



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

STRGBA GSA AGENDA
October 13, 2021 (1:30 p.m. – 2:00 p.m.)
Webinar Digital Platform or Phone Meeting
<https://us02web.zoom.us/j/82844864384>
By phone: 1-669-900-9128
Webinar ID: 828 4486 4384

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

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:

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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 9/8/21 Meeting Minutes [Action Item]
Who: Eric Thorburn, Committee
Expected Outcome: Approval
4. Topic: Remote Teleconferencing Participation [Action Item]
Who: Gordon Enas, Committee
Expected Outcome: Approval
5. Topic: Degraded Water Quality [Action Item]
Who: Gordon Enas, Committee
Expected Outcome: Approval
6. Topic: Budget and Schedule Update
Who: Gordon Enas, Committee
Expected Outcome: Discussion
7. Topic: Public Outreach Update
Who: Samantha Wookey, Committee
Expected Outcome: Discussion
8. Topic: GSP Update
Who: Todd Groundwater, Committee
Expected Outcome: Discussion



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

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9. Next Meeting

November 10, 2021 at 1:30 p.m. via Zoom

10. Items too late for the agenda



Stanislaus & Tuolumne Rivers Groundwater Basin Association
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1231 11th Street | Modesto, CA 95354
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MEETING MINUTES

September 8, 2021 (1:30 p.m. – 3:00 p.m.)

The meeting was called to order at 2:32 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:

Phyllis Stanin, Todd Groundwater

Liz Elliott, Todd Groundwater

Bill Jackson

Tim Coleman

Hilary Reinhard

John Mauterer

Dominick Amador

Valerie Kincaid

Stu Gilman

Ryan Honnette

Emily Sheldon

Spenser Hager

Jeff Black

Samantha Wookey, MID

Gordon Enas, MID

John Mensinger

John Davids

Matthew Toste

Ali Stevens

Allison & Dave Boucher

KC Clark

Amanda Peisch-Derby

Jacob DeBoer

Peter Drekmeier

Kirsten Pringle

2. Business from the Public

N/A



3. Approve 8/11/21 Meeting Minutes [Action item]

Tienken moved, 2nd by Renfrow, to approve 8/11/21 meeting minutes. Motion carried.

4. Budget and Schedule Update

Enas reported that Todd Groundwater has expended approximately 69% of budget and 87% of the time scheduled through July 31.

5. Public Outreach Update

Wookey updated the group on the August 25th Office Hours. Recording of the Office Hours can be found on the STRGBA GSA website, <https://www.strgba.org>.

6. GSP Update

Stanin stated they are finishing up the next chapter of water budget. Modeling projects were further discussed in the TAC meeting.

7. Next meeting

October 13, 2021 at 1:30 p.m. via Zoom

8. Items too late for the agenda

N/A



AGENDA REPORT

GSA Meeting Date: October 13, 2021

Subject:	Brown Act Provisions for Remote Teleconferencing Participation in Meetings during a Declared State of Emergency.
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Recommended Action:	<p>Resolution making the following determination:</p> <p>Section 1. Recitals. The Recitals set forth in the attached resolution are true and correct and are incorporated into this Resolution by this reference.</p> <p>Section 2. Proclamation of Local Emergency. The Governing Body hereby proclaims that a local emergency exists throughout the GSA, and that the governing body meeting in person could present imminent risks to the health and safety of attendees due to the prevalence of the COVID-19 Pandemic in Stanislaus County and the State of California, such that the GSA reserves the right to continue virtual meetings and/or conduct in-person meetings consistent with local health guidance or duly issued orders.</p> <p>Section 3. Remote Teleconference Meetings. The Governing Body and its Chairman and designees of the GSA are hereby authorized and directed to take all actions necessary to carry out the intent and purpose of this Resolution including, conducting open and public meetings in accordance with Government Code section 54953(e) and other applicable provisions of the Brown Act.</p> <p>Section 5. Effective Date of Resolution. This Resolution shall take effect immediately upon its adoption and shall be effective until the earlier of (i) October 28, 2021, or (ii) such time the Governing Body adopts a subsequent resolution in accordance with Government Code section 54953(e)(3) to extend the time during which the Governing Body of the GSA may continue to teleconference without compliance with paragraph (3) of subdivision (b) of section 54953.</p>
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Background and Discussion:	<p>All meetings of the STRGBA GSA are open and public, as required by the Ralph M. Brown Act (Cal. Gov. Code 54950 – 54963) and related state laws and orders, so that any member of the public may attend either virtually or in-person as the case may be to participate and watch the GSA’s governing body conduct GSA business.</p> <p>The Brown Act makes provisions for remote teleconferencing participation in meetings by members of a governing body, without compliance with the requirements of Government Code section 54953(b)(3), subject to the existence of certain conditions, such as when a state of emergency is declared by the Governor pursuant to Government Code section 8625, proclaiming the existence of conditions of disaster or of extreme peril to the safety of persons and property within the state caused by conditions as described in Government Code section 8558. It is further required that state or local officials have imposed or recommended measures to promote social</p>
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AGENDA REPORT

distancing, or, the governing body meeting in person would present imminent risks to the health and safety of attendees.

Such conditions now exist in the STRGBA GSA, specifically, a State of Emergency has been proclaimed pursuant to Government Code Section 8625 that the COVID-19 Pandemic has strained the State's healthcare system and workforce and that state and local health departments must use all available preventative measures to combat the spread of COVID-19. As a consequence of the declared emergency, the STRGBA GSA does hereby find that the governing body of the STRGBA GSA shall conduct their meetings without compliance with paragraph (3) of subdivision (b) of Government Code section 54953, as authorized by subdivision (e) of section 54953, and that such governing bodies shall comply with the requirements to provide the public with access to the meetings as prescribed in paragraph (2) of subdivision (e) of section 54953.

Alternatives, Pros and Cons of Each Alternative:

Pros: Allow GSA meetings to continue to meet while taking all available preventative measures to combat the spread of COVID-19.

Cons: Requiring GSA meetings to be held in-person would violate the proclaimed State of Emergency and potentially expose meeting attendees to COVID-19.

Concurrence:

The actions proposed by this resolution have already been adopted by several of the GSA member agencies.

Fiscal Impact:

Since GSA is currently holding all meetings by remote conferencing, the resolution will create no new or additional fiscal impact.

Recommendation:

Resolution making the following determination:

Section 1. Recitals. The Recitals set forth in the attached resolution are true and correct and are incorporated into this Resolution by this reference.

Section 2. Proclamation of Local Emergency. The Governing Body hereby proclaims that a local emergency exists throughout the GSA, and that the governing body meeting in person could present imminent risks to the health and safety of attendees due to the prevalence of the COVID-19 Pandemic in Stanislaus County and the State of California, such that the GSA reserves the right to continue virtual meetings and/or conduct in-person meetings consistent with local health guidance or duly issued orders.

Section 3. Remote Teleconference Meetings. The Governing Body and its Chairman and designees of the GSA are hereby authorized and directed to take all actions necessary to carry out the intent and purpose of this Resolution including, conducting open and public meetings in accordance with Government Code section 54953(e) and other applicable provisions of the Brown Act.

Section 5. Effective Date of Resolution. This Resolution shall take effect immediately upon its adoption and shall be effective until the earlier of (i)

AGENDA REPORT

October 28, 2021, or (ii) such time the Governing Body adopts a subsequent resolution in accordance with Government Code section 54953(e)(3) to extend the time during which the Governing Body of the GSA may continue to teleconference without compliance with paragraph (3) of subdivision (b) of section 54953.

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. 10/7/2021
Date Signed

GSA Chairman

Eric Thorburn, P.E. 10/8/21
Date Signed

D R A F T

RESOLUTION NO. 2021-9

RESOLUTION CONFIRMING A CONTINUING STATE OF EMERGENCY ARISING FROM THE STATE OF CALIFORNIA AND STANISLAUS COUNTY ORDERS DUE TO THE COVID-19 PANDEMIC AND FURTHER AUTHORIZING REMOTE CONFERENCE MEETINGS OF THE STRGBA GSA'S GOVERNING BODY PURSUANT TO THE PROVISIONS OF THE BROWN ACT AND DULY ISSUED LAWS AND ORDERS FROM THE STATE RELATED TO THE PANDEMIC AND OPERATIONS FOR GOVERNING BODY MEETINGS.

WHEREAS, the STRGBA GSA is committed to preserving and nurturing public access and participation in meetings of its governing body; and

WHEREAS, all meetings of the STRGBA GSA are open and public, as required by the Ralph M. Brown Act (Cal. Gov. Code 54950 – 54963) and related state laws and orders, so that any member of the public may attend either virtually or in-person as the case may be to participate and watch the GSA's governing body conduct GSA business; and

WHEREAS, the Brown Act, Government Code section 54953(e), makes provisions for remote teleconferencing participation in meetings by members of a legislative body, without compliance with the requirements of Government Code section 54953(b)(3), subject to the existence of certain conditions; and

WHEREAS, a required condition is that a state of emergency is declared by the Governor pursuant to Government Code section 8625, proclaiming the existence of conditions of disaster or of extreme peril to the safety of persons and property within the state caused by conditions as described in Government Code section 8558; and

WHEREAS, a proclamation is made when there is an actual incident, threat of disaster, or extreme peril to the safety of persons and property within the jurisdictions that are within the GSA's boundaries, caused by natural, technological, or human-caused disasters; and

AGENDA REPORT

WHEREAS, it is further required that state or local officials have imposed or recommended measures to promote social distancing, or, the legislative body meeting in person would present imminent risks to the health and safety of attendees; and

WHEREAS, such conditions now exist in the GSA, specifically, a State of Emergency has been proclaimed pursuant to Government Code Section 8625 that the COVID-19 Pandemic has strained the State's healthcare system and workforce and that state and local health departments must use all available preventative measures to combat the spread of COVID-19; and

WHEREAS, since most restrictions from the State of California's Blueprint for a Safer Economy were lifted on June 15, 2021, the average daily case rate of COVID-19 in Stanislaus County has increased 9-fold and the testing positivity rate has risen 4-fold, though those conditions may change daily and weekly; and

WHEREAS, as a consequence of the declared emergency, the STRGBA GSA does hereby find that the governing body of the GSA shall conduct their meetings without compliance with paragraph (3) of subdivision (b) of Government Code section 54953, as authorized by subdivision (e) of section 54953, and that such legislative bodies shall comply with the requirements to provide the public with access to the meetings as prescribed in paragraph (2) of subdivision (e) of section 54953; and

WHEREAS, the GSA reserves the option to attend in-person meetings consistent with local health officer directives or to continue a practice of remote meetings that still allow multiple options for public participation.

NOW, THEREFORE, THE GOVERNING BODY OF THE STANISLAUS AND TUOLUMNE RIVERS GROUNDWATER BASIN ASSOCIATION GROUNDWATER SUSTAINABILITY AGENCY DOES HEREBY RESOLVE AS FOLLOWS,

Section 1. Recitals. The Recitals set forth above are true and correct and are incorporated into this Resolution by this reference.

AGENDA REPORT

Section 2. Proclamation of Local Emergency. The Governing Body hereby proclaims that a local emergency exists throughout the GSA, and that the governing body meeting in person could present imminent risks to the health and safety of attendees due to the prevalence of the COVID-19 Pandemic in Stanislaus County and the state, such that the GSA reserves the right to continue virtual meetings and/or conduct in-person meetings consistent with local health guidance or duly issued orders.

Section 3. Remote Teleconference Meetings. The governing body and its Chairman and designees of the GSA are hereby authorized and directed to take all actions necessary to carry out the intent and purpose of this Resolution including, conducting open and public meetings in accordance with Government Code section 54953(e) and other applicable provisions of the Brown Act.

Section 5. Effective Date of Resolution. This Resolution shall take effect immediately upon its adoption and shall be effective until the earlier of (i) October 28, 2021, or (ii) such time the Governing Body adopts a subsequent resolution in accordance with Government Code section 54953(e)(3) to extend the time during which the legislative bodies of the GSA may continue to teleconference without compliance with paragraph (3) of subdivision (b) of section 54953.



AGENDA REPORT

GSA Meeting Date: October 13, 2021

Subject:	Degraded Water Quality Sustainability Indicator for the Modesto Subbasin.
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Recommended Action:	<p>Resolution making the determination that Undesirable Results (UR) are defined as significant and unreasonable adverse impacts to groundwater quality, as indicated by a new (first-time) exceedance of or further exceedance from an MCL of a constituent of concern, that is caused by GSA projects, management actions, or management of groundwater levels or extractions such that beneficial uses are affected and well owners experience an increase in operational costs.</p> <p>Further, resolving that Minimum Thresholds (MT) are set as the primary or secondary California maximum contaminant level (MCL) for each of the constituents of concern, and that Measurable objectives (MO) are set as the historical maximum concentration of each constituent of concern for each Principal Aquifer at each representative monitoring site.</p>
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Background and Discussion:	<p>SGMA identifies six sustainability indicators that describe potential adverse groundwater conditions. Undesirable results may occur when conditions related to any of the six sustainability indicators become significant and unreasonable. SGMA also defines the minimum threshold for degraded water quality as the degradation of water quality, including the migration of contaminant plumes, that impair water supplies or other indicators of water quality as determined by the GSA that may lead to undesirable results. SGMA further specifies that the minimum threshold shall be based on the number of supply wells, a volume of water, or a location of an isocontour that exceeds concentrations of constituents determined by the GSA to be of concern for the basin. Also, in setting minimum thresholds for degraded water quality, the GSA shall consider local, state, and federal water quality standards applicable to the basin.</p> <p>The STRGBA GSA has identified nine potential constituents of concern for the Modesto Subbasin including arsenic, boron, Dibromochloropropane (DBCP), Nitrate, Tetrachloroethene (PCE), total dissolved solids (TDS), 1,2,3-Trichloropropane (TCP), uranium and gross alpha particles. However, Boron does not have a maximum contaminant level (MCL) and will not be included in the minimum threshold. Also, gross alpha particles are observed to be co-located with uranium detections, so uranium (also a constituent of concern) will be used as a surrogate for gross alpha particles.</p>
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Alternatives, Pros and Cons of Each Alternative:	<p>Pros: Defining the undesirable results for degradation of groundwater quality will ensure the Modesto Subbasin achieves its sustainability goal.</p>
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Cons: By not defining the undesirable result for degradation of groundwater quality the subbasin will make 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 Degradation of Groundwater Quality sustainability indicator is contained in the presentation given by Todd Groundwater to STRGBA GSA dated September 22, 2021. This recommendation is also consistent with the approach being taken for degraded water quality in the adjacent Turlock Subbasin to the south and includes all of the constituents of concern being used for the Turlock Subbasin GSP, which have similar occurrences in both subbasins. The constituents of concern also include those identified by Subbasin agencies responsible for drinking water supply wells in the Modesto Subbasin including the City of Modesto.

Fiscal Impact: If the resolution is adopted, a measurable objective and minimum threshold for the degradation of groundwater quality 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 significant and unreasonable adverse impacts to groundwater quality, as indicated by a new (first-time) exceedance of or further exceedance from an MCL of a constituent of concern, that is caused by GSA projects, management actions, or management of groundwater levels or extractions such that beneficial uses are affected and well owners experience an increase in operational costs.

Further, resolving that Minimum Thresholds (MT) are set as the primary or secondary California maximum contaminant level (MCL) for each of the constituents of concern, and that Measurable objectives (MO) are set as the historical maximum concentration of each constituent of concern for each Principal Aquifer at each representative monitoring site.



AGENDA REPORT

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
<i>Gordon J Enas</i>
Gordon Enas, P.E. 10/7/2021
Date Signed

GSA Chairman
<i>Eric Thorburn</i>
Eric Thorburn, P.E. 10/8/21
Date Signed

D R A F T

RESOLUTION NO. 2021-8

**APPROVING THE DEFINITION OF DEGRADED
WATER QUALITY 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 also defines the minimum threshold for degraded water quality as the degradation of water quality, including the migration of contaminant plumes, that impair water supplies or other indicator of water quality as determined by the GSA that may lead to undesirable results.

WHEREAS, the Stanislaus and Tuolumne Rivers Groundwater Basin Association Groundwater Sustainability Agency (STRGBA GSA) has identified nine potential constituents of concern for the Modesto Subbasin including arsenic, boron, Dibromochloropropane (DBCP), Nitrate, Tetrachloroethene (PCE), total dissolved solids (TDS), 1,2,3-Trichloropropane (TCP), uranium and gross alpha particles.

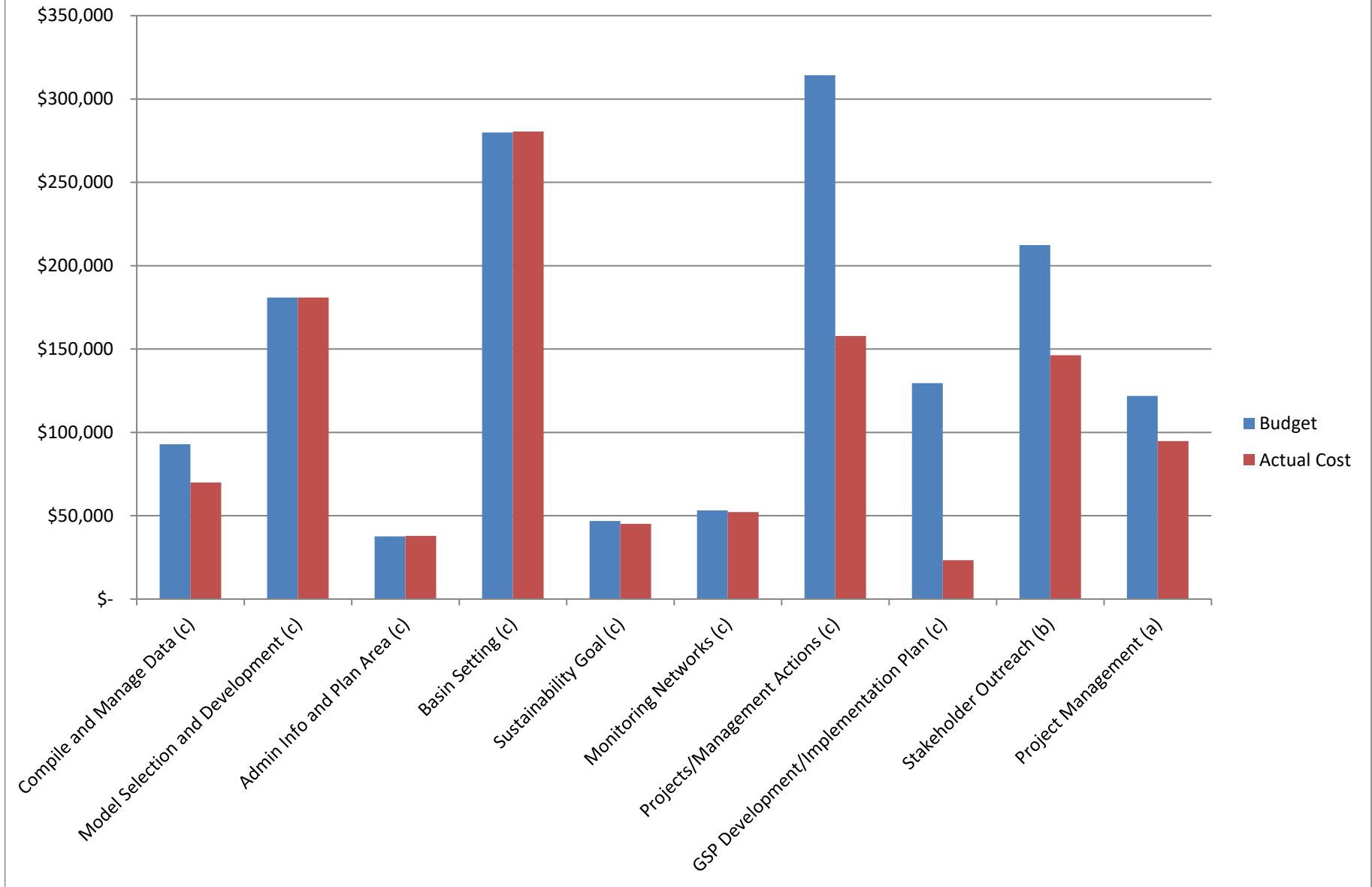
BE IT RESOLVED, The Stanislaus and Tuolumne Rivers Groundwater Basin Association Groundwater Sustainability Agency does hereby make the determination that Undesirable Results are defined as significant and unreasonable adverse impacts to groundwater quality, as indicated by a new (first-time) exceedance of or further exceedance from an MCL of a constituent of concern, that is caused by GSA projects, management actions, or management of groundwater levels or extractions such that beneficial uses are affected and well owners experience an increase in operational costs.

BE IT FURTHER RESOLVED, that Minimum Thresholds (MT) are set as the primary or secondary California maximum contaminant level (MCL) for each of the constituents of concern, and that

AGENDA REPORT

Measurable objectives (MO) are set as the historical maximum concentration of each constituent of concern for each Principal Aquifer at each representative monitoring site.

Cost To Prepare GSP (September 2018 - August 2021)





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TECHNICAL ADVISORY COMMITTEE AGENDA

October 13, 2021 (2:00 p.m. – 3:00 p.m.)

Webinar Digital Platform or Phone Meeting

<https://us02web.zoom.us/j/82844864384>

By phone: 1-669-900-9128

Webinar ID: 828 4486 4384

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 - 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
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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 9/22/21 Meeting Minutes [Action Item]
Who: Eric Thorburn, Committee
Expected Outcome: Approval
4. Topic: Project and Management Actions
Who: Todd Groundwater, Committee
Expected Outcome: Discussion
5. Next Meeting
November 10, 2021 at 1:30 p.m. via Zoom
6. Items too late for the agenda



TECHNICAL ADVISORY COMMITTEE MEETING MINUTES

September 22, 2021 (1:30 p.m. – 3:00 p.m.)

The meeting was called to order at 1:31 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:

Phyllis Stanin, Todd Groundwater	Samantha Wookey, MID
Liz Elliott, Todd Groundwater	Gordon Enas, MID
John Mauterer	Ali Stevens
Andy Taylor	Shelley Huskey
Louie Brichetto	John Mensinger
John Davids	Emily Sheldon
Khandriale Clark	Jeff Vine
Valerie Kincaid	Hilary Reinhard
Dennis Wittchow	Amanda Peisch-Derby
Michael Moradian	

2. Business from the Public

N/A

3. Approve 8/11/21 Minutes [\[Action item\]](#)

Renfrow moved, 2nd by Ward, to approve 9/8/21 meeting minutes. Motion carried.



4. Sustainable Management Criteria for Degraded Water Quality and Review of Interim Milestones

Stanin first presented on Sustainable Management Criteria for Degraded Water Quality. The presentation can be accessed at the STRGBA GSA website: www.strgba.org.

- Kincaid asked about the phrase “new (first-time) exceedance” in the definition of Undesirable Results for Degraded Water Quality. Do you mean further degradation to an existing MCL rather than a first-time exceedance? Stanin stated “new” means a first-time exceedance in a monitoring well based on historical data. Also, the focus won’t be on just one well, rather all the wells in the network.
- Kincaid asked about the 3rd bullet, “GSAs are not responsible for fixing undesirable results for water quality that were already present before January 1, 2015.” What happens if a well exceeds the MCL prior to 2015 and never improves? Stanin responded that this situation is bracketed by the Minimum Threshold and Measurable Objective bookends.
- Pitcock asked that since the State Water Board has the ability to lower the threshold for a MCL, if they lower the MCL threshold in the future and an existing well goes out of compliance, will the GSA be responsible for that? Stanin stated if the threshold changes in the future that will be something we would have to consider at the time.

Stanin next presented a Review of the Interim Milestones Approach.

- Taylor asked if a draft implementation plan has been generated and if it is available for public review? Also, where can I find a list of the projects? Stanin responded that the draft implementation is in progress and the list of projects can be found in the September 8, 2021 presentation which has been posted to the STRGBA website.

5. Next Meeting

October 13, 2021 at 1:30 p.m. via Zoom

6. Items too late for the agenda

Thorburn mentioned that all of the GSA agencies need to provide direction to the group on the Sustainable Management Criteria and the Interim Milestones, as well as their internal processes for adopting the GSP. Ward added that Todd Groundwater will be giving a presentation on the GSP to the Stanislaus County Water Advisory Committee at the September 29 meeting. Pitcock asked if a draft Powerpoint presentation could be developed to provide a consistent approach when presenting to elected officials? Stanin responded that they will build one based on the presentation given to the WAC.



MODESTO SUBBASIN SGMA:

PROJECTS & MANAGEMENT ACTIONS

TECHNICAL ADVISORY COMMITTEE (TAC) MEETING

OCTOBER 13, 2021



AGENDA

- Introduction
 - SGMA Sustainability Indicators
 - Modeling Approach and Assumptions
- Model Results
 - Land and Water Use Budget
 - Groundwater Budget
 - Groundwater Level Hydrographs
- Next Steps

SGMA SUSTAINABILITY INDICATORS

Undesirable results are significant and unreasonable conditions for one or more of the following :

- 1. Chronic lowering of groundwater levels**
- 2. Reduction of groundwater in storage**
3. Seawater intrusion – not applicable to Modesto Subbasin
4. Degraded water quality
- 5. Land subsidence (using GWL as a proxy)**
- 6. Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water**

MODELING APPROACH AND ASSUMPTIONS

■ Modeling Steps

- Phase I: Demand Side Solutions: Ag & Urban Demand Reduction
-  Phase II: Supply Side Solutions: Projects and Management Actions

■ General Approach

- Utilize the C2VSimTM baseline to estimate long term (50-Year) sustainability
- Develop a scenario that meets sustainability criteria including minimum thresholds
- Work with local agencies and stakeholders to refine analysis as necessary

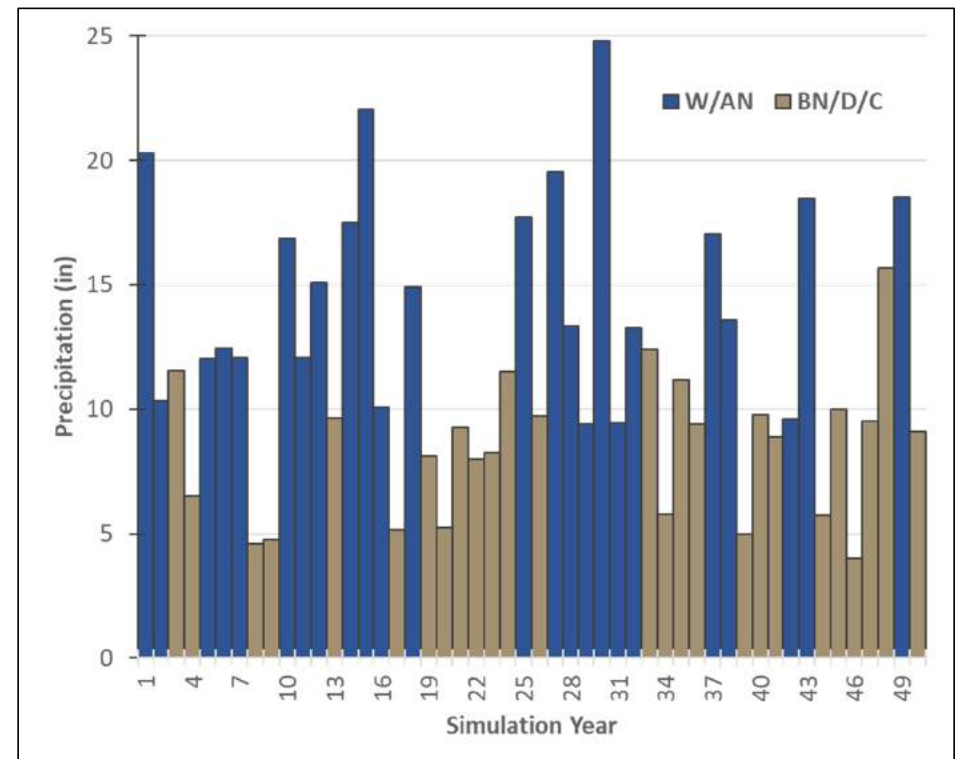
MODESTO GSP - GROUP I & II PROJECTS

#	Urban Projects	Project Proponent	Group	Scenario I	Scenario II	Scenario III
1	Municipal Conservation Projects	City of Modesto	1	X	X	X
2	Storm Drain Cross Connection Removal Project	City of Modesto	2	X	X	X
3	Surface Water Supply Project	City of Waterford	2	X	X	X
In-lieu Supply or Recharge Projects						
4	MID to Out-of-District Lands In-lieu and Direct Recharge Project	Non-District East	2		X	X
5	OID to Out-of-District Lands In-lieu and Direct Recharge Project	Non-District East	2		X	X
Flood Mitigation Projects						
6	Tuolumne River Flood Mitigation Direct Recharge Project	Stanislaus County	2		X	X
7	Dry Creek Flood Mitigation Direct Recharge Project	Stanislaus County	2		X	X
Post-PMA Sustainable Yield Analysis						
	Demand Reduction					X

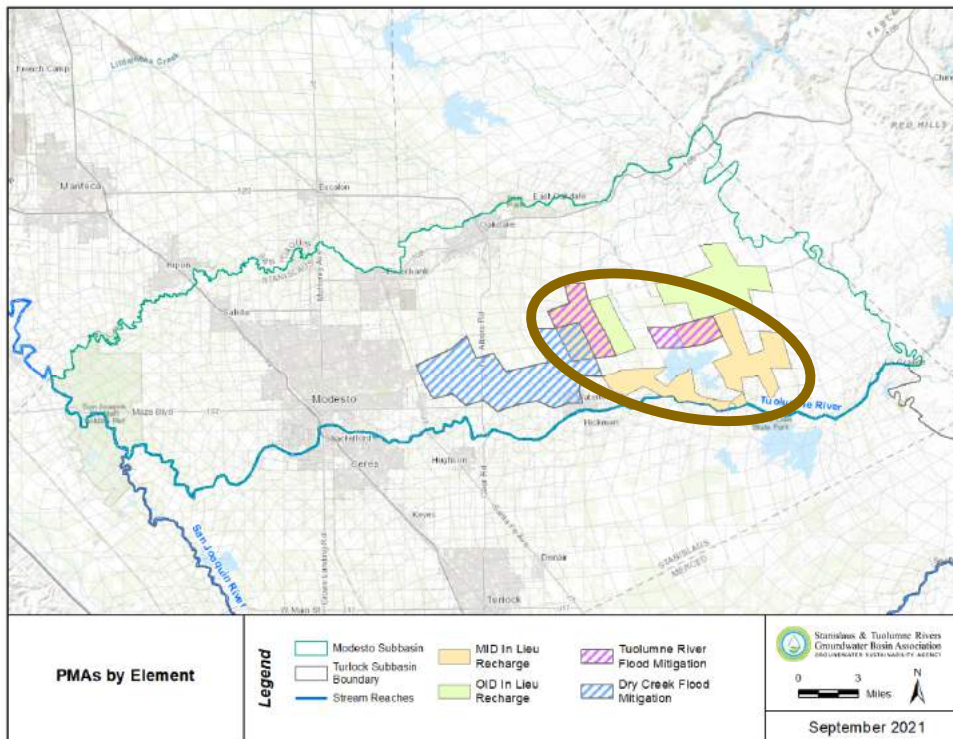
NOTE: The *Growth Realization of Surface Water Treatment Plant Phase II* – is a Group I PMA and is already simulated as part of the projected conditions baseline

MODELING APPROACH & ASSUMPTIONS

Water Year Type	Number of Years	Percentage
W	17 / 50	34 %
AN	7 / 50	14 %
BN	4 / 50	8 %
D	8 / 50	16 %
C	14 / 50	28 %
W/AN	24 / 50	48 %
BN/D/C	26 / 50	52 %



MODELING APPROACH & ASSUMPTIONS



MID to Out-of-District Lands In-lieu and Direct Recharge Project

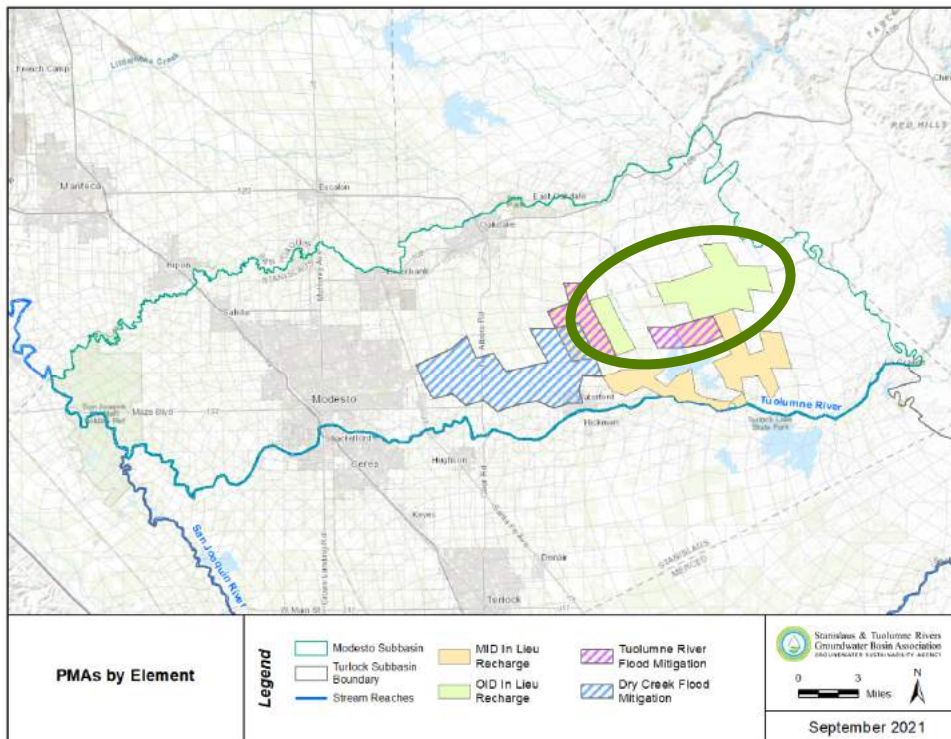
Volume:

- 60,000 AFY in W/AN years
- 28,800 AFY (50-Year Ave.)

Location:

- NDE acreage with low/med infrastructure requirements
- 2/3 In-Lieu Recharge
- 1/3 Direct Recharge

MODELING APPROACH & ASSUMPTIONS



OID to Out-of-District Lands In-lieu and Direct Recharge Project

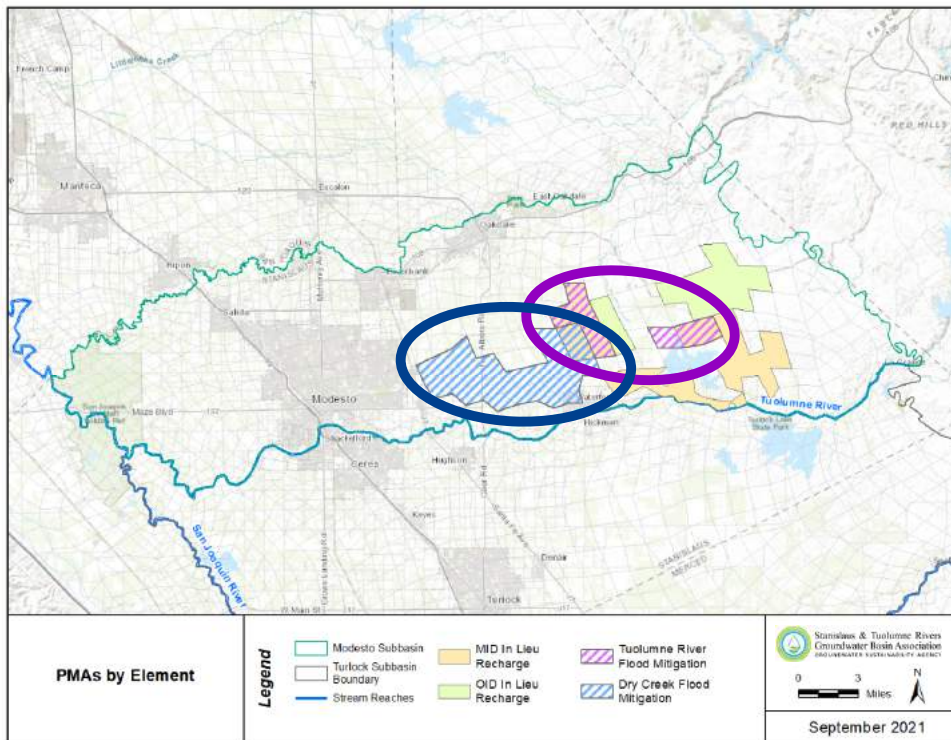
Volume:

- 20,000 AFY in W/AN/BN/D
- 14,400 AFY (50-Year Ave.)

Location:

- NDE acreage with low/med infrastructure requirements
- 90% In-Lieu Recharge
- 10% Direct Recharge

MODELING APPROACH & ASSUMPTIONS



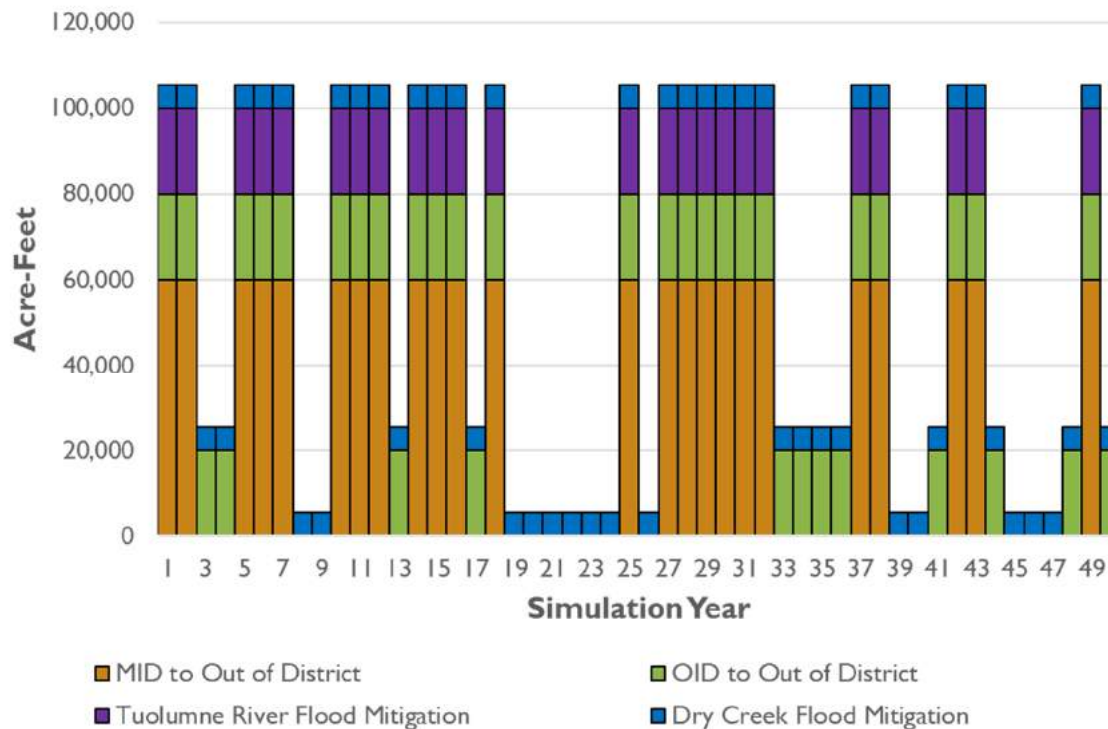
Tuolumne River Flood Mitigation Project

- 20,000 AFY in W/AN
- 9,600 AFY (50-Year Ave.)

Dry Creek Flood Mitigation Project

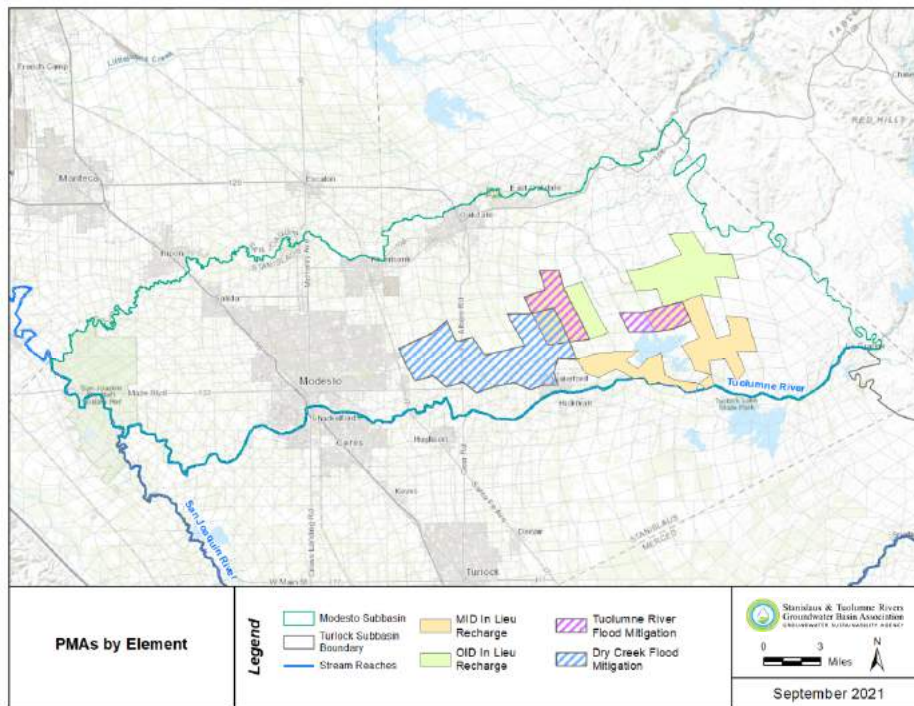
- 5,400 AFY (50-Year Ave.)

MODELING APPROACH & ASSUMPTIONS



- MID to Out-of-District Lands In-lieu and Direct Recharge Project
- OID to Out-of-District Lands In-lieu and Direct Recharge Project
- Tuolumne River Flood Mitigation Project
- Dry Creek Flood Mitigation Project

MODELING APPROACH & ASSUMPTIONS



Scenario	Project	Direct Recharge	In-Lieu Recharge
In-lieu Recharge Projects	MID to Out-of-District Lands In-lieu and Direct Recharge Project	9,600	19,200
	OID to Out-of-District Lands In-lieu and Direct Recharge Project	1,400	13,000
	In-lieu Recharge Projects	11,000	32,200
Flood Mitigation Projects	Tuolumne River Flood Mitigation Project	9,600	
	Dry Creek Flood Mitigation Project	5,400	
	Flood Mitigation Projects	15,000	
ALL	All Projects	26,000	32,200

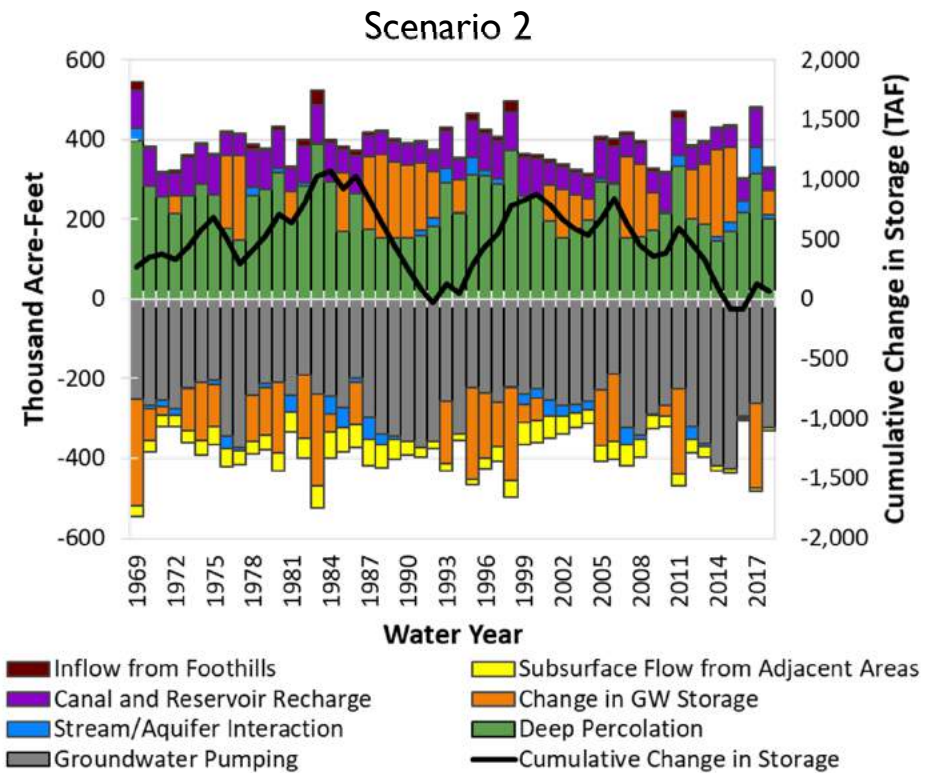
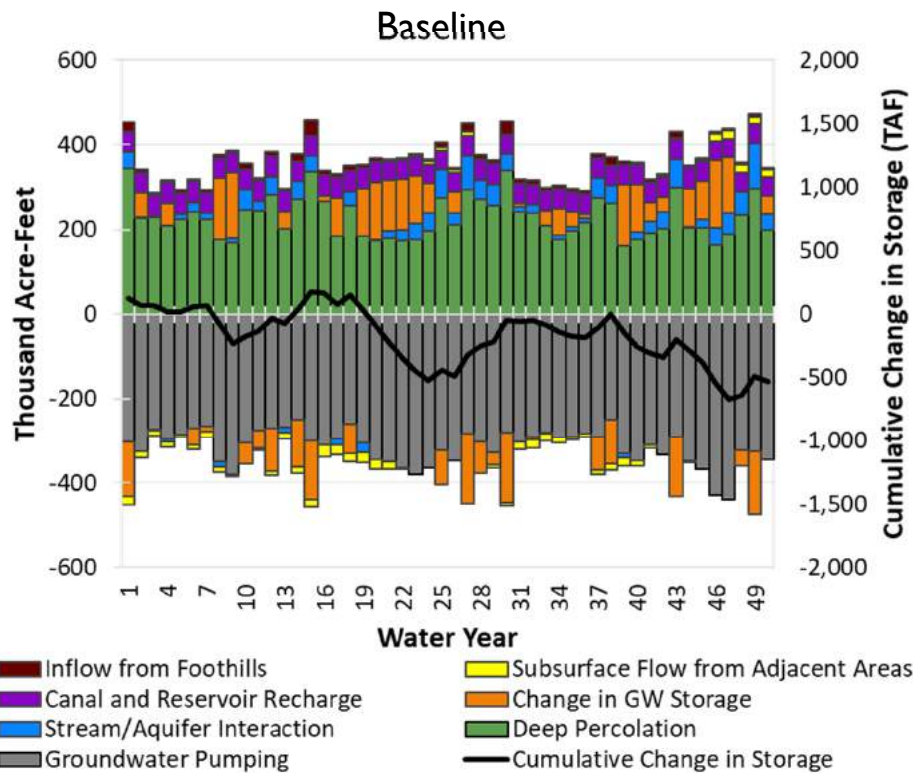
Note: All values are in acre-feet per year and represent the average annual yield over the 50-year simulation period

LAND & WATER USE BUDGET

		Baseline	Sustainable Yield	Scenario 1	Scenario 2	Scenario 2 Impact
Urban Water Use	Urban Demand	111,000	111,000	98,200	98,200	-12,800
	Urban Surface Water	51,100	51,100	51,800	51,800	700
	Urban Pumping	59,900	59,900	46,400	46,400	-13,500
Agricultural Water Use	Ag. Demand	503,800	449,700	503,800	503,800	0
	Ag. Surface Water Deliveries	266,500	266,500	266,500	298,700	32,200
	Ag. Private Agricultural Pumping	237,300	183,200	237,300	205,100	-32,200
Other	Canal, Reservoir, & Direct Recharge	47,300	47,300	47,500	73,500	26,200
	Agricultural Agency Pumping	23,800	23,800	23,800	23,800	0

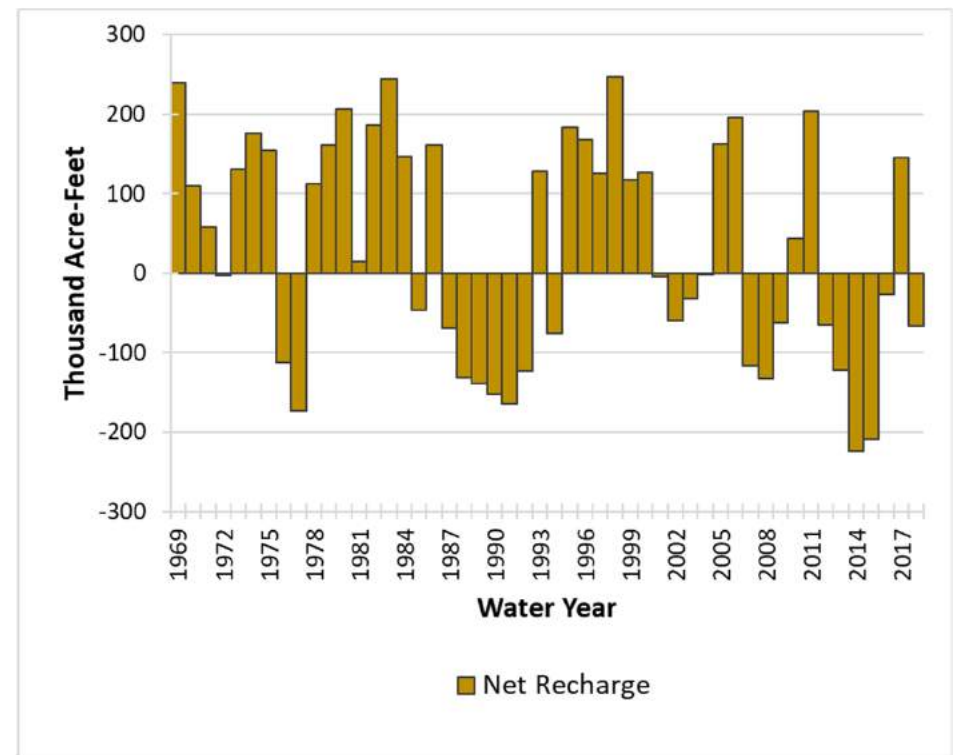
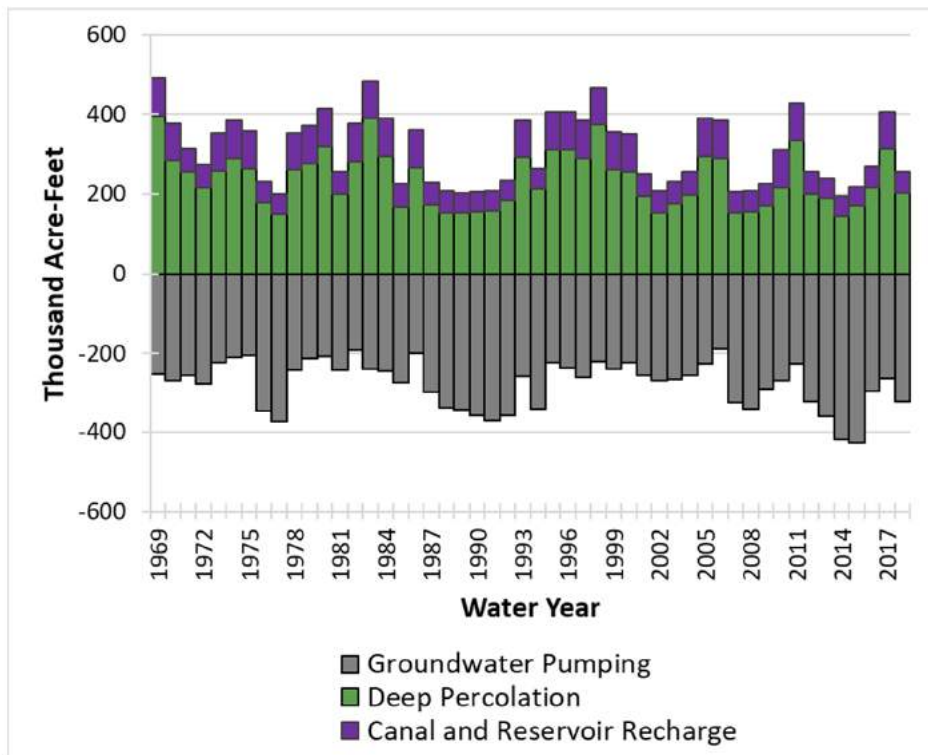
Impact = Scenario - Baseline

GROUNDWATER BUDGET



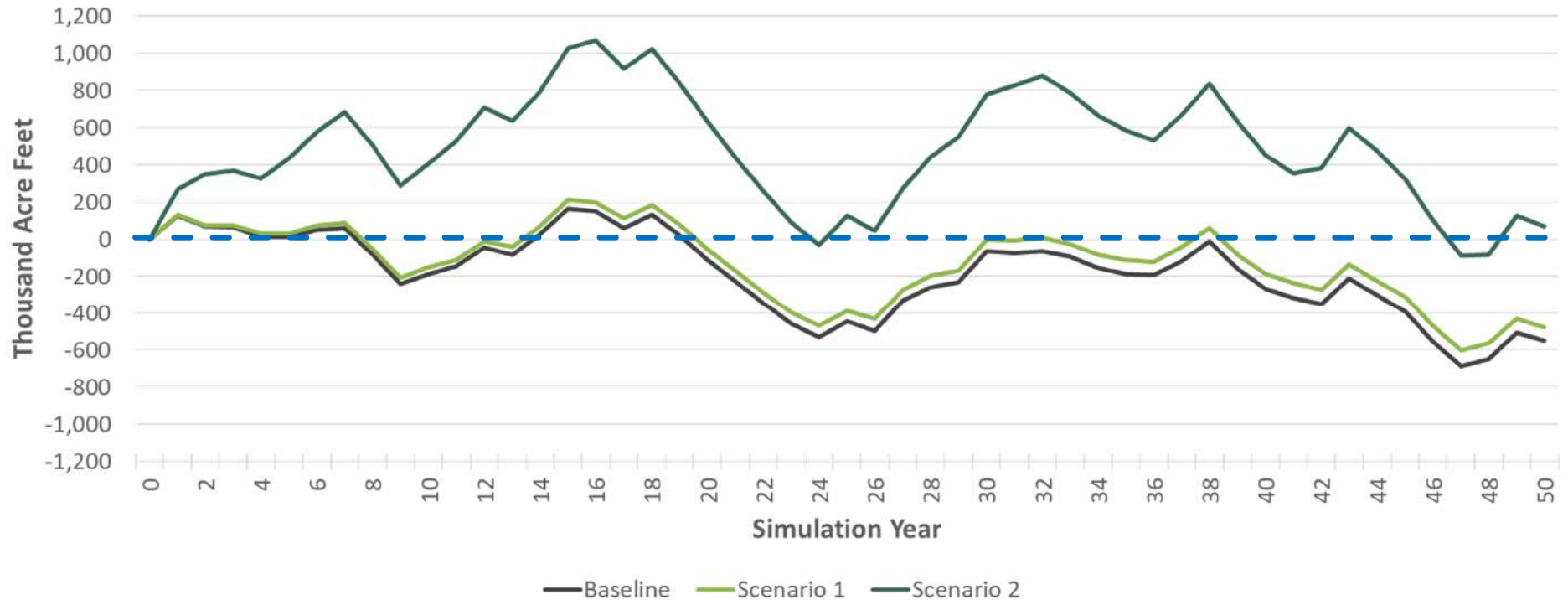
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OPERATIONAL WATER BUDGETS - SUBBASIN



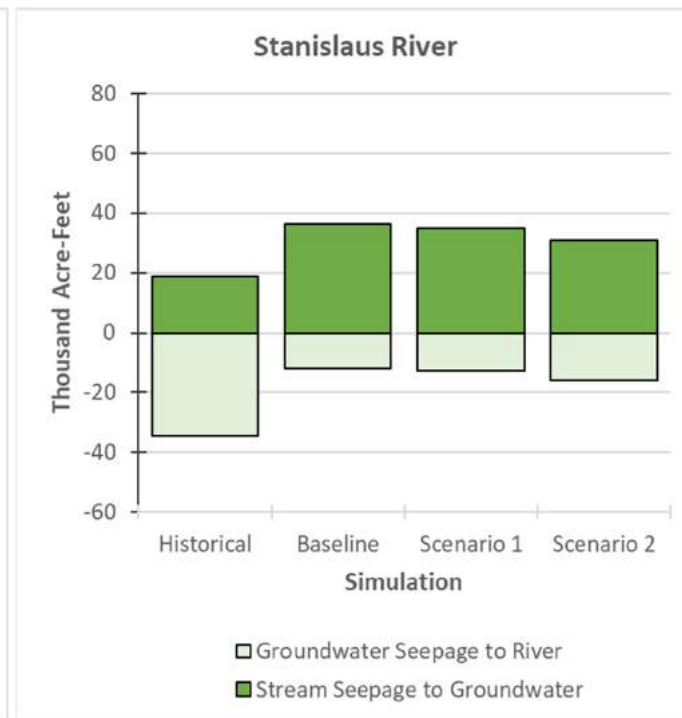
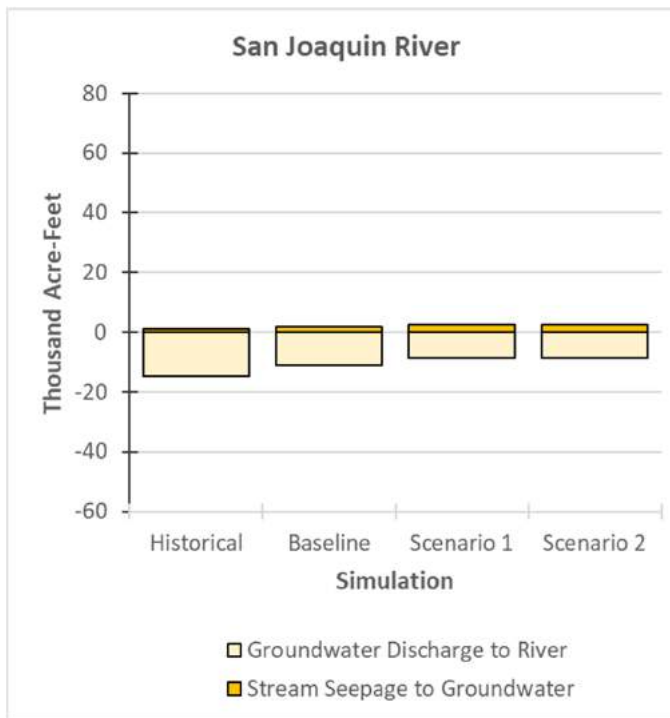
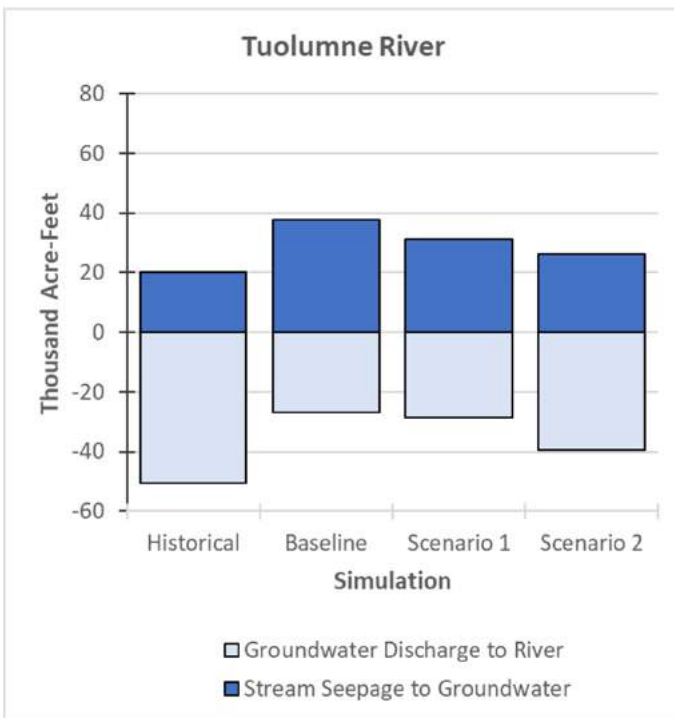
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CUMULATIVE CHANGE IN STORAGE



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INTERCONNECTED SURFACE WATER



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GROUNDWATER BUDGET

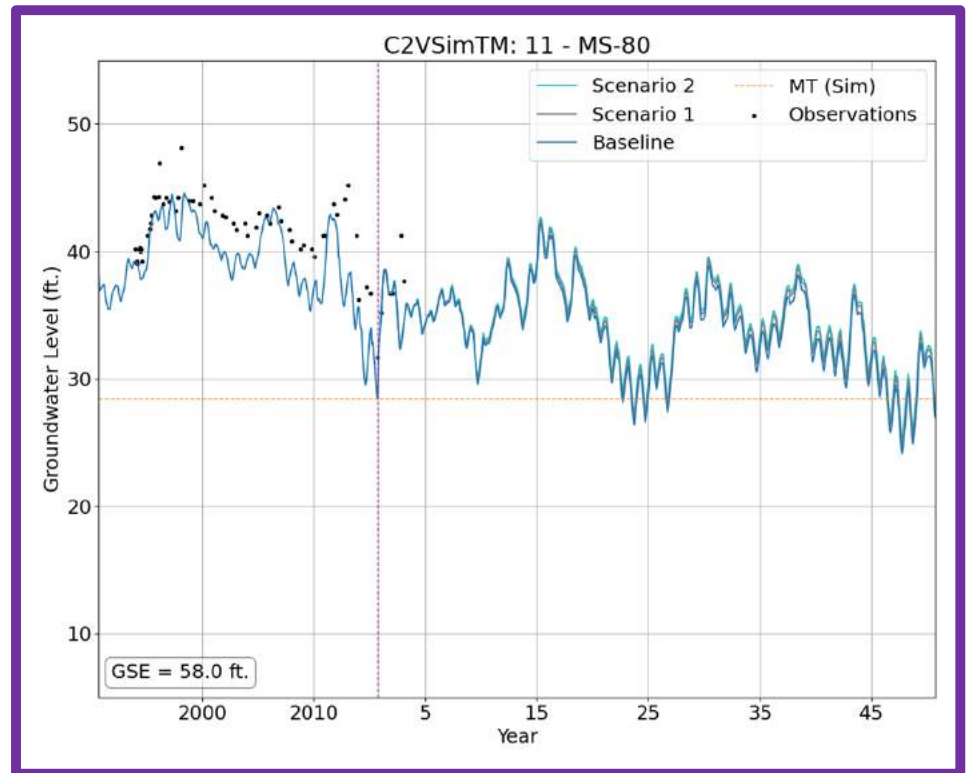
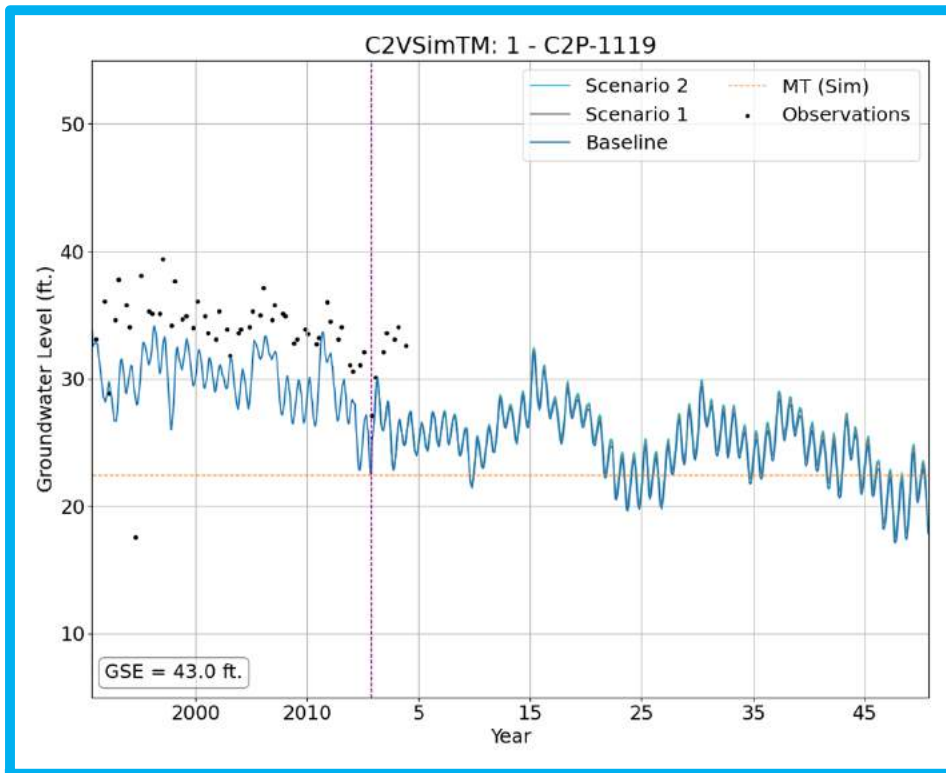
	Baseline	Sustainable Yield	Scenario 1	Scenario 2	Scenario 2 Impact
Deep Percolation	234,900	212,500	230,100	235,800	+900
Canal, Reservoir, and Direct Recharge	47,300	47,300	47,500	73,500	+26,200
Net Stream Seepage	24,300	-13,300	18,800	-4,100	-28,400
Inflow from Foothills	9,300	9,300	9,300	9,300	0
Net Subsurface Flow from Adjacent Subbasins	-5,900	-11,200	-7,600	-36,500	-30,600
Groundwater Pumping	321,000	-226,900	307,600	276,600	-44,400
Groundwater Storage Deficit	11,000	-100	9,500	-1,400	-12,400

Impact = Scenario - Baseline

SUSTAINABLE MANAGEMENT CRITERIA I: CHRONIC LOWERING OF GWL

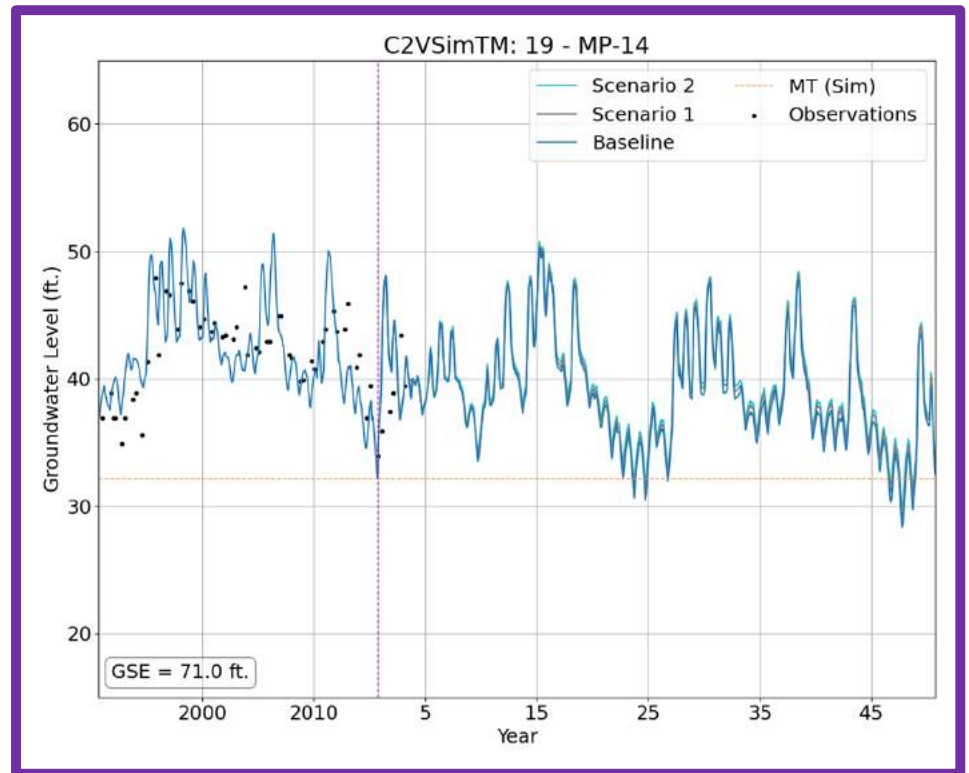
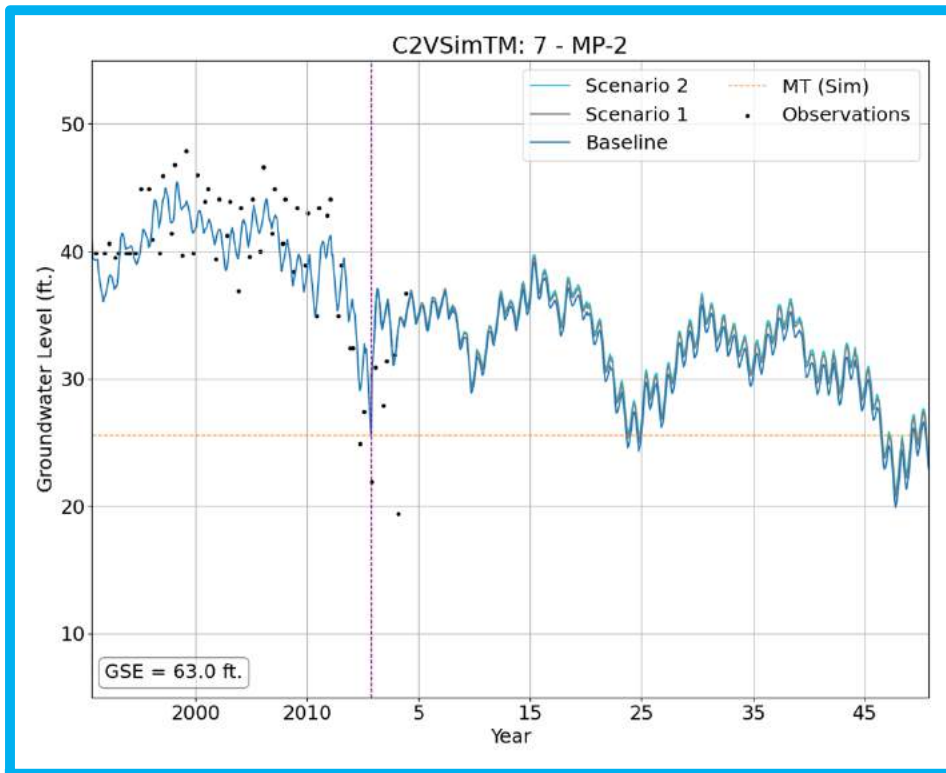
- **Sustainability Criteria (Chronic lowering of water levels)**
 - SGMA requires GSPs to set minimum thresholds to maintain groundwater levels throughout their subbasins.
 - Groundwater levels at no more than 33% of the representative monitoring wells do not exceed **the historic low** for a period longer than 3 years.
 - **MTs considered to be out of compliance by 3 consecutive Fall monitoring events**
- **Notes:**
 - Minimum thresholds may vary along the river system to protect against SMC6, depletions of interconnected surface water systems

GROUNDWATER HYDROGRAPHS



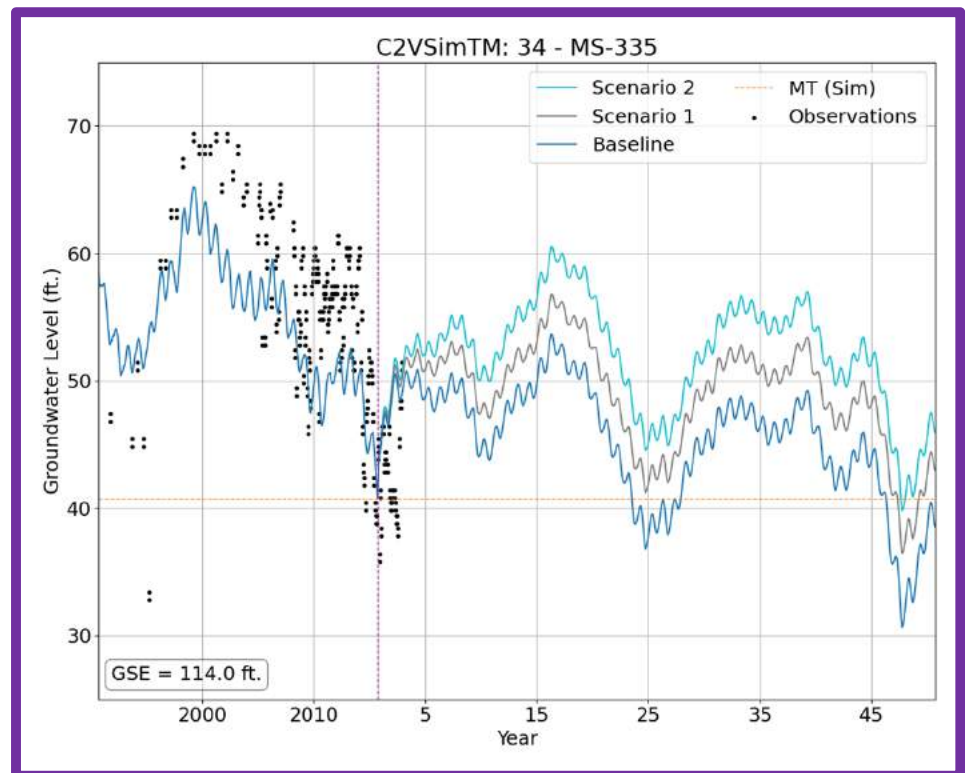
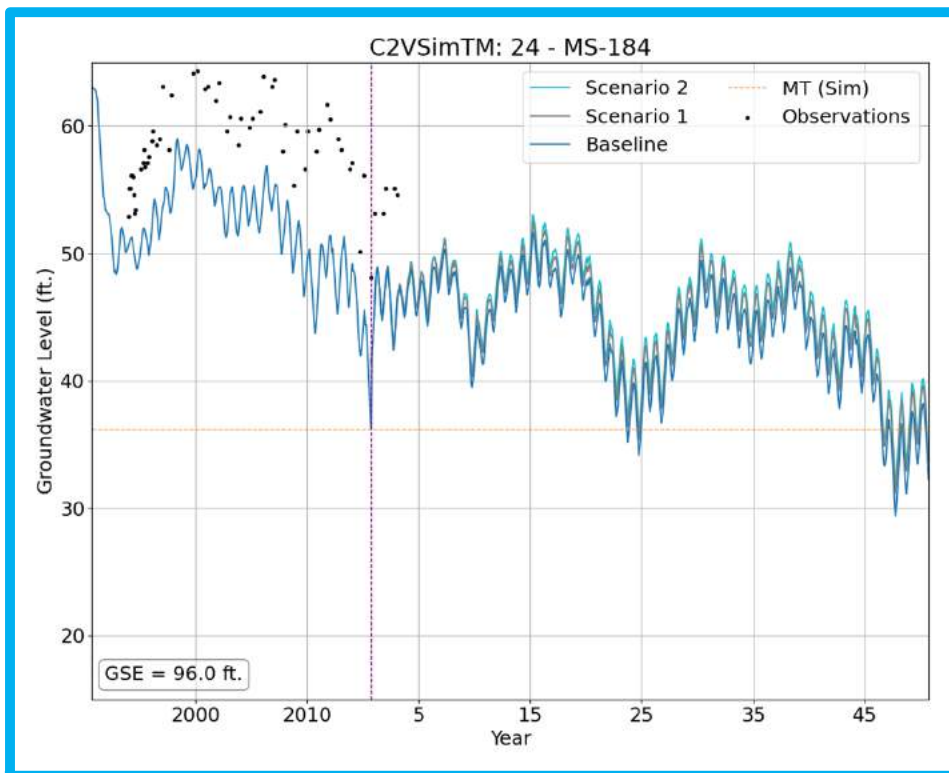
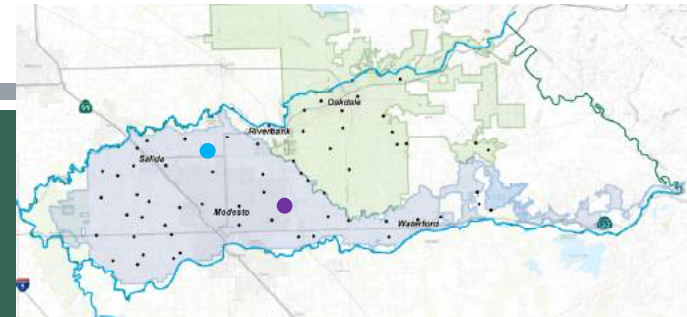
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GROUNDWATER HYDROGRAPHS



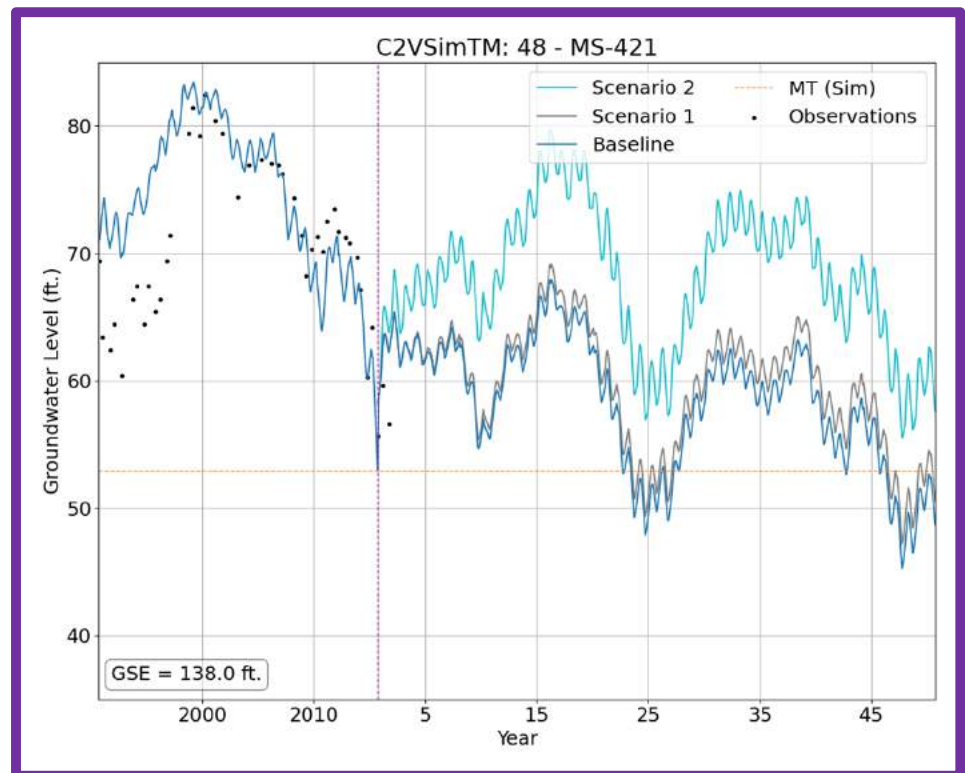
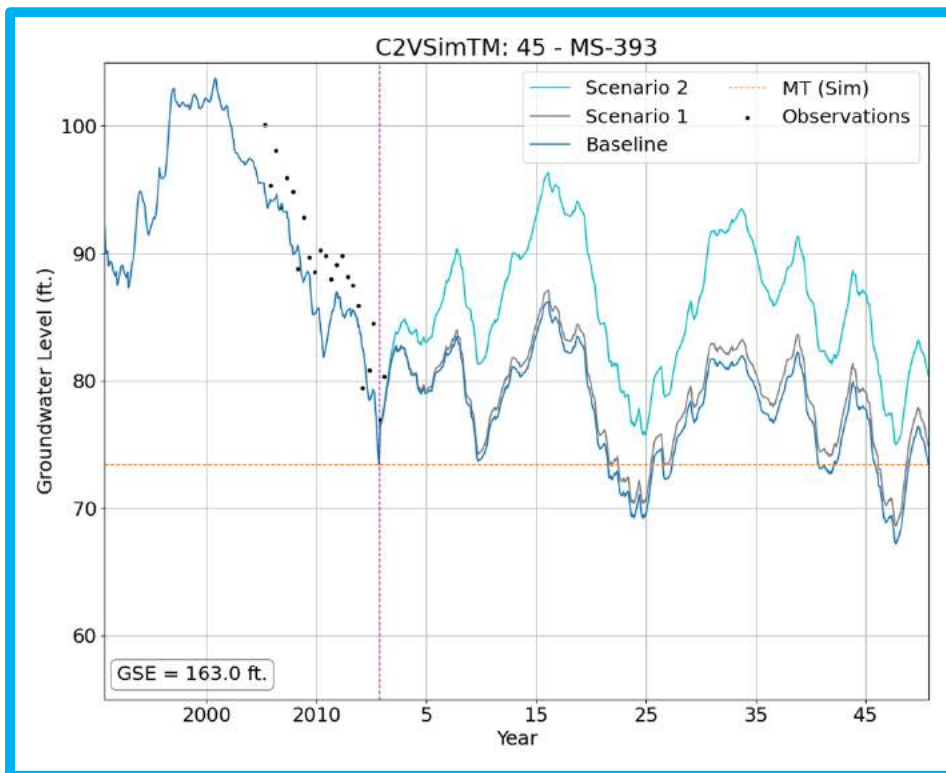
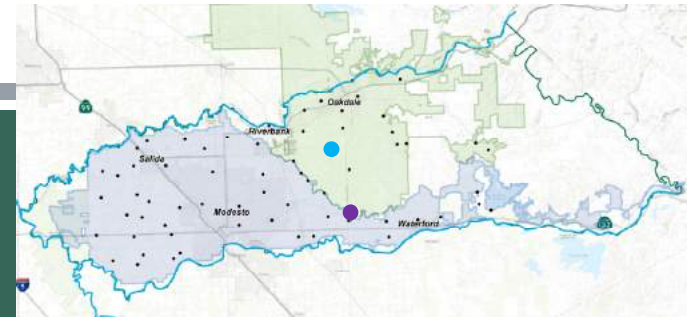
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GROUNDWATER HYDROGRAPHS



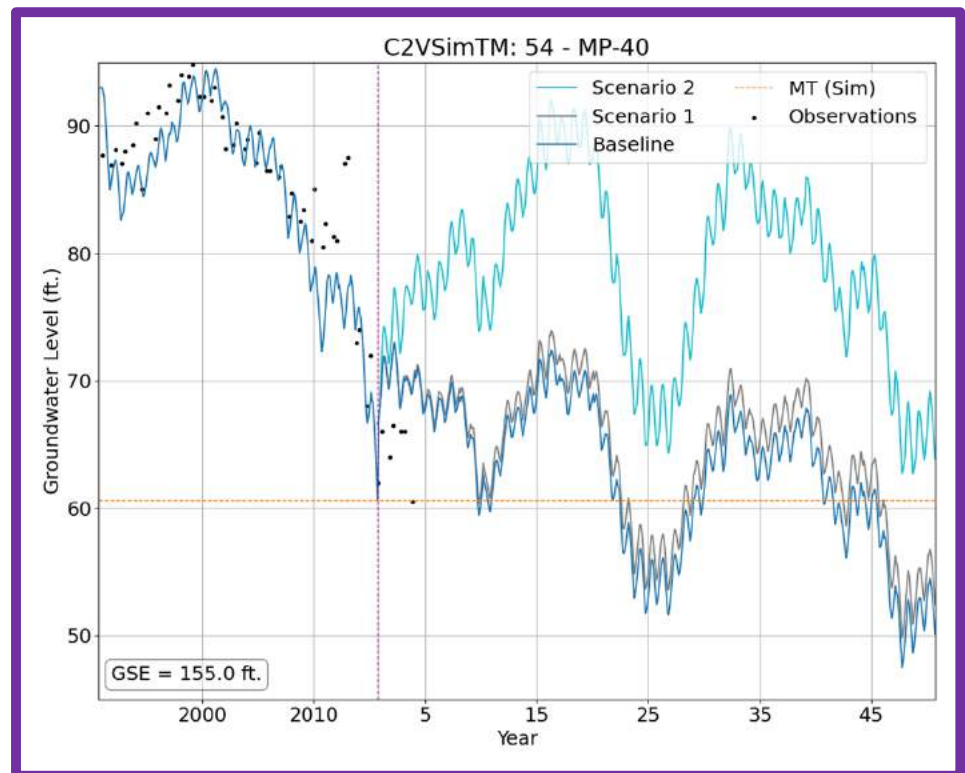
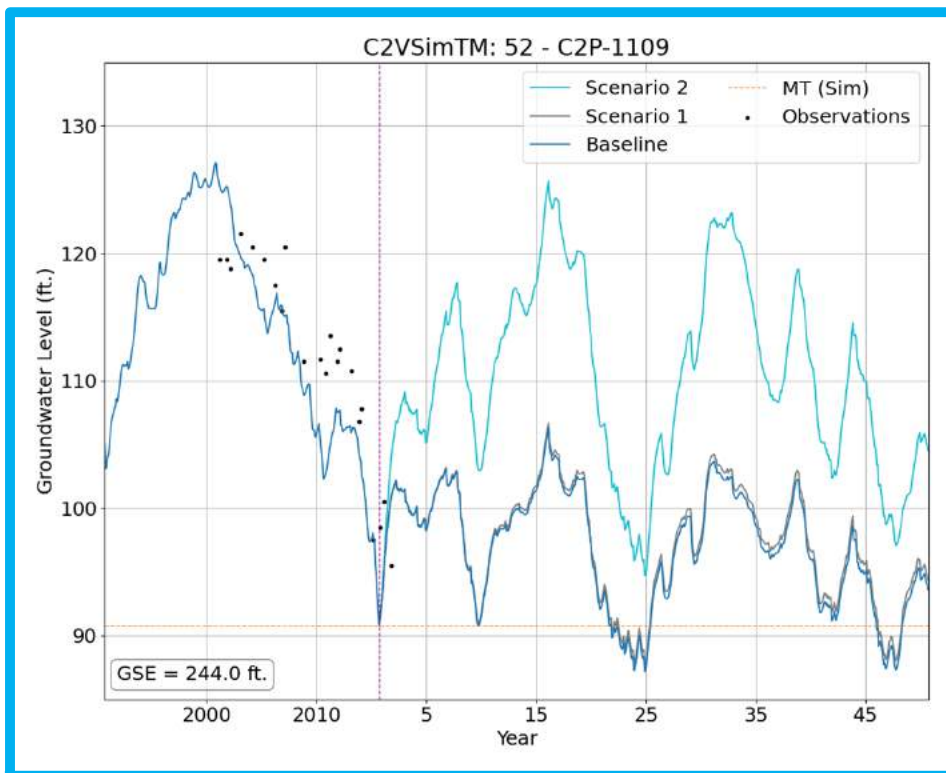
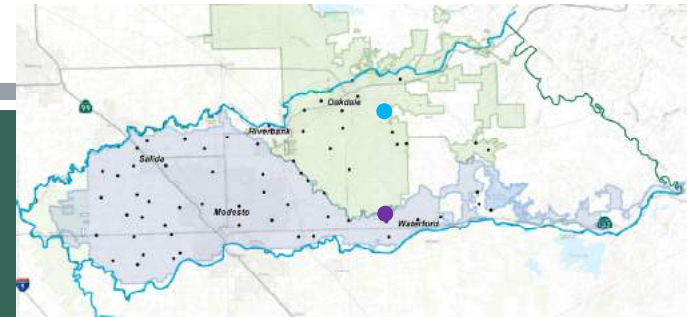
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GROUNDWATER HYDROGRAPHS



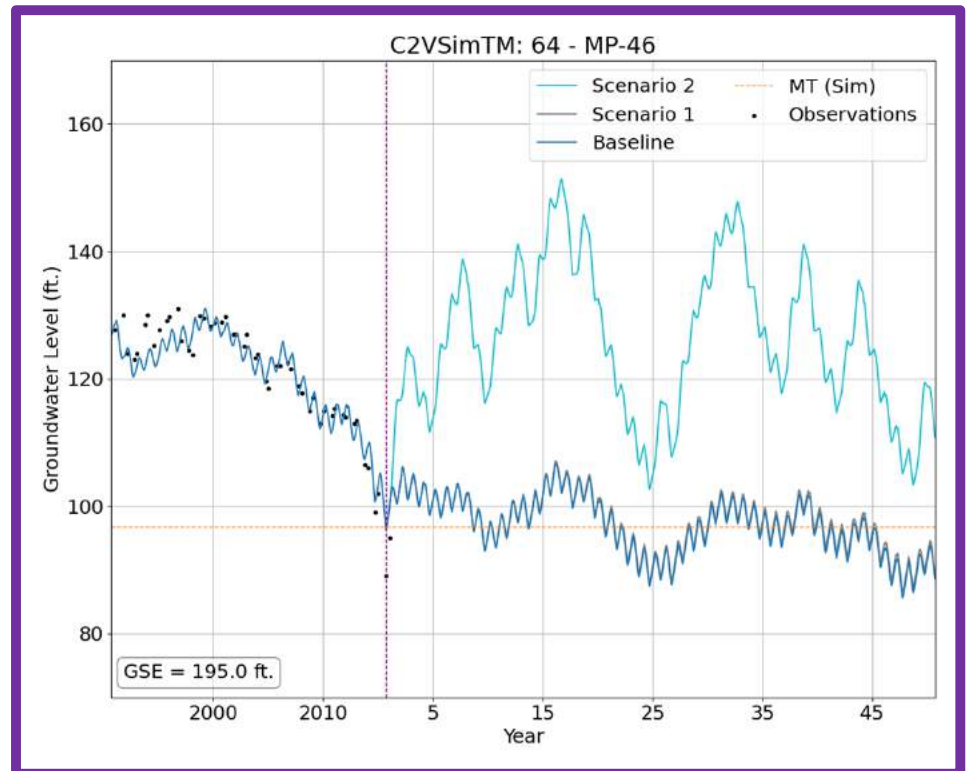
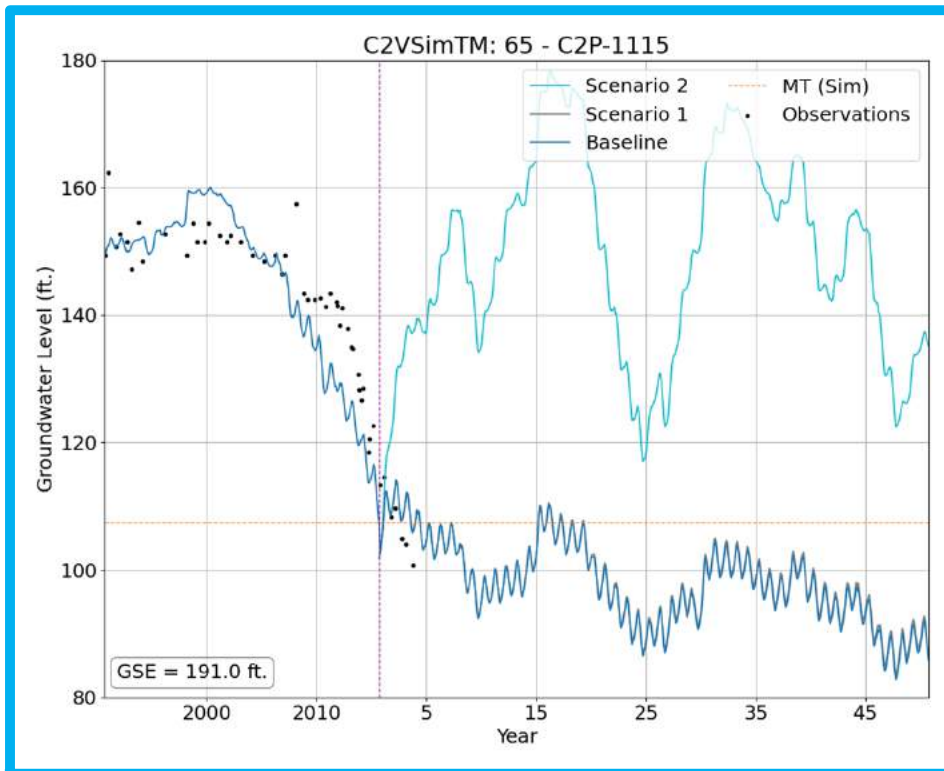
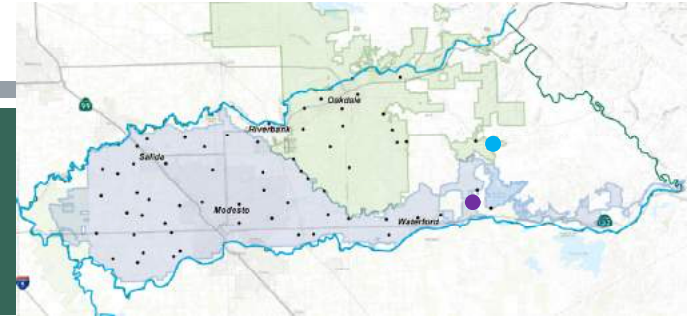
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GROUNDWATER HYDROGRAPHS



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GROUNDWATER HYDROGRAPHS



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CONCLUSIONS

■ **Summary of PMA Modeling:**

- Meeting sustainability goals should be achievable through project implementation
 - Sustainability analysis hinges on a commitment from NDE areas to actively pursue and implement the simulated projects.
 - Meeting minimum thresholds is dependent on progress being initiated immediately after GSP submittal.
- We will continue to work with the GSA to develop and implement adaptive management and guard against conditions that may threaten minimum thresholds.

QUESTIONS?

