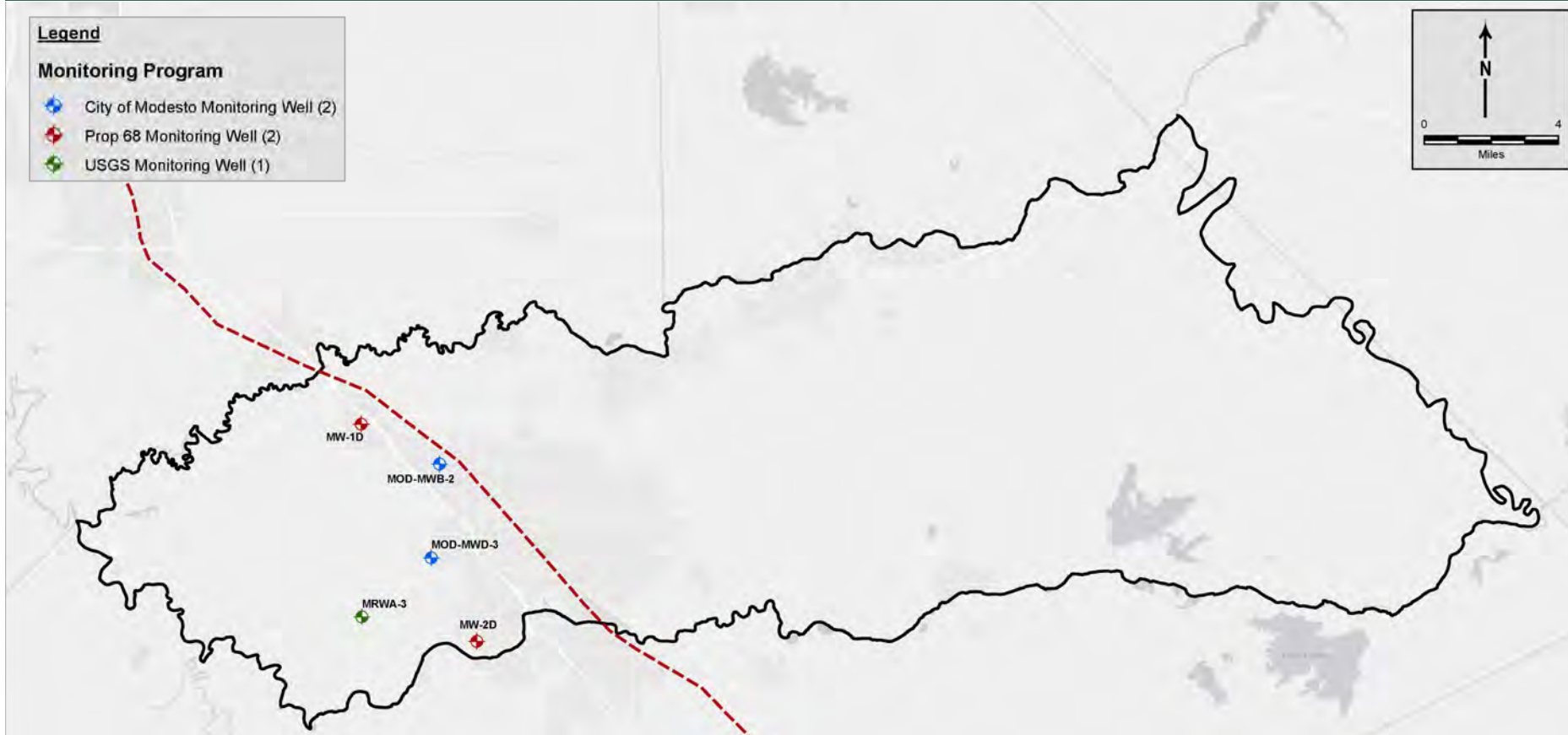
Monitoring Program

- CASGEM Well -- Above Corcoran Clay (15)
- CASGEM Well -- Eastern (26)
- City of Modesto Monitoring Well (5)
- Prop 68 Monitoring Well (15)
- USGS Monitoring Well (7)



- Western Upper Principal Aquifer (20)
- Eastern Principal Aquifer (48)
- Wells:
 - CASGEM (41)
 - City of Modesto (5)
 - Prop 68 (15)
 - USGS (7)

CHRONIC LOWERING OF GROUNDWATER LEVELS WESTERN LOWER PRINCIPAL AQUIFER



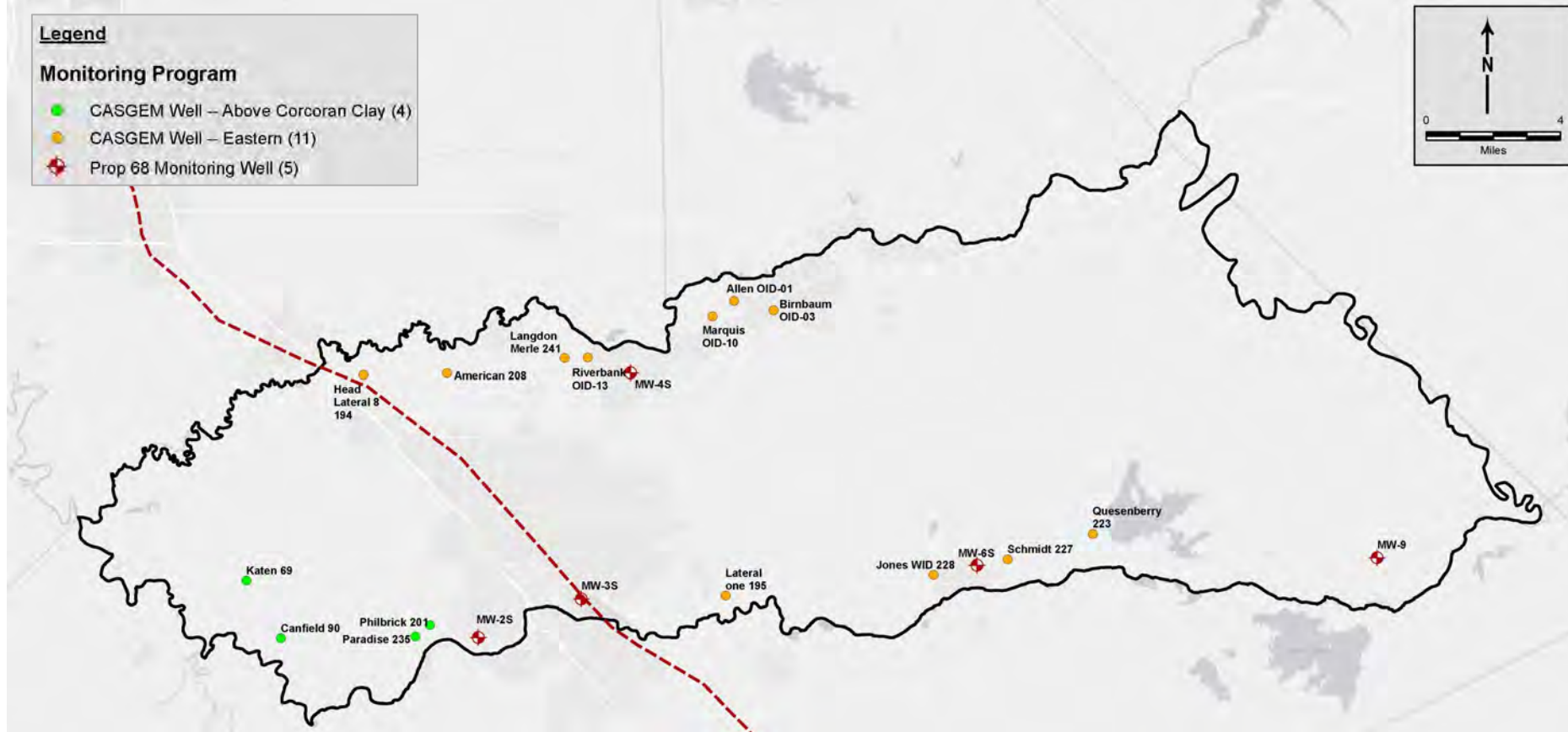
- 5 wells
 - City of Modesto
 - Prop 68
 - USGS
- Limited number of wells screened solely in the Western Lower Principal Aquifer

REDUCTION OF GROUNDWATER IN STORAGE



- Sustainable Management Criteria for Chronic Lowering of Water Levels used as a Proxy for Reduction of Groundwater in Storage
 - Applied to all three principal aquifers
 - Same monitoring network
 - Will be the same MTs and MOs

INTERCONNECTED SURFACE WATER



- 20 wells
 - CASGEM
 - Prop 68
- Stanislaus River: data gaps eastern- and western-most reaches
- Tuolumne River: better coverage
- San Joaquin River: data gap - only 2 wells close to river

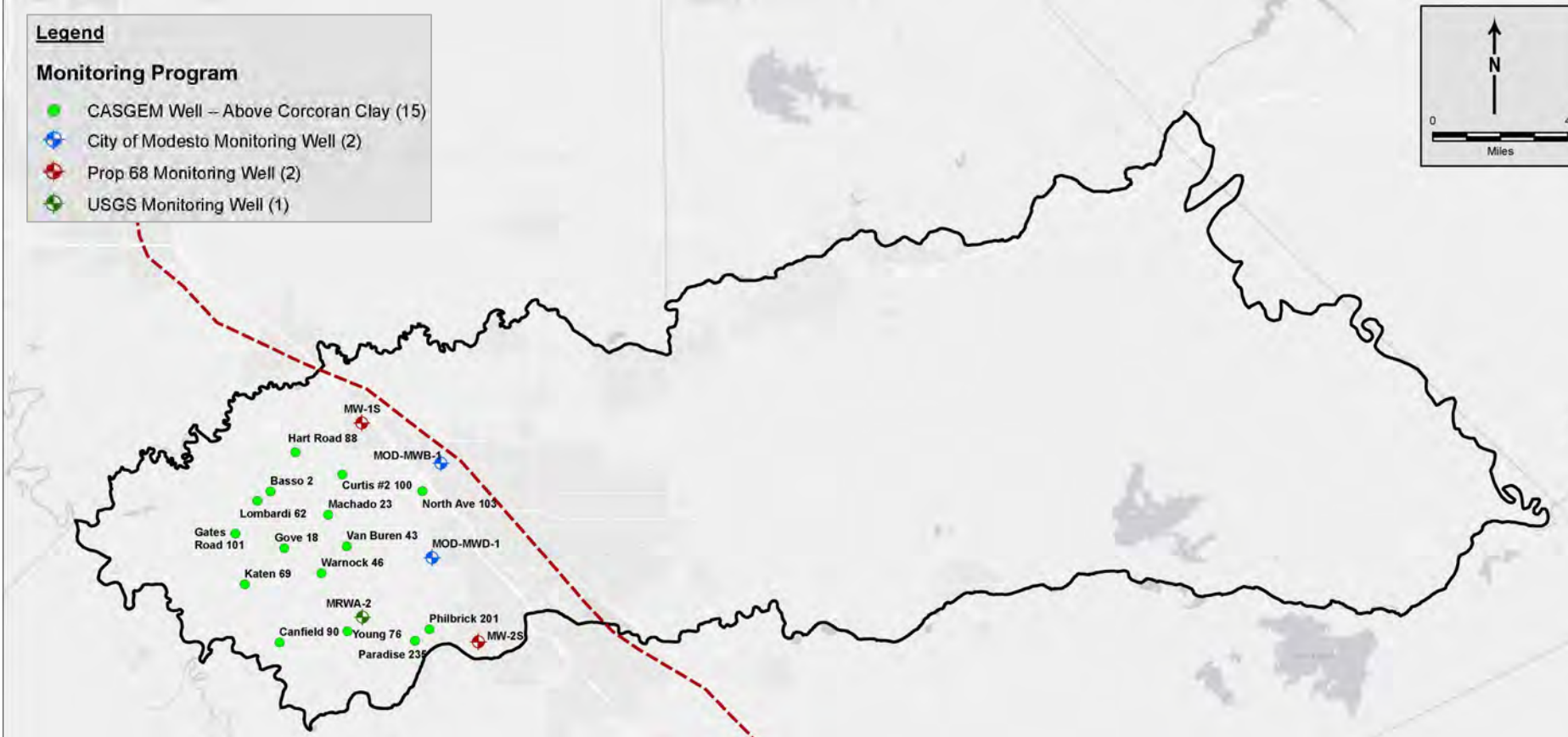
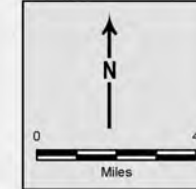
LAND SUBSIDENCE WESTERN UPPER PRINCIPAL AQUIFER



Legend

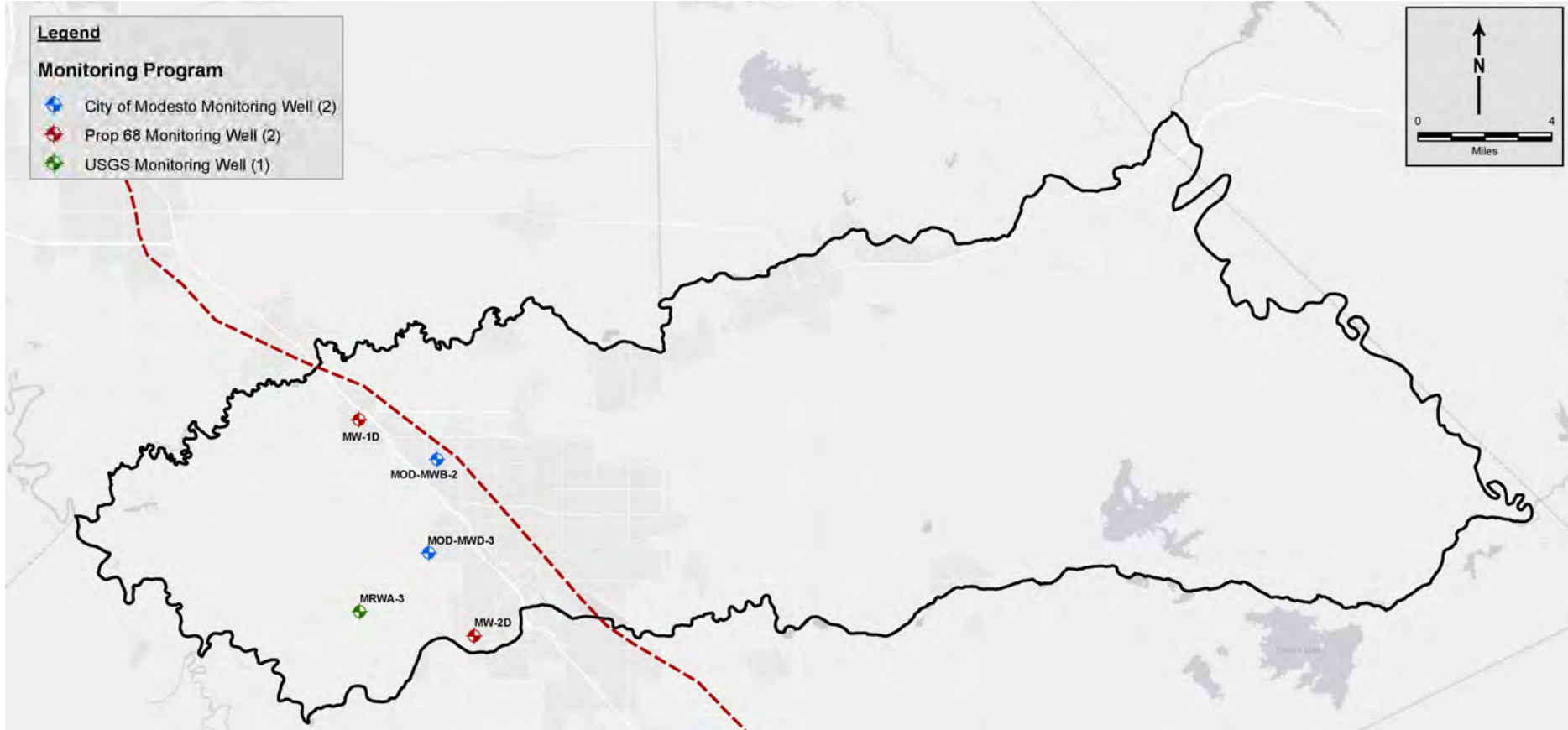
Monitoring Program

- CASGEM Well – Above Corcoran Clay (15)
- City of Modesto Monitoring Well (2)
- Prop 68 Monitoring Well (2)
- USGS Monitoring Well (1)



- 20 wells
 - CASGEM
 - City of Modesto
 - Prop 68
 - USGS
- Same network as chronic lowering of groundwater levels for Western Upper Principal Aquifer

LAND SUBSIDENCE WESTERN LOWER PRINCIPAL AQUIFER



- 5 wells
 - City of Modesto
 - Prop 68
 - USGS
- Same network as chronic lowering of groundwater levels for Western Lower Principal Aquifer

GSP MONITORING NETWORK – NEXT STEPS

- Finish developing MTs/MOs
- Eliminate non-representative wells, as needed
- Present monitoring network with MTs/MOs at August 25th Special TAC meeting

PRESENTATION OUTLINE

- Update on GSP Monitoring Network

- Review of Sustainable Management Criteria

- Recommendation for *Reduction of Groundwater in Storage* undesirable results and minimum thresholds
- Recommendation for *Land Subsidence* undesirable results and minimum thresholds





REDUCTION OF GROUNDWATER IN STORAGE

NEXUS WITH SUSTAINABLE YIELD

Minimum Thresholds for Reduction of Groundwater in Storage:

- MT shall be a **total volume** of groundwater that can be withdrawn from the basin without causing conditions that lead to undesirable results.
- MT shall be **supported by the sustainable yield** of the basin, calculated on historical trends, water year type, and projected water use. (354.28(c)(2))
- Sustainable yield modeling analysis included requirements to manage water levels at minimum thresholds (MTs) selected for *chronic lowering of groundwater levels and interconnected surface water*
- Therefore, the **sustainable yield volume** of 267,000 AFY correlates directly to management of water levels at MTs for chronic lowering of water levels, allowing these MTs to be applied as a proxy for reduction of groundwater in storage.

RECOMMENDATION FOR UNDESIRABLE RESULTS

REDUCTION OF GROUNDWATER IN STORAGE

Undesirable Result (UR) Definition

Significant and unreasonable reduction of groundwater in storage would occur if the volume of groundwater supply is at risk of depletion and/or may not be accessible for beneficial use.

An Undesirable Result for this sustainability indicator would also occur if the Subbasin remains in a condition of long-term overdraft, based on projected water use and average hydrologic conditions as applied in the GSP.



The chronic lowering of water levels MTs and MOs are protective against depletion of supply and long-term overdraft conditions. Prevention of long-term water level declines is directly correlated to the sustainable yield of the Subbasin.

MTs and MOs that have been approved for chronic lowering of water levels are selected as a proxy for this sustainability indicator.

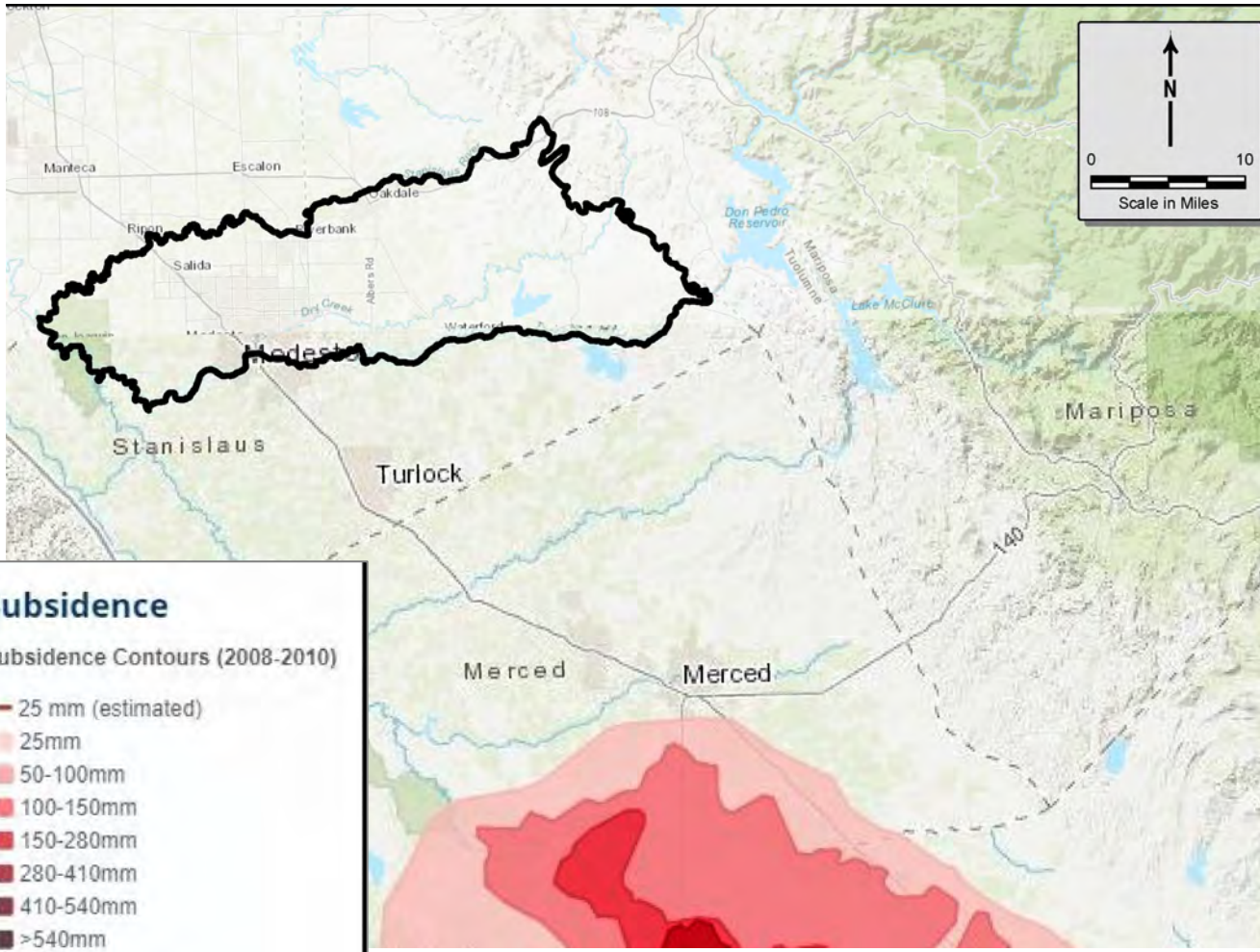
PRESENTATION OUTLINE

- Update on GSP Monitoring Network
- Review of Sustainable Management Criteria
 - Recommendation for *Reduction of Groundwater in Storage* undesirable results and minimum thresholds
 - ➔ ■ Recommendation for *Land Subsidence* undesirable results and minimum thresholds





LAND SUBSIDENCE AFFECTING LAND USE



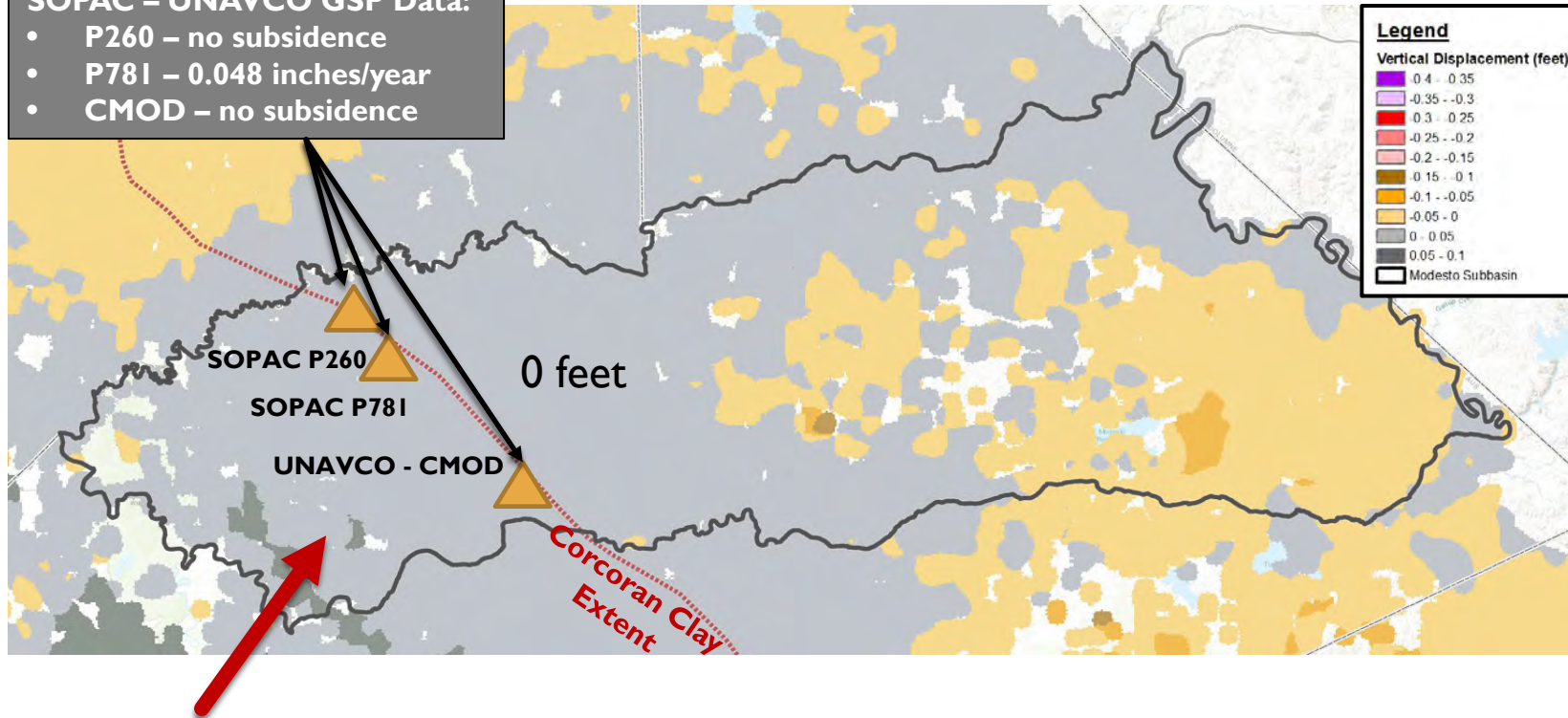
- No known subsidence impacts in the Modesto Subbasin
- Central Valley subsidence located primarily south of the Subbasin
- Most subsidence occurs in areas where the Corcoran Clay or associated clays have been depressurized/dewatered



EXISTING GPS STATIONS IN MODESTO SUBBASIN PROVIDE DATA FOR LAND SUBSIDENCE ANALYSIS

SOPAC – UNAVCO GSP Data:

- P260 – no subsidence
- P781 – 0.048 inches/year
- CMOD – no subsidence



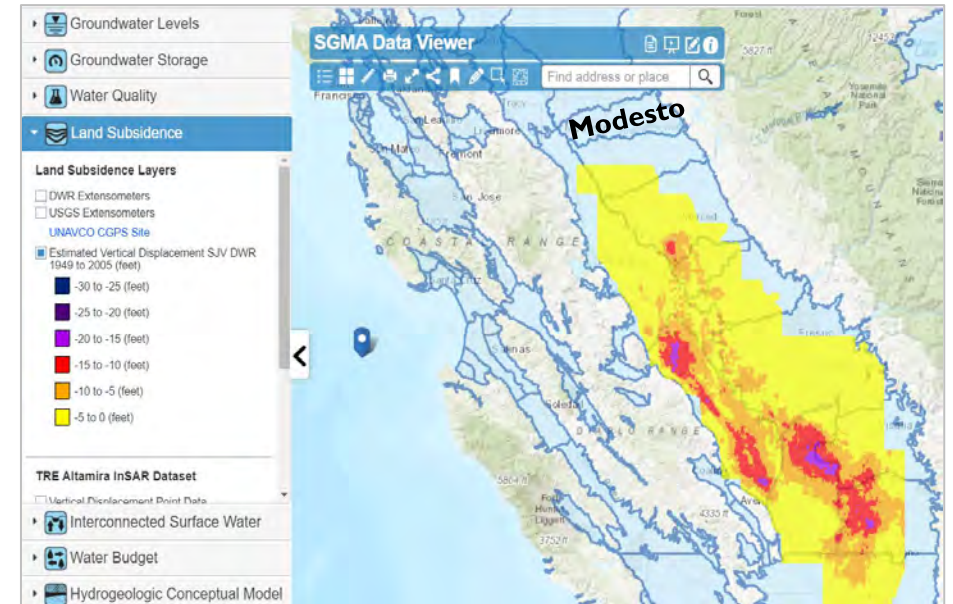
- 3 GPS stations monitored by others for land subsidence
- InSAR data published annually by DWR
- GPS data to bolster monitoring within the extent of Corcoran Clay
- Track InSAR data to future indications of subsidence outside of extent of the Corcoran Clay

Zero to low rates of vertical displacement in most susceptible areas for land subsidence (extent of the Corcoran Clay)



REQUIREMENTS FOR MINIMUM THRESHOLDS LAND SUBSIDENCE

- GSP requirements for Land Subsidence MT:
 - MT shall be the rate and extent of subsidence that substantially interferes with surface land uses and may lead to undesirable results (354.28(c)(5))
- Given the lack of impacts from subsidence in the Modesto Subbasin to date, it is difficult to determine exact rate that would lead to undesirable results
- Current MTs for chronic lowering of water levels manage groundwater elevations at historic low levels



Maintenance of water levels at or above historic lows is protective against future land subsidence

RECOMMENDATION FOR LAND SUBSIDENCE UNDESIRABLE RESULTS AND MINIMUM THRESHOLDS WESTERN UPPER AND LOWER PRINCIPAL AQUIFERS

Undesirable Result (UR) Definition

Significant and unreasonable inelastic land subsidence, caused by groundwater extraction and associated water levels declines, that adversely affects land use or reduces the viability of the use of critical infrastructure.



The MT for the chronic lowering of water levels sustainability indicator – set at the historic low water level – is sufficiently protective to avoid undesirable results from future potential inelastic land subsidence. Although no significant inelastic land subsidence has occurred in the Modesto Subbasin, declining water levels can be directly correlated to the future potential for land subsidence, consistent with impacted areas in the San Joaquin Valley.

Accordingly, the MTs and MOs set for the Chronic Lowering of Water Levels are recommended as a proxy for this sustainability indicator.

NEXT STEPS

- Finalize MTs / MOs and GSP monitoring networks
- Finalize sustainable management criteria
- Release additional GSP chapters – *Water Budget* chapter coming next, followed by *Sustainable Management Criteria*
- Analyze Projects
- Progress on Draft Management Actions





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STRGBA GSA AGENDA

August 11, 2021 (2:30 p.m. – 3:00 p.m.)

Webinar Digital Platform or Phone Meeting

<https://us02web.zoom.us/j/87846141611>

By phone: 1-669-900-9128

Webinar ID: 878 4614 1611

This meeting is being conducted via webinar for all seven member agencies, pursuant to Executive Orders signed by Governor Gavin Newsom related to the ongoing COVID-19 pandemic, including provisions regarding the Brown Act. Members of the public and member agency staff may join the meeting utilizing Zoom's webinar feature if desired, or a phone number as provided in this Agenda. Members of the public will continue to have the opportunity to provide public input via the webinar or phone features. Members of the public may also email public comments by 3:00 p.m. on the day preceding the GSA meeting to: strgba.org. If public comments are timely submitted by email, then those comments will be identified during the public input section of the Agenda or during a specific agenda item if the agenda item is identified in the email. The Brown Act does not require a member of the public to state her or his name; please indicate in your email if you would like your name stated or if you want to remain anonymous. _

PUBLIC PARTICIPATION

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1. Call to Order/Welcome and Introductions
(Four agencies needed for a quorum)
2. Business from the Public
Who: Public
Expected Outcome: Interested persons are welcome to introduce any topic within the Agency's jurisdiction. Matters presented under this heading may be discussed but no action will be taken by the Agency at this meeting.
3. Topic: Approve 7/14/21 Meeting Minutes [Action Item]
Who: Eric Thorburn, Committee
Expected Outcome: Approval
4. Topic: Reduction of Groundwater In Storage Resolution [Action Item]
Who: Gordon Enas, Committee
Expected Outcome: Approval
5. Topic: Land Subsidence Resolution [Action Item]
Who: Gordon Enas, Committee
Expected Outcome: Approval
6. Topic: Budget and Schedule Update
Who: Gordon Enas, Committee
Expected Outcome: Discussion
7. Next Meeting
September 8, 2021 at 1:30 p.m. via Zoom
8. Items too late for the agenda



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1231 11th Street | Modesto, CA 95354
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MEETING MINUTES

July 14, 2021 (2:30 p.m. – 3:00 p.m.)

The meeting was called to order at 2:45 p.m.

1. Welcome and Introductions

The following members of the Stanislaus and Tuolumne Rivers Groundwater Basin Association Groundwater Sustainability Agency (STRGBA GSA) attended via Zoom:

Modesto Irrigation District (MID): Chad Tienken

City of Waterford: Mike Pitcock

Stanislaus County: Walt Ward

Oakdale Irrigation District: Eric Thorburn

Other Attendees:

Phyllis Stanin, Todd Groundwater

John Mensinger

Stacy Henderson, Terpstra Henderson

Hilary Reinhard, Provost & Pritchard

Gordon Enas, MID

Samantha Wookey, MID

Khandriale Clark

Tom Orvis

Kim Harness

John Davids

Dave Boucher

Dana Ferreira

John Mauterer

Steve Knell

Amanda Peisch-Derby

Marisa Perez-Reyes

Spenser Hager

Louie Brichetto

Dennis Wittchow

Valerie Kincaid

Alexis Stevens

Emily Sheldon

2. Business from the Public

N/A



**Stanislaus & Tuolumne Rivers Groundwater Basin Association
Groundwater Sustainability Agency**

1231 11th Street | Modesto, CA 95354

Phone: (209) 526-7564 | Fax: (209) 526-7352

Email: strgba@mid.org

3. Approve 6/9/21 Meeting Minutes [Action item]

Tienken moved, 2nd by Pitcock, to approve the 6/9/21 meeting minutes. Motion carried.

4. Chronic Lowering of Water Levels Resolution [Action item]

Ward moved, 2nd by Tienken, to approve the chronic lowering of water levels resolution. Motion carried.

5. Interconnected Surface Water Resolution [Action item]

Tienken moved, 2nd by Ward, to approve interconnected surface water resolution. Motion carried.

6. Budget and Schedule Update

Enas reported that Todd Groundwater has expended approximately 61% of the budget and 83% of the time scheduled through May 31, 2021.

7. Next meeting

August 11, 2021 at 1:30 p.m. via Zoom webinar

8. Items too late for the agenda



AGENDA REPORT

GSA Meeting Date: August 11, 2021

Subject: Reduction of Groundwater In Storage Sustainability Indicator for the Modesto Subbasin.

Recommended Action: Resolution making the determination that Undesirable Results (UR) are defined as the reduction of groundwater in storage in the Modesto Subbasin that would occur if the volume of groundwater supply is at risk of depletion and is not accessible for beneficial use, or if the subbasin remains in a condition of long-term overdraft based on projected water use and average hydrologic conditions, as applied in the GSP.

Further, resolving that since the Minimum Thresholds (MT) for the Chronic Lowering of Water Levels Sustainability Indicator are protective against depletion of groundwater in storage and long-term overdraft conditions, the MTs for chronic lowering of water levels are selected as a proxy for Reduction of Groundwater In Storage.

Background and Discussion: SGMA identifies six sustainability indicators that describe potential adverse groundwater conditions. Undesirable results occur when conditions related to any of the six sustainability indicators become significant and unreasonable. SGMA also defines sustainable yield as the maximum quantity of water, calculated over a base period representative of long-term conditions in the basin, that can be withdrawn annually from a groundwater supply without causing an undesirable result. The Sustainable Yield for the Modesto Subbasin is estimated at 267,000 acre-feet per year based on historical trends, water year type, and projected water use. While the GSA acknowledges that the subbasin is not at risk of depleting a large percentage of the total volume of groundwater supply, the ongoing depletion from overdraft exceeds the sustainable yield and requires correction under SGMA regulations. When overdraft is corrected, long-term water level declines will be arrested. If water levels can be maintained at or close to the current levels, then those conditions can be used as a clear indication that overdraft has been corrected. This use of water levels is correlated to and supported by the volume estimated for the sustainable yield.

Alternatives, Pros and Cons of Each Alternative:

Pros: Defining the undesirable results for reduction of groundwater in storage will ensure the Modesto Subbasin achieves its sustainability goal.

Cons: By not defining the undesirable result for reduction of groundwater in storage the subbasin will continue to be in a condition of long-term overdraft making the GSP non-compliant with SGMA and potentially placing the Modesto Subbasin under probation.

Concurrence: The analysis behind the recommendation to define undesirable results for the Reduction of Groundwater In Storage sustainability indicator is contained in

the presentation given by Todd Groundwater to STRGBA GSA dated July 28, 2021. This recommendation is also consistent with a similar finding made by the Delta-Mendota Subbasin to the west and the Eastern San Joaquin Subbasin to the north.

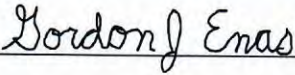
Fiscal Impact: If the resolution is adopted, a measurable objective and minimum threshold for the reduction of groundwater in storage sustainability indicator will need to be developed for each representative monitoring well and managed through GSP implementation, which may require additional analysis by the consultant team, but not additional cost.


Recommendation: Resolution making the determination that Undesirable Results (UR) are defined as the reduction of groundwater in storage in the Modesto Subbasin that would occur if the volume of groundwater supply is at risk of depletion and is not accessible for beneficial use, or if the subbasin remains in a condition of long-term overdraft based on projected water use and average hydrologic conditions, as applied in the GSP.

Further, resolving that since the Minimum Thresholds (MT) for the Chronic Lowering of Water Levels Sustainability Indicator are protective against depletion of groundwater in storage and long-term overdraft conditions, the MTs for chronic lowering of water levels are selected as a proxy for Reduction of Groundwater In Storage.

Attachments: Supporting documents attached:
 Resolution Presentation Other supporting docs None attached

Note: Original contracts and agreements are housed in the GSA Secretary's Office, phone (209) 526-7360.

Presenter

Gordon Enas, P.E. 8/5/2021
Date Signed

GSA Chairman

Eric Thorburn, P.E.
Date Signed



AGENDA REPORT

DRAFT

RESOLUTION NO. 2021-6

APPROVING THE DEFINITION OF REDUCTION OF GROUNDWATER IN STORAGE SUSTAINABILITY INDICATOR FOR THE MODESTO SUBBASIN.

WHEREAS, the Sustainable Groundwater Management Act (SGMA) identifies six sustainability indicators that describe potential adverse groundwater conditions and that if any of these indicators should be determined to be significant and unreasonable in the Modesto Subbasin, that condition would define an Undesirable Result; and

WHEREAS, SGMA states that a Groundwater Sustainability Agency (GSA) is required to establish criteria for undesirable results for those sustainability indicators that exist and are likely to occur in the future; and

WHEREAS, the Stanislaus and Tuolumne Rivers Groundwater Basin Association Groundwater Sustainability Agency (STRGBA GSA) acknowledges that while the subbasin is not at risk of depleting a large percentage of the total volume of groundwater supply, the ongoing depletion from overdraft exceeds the sustainable yield and requires correction under SGMA regulations.

BE IT RESOLVED, The Stanislaus and Tuolumne Rivers Groundwater Basin Association Groundwater Sustainability Agency does hereby make the determination that Undesirable Results (UR) are defined as the reduction of groundwater in storage in the Modesto Subbasin that would occur if the volume of groundwater supply is at risk of depletion and is not accessible for beneficial use, or if the subbasin remains in a condition of long-term overdraft based on projected water use and average hydrologic conditions.

BE IT FURTHER RESOLVED, that since the Minimum Thresholds (MT) for the Chronic Lowering of Water Levels Sustainability Indicator are protective against depletion of groundwater in storage and long-term overdraft conditions, the MTs for chronic lowering of water levels are selected as a proxy for Reduction of Groundwater In Storage.



AGENDA REPORT

GSA Meeting Date: August 11, 2021

Subject: Land Subsidence Sustainability Indicator for the Modesto Subbasin.

Recommended Action: Resolution making the determination that Undesirable Results (UR) occur when significant and unreasonable inelastic land subsidence, caused by groundwater extraction and associated water levels declines, adversely affects land use or reduces the viability of the use of critical infrastructure.

Further, resolving that the Minimum Threshold (MT) for the chronic lowering of water levels sustainability indicator is sufficiently protective to avoid undesirable results since declining water levels can be directly correlated to the potential land subsidence, and therefore will be used as a proxy for land subsidence.

Background and Discussion: SGMA identifies six sustainability indicators that describe potential adverse groundwater conditions. Undesirable results occur when conditions related to any of the six sustainability indicators become significant and unreasonable. SGMA defines significant and unreasonable land subsidence as the rate and extent of subsidence which substantially interferes with surface land uses and which may lead to undesirable results. Analysis of recent DWR InSAR data and SOPAC-UNAVCO GPS station data resulted in no significant land subsidence indicated in susceptible areas of the Corcoran Clay within the Modesto Subbasin. Vertical displacement data retrieved from areas outside of the Corcoran Clay is more likely caused by localized vertical displacement in clay soils due to routine land operations; however, annual InSAR data will be reviewed annually to guard against the potential for future land subsidence in these areas.

Also, consistent with other impacted areas in the San Joaquin Valley, declining water levels can be directly correlated to potential land subsidence. Therefore, the Minimum Threshold (MT) for the chronic lowering of water levels sustainability indicator will be used as a proxy for the land subsidence sustainability indicator since it is sufficiently protective to avoid undesirable results.

Alternatives, Pros and Cons of Each Alternative:

Pros: Defining the undesirable results for land subsidence will ensure the Modesto Subbasin achieves its sustainability goal.

Cons: By not defining the undesirable result for land subsidence the subbasin and GSP would be non-compliant with SGMA, and potentially placing the Modesto Subbasin under probation.

Concurrence: The analysis behind the recommendation to define undesirable results for the Land Subsidence sustainability indicator is contained in the presentation given by Todd Groundwater to STRGBA GSA dated July 28, 2021. This recommendation is also consistent with a similar finding made by the Delta-

Mendota Subbasin to the west, the Eastern San Joaquin Subbasin to the north, and the Turlock Subbasin to the south.

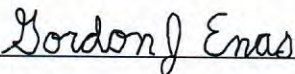
Fiscal Impact: If the resolution is adopted, a measurable objective and minimum threshold for the land subsidence sustainability indicator will need to be developed for each representative monitoring well and managed through GSP implementation, which may require additional analysis by the consultant team, but not additional cost.


Recommendation: Resolution making the determination that Undesirable Results (UR) occur when significant and unreasonable inelastic land subsidence, caused by groundwater extraction and associated water level decline, adversely affects land use or reduces the viability of the use of critical infrastructure.

Further, resolving that the Minimum Threshold (MT) for the chronic lowering of water levels sustainability indicator is sufficiently protective to avoid undesirable results since declining water levels can be directly correlated to the potential land subsidence, and therefore will be used as a proxy for land subsidence.

Attachments: Supporting documents attached:
 Resolution Presentation Other supporting docs None attached

Note: Original contracts and agreements are housed in the GSA Secretary's Office, phone (209) 526-7360.

Presenter

Gordon Enas, P.E. 8/5/2021
Date Signed

GSA Chairman

Eric Thorburn, P.E.
Date Signed



AGENDA REPORT

D R A F T

RESOLUTION NO. 2021-7

APPROVING THE DEFINITION OF LAND SUBSIDENCE SUSTAINABILITY INDICATOR FOR THE MODESTO SUBBASIN.

WHEREAS, the Sustainable Groundwater Management Act (SGMA) identifies six sustainability indicators that describe potential adverse groundwater conditions and that if any of these indicators should be determined to be significant and unreasonable in the Modesto Subbasin, that condition would define an Undesirable Result; and

WHEREAS, SGMA states that a Groundwater Sustainability Agency (GSA) is required to establish criteria for undesirable results for those sustainability indicators that exist and are likely to occur in the future; and

WHEREAS, SGMA defines significant and unreasonable land subsidence as the rate and extent of subsidence which substantially interferes with surface land uses and which may lead to undesirable results; and

WHEREAS, the Stanislaus and Tuolumne Rivers Groundwater Basin Association Groundwater Sustainability Agency (STRGBA GSA) conducted an analysis of recent data that resulted in no significant land subsidence indicated in susceptible areas of the Corcoran Clay within the Modesto Subbasin.

BE IT RESOLVED, The Stanislaus and Tuolumne Rivers Groundwater Basin Association Groundwater Sustainability Agency does hereby make the determination that Undesirable Results (UR) occur when significant and unreasonable inelastic land subsidence, caused by groundwater extraction and associated water levels declines, adversely affects land use or reduces the viability of the use of critical infrastructure.

BE IT FURTHER RESOLVED, the Minimum Threshold (MT) for the Chronic Lowering of Water Levels sustainability indicator is sufficiently protective to avoid undesirable results since declining water levels can be directly correlated to the potential land subsidence, and therefore will be used as a proxy for Land Subsidence.

Cost To Prepare GSP (September 2018 - June 2021)

