Vandalia
WATER DISTRICT

# MEMORANDUM

To: Vandalia Water District Board Members
Members of the Public

From: Cinthia Canales
Administrative Assistant

Date: June 5, 2025

Re: June Board Packet

**Enclosed is this month's Board Packet, which includes:**

- Ground Sustainability Agency Agenda
- Regular Meeting Agenda
- GSA Draft Minutes – May 14, 2025
- Draft Minutes – May 14, 2025
- Mitigation Plan
  - Attachment 1 – Coordination Agreement
  - Attachment 2 – Mitigation Plan Tech Memo
  - Attachment 3 – Groundwater Level Impact Claim Process – Investigation Phase
  - Attachment 4 – Groundwater Level Impact Claim Process – Evaluation Examples
  - Attachment 5 – Claim Form
  - Attachment 6 – Well Inspection Form
  - Attachment 7 – Waiver and Release of Liability
  - Attachment 8 – Land Subsidence Impact Claim Process
  - Attachment 9 – Land Subsidence Impact Claim Form
  - Attachment 10 – Tule Basin Management Zone Sage Drinking Water Delivery
  - Attachment 11 – Water Quality and Tule Subbasin Management
- Draft SHE-Vandalia Well Mitigation Agreement
- SHE-VWD Agreement – Exhibit A and B
- Tule Subbasin Mitigation Program Draft

**Notice of ADA Compliance:** The District is committed to making its meetings accessible to all citizens. In accordance with the Americans with Disabilities Act ("ADA"), if any person(s) requires special accommodations to participate, they should contact the District's secretary at 559-686-4716, preferably at least 48 hours in advance of the meeting.

Vandalia
WATER DISTRICT

# Vandalia Water District
# Board of Directors
# Groundwater Sustainability Agency Meeting Agenda
# June 11, 2025
# Location: 105 W Teapot Dome Ave, Porterville, CA 93257
# Time: 10:30 a.m.

1. Call to Order.

2. Public Comment.
   During this item, members of the public will be afforded an opportunity to address the Board on any matter within the jurisdiction of the District at the beginning of the session or before the Board's consideration of an agenda item regarding that item. Comments are limited to 3 minutes per person, unless otherwise indicated by the Board President, with a maximum of 30 minutes for public comments overall. Cal. Gov. Code § 54954.3.

3. General Administration.
   a. Agenda Approval – Action Item
   b. Minutes of May 14, 2025 GSA Meeting – Action Item

4. Sustainable Groundwater Management Act.
   a. Updates
   b. Self-Help Enterprise Agreement – Action Item
   c. Draft mitigation Plan – Action Item
   d. Others

5. Next GSA Meeting: July 9, 2025, at 10:30 a.m.
   105 W Teapot Dome Ave, Porterville, CA 93257

6. Adjournment.

**Agenda posted for public information on June 6, 2025, pursuant to Cal. Gov. Code 54954.2(a), in front of the District's office at 2032 S. Hillcrest St, Porterville, CA 93257, and at 105 W Teapot Dome Ave, Porterville, CA 93257, and on the District's website at www.ltrid.org.

Vandalia
WATER DISTRICT

# Vandalia Water District
# Board of Directors
# Regular Meeting Agenda
# June 11, 2025
# Location: 105 W Teapot Dome Ave, Porterville, CA 93257
# Time: 10:30 a.m.

1. Call to Order.

2. Public Comment.
   During this item, members of the public will be afforded an opportunity to address the Board on any matter within the jurisdiction of the District at the beginning of the session or before the Board's consideration of an agenda item regarding that item. Comments are limited to 3 minutes per person, unless otherwise indicated by the Board President, with a maximum of 30 minutes for public comments overall. Cal. Gov. Code § 54954.3.

3. General Administration
   a. Agenda Approval – Action Item
   b. Minutes of May 14, 2025 Regular Meeting – Action Item

4. Financial Statement / Bills
   a. Treasurer's Report & Bills to approve – Action Item.

5. Water Operations
   a. Water deliver report

6. Company Operations and Maintenance
   a. Operations and Maintenance Report

7. Tule River Association
   a. Update

8. Closed Session.
   a. Legal – Pending Litigation
      i. CONFERENCE WITH LEGAL COUNSEL – PENDING OR THREATENED LITIGATION in accordance with Government Code Section 54956.9(b): (one case)

**If Necessary

**Vandalia**
WATER DISTRICT

b. Real Property – Possible adjournment to executive session to confer on employee related matters in accordance with Government Code Section 54957 (Brown Act).
    i. District Negotiator: General Manager Limas
    **If Necessary

9. Next Regular Meeting: July 9, 2025 at 10:30 a.m.
   105 W Teapot Dome Ave, Porterville, CA 93257

10. Adjournment.

**Agenda posted for public information on June 6, 2025, pursuant to Cal. Gov. Code 54954.2(a), in front of the District's office at 2032 S. Hillcrest St, Porterville, CA 93257, and at 105 W Teapot Dome Ave, Porterville, CA 93257, and on the District's website at www.ltrid.org.

**Meetings Hearings and Notices**

A person with a qualifying disability under the Americans with Disabilities Act of 1990 may request the District to provide a disability-related modification or accommodation in order to participate in any public meeting of the District. Such assistance includes appropriate alternative formats for the agendas and agenda packets used for any public meetings of the District. Requests for such assistance and for agendas and agenda packets shall be made in person, by telephone, facsimile, or written correspondence at the office of Vandalia Water District, at least 48 hours before a public Authority meeting.

# Vandalia Water District
# Groundwater Sustainability Agency
# Regular Meeting Minutes
# May 14, 2025
# Location: 105 W Teapot Dome Ave, Porterville, CA 93257
# Time: 10:30 a.m.

1. Call to Order: The meeting was called to order at 10:30 a.m. by President Meier

2. Roll Call:

| | |
|---|---|
| Director Steve Meier | November 2028 |
| Director Roger Everett | November 2026 |
| Director Jim Zimmerman | November 2028 |
| Director Dyson Schneider | November 2028 |
| Director Mike Bennett | November 2026 |

District Staff:

Eric Limas (video conference), General Manager

Mark Greenall, Controller

John Michael Domondon, District Engineer

Jack Lopez, Field Superintendent

Kirk Masters, Water Resource Superintendent

Alex Peltzer (video conference), General Counsel

Landowners and Public:

None

3. General Administration
   a. Agenda Approval –
   On motion by Director EVERETT, second by Director BENETT, and unanimously approved, the agenda was approved as presented.

   b. Minutes of April 9, 2025, GSA meeting –
   On motion by Director BENNETT, second by Director EVERETT, and unanimously approved, the minutes of the April 9, 2025, GSA meeting were approved as presented.

4. Public Comment
   No Public Comment

5. Closed Session. The board entered Closed Session at approximately 10:35 a.m.
   a. Legal – Pending Litigation

   b. Personnel – Possible adjournment to executive session to confer on employee-related matters in accordance with Government Code Section 54957 (Brown Act).

   c. Real Property – Possible adjournment to executive session to confer on employee-related matters in accordance with Government Code Section 54957 (Brown Act).
      i. District Negotiator: General Manager Limas

   Closed Session adjournment. No reportable actions were taken during closed Session.

6. General Updates
   a. Groundwater Accounting
      DOMONDON reviewed the groundwater accounting, monthly summary report, and State Water Control Board Correspondence. No action was taken.

   b. Tule Subbasin SGMA Budget
      Manager LIMAS reviewed the Tule Subbasin SGMA Budget. After discussion, on motion by Director EVERETT, second by BENNETT, and unanimously approved, the Tule Subbasin SGMA Budget was approved with the exemption of the Groundwater Model Update line item, where the Board said to bring it back to the Board in the future and look for grant funds to pay for it.

   c. Self-Help Enterprise Agreement
      Manager LIMAS reviewed the Draft Self-Help Enterprise Agreement. No action was taken.

   d. Other
      DOMONDON presented the 2023/2024 Tule Subbasin Annual Report. No action was taken.

7. Next Regular Board Meeting: June 11, 2025 at 10:30 a.m.
   105 W Teapot Dome Ave, Porterville, CA 93257

8. Adjourned at 12:30 p.m. by Board President Meier.

CERTIFICATION: THIS IS TO CERTIFY THAT THE ORIGINAL AGENDA FOR THE REGULAR MEETING AND GROUND SUSTAINABILITY AGENCY WAS POSTED AT THE DISTRICT OFFICE BY 9 AM MAY 10, 2025.

IF ANYONE WANTS COPIES OF ANY OF THE REFERENCED BOARD MATERIALS THEY MAY CONTACT THE DISTRICT ADMINISTRATIVE ASSISTANT, CINTHIA CANALES AT 559-686-4716 OR BY EMAIL customerservice@ltrid.org.

Vandalia
WATER DISTRICT

Draft Minutes May 14, 2025

# Vandalia Water District
# Board of Directors
# Regular Meeting Minutes
# May 14, 2025
# Location: 105 W Teapot Dome Ave, Porterville, CA 93257
# Time: 10:30 a.m.

1. Call to Order: The meeting was called to order at 10:30 a.m. by President Meier.

2. Roll Call:

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| Director Steve Meier | November 2028 |
| Director Roger Everett | November 2026 |
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District Staff:

Eric Limas (video conference), General Manager

Mark Greenall, Controller

John Michael Domondon, District Engineer

Jack Lopez, Field Superintendent

Kirk Masters, Water Resource Superintendent

Alex Peltzer (video conference), General Counsel

Landowners and Public:

None

3. General Administration
   a. Agenda Approval –
   On motion by Director EVERETT, second by Director BENETT, and unanimously approved, the agenda was approved as presented.

   b. Minutes of April 9, 2025, meeting –
   On motion by Director BENNETT, second by Director EVERETT, and unanimously approved, the minutes of the April 9, 2025, Board of Directors meeting were approved as presented.

4. Public Comment
   No Public Comment

5. Closed Session. The board entered Closed Session at approximately 10:35 a.m.
    a. Legal – Pending Litigation

    b. Personnel – Possible adjournment to executive session to confer on employee-related matters in accordance with Government Code Section 54957 (Brown Act).

    c. Real Property – Possible adjournment to executive session to confer on employee-related matters in accordance with Government Code Section 54957 (Brown Act).
        i. District Negotiator: General Manager Limas

Closed Session adjournment. No reportable actions were taken during closed Session.

6. Administration/Financial Statement/Bills
    a. Financial Statement/Bills
    GREENALL reviewed the treasurer's report and bills paid for April. On motion by Director EVERETT, second by Director SCHNEIDER, and unanimously approved, the bills paid were approved, and the treasurer's report was ordered and placed on file.

7. Water Operations
    a. Water Delivery Report
    DOMONDON reviewed current water conditions, operations, and delivery reports for April. No Action was taken.

8. District Operations
    a. Operations & Maintenance report
    MASTERS reviewed operations and maintenance activities, including water-related duties and general maintenance, including leak repair at turnout 230. No action was taken.

    b. Rental Property: Request by tenant to Participate in CSET weatherization Program.
    DOMONDON reviewed the tenant's Request to Participate in the CSET weatherization program for a swamp cooler for the rental property in Hillcrest. After discussion, on motion by Director EVERETT, second by Director SCHNEIDER, the request was denied. Instead, the Board directed staff to purchase the coolers and install them for the tenant.

    c. Fire Hydrant Use Memorandum
    DOMONDON reviewed the Fire Hydrant Use Memorandum. No action taken.

9. Tule River Association
    a. Success Reservoir Enlargement Project(SREP)
    Manager LIMAS reviewed activities related to the SREP. No action was taken.

10. Next Regular Board Meeting: June 11, 2025 at 10:30 a.m.
    105 W Teapot Dome Ave, Porterville, CA 93257

11. Adjourned at 12:30 p.m. by Board President Meier.

CERTIFICATION: THIS IS TO CERTIFY THAT THE ORIGINAL AGENDA FOR THE REGULAR MEETING AND GROUND SUSTAINABILITY AGENCY WAS POSTED AT THE DISTRICT OFFICE BY 9 AM MAY 10, 2025.

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# Vandalia Water District Groundwater Sustainability Agency
# Groundwater Sustainability Agency
# Groundwater Sustainability Plan Impact Mitigation Plan

## 1.1 INTRODUCTION – Establishment of Groundwater Well Mitigation Program.

Sustainable management criteria identified in each of the Tule Subbasin Groundwater Sustainability Agencies' (GSAs) Groundwater Sustainability Plans (GSPs) have been developed to address significant and unreasonable impacts to agricultural, municipal, and industrial beneficial uses of groundwater. However, analysis based on available data suggest that numerous shallow domestic wells and potentially other wells may be impacted during the Sustainable Groundwater Management Act (SGMA) GSP implementation period between 2020 and 2040 as a result of continued lowering of groundwater levels during this period. Wells, land use, property, and infrastructure may also be impacted from land subsidence and changes in groundwater quality during this period.

The Subbasin has been in overdraft for many years resulting in a significant lowering of regional and local groundwater levels. The GSPs are designed for the Subbasin to reach sustainability by 2040 and beyond. However, until sustainability is reached, some level of continued groundwater level decline and land subsidence is expected in areas of the Subbasin while the GSAs are in the process of implementing projects and management actions to achieve sustainability by 2040. The purpose of the GSAs' Mitigation Programs is to mitigate those wells, critical infrastructure, and land uses that are adversely affected by declining groundwater levels, land subsidence, and changes to groundwater quality while the GSAs reach sustainability.

As part of revisions to the Tule Subbasin Groundwater Sustainability Plans (GSPs) and Coordination Agreement approved by the Groundwater Sustainability Agencies (GSAs) within the Tule Subbasin, the GSAs each agreed to develop mitigation plans to address significant and unreasonable impacts to beneficial uses of groundwater during the sustainability transition period between 2020 and 2040. The revised Tule Subbasin Coordination Agreement submitted in July 2022 included a Mitigation Program Framework as Attachment 7, which outlined the general standards that each GSA would commit to in developing their respective Mitigation Programs. Vandalia Water District elected to become a GSA in July 2024 and committed to completing the mitigation claims process for domestic and municipal wells.. The Mitigation Framework is attached to this policy as Attachment 1.

## 1.1 Purpose and Scope

Thomas Harder and Company prepared a Technical Memorandums, attached as Attachment 2, to provide the minimum technical requirements for use by each Tule Subbasin GSA to address claims of impact from lowered groundwater levels, subsidence impacts, and water quality impacts associated with GSP-/GSA-approved or authorized activities. In consideration of the technical information provided therein, and in accordance with the Mitigation Framework in the Coordination Agreement, each GSA Mitigation Program will identify the specific criteria and processes for mitigating claims of impact caused by pumping within their respective GSA boundaries. The purpose of this policy is to establish a Mitigation Program for the Vandalia Water District GSA consistent with the Mitigation Framework (Attachment 1) and the Harder Technical Memorandums (Attachment 2).

## 2.0 GROUNDWATER WELL LEVEL IMPACT – MITIGATION CLAIM PROCESS

The Mitigation Program allows for domestic, industrial, municipal, and certain agricultural well owners adversely affected by groundwater level impacts to file a claim with the GSA in which the well is located. The process for receiving and investigating claims of groundwater level impact is set forth in sections 2.1 through 2.3 is shown in Attachment 3, Groundwater Level Impact Claim Process – Investigation Phase. For groundwater levels, an "impact" is defined as the inability of a well owner to pump groundwater of sufficient quantity to meet their water supply needs due to lowered groundwater levels resulting from Tule Subbasin GSP-/GSA-approved or authorized activities. The impact must be realized after January 2015. Responsibilities of the claimant are shown in green, and responsibilities of the GSA are shown in blue in Attachment 3. Decision points are shown in orange.

All claims will be investigated and evaluated within 45 days of receipt of the claim.

## 2.1 Filing a Claim

The claim process starts with the affected party ("Claimant") filing a claim with the GSA in which the party's well is located, or in which the Claimant asserts the activity was the cause of the Claimant's impacts. The claim will be filed using a form like that provided in Attachment 5 -Impact Claim Form.

- Claim forms will only be accepted for claim impacts occurring after January 1, 2025
- Claims can only be filed by the owner of the well
- Claim forms will only be accepted on wells that were in existence and actively in service as of December 31, 2024.
- Wells older than 25 years (per IRS depreciation schedules) will not be eligible for mitigation.

To process a claim, the Claimant must provide some basic information on the Impact Claim Form to enable further investigation of the claim, including:

a) The Claimant's name and contact information,
b) The type and location of the well,
c) Request for interim water supply,
d) Well construction information
e) Pump information
f) description of the issue with the well, and
g) The applicant's signature.

The filing of a claim will require that the Claimant provide access to the well to verify the claim. In signing the impact claim form, the Claimant agrees to release all data associated with the well and provide access to the well for inspection by a GSA technical representative. Denial of access to the well for inspection by the GSA will result in denial of the claim.

## 2.2 Impact Assessment

### 2.2.1. Technical Review and Verification of Claimant-Provided Data

A GSA technical representative will review all available information provided by the Claimant for the affected well prior to inspection in the field. Data to be reviewed will include, but not limited to:

a) The CDWR driller's log,
b) Information on date the well was constructed,
c) Well construction information (casing diameter, casing depth, perforation interval), Available downhole video surveys,
d) Historical groundwater levels,
e) Pump type and intake depth,
f) Motor size,
g) Pump age,
h) Typical discharge rate,
i) Last pump test date,
j) Last service date,
k) Last static and pumping groundwater levels, and
l) Information on the nature of the problem.

Based on a review of the available data provided by the Claimant, the GSA will determine whether the claim can be verified based on the data.

Completeness of the dataset relative to the requested information will be reviewed for the following criteria, reliability of the

data provided, the nature and status of the issue, and evidence of well impact due to GSP-/GSA-approved or authorized activities, as opposed to impact from other sources.

If the completeness of the data supporting the claim can be verified based on available information, then the GSA technical representative will assess the claim pursuant to section 2.3.1, 2.3.2, or 2.3.3. If not, a GSA technical representative will need to inspect the well and collect supplemental information. The types of information to be collected will depend on the data available from the Claimant. Determination of the extent of additional data collection necessary to verify the claim will be at the sole discretion of the GSA.
In general, the minimum data to be collected in the field will include:

- Well name
- Pump size (horsepower)
- Casing type and diameter
- Static groundwater level
- Discharge rate
- Pumping groundwater level

The owner or owner's representative authorized to operate the pump will be asked to be onsite at the time of inspection to operate the pump. The GSA technical representative will record observations from the inspection. If a driller's log or other information is not available to confirm the total depth and condition of the well and if the pump intake depth cannot be confirmed from available information, it may be necessary to have the pump removed from the well and conduct a downhole video survey. Removing the pump will enable the GSA technical representative to measure the column pipe and thus confirm the pump intake depth and inspect the condition of the pump. The video log will enable inspection of the condition of the casing and perforations and confirm the perforation interval, total depth, and static groundwater level of the well. Upon completion of the investigation, the contractor will be required to reinstall the pump and reestablish all connections. If the pump was operating prior to removal, the contractor will be required to demonstrate that the pump is functioning properly after reinstallation. A sounding port or flow meter may also be installed to collect pumping water level data or discharge rate data, respectively. The GSA will fund the contractor to remove the pump and conduct the video survey. If the claim is ultimately denied, the claimant will reimburse the GSA. The GSA require the well owner to sign a release of liability for any damage to the pump, pump column, or well resulting from removal of the pump and conducting the video log.

2.2.2 Evaluations of Claims of Groundwater Level Impacts

Based on the analysis of data for the impacted well, the GSA technical representative will provide a recommendation to the Groundwater Planning Commission whether the well qualifies for mitigation. In making the recommendation, the GSA technical representative will consider primarily that the foundational premise of the Mitigation Program, as it relates to groundwater levels, is to address impacts to domestic, municipal, industrial, and agricultural wells from GSP-/GSA-approved or authorized activities. As SGMA does not require the GSAs to address impacts prior to January 2015, only impacts associated with groundwater level declines after this time will be considered.

The graphic in Attachment 4 provides a basis for evaluating claims based on the data provided by the Claimant or collected by the GSA. As shown, Examples 1 and 2 illustrate groundwater level impacts that would qualify for mitigation. Example 1 is a case where the static groundwater level is below the 2015 groundwater level and the pumping groundwater level, at the historical discharge rate, is within 10 feet of the bottom of the well. In Example 2, the static groundwater level is measured below the 2015 groundwater level and the pumping groundwater level, at the historical discharge rate, has dropped to within 20 feet of the pump intake. In both cases, the lowered groundwater levels can be attributed to transitional pumping overdraft and there is no option to restore the water supply without mitigation. The evaluation should consider whether there is adequate separation between the pump intake and the bottom of the well (e.g., 10 feet) and whether there is adequate pump submergence (e.g., 20 feet).

Examples 3 through 6 on Figure 2 illustrate cases where the well impact is not associated with lowered groundwater levels from GSP-/GSA-approved or authorized activities. In these cases:

- The pumping groundwater level would have already been below the bottom of the well before January 2015 (Example 3),

- The pumping groundwater level would have already been below the bottom of the pump intake before January 2015 (Example 4),
- The static groundwater level would have been below the pump intake prior to January 2015 (Example 5),
- The pump is not functioning for reasons other than groundwater level decline (e.g. mechanical failure) (Example 6).

In many cases, it is anticipated that a static groundwater level measured in the impacted well from January 2015 will not be available. For those cases, the reference January 2015 static groundwater level will be inferred from a groundwater level contour map generated based on available data from other wells measured at that time. Separate groundwater contour maps will be generated for the Upper and Lower Aquifers. The reference static groundwater level will be assigned from the contour map of the aquifer in which the well is predominantly perforated.

There are other factors, independent of lowered groundwater levels, that can cause a well to stop functioning, such as pump mechanical failure due to age or malfunction, holes in the well casing allowing sand into the pump intake, holes in the pump column associated with corrosion and wear, excessive plugging of screens due to lack of maintenance (e.g. well rehabilitation), and others. All these factors will need to be taken into consideration when assessing the need for mitigation.

Other factors to be considered when evaluating a claim will include, but are not limited to:

- If the Claimant is asserting an impact to an agricultural well, and the Claimant has been utilizing groundwater under a transitional pumping allocation, or otherwise contributing to transitional overdraft, the GSA will reject the claim. This includes claims where a well is being used for both domestic use and irrigation.

If the relative contribution to the problem by the claimant, or by neighboring property owner actions or other overdraft results are not attributable to the GSP, the claim is not eligible for mitigation. If the problem is being caused by specific neighboring well issues, a claimant may be able to pursue corrections through the civil court process and will be so advised.

If the GSA Technical Representative recommends that the impact is eligible for mitigation, a specific mitigation measure as described in Section 2.3 will be considered for recommendation.

2.23 GSA Consideration of Technical Representative Recommendation

The Technical Representative Recommendation will be submitted to GSA General Manager. The GSA General Manager is delegated authority by the GSA Governing Body to determine whether to accept claims and to determine mitigation measures. The claimant has a right to appeal the staff decision to the GSA Governing Body.
Decisions by the GSA governing body to accept a mitigation claim are not an acceptance of liability and shall not be a legal determination of any parties' rights. The Mitigation Program is provided as an administrative action to further the goals and objectives of the GSP and SGMA in general.

## 2.3 IDENTIFICATION OF MITIGATION MEASURES FOR ACCEPTED CLAIMS

In the event that, under the Impact Assessment process, the GSA determines that GSA or GSA-allowed activities have had an impact on an existing well (i.e., impacts related to post-2015 overdraft), the GSA will implement a mitigation measure(s) for the existing well. Mitigation measures that could be adopted to address impacts attributed to the GSA allowed activities could include the following:

- Providing a short-term emergency interim water supply to domestic well owners. Short-term emergency supplies shall be provided as soon as reasonably possible, but in all cases within 14 days of notification to the GSA of such needs.
- Providing funds to lower a well pump.
- Providing funds to complete a connection to an M&I water provider.
- Supplying an equivalent water supply from an alternate source.
- Providing funds to replace the affected well with a deeper well that meets state and local requirements; or with the consent of the affected landowner, providing other acceptable mitigation.

- The GSA require the well owner to sign a release of liability for any claims following mitigation implementation

Factors to be considered when determining the level of mitigation include, but are not limited to, the following:

- Well age – mitigation measures may be prorated based on well age, per manufacturer well life specifications
- Well depth – mitigation measures may be prorated, per linear foot, based on the depth the current well is drilled to vs. the depth a new well needs to be drilled to.

Mitigation measures will be determined by the GSA BOD, on the recommendation of the technical representative. Once a long term solution is identified and offered by the GSA, if it is not accepted by the claimant within 30 days, the claim will be denied and not eligible for a future claim to be filed.

### 2.3.1 Provision for Interim Water Supply

The claim process allows for the provision of an interim water supply should the Claimant request it. The interim water supply is meant to provide water to the applicant while the claim is investigated and prior to arranging a more permanent mitigation. If a claim is denied, it no longer qualifies for the provision of an interim water supply. Potential sources of interim water supply include (but are not limited to):

- Trucking water
- Connecting to the water supply of a neighboring landowner
- Obtaining a temporary/permanent connection to the municipal water supply system

- The GSA will fund the interim water supply or refer the claimant to existing programs that provide short term water supplies. If the claim is denied by the GSA, the cost is subject to reimbursement by the Claimant.

### 2.3.2 Evaluation of Potential for Municipal Water Supply Connection

In some urban areas of the Tule Subbasin, impacted domestic or industrial wells may be in close proximity to existing municipal water supply infrastructure. If so, the GSA will contact the local municipality, on behalf of the Claimant, to determine the feasibility of connecting the Claimant to the existing municipal water supply system. If a connection is feasible, the Claimant will be provided with a contact person at the municipality to arrange the connection to the municipal system. For those claims that can be satisfied through a municipal water supply connection, the GSA will waive all well inspection requirements. However, the Claimant must agree to allow the GSA to destroy or properly abandon the impacted well, in accordance with California Department of Water Resources requirements and County of Tulare regulations.

- The GSA, or other existing program that provides short term water supplies, will continue to fund the interim water supply to the Claimant, until the connection to the municipal system is complete
- GSA, municipality, and Claimant will work together to determine cost share funding to connect the Claimant to the municipal water system and the cost to destroy the impacted well

If the Claimant refuses to connect to the municipal water system, the Claimant will be required to allow the GSA to inspect the well in accordance with Section 2 herein.

### 2.3.3 Assistance for Claimants Whose Claims have been denied

For claimants who have denied claims, the GSA will provide references to other local, county and state programs that provide solutions.

## 3. SUBSIDENCE IMPACT – MITIGATION CLAIM PROCESS

The Mitigation Program allows entities, whether public or private, adversely affected by land subsidence associated with GSP-/GSA-approved or authorized activities, to file a claim with the GSA in which the impact is located. The process for receiving and investigating claims of subsidence impacts is set forth in sections 3.1 through 3.3 is shown in Attachment 8, Land Subsidence Impact Claim Process. For land subsidence, an "impact" is defined as damage and/or loss of functionality of a structure or a facility occurring to the extent that the structure or facility cannot reasonably operate without either repair or replacement, as determined by the GSA where the structure and facility are located or where beneficial use is impacted due to the damage and/or loss of functionality of the structure or facility.

All claims will be investigated and evaluated within 45 days of receipt of the claim.

### 3.1 Filing a Claim

The claim process starts with the affected party ("Claimant") filing a claim with the GSA in which the party's well is located, or in which the Claimant asserts the activity was the cause of the Claimant's impacts. The claim will be filed using a form like that provided in Attachment 9 -Impact Claim Form.

- Claim forms will only be accepted for claim impacts occurring after January 1, 2025
- Claims can only be filed by the owner of the infrastructure claimed to be impacted

To process a claim, the Claimant must provide some basic information on the Impact Claim Form to enable further investigation of the claim, including:

- The Claimant's name and contact information,
- The type and location of the structure or facility,
- Infrastructure construction information
- description of the issue with the infrastructure, and
- The applicant's signature.

The filing of a claim will require that the Claimant provide access to the infrastructure to verify the claim. In signing the impact claim form, the Claimant agrees to release all data associated with the infrastructure and provide access for inspection by a GSA technical representative. Denial of access to the infrastructure for inspection by the GSA will result in denial of the claim.

### 3.2 Impact Assessment

#### 3.2.1. Technical Review and Verification of Claimant-Provided Data

A GSA technical representative will review all available information provided by the Claimant for the affected infrastructure prior to inspection in the field. Data to be reviewed will include, but not limited to:

- A description of the type of structure/facility and what it is used for,
- Original as-built drawings of the structure/facility,
- Information on the date the structure/facility was constructed,
- Any geotechnical reports, including borehole logs, generated prior to or at the time the structure/facility was constructed,
- Photographs of the structure/facility prior to the impact, and
- Information on the nature of the problem including photographs showing the impacted structure/facility.

Based on a review of the available data provided by the Claimant, the GSA will determine whether the claim can be verified

based on the data.

Completeness of the dataset relative to the requested information will be reviewed for the following criteria, reliability of the data provided, the nature and status of the issue, and evidence of infrastructure impact due to GSP-/GSA-approved or authorized activities, as opposed to impact from other sources.

If the completeness of the data supporting the claim can be verified based on available information, then the GSA technical representative will assess the claim pursuant to section 3.2. If not, a GSA technical representative will need to conduct an additional investigation and collect supplemental information. The types of information to be collected will depend on the data available from the Claimant. Determination of the extent of additional data collection necessary to verify the claim will be at the sole discretion of the GSA.

In general, the minimum data to be collected in the field will include:

- Structure/facility address,
- Nature and use of the structure/facility,
- Notes on the nature of the damage to the structure or facility,
- Photographs of the damage.

If the claim is related to gravity-driven water conveyance infrastructure (e.g. canals, turnouts, recharge basins, stream channels used to convey water, pipelines, and field irrigation), it may be necessary to inspect the entire facility to determine if factors other than land subsidence are impacting the functionality of the structure or facility. The GSA may arrange for water delivery to the facility to document the facility's operating condition. It may also be necessary to survey the structure/facility to obtain data needed to verify the structure's hydraulic capacity.

If the claim is related to well damage suspected of being caused by land subsidence, it may be necessary to have the pump removed from the well and conduct a downhole video survey. Removing the pump will enable the GSA technical representative to measure the column pipe and thus confirm the pump intake depth and inspect the condition of the pump. The video log will enable inspection of the condition of the casing and perforations and confirm the perforation interval, total depth, and static groundwater level of the well. Upon completion of the investigation, the contractor will be required to reinstall the pump and reestablish all connections. If the pump was operating prior to removal, the contractor will be required to demonstrate that the pump is functioning properly after reinstallation. The GSA will fund the contractor to remove the pump and conduct the video survey. If the claim is ultimately denied, the claimant will reimburse the GSA. The GSA requires the well owner to sign a release of liability for any damage to the pump, pump column, or well resulting from removal of the pump and conducting the video log.

If the claim is related to flood control facilities it may be necessary to inspect the entire facility to determine if there are factors other than land subsidence impacting the functionality of the structure or facility. The GSA may survey the structure/facility to obtain data needed to verify the structure's hydraulic capacity. In certain cases, the GSA may also have a hydraulic analysis completed by an engineer.

Finally, additional data may be required to evaluate a claim (e.g. soil testing, materials testing, etc.) and will be obtained on a case-by-case basis depending on the structure/facility (e.g. roads, railroads, pipelines, bridges, wastewater collection) and the nature of the impact.

### 3.2.2 Evaluations of Claims of Groundwater Level Impacts

Land subsidence can manifest itself as a regional phenomenon or on a local scale. Regional land subsidence results in a large area (e.g. 10's to 100's of square miles) subsiding at similar rates such that the effect of the lowered land elevation cannot be discerned except through periodic surveying of bench marks or information from satellites. Impacts to land uses, property interests, and critical infrastructure from this type of land subsidence are most likely to occur in the form of reduced surface carrying capacity of gravity-driven water conveyance, well damage, and flood control. Differential land subsidence results in localized adjoining areas subsiding at different rates relative to each other. This can result in

land fissuring and often occurs along a fault or geologic boundary. Differential land subsidence has the most potential to cause damage to surface infrastructure such as roads, bridges, and buildings.

Criteria for attributing structural/facility impacts to land subsidence include the following:

- The total amount of land subsidence and, if applicable, change in land surface slope at the structure/facility since 2015 based on the best available data.
- Evidence of ground fissures at the structure/facility that can be linked to active land subsidence in the area from other data.
- For gravity-driven water conveyance facilities, reduced flow capacity relative to 2015, that affects the functionality of the facility.
- For wells: observed casing collapse, damage, or protrusion attributable to subsidence.
- For flood control facilities, changes in water height or channel slope attributable to subsidence since 2015 that affects the functionality of the facility.

Other factors to be considered when evaluating a claim will include, but are not limited to:

If the Claimant is asserting an impact to an agricultural well, and the Claimant has been utilizing groundwater under a transitional pumping allocation, or otherwise contributing to transitional overdraft, the GSA will reject the claim. This includes claims where a well is being used for both domestic use and irrigation.

If the relative contribution to the problem by the claimant, or by neighboring property owner actions or other results are not attributable to the GSP, the claim is not eligible for mitigation. If the problem is being caused by specific neighboring issues, a claimant may be able to pursue corrections through the civil court process and will be so advised.

If the GSA Technical Representative recommends that the impact is eligible for mitigation, a specific mitigation measure as described in Section 3.3 will be considered for recommendation.

3.2.3 GSA Consideration of Technical Representative Recommendation

The Technical Representative Recommendation will be submitted to GSA General Manager. The GSA General Manager is delegated authority by the GSA Governing Body to determine whether to accept claims and to determine mitigation measures. The claimant has a right to appeal the staff decision to the GSA Governing Body.
Decisions by the GSA governing body to accept a mitigation claim are not an acceptance of liability and shall not be a legal determination of any parties' rights. The Mitigation Program is provided as an administrative action to further the goals and objectives of the GSP and SGMA in general.

## 3.3 IDENTIFICATION OF MITIGATION MEASURES FOR ACCEPTED CLAIMS

In the event that, under the Impact Assessment process, the GSA determines that GSA or GSA-allowed activities have had an impact on existing infrastructure (i.e., impacts related to post-2015 overdraft), the GSA will implement a mitigation measure(s) for the infrastructure. Mitigation measures that could be adopted to address impacts attributed to the GSA allowed activities could include the following:

n coordination with the affected landowner, developing a plan with acceptable mitigation.

Mitigation measures will be determined by the BOD, on the recommendation of the technical representative. Once a long-term solution is identified and offered by the GSA, if it is not accepted by the claimant within 30 days, the claim will be denied and not eligible for a future claim to be filed.

### 3.3.1 Assistance for Claimants Whose Claims have been denied

For claimants who have denied claims, the GSA will provide references to other local, county and state programs that provide solutions.

## 4. WATER QUALITY IMPACT – MITIGATION CLAIM PROCESS

The monitoring and characterization of groundwater quality conditions has historically been conducted and reported by other public agencies and/or non-profits to meet requirements of other regulatory programs, which focus on the prevention of degradation of groundwater quality and providing mitigation to those who are found to be impacted.

To prevent duplication of efforts and competing datasets for the ILRP, CV-Salts Nitrate Control Program, and SGMA GSAs, the Tule Subbasin utilizes a single group to manage the monitoring efforts within the Subbasin for collectively meeting the various requirements of these programs being implemented at the local level. This level of coordination between these agencies and groups ensures that the efforts performed under each program help provide a cohesive response to providing short term and long-term solutions to groundwater management.

As it relates to providing replacement water for those impacted, the Tule Basin Management Zone (TBMZ), a local management zone formed to comply with the CV-Salts Nitrate Control Program is providing clean drinking water to residents within the Tule Subbasin who's drinking water supply is impacted from elevated concentrations of nitrate as nitrogen ($NO_3$-N). As of recent, the Management Zone has begun working with the Tule Basin Water Foundation (TBWF) to expand their responsibilities for testing and providing short-term and long-term solutions replacement water solutions to include additional constituents of concern (COCs) found to be harmful for human consumption at elevated concentrations through the State funded SAFER program. The expansion of the TBMZ and TBWF efforts allows for the coordinated implementation efforts with the GSAs within the Tule Subbasin.

The Mitigation Program allows for domestic and municipal well users adversely affected by groundwater level impacts associated with GSP-/GSA-approved or authorized activities to file a claim with the GSA in which the well is located. Each GSA will allow for a domestic or municipal with potentially impacted groundwater quality to file a claim against the GSA the well is located within. Once a claim is filed against the GSA, the claim will be routed to the to the TBWZ/TBWF claim process which triggers an eligibility investigation as shown in Attachment 10, before the well can be tested for impacts.

For degraded groundwater quality, an "impact" is defined as a well user's groundwater quality degraded beyond the drinking water standards maximum contaminate level (MCL) for COCs defined in the Tule Subbasin Coordination Agreement due to Tule Subbasin GSP-/GSA-approved or authorized activities. The impact must be realized after January 2015.

For eligible claims that tests return results exceeding the MCL for the COCs, the process outlined in Section 4.1 will be followed to determine if the impact was caused by a Tule Subbasin GSA-/GSP- approved or authorized activity.

All claims will be investigated and evaluated within 45 days of receipt of the claim.

### 4.1 Filing a Claim

The claim process starts with the affected party ("Claimant") filing a claim with the GSA in which the party's well is located, or in which the Claimant asserts the activity was the cause of the Claimant's impacts. The claim will be filed using a form like that provided in Attachment 11 -Impact Claim Form.

- Claim forms will only be accepted for claim impacts occurring after January 1, 2025
- Claims can only be filed by the owner of the well

To process a claim, the Claimant must provide some basic information on the Impact Claim Form to enable further investigation of the claim, including:

- The Claimant's name and contact information,
- The type and location of the well,
- Request for interim water supply,
- description of the issue with the well, and
- The applicant's signature.

The filing of a claim will require that the Claimant provide access to the well to verify the claim. In signing the impact claim form, the Claimant agrees to release all data associated with the well and provide access to the well for inspection by a GSA technical representative. Denial of access to the well for inspection by the GSA will result in denial of the claim.

**4.2 Impact Assessment**

4.2.1. Technical Review and Verification of Claimant-Provided Data

A GSA technical representative will review all available information provided by the Claimant for the affected well prior to inspection in the field. Data to be reviewed will include, but not limited to:

Data from nearby groundwater quality Representative Monitoring Sites (RMS) wells designated for monitoring drinking water COCs will be evaluated.

Review readily available historical groundwater quality and level data within the vicinity of the potentially impacted well;

Evaluate potential GSA-/GSP- approved or authorized activities within the vicinity of the potentially impacted well that may have contributed to the exceedance; and

Evaluate other potential dischargers within the vicinity of the potentially impacted well to determine if activities outside of the GSA may have contributed to the exceedance.

If the findings from the above actions listed prove that a GSA-/GSP- approved or authorized activity have impacted the claim well, the GSA will address the impact as described in Section 4.2.2. Irrespective if the GSA is or is not found to have contributed to the impacted well, the GSA will coordinate with the TBMZ/TBWF to perform outreach to potentially impacted residents within the vicinity of the well, notifying them of the exceedance and offering resources for free well testing and replacement drinking water.

Based on a review of the available data provided by the Claimant, the GSA will determine whether the claim can be verified based on the data.

Completeness of the dataset relative to the requested information will be reviewed for the following criteria, reliability of the data provided, the nature and status of the issue, and evidence of well impact due to GSP-/GSA-approved or authorized activities, as opposed to impact from other sources.

The owner or owner's representative authorized to operate the pump will be asked to be onsite at the time of inspection to operate the pump. The GSA technical representative will record observations from the inspection. If a driller's log or other information is not available to confirm the total depth and condition of the well and if the pump intake depth cannot be confirmed from available information, it may be necessary to have the pump removed from the well and conduct a downhole video survey. Removing the pump will enable the GSA technical representative to measure the column pipe and thus confirm the pump intake depth and inspect the condition of the pump. The video log will enable inspection of the condition of the casing and perforations and confirm the perforation interval, total depth, and static groundwater level of the well. Upon completion of the investigation, the contractor will be required to reinstall the pump and reestablish all connections. If the pump was operating prior to removal, the contractor will be required to demonstrate that the pump is functioning properly after reinstallation. A sounding port or flow meter may also be installed to collect pumping water level data or discharge rate data, respectively. The GSA will fund the contractor to remove the pump and conduct the video survey. If the claim is ultimately denied, the claimant will reimburse the GSA. The GSA require the well owner to sign a release of liability for any damage to the pump, pump column, or well resulting from removal of the pump and conducting the video

log.

4.2.2 Evaluations of Claims of Groundwater Level Impacts

Based on the analysis of data for the impacted well, the GSA technical representative will provide a recommendation to the GSA Board of Directors whether the well qualifies for mitigation. In making the recommendation, the GSA technical representative will consider primarily that the foundational premise of the Mitigation Program, as it relates to water quality, is to address impacts to domestic, municipal, industrial, and agricultural wells from GSP-/GSA- approved or authorized activities. As SGMA does not require the GSAs to address impacts prior to January 2015, only impacts associated with water quality after this time will be considered.

Other factors to be considered when evaluating a claim will include, but are not limited to:

- If the Claimant is asserting an impact, and the Claimant has been utilizing groundwater under a transitional pumping allocation, or otherwise contributing to transitional overdraft, the GSA will reject the claim. This includes claims where a well is being used for both domestic use and irrigation.

If the relative contribution to the problem by the claimant, or by neighboring property owner actions or other overdraft results are not attributable to the GSP, the claim is not eligible for mitigation. If the problem is being caused by specific neighboring well issues, a claimant may be able to pursue corrections through the civil court process and will be so advised.

If the GSA Technical Representative recommends that the impact is eligible for mitigation, a specific mitigation measure as described in Section 4.3 will be considered for recommendation.

4.23 GSA Consideration of Technical Representative Recommendation

The Technical Representative Recommendation will be submitted to GSA General Manager. The GSA General Manager is delegated authority by the GSA Governing Body to determine whether to accept claims and to determine mitigation measures. The claimant has a right to appeal the staff decision to the GSA Governing Body.
Decisions by the GSA governing body to accept a mitigation claim is not an acceptance of liability and shall not be a legal determination of any parties' rights. The Mitigation Program is provided as an administrative action to further the goals and objectives of the GSP and SGMA in general.

## 4.3 IDENTIFICATION OF MITIGATION MEASURES FOR ACCEPTED CLAIMS

In the event that, under the Impact Assessment process, the GSA determines that GSA or GSA-allowed activities have had an impact on an existing well (i.e., impacts related to post-2015 activities), the GSA will identify suitable mitigation to alleviate the impact either independent of the TBMZ/ TBWF or in coordination (i.e., financial contributions), may include one or more of the following:

- Adjusting groundwater pumping locations, rates, or schedules;
- Providing interim or permanent replacement water;
- Coordinating consolidation with existing water systems; or
- With the consent of the affected user, providing other acceptable means of mitigation.

Mitigation measures will be determined by the GSA BOD, on the recommendation of the technical representative. Once a long-term solution is identified and offered by the GSA, if it is not accepted by the claimant within 30 days, the claim will be denied and not eligible for a future claim to be filed.

### 4.3.1 Provision for Interim Water Supply

The claim process allows for the provision of an interim water supply should the Claimant request it. The interim water supply is meant to provide water to the applicant while the claim is investigated and prior to arranging a more permanent mitigation. If a claim is denied, it no longer qualifies for the provision of an interim water supply. Potential sources of interim

water supply include (but are not limited to):

- Trucking water
- Connecting to the water supply of a neighboring landowner
- Obtaining a temporary/permanent connection to the municipal water supply system

The GSA will fund the interim water supply or refer the claimant to the TBMZ that provides short term water supplies. If the claim is denied by the GSA, the cost is subject to reimbursement by the Claimant.

### 4.3.2 Evaluation of Potential for Municipal Water Supply Connection

In some urban areas of the Tule Subbasin, impacted domestic or industrial wells may be in close proximity to existing municipal water supply infrastructure. If so, the GSA will contact the local municipality, on behalf of the Claimant, to determine the feasibility of connecting the Claimant to the existing municipal water supply system. If a connection is feasible, the Claimant will be provided with a contact person at the municipality to arrange the connection to the municipal system. For those claims that can be satisfied through a municipal water supply connection, the GSA will waive all well inspection requirements. However, the Claimant must agree to allow the GSA to destroy or properly abandon the impacted well, in accordance with California Department of Water Resources requirements and County of Tulare regulations.

- The GSA, or other existing program that provides short term water supplies, will continue to fund the interim water supply to the Claimant, until the connection to the municipal system is complete
- GSA, municipality, and Claimant will work together to determine cost share funding to connect the Claimant to the municipal water system and the cost to destroy the impacted well

If the Claimant refuses to connect to the municipal water system, the Claimant will be required to allow the GSA to inspect the well in accordance with Section 2 herein.

### 4.3.3 Assistance for Claimants Whose Claims have been denied

For claimants who have denied claims, the GSA will provide references to other local, county and state programs that provide solutions.

## 5.0 Funding Plan

The GSA will develop a budget and reserve account for in order to implement this plan. It is anticipated that the funding for the budget and reserve account will come from Transitional Fees collected by the GSA.

## 6.0 Reporting and Monitoring of Plan Implementation

The GSA will monitor mitigation implementation activities on an ongoing basis. Mitigation Plan implementation and actions will be included in the GSA's annual GSP update to the Department of Water Resources.

ATTACHMENTS
Attachment 1 – Mitigation Program Framework, Coordination Agreement Attachment 7
Attachment 2 – Thomas Harder and Company Technical Memorandum – Technical Requirements for Addressing Impact Claims from Groundwater Levels for Tule Subbasin Groundwater Sustainability Agencies
Attachment 3 – Groundwater Level Impact Claim Process – Investigation Phase Flow Chart
Attachment 4 – Groundwater Level Impact Claim Process – Evaluation Examples
Attachment 5 – Groundwater Level Impact Claim Form
Attachment 6 - Well Inspection Form
Attachment 7-Release of liability forms
Attachment 8 – Land Subsidence Impact Claim Process
Attachment 9 – Land Subsidence Impact Claim Form
Attachment 10- Tule Basin Management Zone Safe – Eligibility Investigation Process

Attachment 11 – Water Quality and Tule Basin Management Zone – Claim Forms

MITIGATION PROGRAM FRAMEWORK
COORDINATION AGREEMENT ATTACHMENT 7
Framework for GSA Mitigation Programs to Address
Groundwater Levels, Land Subsidence and Groundwater Quality Impacts

## Introduction

Sustainable management criteria identified in each of the Tule Subbasin Groundwater Sustainability Agencies' (GSAs) Groundwater Sustainability Plans (GSPs) have been developed to address significant and unreasonable impacts to agricultural, municipal, and industrial beneficial uses of groundwater. However, analysis based on available data suggests that numerous shallow domestic wells and potentially other wells may be impacted during the Sustainable Groundwater Management Act (SGMA) GSP implementation period between 2020 and 2040 as a result of continued lowering of groundwater levels during this period. Wells, land use, property, and infrastructure may also be impacted from land subsidence and changes in groundwater quality during this period.

The Tule Subbasin GSAs agree to each individually implement a Mitigation Program (Program) as needed to offset impacts associated with GSP-allowed activities, subject to the following framework and subject to the schedule provided herein. The goal of this framework is to establish a standard for mitigation programs to be implemented by each GSA for the purpose of mitigating anticipated impacts to beneficial uses to a level that avoids the occurrence of an Undesirable Result.

Each Mitigation Program may be extended or revised based on groundwater conditions in the future.

## Mitigation Program Framework

The Subbasin has been in overdraft for many years, resulting in a significant lowering of regional and local groundwater levels. The GSPs are designed for the Subbasin to reach sustainability by 2040 and beyond. However, until sustainability is reached, some level of continued groundwater level decline and land subsidence is expected in areas of the Subbasin while the GSAs are in the process of implementing projects and management actions to achieve sustainability by 2040. The purpose of the GSAs' Mitigation Programs is to mitigate those wells, critical infrastructure, and land uses that are adversely affected by declining groundwater levels, land subsidence, and changes to groundwater quality while the GSAs reach sustainability.

Each GSA shall include a Program as a project or management action identified in that GSA's GSP, describing the following elements:

a) Identification of Impacts to be Addressed by Mitigation Program

Each Tule Subbasin GSA will adopt and implement a Mitigation Program to identify the specific needs for mitigation caused by pumping within the GSA's boundaries. Each GSA Mitigation

Program will separately identify the impacts to beneficial uses that the Program is intended to address. Each GSA Mitigation Program must provide a claim process to address impacts to (i) domestic and municipal wells, (ii) agricultural wells, and (iii) critical infrastructure. Decisions to include or exclude impacted users from participation in a GSA's Mitigation Program shall be supported by appropriate written technical data and analysis.

b) Process

For claims of impact to wells related to groundwater level declines, the process to be adopted by each GSA's Mitigation Program may include:

1) an application process by the well owner;
2) data collection by the GSA to verify the claim;
3) identification of suitable mitigation; and/or
4) response to said affected user.

For claims of impact to land uses from land subsidence, the process may include:

1) an application process by the affected party;
2) data collection by the GSA to verify the claim;
3) identification of suitable mitigation; and/or
4) coordination, as necessary, with said affected parties to implement the mitigation.

For claims of impact to groundwater quality that is attributable to pumping allowed by a GSA/GSP, the process may include:

1) an application process by the affected party;
2) data collection by the GSA to verify the claim;
3) identification of suitable mitigation; and/or
4) coordination, as necessary, with said affected parties to implement the mitigation.

SGMA requires GSAs and GSPs to measure sustainability from 2015 forward. As a result, GSAs do not necessarily need to provide mitigation for impacts that occurred prior to January 1, 2015.

For those claims that are shown not to be related to GSP-/GSA-approved or authorized activities, the GSA will, to the extent possible, provide assistance to the affected party to identify programs for addressing their issue.

c) *Investigation*

Once a claim of adverse impact has been made to a GSA, whether it be for well, specific land use, critical infrastructure or groundwater quality issue(s), the GSA will investigate the claim.

d) *Qualifications for Mitigation*

GSAs may determine whether to provide full or partial mitigation based on a user's compliance with the GSA's GSP, Rules & Regulations, and other laws or regulations. For example, a user whose own pumping has caused or contributed to overdraft or damage to their own well may not qualify for mitigation under the Program. Further, mitigation will be applied only to those claims that are shown to be attributable to GSP-/GSA-approved or authorized activities. Each GSA's Program will also address how claims that a GSA determines are caused by pumping outside the GSA's boundaries will be addressed.

e) *Mitigation*

Once a claim of impact has been confirmed to be due to GSP-/GSA-approved or authorized activities, the GSA will identify suitable mitigation to alleviate the impact.

For groundwater level impacts, this could be any of the following:

1) Deepening the well;
2) Constructing a new well;
3) Modifying pump equipment;
4) Providing temporary or permanent replacement water;
5) Coordinating consolidation of the domestic well owner with existing water systems; or
6) With the consent of the affected user, providing other acceptable means of mitigation.

For land use impacts, this could be any of the following:

1) Repair to canals, turnouts, stream channels, water delivery pipelines, and basins;
2) Repair to damaged wells;
3) Addressing flood control;
4) Addressing other damaged infrastructure; or
5) With the consent of the affected user, providing other acceptable means of mitigation.

For groundwater quality impacts (due to groundwater management/actions), this could be any of the following:

1) Adjusting groundwater pumping locations, rates, or schedules;
2) Modifying project operations;
3) Providing temporary or permanent replacement water;
4) Coordinating consolidation with existing water systems; or
5) With the consent of the affected user, providing other acceptable means of mitigation.

Various factors may reflect the proper mitigation methods for the specific issue. For example, age, location, financial impact to the beneficial user as a result of mitigation, and the beneficial user may reflect which mitigation measures are chosen by a particular GSA.

f) *Outreach*

Public outreach and education will be separately performed during development of the Mitigation Program and prior to implementation by each GSA.

Prior to implementation, extensive outreach will be needed to notify landowners of each GSA's Program requirements and how they can apply for assistance. Outreach may need to be performed in multiple languages as appropriate for each particular GSA. Outreach methods could include workshops, mailings, flyers, website postings, Board meeting announcements, etc.

g) Program Adoption Schedule

Each GSA will formulate and implement a mitigation claims process for domestic and municipal use impacts by December 31, 2022 and complete all other aspects of the Mitigation Program by June 30, 2023. During Program development, the GSAs will conduct community outreach and refer landowners and others to available local programs as well as other resources and funding programs from the County, State, or non-profit organizations, including the Tule Basin Water Foundation.

h) Mitigation Program Funding Source

Each GSA will develop a funding mechanism for the Program, which is dependent on the specific GSA needs for specific expected impacted wells, critical infrastructure, and land uses within each GSA. Funding is anticipated to be available for each GSA's Mitigation Program through implementation of assessments, fees, charges, and penalties. In addition, the GSAs will explore grant funding. The State has many existing grant programs for community water systems and well construction funding. County, state, and federal assistance will be needed to successfully implement the respective Mitigation Programs. Each GSA may, separately or in coordination with other GSAs, also work with local NGOs that may be able to provide assistance or seek grant monies to help fund the Program. GSAs may act individually or collectively to address and fund mitigation measures.

# Technical Memorandum

**To:** Tule Subbasin Technical Advisory Committee

**From:** Thomas Harder, P.G., C.HG.
Thomas Harder & Co.

**Date:** 13-Dec-22

**Re:** Technical Requirements for Addressing Impact Claims from Groundwater Levels for Tule Subbasin Groundwater Sustainability Agencies

## 1 Background and Purpose

In response to California Department of Water Resources (CDWR) comments to the Tule Subbasin draft Groundwater Sustainability Plans (GSPs) and Coordination Agreement, the Groundwater Sustainability Agencies (GSAs) each agreed to develop mitigation plans to address significant and unreasonable impacts to beneficial uses of groundwater during the sustainability transition period between 2020 and 2040. The revised Tule Subbasin Coordination Agreement submitted in July 2022 included a Mitigation Program Framework as Attachment 7, which outlined the general standards that each GSA would commit to in developing their respective Mitigation Programs. The GSAs further committed to completing the mitigation claims process for domestic and municipal wells by December 31, 2022 and all other aspects of the Mitigation Programs by June 30, 2023.

The purpose of this document is to provide the minimum technical requirements for use by each Tule Subbasin GSA to address claims of impact from lowered groundwater levels associated with GSP-/GSA-approved or authorized activities or unmanaged pumping. In consideration of the technical information provided herein, and in accordance with the Mitigation Framework in Attachment 7 of the Coordination Agreement, each GSA Mitigation Program will identify the specific criteria and processes for mitigating claims of impact caused by pumping within their respective GSA boundaries. Each Mitigation Program must provide a claim process to address impacts to:

(i) domestic and municipal wells,
(ii) agricultural wells, and
(iii) critical infrastructure.

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Impacts may be related to one or more of the three sustainability indicators related to GSP-/GSA-approved or authorized activities:

1. Groundwater level declines
2. Land subsidence, and
3. Groundwater quality.

This TM addresses impacts related to groundwater levels.[1] Decisions to include or exclude impacted users from participation in a GSA's Mitigation Program shall be supported by appropriate written technical data and analysis, as described herein. In addition, this TM includes additional considerations, outside the technical requirements, for developing Mitigation Programs.

Each Mitigation Program will document:

1. Types of Impacts to be Addressed by the Mitigation Program
2. A Process for Responding to Claims of Impact
3. A Process for Investigating Claims
4. Qualifications for Mitigation
5. Types of Mitigation to Address Claims
6. An Outreach Program Prior To and During Mitigation Program Development
7. The Program Adoption Schedule
8. Mitigation Program Funding Source(s)

Mitigation will be applied only to those claims that are shown to be attributable to GSP-/GSA-approved or authorized activities.

## 2 Process Overview for Claims of Groundwater Level Impacts

The Mitigation Program framework outlined in the Tule Subbasin Coordination Agreement allows for domestic, industrial, municipal, and certain agricultural beneficial users of groundwater suffering from significant and unreasonable impacts (as defined in the Tule Subbasin Coordination Agreement and Mitigation Program Framework) to file a claim with the GSA in which the well is located. The overall process for receiving and investigating claims of groundwater level impact is shown on Figure 1. For groundwater levels, a significant and unreasonable "impact" is defined as the inability of a beneficial user to pump groundwater of sufficient quantity to meet their water supply needs due to lowered groundwater levels resulting from Tule Subbasin GSP-/GSA-approved or authorized activities. The GSAs are not required to address impacts that occurred prior to January 2015. Responsibilities of the claimant are shown in green and responsibilities of the GSA are shown in blue on Figure 1. Decision points are shown in orange. All claims will be investigated and evaluated within 45 days of receipt of the claim.

[1] Technical requirements for mitigation of impacts associated with land subsidence and groundwater quality will be addressed in separate Technical Memoranda.

## 2.1 Filing a Claim

The claim process starts with the affected party ("Claimant") filing a claim with the GSA in which the party's well is located. The claim will be filed using a form like that provided in Attachment 1. To process a claim, the Claimant must provide some basic information to enable further investigation of the claim, including (but not limited to):

- The Claimant's name and contact information,
- The type and location of the well,
- Request for interim water supply,
- Well construction information,
- Pump information,
- Historical operating and groundwater conditions for the well,
- A description of the issue with the well, and
- The applicant's signature.

GSAs may determine whether to provide full or partial mitigation based on a user's compliance with the GSA's GSP, Rules & Regulations, and other laws or regulations. Further, mitigation will be applied only to those claims that are shown to be attributable to GSP-/GSA-approved or authorized activities. If the Claimant is pumping groundwater under a transitional pumping allocation, or otherwise contributing to transitional overdraft, a GSA may consider this fact in determining whether to accept or reject the claim.

## 2.2 Provision for Interim Water Supply

For claims not denied in Section 2.1, the claim process allows for the provision of an interim water supply should the Claimant request it. The interim water supply is meant to provide water to the applicant while the claim is investigated and prior to arranging a more permanent mitigation. Potential sources of interim water supply include (but are not limited to):

- Trucking water
- Utilizing filling stations
- Connecting to the water supply of a neighboring landowner
- Obtaining a temporary/permanent connection to the municipal water supply system

Considerations for each GSA Mitigation Program include:

- Funding
- If the GSA funds it, is the cost subject to reimbursement by the Claimant if the investigation finds that the issue is not associated with GSA activities or post-2015 overdraft?



## 2.3 Evaluation of Potential for Municipal Water Supply Connection

In some urban areas of the Tule Subbasin (e.g. Porterville), impacted domestic or industrial wells may be in close proximity to existing municipal water supply infrastructure. If so, the GSA will contact the local municipality, on behalf of the Claimant, to determine the feasibility of connecting the Claimant to the existing municipal water supply system. If a connection is feasible, the Claimant will be provided a contact person at the municipality to arrange the connection to the municipal system. For those claims that can be satisfied through a municipal water supply connection, the GSA may waive well inspection requirements. However, the Claimant must agree to allow the GSA to destroy or properly abandon the impacted well, in accordance with California Department of Water Resources requirements and County of Tulare regulations, if it is in the GSA's interest to do so.

Considerations for each GSA Mitigation Program include:

- Will the GSA continue the interim water supply to the Claimant, free of cost, until the connection to the municipal system is complete?
- Who will fund the cost to connect the Claimant to the municipal water system (GSA, municipality, Claimant)?
- Who will fund the cost to destroy the impacted well?

If the Claimant refuses to connect to the municipal water system, the Claimant will be required to allow the GSA to inspect the well in accordance with Sections 2.4, 2.5, and 2.6, herein.

## 2.4 Provision of Access to the Well for Inspection by the GSA

Mitigation of any claim of impact not rejected in Section 2.1 and not mitigated in Section 2.3 herein, will require that the Claimant provide access to the well to verify the claim. In signing the impact claim form (Attachment 1), the Claimant agrees to release all data associated with the well and provide access to the well for inspection by a GSA technical representative. Denial of access to the well for inspection by the GSA will result in denial of mitigation.

## 2.5 Preliminary Well Assessment Based on Existing Data

A GSA technical representative will review all available information provided by the Claimant for the affected well prior to inspection in the field. Data to be reviewed will include (but not necessarily be limited to):

- The CDWR driller's log,
- Information on date the well was constructed,
- Well construction information (casing diameter, casing depth, perforation interval),
- Available downhole video surveys,

- Historical groundwater levels,
- Pump type and intake depth,
- Motor size,
- Pump age,
- Typical discharge rate,
- Historical electrical use,
- Historical production,
- End use of the water (e.g. agricultural irrigation, domestic supply, etc.),
- Land IQ satellite consumptive use data (if agricultural),
- Last pump test date,
- Last service date,
- Last static and pumping groundwater levels, and
- Information on the nature of the problem.

Based on a review of the available data provided by the Claimant, the GSA will determine whether the claim can be verified based on the data. Criteria for the determination will include:

- Completeness of the dataset relative to the requested information,
- Reliability of the data provided,
- Nature and status of the issue,
- Evidence of well impact due to GSP-/GSA-approved or authorized activities.

If the claim can be verified based on available information from the Claimant or the Tule Subbasin Data Management System, then the GSA technical representative will issue a recommendation for appropriate mitigation. If not, the GSA will conduct additional investigation to verify the claim as described in Section 2.6.

## 2.6 As-Needed Supplemental Well Inspection and Data Collection

To verify a claim that cannot be confirmed from existing information provided by the Claimant, a GSA technical representative will need to inspect the well and collect supplemental information. The types of information to be collected will depend on the data available from the Claimant. Determination of the extent of additional data collection necessary to verify the claim will be at the sole discretion of the GSA.

In general, the minimum data to be collected in the field will include:

- Well name
- Pump size (horsepower)
- Casing type and diameter
- Static groundwater level

- Discharge rate
- Pumping groundwater level

The owner or owner's representative authorized to operate the pump will be asked to be onsite at the time of inspection to operate the pump. The GSA technical representative will record observations from the inspection on a form like that provided in Attachment 2.

If a CDWR driller's log or other information is not available to confirm the total depth and condition of the well and if the pump intake depth cannot be confirmed from available information, it may be necessary to have the pump removed from the well and conduct a downhole video survey. Removing the pump will enable the GSA technical representative to measure the column pipe and thus confirm the pump intake depth and inspect the condition of the pump. The video log will enable inspection of the condition of the casing and perforations and confirm the perforation interval, total depth, and static groundwater level of the well. Upon completion of the investigation, the contractor will be required to reinstall the pump and reestablish all connections. If the pump was operating prior to removal, the contractor will be required to demonstrate that the pump is functioning properly after reinstallation. A sounding port or flow meter may also be installed to collect pumping water level data or discharge rate data, respectively.

Considerations for each GSA Mitigation Program include:

- Who will fund the contractor to remove the pump and conduct the video survey?
- If the GSA funds it, is the cost subject to reimbursement by the Claimant if the investigation finds that the issue is not associated with transitional overdraft pumping.
- Will the GSA require the well owner to sign a release of liability for any damage to the pump, pump column, or well resulting from removal of the pump and conducting the video log?

# 3 Evaluation of Claims of Groundwater Level Impacts

The foundational premise of the Mitigation Program, as it relates to groundwater levels, is to address significant and unreasonable impacts to domestic, municipal, industrial and agricultural wells from GSP-/GSA-approved or authorized activities.

The graphic on Figure 2 provides illustrated examples of groundwater level conditions that could be cause to approve or deny claims based on the data provided by the Claimant or collected by the GSA. It is noted that the examples shown on Figure 2 are not exhaustive and are provided for guidance only. Further, as SGMA does not require the GSAs to address impacts prior to January 2015, the examples assume that impacts prior to this time will not be considered for mitigation. In practice, it will be up to each GSA to determine if impacts that occurred prior to January 2015 will be evaluated and factored into considerations of mitigation. As shown, Examples 1 and 2 illustrate groundwater level impacts that would qualify for mitigation. Example 1 is a case where the static

groundwater level is below the 2015 groundwater level and the pumping groundwater level, at the historical discharge rate, is within 10 feet of the bottom of the well. In Example 2, the static groundwater level is measured below the 2015 groundwater level and the pumping groundwater level, at the historical discharge rate, has dropped to within 20 feet of the pump intake. In both cases, the lowered groundwater levels can be attributed to overdraft and there is no option to restore the water supply without mitigation. The evaluation should consider whether there is adequate separation between the pump intake and the bottom of the well (e.g., 10 feet) and whether there is adequate pump submergence (e.g., 20 feet).

Examples 3 through 6 on Figure 2 illustrate cases where the well impact is not associated with lowered groundwater levels from GSP-/GSA-approved or authorized activities. In these cases:

- The pumping groundwater level would have already been below the bottom of the well before January 2015 (Example 3),
- The pumping groundwater level would have already been below the bottom of the pump intake before January 2015 (Example 4),
- The static groundwater level would have been below the pump intake prior to January 2015 (Example 5),
- The pump is not functioning for reasons other than groundwater level decline (e.g. mechanical failure)(Example 6).

In many cases, it is anticipated that a static groundwater level measured in the impacted well from January 2015 will not be available. For those cases, the reference January 2015 static groundwater level will be inferred from a groundwater level contour map generated based on available data from other wells measured at that time. Separate groundwater contour maps will be generated for the Upper and Lower Aquifers. The reference static groundwater level will be assigned from the contour map of the aquifer in which the well is predominantly perforated.

There are other factors, independent of lowered groundwater levels, that can cause a well to stop functioning, such as pump mechanical failure due to age or malfunction, holes in the well casing allowing sand into the pump intake, holes in the pump column associated with corrosion and wear, excessive plugging of screens due to lack of maintenance (e.g. well rehabilitation), and others. All these factors will need to be taken into consideration when assessing the need for mitigation.

Based on the analysis of data for the impacted well, the GSA technical representative will provide a recommendation to the GSA Board of Directors whether the well qualifies for mitigation.

A consideration for each GSA Mitigation Program includes:

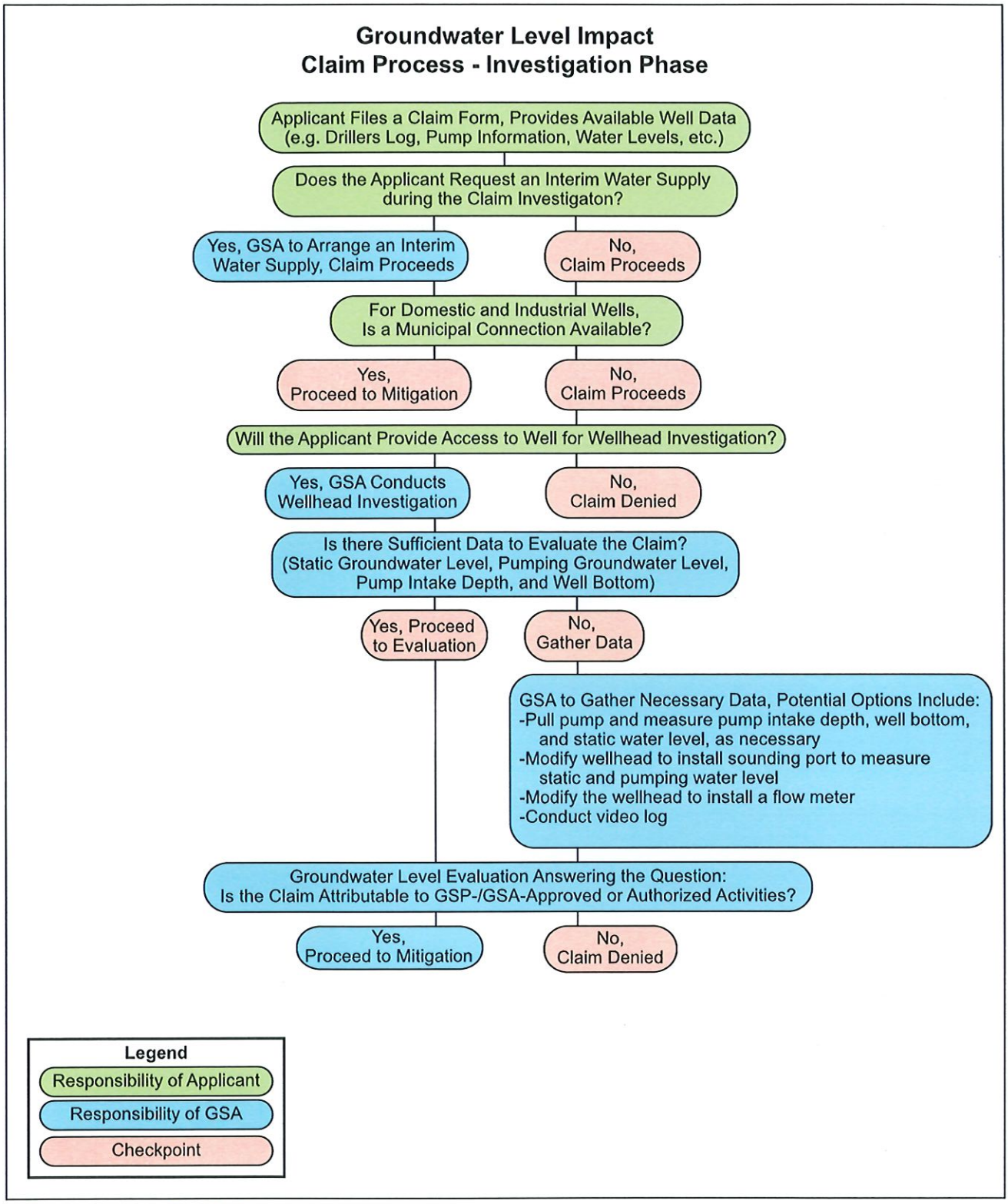
- Will there be an appeal process available to the Claimant and, if so, what will that process consist of?

# 4 Potential Options for Mitigation

Mitigation measures, if approved, could include (but are not necessarily limited to) one or more of the following:

- Providing a short-term emergency water supply to domestic and municipal well owners. Short-term emergency supplies shall be provided as soon as reasonably possible, but in all cases within 14 days of notification to the GSA of such needs;
- Providing funds to lower a well pump;
- Providing funds to complete a connection to an M&I water provider;
- Supplying an equivalent water supply from an alternate source;
- Providing funds to replace the affected well with a deeper well that meets state and local requirements; or
- With the consent of the affected landowner, providing other acceptable mitigation.

**Figure 1**




Thomas Harder & Co.
Groundwater Consulting

**December 2022**

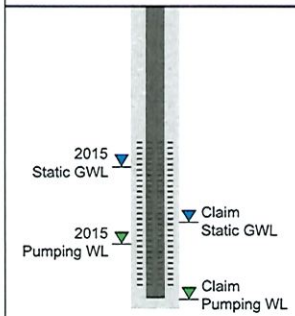
**Figure 2**

## Groundwater Level Impact
## Claim Process - Evaluation Examples

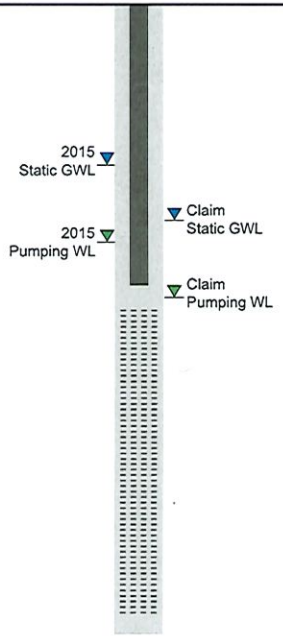
**Attributable to GSP-/GSA-Approved or Authorized Activity**

**Not Attributable to GSP-/GSA-Approved or Authorized Activity**

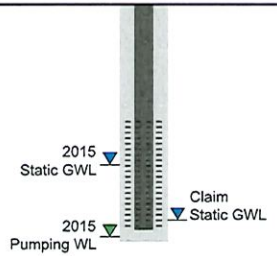
**Example 1 - Well and pump was operational in 2015. Pumping Water Level is currently at or below the bottom of the well**



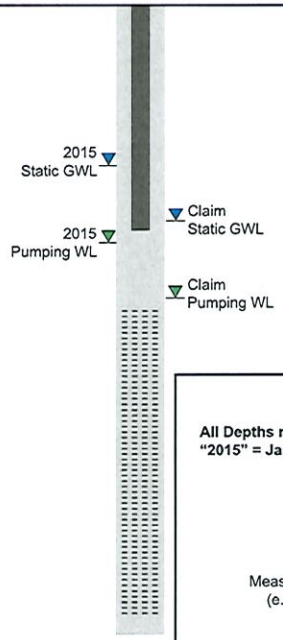

**Example 2 - Well and pump was operational in 2015. Pumping Water Level is currently at or below the pump intake**



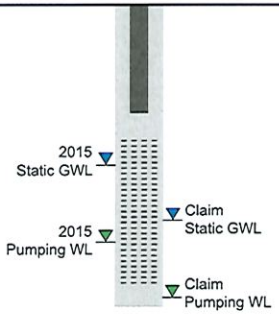

**Example 3 - Static Groundwater Level was above the pump intake, but the Pumping Water Level was at or below the bottom of the well before 2015**



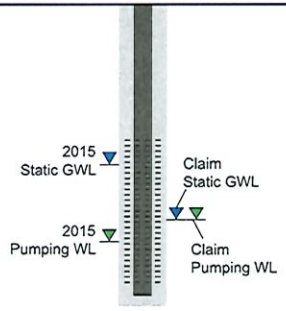

**Example 4 - Static Groundwater Level was above the pump intake, but the Pumping Water Level was at or below the pump intake before 2015**




**Example 5 - Static Groundwater Level was at or below the pump intake before 2015**




**Example 6 - Pumping Water Level may be at or below the bottom of the Pump or Well but the Pump is Not Functioning**

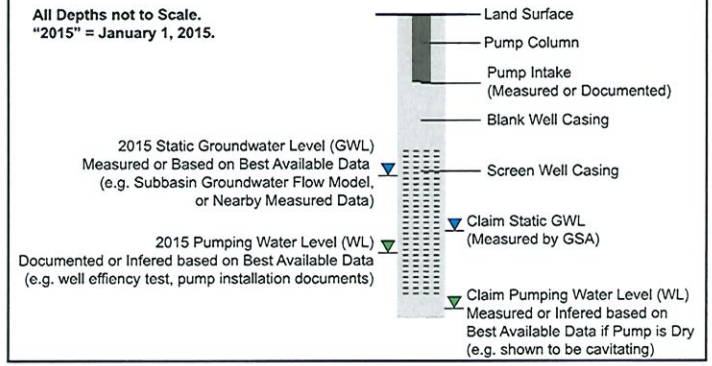



***Note: Examples provided are for illustrative purposes only and do not constitue a decision. Groundwater level evaluations will be conducted on a case-by-case basis using the best available data. Additional data and analysis may be required.***

**Other Potential Issues Not Arribatable to GSP-/GSA-Approved or Authorized Activity:**
Pump damage
Well casing damage
Sanding
Staining
Odor
Mechanical Failure/Issues

**Legend and Notes**

**All Depths not to Scale.**
**"2015" = January 1, 2015.**

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Groundwater Consulting

**Attachment 1**

Tule Subbasin Technical Advisory Committee
Example Groundwater Sustainability Agency
Groundwater Level Impact Claim Form

| Claimant Information | |
|---|---|
| **Contact Name:** | **Well Location Sketch:** |
| **Phone Number:** | |
| **Mailing Address:** | |
| **Well Name:** | |
| **Well Location (Address/Description):** | |
| **Well Type:** ☐ Domestic ☐ Industrial ☐ Agricultural ☐ Other (Specify): | |

| Interim Water Supply | |
|---|---|
| **Does the Claimant Request an Interim Water Supply?** | ☐ Yes ☐ No |
| **Number of Residences/Business Served (If Applicable):** | |
| **Number of Cropped Acres and Crop Type (If Applicable):** | |
| **Estimated Daily Water Use (Gallons, Cubic Feet, or Acre-Ft):** | |

| Well Construction Information | | |
|---|---|---|
| **Is a Department of Water Resources Well Completion Report (i.e. Driller's Log) Available?** | ☐ Yes (Attach if Available) ☐ No | |
| **Casing/Well Depth (ft):** | | |
| **Perforation Interval(s) (ft):** | | |
| **Casing Material:** | **Casing Diameter (inches):** | |
| **Date Constructed (If Known) and/or Well Age (Estimated):** | | |
| **Date of Last Video Survey (If Available):** | | |
| **Well Photos Attached:** | ☐ Yes | ☐ No |

Tule Subbasin Technical Advisory Committee
Example Groundwater Sustainability Agency
Groundwater Level Impact Claim Form

| Pump Information | |
|---|---|
| **Type:** ☐ **Submersible** | ☐ **Vertical Turbine** |
| **Intake Depth (ft):** | **Motor Size (horsepower):** |
| **Age (Known or Estimated):** | **Typical Discharge Rate (gpm):** |
| **Last Pump Test Date (Attach Record if Available):** | |
| **Last Service Date (Attach Record if Available):** | |

| Issue Status | | | | |
|---|---|---|---|---|
| **Date Issue Arose:** | | | | |
| **Issue:** ☐ **No flow** | ☐ **Reduced Flow** | ☐ **Breaking Suction** | ☐ **Future Concern** | |
| **Comments/Description:** | | | | |
| **Static Water Level (ft):** | | **Pumping Water Level (ft):** | | |
| **Status:** ☐ **Not Resolved, Contractor not Contacted (Note: Contacting a Contractor Not Required)**<br>☐ **Not Resolved, Contractor Provided Estimate (attach estimate if applicable)**<br>☐ **Resolved (attached records if applicable)** | | | | |
| **Contractor Company Name:** | | | | |
| **Contractor Contact Name:** | | **Contact Phone Number:** | | |
| **Contractor Address:** | | | | |

| Applicant | |
|---|---|
| By signing this Groundwater Level Impact Claim Form, the applicant agrees to provide the GSA with access to the well for the Wellhead Investigation. | |
| **Print Name:** | **Date:** |
| **Signature:** | |

| GSA Use Only | |
|---|---|
| **Received By:** | **Date:** |

**Attachment 2**

Tule Subbasin Technical Advisory Committee
Example Groundwater Sustainability Agency
Groundwater Level Impact Well Inspection Form

| Inspector | |
|---|---|
| **Inspector Name:** | **Date:** |
| **Representing (e.g. Irrigation District, Consultant, etc.):** | |

| Owner Information |
|---|
| **Owner's Name:** |
| **Field Contact Name (If Different):** |
| **Address:** |
| **Phone Number:** |

| Well Information |
|---|
| **Well Name:** |
| **Date Constructed:** |
| **Casing/Well Depth:** |
| **Casing Material:** |
| **Casing Diameter (inches):** |
| **Perforation Interval(s):** |

| Pump Information: | |
|---|---|
| **Type:** ☐ **Submersible** ☐ **Vertical Turbine** | |
| **Electrical Power (kW):** | **Motor Size (horsepower):** |
| **Intake Depth (ft):** | |
| **Equipped with Flow Meter:** ☐ **Yes** ☐ **No** | |
| **Flow Meter Description (Attach Photo):** | |
| **Discharge Rate (gpm) and Source:** | |
| **Discharge Line Diameter (Inches):** | |

Tule Subbasin Technical Advisory Committee
Example Groundwater Sustainability Agency
Groundwater Level Impact Well Inspection Form

| Site Inspection | |
|---|---|
| **Sounder Access Port Description and Opening Diameter (in):** | |
| **Reference Point Description and Stick Up (ft):** | |
| **Time Since Last Pumped:** | **Time Since Pumping Started:** |
| **Measured Static Water Level (ft):** | **Measured Pumping Water Level (ft):** |
| **Observed Pumping Description (e.g., working, won't turn on, dry after 5 minutes, pumping air, cavitating, etc.):** | |
| **Observed Pumping Rate (gpm) and Description (e.g., flow meter, bucket test, etc.):** | |
| **Distribution System Description (e.g., pressure tank, storage tank, residence, etc.)** | |

| Location Sketch | | |
|---|---|---|
| | | |
| **Well Coordinates:** | | |
| **Survey Method:** | **Latitude:** | **Longitude:** |

# DRAFT Technical Memorandum

**To:** Tule Subbasin Technical Advisory Committee

**From:** Thomas Harder, P.G., C.HG.
Thomas Harder & Co.

**Date:** 3-May-23

**Re:** DRAFT Technical Requirements for Addressing Impact Claims from Land Subsidence in the Tule Subbasin

## 1 Background and Purpose

In response to California Department of Water Resources (CDWR) comments to the Tule Subbasin draft Groundwater Sustainability Plans (GSPs) and Coordination Agreement, the Groundwater Sustainability Agencies (GSAs) each agreed to develop mitigation plans to address significant and unreasonable impacts to beneficial uses of groundwater during the sustainability transition period between 2020 and 2040. The revised Tule Subbasin Coordination Agreement submitted in July 2022 included a Mitigation Program Framework as Attachment 7, which outlined the general standards that each GSA would commit to in developing their respective Mitigation Programs. The GSAs further committed to completing the mitigation claims process for domestic and municipal wells by December 31, 2022 and all other aspects of the Mitigation Programs by June 30, 2023.

The purpose of this document is to provide the minimum technical requirements for use by each Tule Subbasin GSA to address claims of impact from land subsidence associated with transitional pumping overdraft. In consideration of the technical information provided herein, each GSA Mitigation Program will identify the specific criteria and processes for mitigating claims of impact caused by pumping within their respective GSA boundaries. Each Mitigation Program must provide a claim process to address impacts to:

(i) domestic and municipal wells,
(ii) agricultural wells, and
(iii) critical infrastructure.

Impacts may be related to one or more of the three sustainability indicators related to GSP-/GSA-approved or authorized activities:

1. Groundwater level declines
2. Land subsidence, and
3. Groundwater quality.

This TM addresses impacts related to land subsidence. Decisions to include or exclude impacted users from participation in a GSA's Mitigation Program shall be supported by appropriate written technical data and analysis, as described herein. In addition, this TM includes additional considerations, outside the technical requirements, for developing Mitigation Programs.

Each Mitigation Program will document:

1. Types of Impacts to be Addressed by the Mitigation Program
2. A Process for Responding to Claims of Impact
3. A Process for Investigating Claims
4. Qualifications for Mitigation
5. Types of Mitigation to Address Claims
6. An Outreach Program Prior To and During Mitigation Program Development
7. The Program Adoption Schedule
8. Mitigation Program Funding Source(s)

Mitigation will be applied only to those claims that are shown to be attributable to GSP-/GSA-approved or authorized activities.

# 2 Process Overview for Claims of Land Subsidence Impacts

The Mitigation Program framework outlined in the Tule Subbasin Coordination Agreement allows for entities, whether public or private, adversely affected by land subsidence to file a claim with the GSA in which the impact is located. The overall process for receiving and investigating claims of land subsidence impact is shown on Figure 1. For land subsidence, an "impact" is defined as damage and/or loss of functionality of a structure or a facility occurring to the extent that the structure or facility cannot reasonably operate without either repair or replacement, as determined by the GSA where the structure and facility are located or where beneficial use is impacted due to the damage and/or loss of functionality of the structure or facility. The impact must by realized after January 2015. Responsibilities of the claimant are shown in green and responsibilities of the GSA are shown in blue on Figure 1. Decision points are shown in orange.

## 2.1 Filing a Claim

The claim process starts with the affected party ("Claimant") filing a claim with the GSA in which the party's structure or facility is located. The claim will be filed using a form like that provided in Attachment 1. To process a claim, the Claimant must provide some basic information to enable further investigation of the claim, including:

- The Claimant's name and contact information,
- The location of the impacted structure or facility,
- A description of the impacted structure or facility,
- A description of the damage attributed to land subsidence, and
- The applicant's signature.

GSAs may determine whether to provide full or partial mitigation based on a Claimant's compliance with the GSA's GSP, Rules & Regulations, and other laws or regulations. Further, mitigation will be applied only to those claims that are shown to be attributable to GSP-/GSA-approved or authorized activities.

## 2.2 Provision of Access to the Structure/Facility for Inspection by the GSA

Mitigation of any claim of impact not rejected in Section 2.1 herein, will require that the Claimant provide access to the impacted structure or facility to verify the claim. In signing the impact claim form (Attachment 1), the Claimant agrees to release all data associated with the structure or facility and provide access to the structure or facility for inspection by a GSA technical representative. Denial of access to the structure or facility for inspection by the GSA will result in denial of mitigation.

## 2.3 Preliminary Structure/Facility Assessment Based on Existing Data

A GSA technical representative will review all available information provided by the Claimant for the affected structure/facility prior to inspection in the field. Data to be reviewed will include (but not necessarily be limited to):

- A description of the type of structure/facility and what it is used for,
- Original as-built drawings of the structure/facility,
- Information on the date the structure/facility was constructed,
- Any geotechnical reports, including borehole logs, generated prior to or at the time the structure/facility was constructed,
- Photographs of the structure/facility prior to the impact, and
- Information on the nature of the problem including photographs showing the impacted structure/facility.

Based on a review of the available data provided by the Claimant, the GSA will determine whether the claim can be verified based on the data. Criteria for the determination will include:

- Completeness of the dataset relative to the requested information,
- Reliability of the data provided,
- Nature and status of the issue, and

- Evidence of structure/facility impact from land subsidence attributed to GSP-/GSA-approved or authorized activities.

If the claim can be verified based on available information from the Claimant or the Tule Subbasin Data Management System, then the GSA technical representative will issue a recommendation for appropriate mitigation. If not, the GSA will conduct additional investigation to verify the claim as described in Section 2.4.

## 2.4 As-Needed Supplemental Data Collection

To verify a claim that cannot be confirmed from existing information provided by the Claimant, a GSA technical representative will need to inspect the structure/facility and collect supplemental information. The types of information to be collected will depend on the data available from the Claimant and the nature of the structure/facility. Determination of the extent of additional data collection necessary to verify the claim will be at the sole discretion of the GSA. In general, the minimum data to be collected in the field will include:

- Structure/facility address,
- Nature and use of the structure/facility,
- Notes on the nature of the damage to the structure or facility, and
- Photographs of the damage.

The GSA technical representative will record observations from the inspection on a form like that provided in Attachment 2.

If the claim is related to gravity-driven water conveyance infrastructure (e.g. canals, turnouts, recharge basins, stream channels used to convey water, pipelines, and field irrigation), it may be necessary to inspect the entire facility to determine if factors other than land subsidence are impacting the functionality of the structure or facility. The GSA may arrange for water delivery to the facility to document the facility's operating condition. It may also be necessary to survey the structure/facility to obtain data needed to verify the structure's hydraulic capacity.

If the claim is related to well damage suspected of being caused by land subsidence, it may be necessary to have the pump removed from the well and conduct a downhole video survey. Removing the pump will enable the GSA technical representative to measure the column pipe and thus confirm the pump intake depth and inspect the condition of the pump. The video log will enable inspection of the condition of the casing and perforations and confirm the perforation interval, total depth, and static groundwater level of the well. Upon completion of the investigation, the contractor will be required to reinstall the pump and reestablish all connections. If the pump was operating prior to removal, the contractor will be required to demonstrate that the pump is functioning properly after reinstallation.

If the claim is related to flood control facilities it may be necessary to inspect the entire facility to determine if there are factors other than land subsidence impacting the functionality of the structure or facility. The GSA may survey the structure/facility to obtain data needed to verify the structure's hydraulic capacity. In certain cases, the GSA may also have a hydraulic analysis completed by an engineer.

Finally, additional data may be required to evaluate a claim (e.g. soil testing, materials testing, etc.) and will be obtained on a case-by-case basis depending on the structure/facility (e.g. roads, railroads, pipelines, bridges, wastewater collection) and the nature of the impact.

Considerations for each GSA Mitigation Program include:

- Should a landowner making a claim be required to provide documentation that they did not contribute to the groundwater overdraft causing land subsidence to be eligible for mitigation?
- Who will fund a surveyor, well contractor, engineer, or other consultant/contractor, if needed, to collect and analyze additional data?
- If the GSA funds it, is the cost subject to reimbursement by the Claimant if the investigation finds that the issue is not associated with transitional overdraft pumping.
- Will the GSA require the Claimant to sign a release of liability for any damage to the structure/facility resulting from the data collection (e.g. removal of the pump and conducting the video log)?

# 3 Evaluation of Claims of Land Subsidence Impacts

Land subsidence can manifest itself as a regional phenomenon or on a local scale. Regional land subsidence results in a large area (e.g. 10's to 100's of square miles) subsiding at similar rates such that the effect of the lowered land elevation cannot be discerned except through periodic surveying of bench marks or information from satellites. Impacts to land uses, property interests, and critical infrastructure from this type of land subsidence are most likely to occur in the form of reduced surface carrying capacity of gravity-driven water conveyance, well damage, and flood control. Differential land subsidence results in localized adjoining areas subsiding at different rates relative to each other. This can result in land fissuring and often occurs along a fault or geologic boundary. Differential land subsidence has the most potential to cause damage to surface infrastructure such as roads, bridges, and buildings.

Criteria for attributing structural/facility impacts to land subsidence include the following:

- The total amount of land subsidence and, if applicable, change in land surface slope at the structure/facility since 2015 based on the best available data.

- Evidence of ground fissures at the structure/facility that can be linked to active land subsidence in the area from other data.
- For gravity-driven water conveyance facilities, reduced flow capacity relative to 2015, that affects the functionality of the facility.
- For wells: observed casing collapse, damage, or protrusion attributable to subsidence.
- For flood control facilities, changes in water height or channel slope attributable to subsidence since 2015 that affects the functionality of the facility.

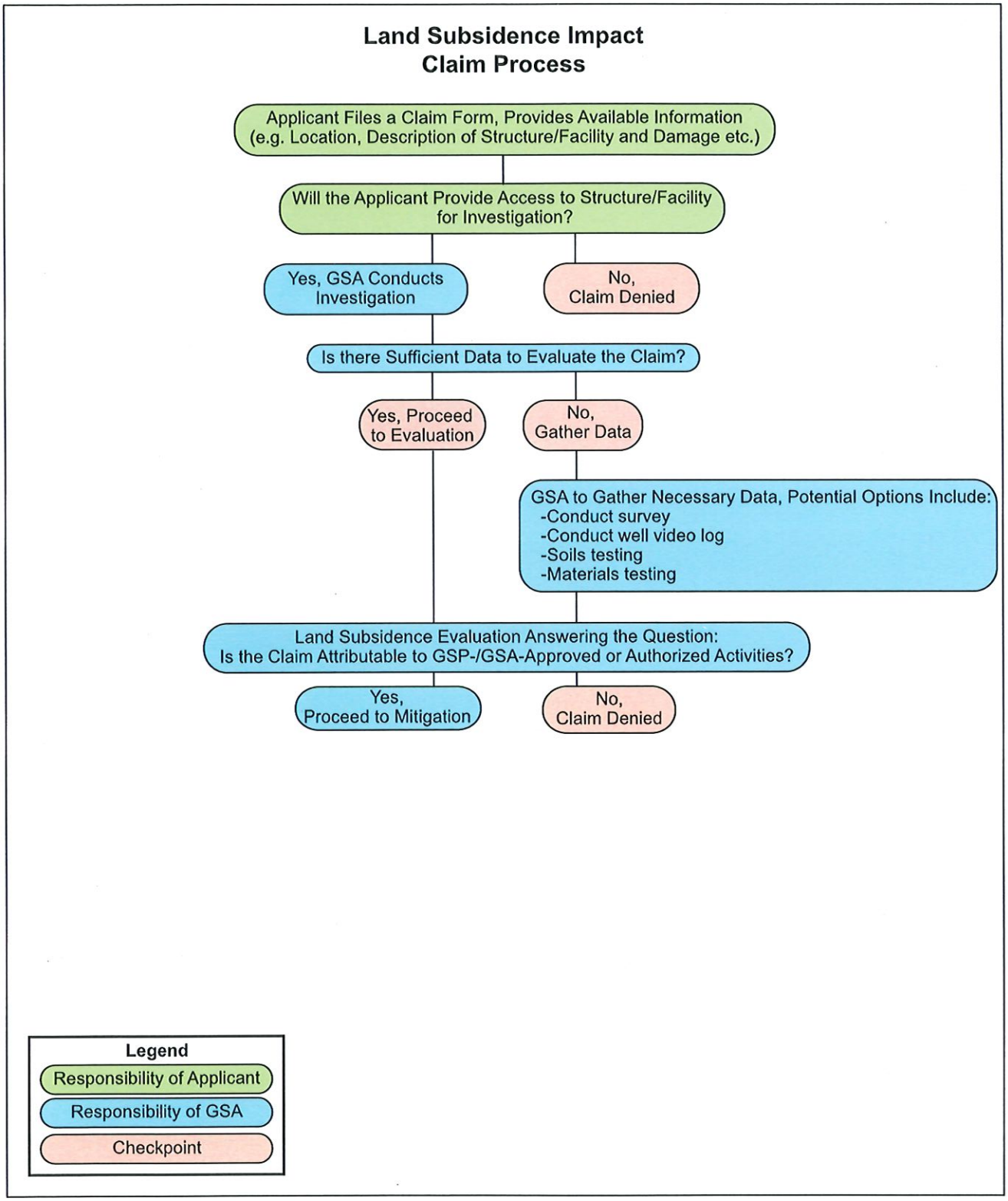
# 4 Potential Options for Mitigation

Mitigation measures, if approved, could include (but are not necessarily limited to) one or more of the following:

- Providing funds to repair or replace the impacted structure/facility; or
- With the consent of the affected landowner, providing other acceptable mitigation.

**Figure 1**

## Land Subsidence Impact Claim Process




Thomas Harder & Co.
Groundwater Consulting

**April 2023**

**Attachment 1**

Tule Subbasin Technical Advisory Committee
Example Groundwater Sustainability Agency
Land Subsidence Impact Claim Form

| Claimant Information | |
|---|---|
| **Contact Name:** | **Structure/Facility Location Sketch:** |
| **Phone Number:** | |
| **Mailing Address:** | |
| **Structure/Facility Name:** | |
| **Structure/Facility Location (Address):** | |
| **Structure/Facility Description:** | |

| Structure/Facility Information | |
|---|---|
| **Are Original As-Built Drawings Available?** | ☐ **Yes (Attach if Available)**<br>☐ **No** |
| **Date Structure/Facility was Constructed:** | |
| **Are Geotechnical Reports, Borehole Logs, Hydraulic Studies, or Other Data Available?** | ☐ **Yes (Attach if Available)**<br>☐ **No** |
| **Are Structure/Facility Photos Prior to Impact Available?** | ☐ **Yes (Attach if Available)**<br>☐ **No** |

Tule Subbasin Technical Advisory Committee
Example Groundwater Sustainability Agency
Land Subsidence Impact Claim Form

| **Issue Status** | |
|---|---|
| **Date Issue Arose:** | |
| **Description of the Impact (Attach Photographs):** | |
| **Status:** ☐ **Not Resolved, Contractor not Contacted (Note: Contacting a Contractor Not Required)**<br>☐ **Not Resolved, Contractor Provided Estimate (attach estimate if applicable)**<br>☐ **Resolved (attached records if applicable)** | |
| **Contractor Company Name:** | |
| **Contractor Contact Name:** | **Contact Phone Number:** |
| **Contractor Address:** | |

| **Applicant** | |
|---|---|
| By signing this Land Subsidence Impact Claim Form, the applicant agrees to provide the GSA with access to the Structure/Facility for the Investigation. | |
| **Print Name:** | **Date:** |
| **Signature:** | |

| **GSA Use Only** | |
|---|---|
| **Received By:** | **Date:** |

Tule Subbasin Technical Advisory Committee
Example Groundwater Sustainability Agency
Land Subsidence Impact Site Inspection Form

| **Inspector** | |
|---|---|
| **Inspector Name:** | **Date:** |
| **Representing (e.g. Irrigation District, Consultant, etc.):** | |

| **Owner Information** |
|---|
| **Owner's Name:** |
| **Field Contact Name (If Different):** |
| **Address:** |
| **Phone Number:** |

| **Structure/Facility Information** |
|---|
| **Name:** |
| **Date Constructed:** |
| **Nature and Use of Structure/Facility (Fill in Appropriate Section Below)** |
| **Gravity-Driven Water Conveyance (Provide Description; e.g. canal, turnout, basin, stream channel, etc.)** |
| **Well (Provide Description; e.g. Depth, Casing Material, Casing Diameter, Perforation Interval, etc.):** |

Tule Subbasin Technical Advisory Committee
Example Groundwater Sustainability Agency
Land Subsidence Impact Site Inspection Form

| **Flood Control Facilities (Provide Description):** |
| --- |
| **Other (Provide Description):** |

| **Site Inspection Notes** |
| --- |
| **Nature of Damage (Attach Photographs):** |

Tule Subbasin Technical Advisory Committee
Example Groundwater Sustainability Agency
Land Subsidence Impact Site Inspection Form

| **Location Sketch** | | |
|---|---|---|
| | | |
| **Site Coordinates/APN:** | | |
| **Survey Method:** | **Latitude:** | **Longitude:** |

# TECHNICAL MEMORANDUM

**To:** Tule Subbasin SGMA Managers

**From:** Don Tucker – 4Creeks, Inc.

**Date:** June 29, 2022

**Re:** Technical Support for Addressing DWRs Comments Regarding Groundwater Quality Sustainable Management Criteria in the Tule Subbasin

## 1 Introduction

This technical memorandum (TM) was prepared to address the groundwater quality comments from the California Department of Water Resources (CDWR) on groundwater sustainability plans (GSPs) prepared by each of the six Groundwater Sustainability Agencies (GSAs) within the Tule Subbasin.

## 1.1 Background

The originally submitted Tule Subbasin Coordination Agreement addressed undesirable results related to groundwater quality as stated: *"...the criteria for an undesirable result for the degradation of groundwater quality is defined as the unreasonable long-term changes of groundwater quality above the minimum thresholds at greater than 50% of GSA Management Area RMS wells caused by groundwater pumping and/or groundwater recharge."*

The original Coordination Agreement further stated that *"...the avoidance of an undesirable result for degraded groundwater quality is to protect the those using the groundwater, which varies depending on the use of the groundwater. The effects of degraded water quality caused by recharge or lowering of groundwater levels may impact crop growth or impact drinking water systems, both of which would cause additional expense of treatment to obtain suitable water."*

Each of the Tule Subbasin GSA originally submitted GSPs further described the process/methodology used for setting Sustainable Management Criteria: *"The following four (4) steps detail the process for setting interim milestones and the measurable objective at individual RMS related to Groundwater Quality:*

***Step 1:*** *Locate the RMS defined in the Tule Subbasin Monitoring Plan, identify which portion of the aquifer it represents, and the associated Constituents of Concern (COC) at the RMS based on groundwater suitability (Agriculture use, Domestic Use, Municipal Use).*

***Step 2:*** *Prepare a table summarizing available historical groundwater quality data for each COC at the RMS well.*

***Step 3:*** *Establish interim milestones and the measurable objective at each RMS well with calculating a change above the baseline groundwater quality to not exceed 10% of long term 10 year running average.*

***Step 4:*** *Each year, during the Plan Implementation Period, re-calculate the long term 10 year running average. Evaluate changes to groundwater quality based on reduction of groundwater elevation or from recharge efforts."*

Similar to the process described for interim milestones and measurable objectives, minimum thresholds at each RMS well were established to not exceed 15% change in the long-term 10-year running average.

Lastly, each of the Tule Subbasin GSA GSPs described the Constituent of Concerns (COC) that will be monitored at each RMS wells as follows: *"The COC vary depending on the suitability of the groundwater. Each of the COC to be monitored by the GSA at the RMS wells to serve as indicators for changes in groundwater quality are identified in the table below."*

| *Municipal / Domestic* | *Agricultural* |
|---|---|
| *Arsenic* | *pH* |
| *Chromium (Total)* | *Conductivity* |
| *Nitrogen as N* | *Nitrogen as N* |
| *(any specific Title 22 MCL exceedance at baseline sampling event in Spring 2020)* | |

## 1.2 DWR Response

The CDWR made the following comments relating to addressing groundwater quality in the Coordination Agreement and individual GSPs within the Tule Subbasin:

*"The GSPs do not provide sufficient information to justify the proposed sustainable management criteria for degraded water quality.*

1. *The GSPs do not specify what groundwater conditions are considered suitable for agricultural irrigation and domestic use. The GSPs do not explain the choice of constituents (pH, conductivity, and nitrate) as a means of evaluating impacts to beneficial uses and users, especially agricultural irrigation.*

2. *The GSPs do not explain how the use of a 10-year running average to establish the sustainable management criteria will avoid undesirable results due to degraded groundwater quality and related potential effects of the undesirable results to existing regulatory standards. The GSPs do not explain how the criteria defining when undesirable results occur in the Subbasin was established, the rationale behind the approach, and why it is consistent with avoiding significant and unreasonable effects associated with groundwater pumping and other aspects of the GSAs' implementation of their GSPs.*

3. *The GSPs do not explain how the sustainable management criteria for degraded water quality relate to existing groundwater regulatory requirements in the Subbasin and how the GSAs will coordinate with existing agencies and programs to assess whether or not implementation of the GSPs is contributing to the degradation of water quality throughout the Subbasin."*

## 1.3 Purpose and Scope

The purpose of this TM is to provide the revised approach for re-establishing the sustainability management criteria (SMC) for groundwater quality as is relates to selection constituents of concerns for determining impacts to beneficial uses and users, the rationale used to quantify undesirable results as they relate to existing regulatory standards, and how impacts will be assessed to determine if GSA implementation efforts are a contributing factor to groundwater quality.

In general, the following items were prepared relating to DWRs comments for degradation of groundwater quality:

1. A detailed description of how the overlying beneficial uses and users were defined for determining constituent of concerns to monitor at each RMS groundwater quality well.
2. Redefined rationale for setting groundwater quality SMCs to align with existing regulatory requirements.
3. A detailed description of how ongoing coordination with existing groundwater regulatory agencies and programs will take place to evaluate if GSP implementation is contributing to degradation to groundwater quality.

## 1.4 Proposed Approach

### 1.4.1 Defining Beneficial Uses and Users at each RMS Well

Each groundwater quality RMS well will be designated as representative of agricultural or drinking water or both based on the beneficial use and users of groundwater within a representative area surrounding the well based on the following evaluation:

**Drinking Water:** The RMS well is within an urban MA or 1-mile of a public water system.

**Agricultural:** Greater than 50% of the pumping within the representative area is determined to be agricultural and there are no public water systems within a 1-mile radius.

An RMS well may be designated as representative of both agricultural and drinking water if it possesses a representative area with greater than 50% agricultural pumping and a public water system was within 1-mile.

The analysis used to determine the beneficial uses at each RMS well consisted of querying DWR well completion reports, public water systems, and schools using ArcGIS. The detailed breakdown of the steps to conduct analysis is described below.

1. Create a layer in ArcGIS by combining data from the following:
   - Well locations and well types from DWRs Well Completion Report Mapping Application
   - Boundaries of SWDIS Public Water Systems
   - Boundaries of Community/Urban areas from LAFCO
2. Overlay groundwater quality locations of RMS wells and create 1 mile buffer for analyzing.
3. Summarize the data identified in step 1 relative to each groundwater quality RMS well 1-mile buffer.
4. Define the groundwater quality RMS well as representative of drinking water and/or agricultural beneficial pumping beneficial use.

Wells types are categorized as drinking water, agricultural, or not applicable based on breakdown in **Table 1**.

**Table 1**: Categories of Well Types

| Drinking Water | Agricultural | Not Applicable |
|---|---|---|
| Domestic | Irrigation - Agricultural | Cathodic Protection |
| Public | Other Irrigation | Destruction Monitoring |
| Water Supply | Water Supply Irrigation - Agricultural | Destruction Unknown Soil Boring |
| Water Supply Domestic | Water Supply Irrigation - Agriculture | Monitoring |
| Water Supply Public | Water Supply Stock or Animal Watering | Other Destruction |
| | | Test Well |
| | | Test Well Unknown |
| | | Unknown |
| | | Vapor Extraction |
| | | Vapor Extraction n/a |
| | | Water Supply Industrial |
| | | Blanks |

Results of this analysis are provided as part of the Monitoring Network Section of each GSP.

### 1.4.2 Rationale for Establishing Sustainable Management Criteria

Agricultural and drinking water constituents of concerns (COC) will be evaluated based on the established Maximum Contaminate Level (MCL) or Water Quality Objectives (WQO) by the responsible regulatory agency. In the case of drinking water, the following Title 22 constituents will be monitored and for agricultural the following Basin Plan Water Quality Objective (WQO) constituents of concern will be monitored:

**Drinking Water Constituents of Concern**

- Arsenic
- Nitrate as N
- Chromium-VI
- Dibromochloropropane (DBCP)
- 1,2,3- Trichloropropane (TCP)
- Tetrachloroethene (PCE)
- Chloride
- Total Dissolved Solids
- Perchlorate

**Agricultural Constituents of Concern**

- Chloride
- Sodium
- Total Dissolved Solids

Measurable objectives are proposed to be 75% of the regulatory limits for the COCs and the minimum thresholds are proposed to be the regulatory limits as identified in **Table 2**. For RMS wells that have historical exceedances of the MCLs or WQOs which were not caused by implementation of a GSP, minimum thresholds will not be set at the MCLs or WQOs, but rather the pre-SGMA implementation concentration. These RMS wells closely monitored to evaluate if further degradation is occurring at the RMS site as a result of GSP implementation into the future.

**Table 2:** Measurable Objectives and Minimum Thresholds for Groundwater Quality

| Constituent | Units | Minimum Threshold | | Measurable Objective | |
|---|---|---|---|---|---|
| | | Drinking Water Limits (MCL/SMCL) | Agricultural Water Quality Objective | Drinking Water Limits (MCL/SMCL) | Agricultural Water Quality Objective |
| Arsenic | ppb | 10 | N/A | 7.5 | N/A |
| Nitrate as N | ppm | 10 | N/A | 7.5 | N/A |
| Hexavalent Chromium | ppb | 10 | N/A | 7.5 | N/A |
| Dibromochloropropane (DBCP) | ppb | 0.2 | N/A | 0.15 | N/A |
| 1,2,3-Trichloropropane (TCP) | ppt | 5 | N/A | 3.75 | N/A |
| Tetrachloroethene (PCE) | ppb | 5 | N/A | 3.75 | N/A |
| Chloride | ppm | 500 | 106 | 375 | 79.5 |
| Sodium | ppm | N/A | 69 | N/A | 51.75 |
| Total Dissolved Solids | ppm | 1,000 | 450 | 750 | 337.5 |
| Perchlorate | ppb | 6 | N/A | 4.5 | N/A |

Utilizing the criteria described above, the Tule Subbasin GSAs have revised the definition of undesirable results for degradation of groundwater quality in *Section 4.3.3.2 - Criteria to Define Undesirable Results (§354.26(b)(2))* in the Tule Subbasin Coordination Agreement as:

> *"..the exceedance of a minimum threshold at a groundwater quality RMS in any given GSA resulting from the implementation of a GSP. This condition would indicate that more aggressive management actions were needed to mitigate the overdraft."*

Additionally, the Tule Subbasin has developed a Mitigation Program Framework included as Attachment 7 of the Tule Subbasin Coordination Agreement, which describes the framework the Tule Subbasin GSAs would utilize to address impacts that occur from implementation of a GSP relative to degradation of groundwater quality due to GSA actions.

### 1.4.3 Coordination with Existing Groundwater Quality Regulatory Agencies and Programs

The monitoring and characterization of groundwater quality conditions has historically been conducted and reported by other public agencies and/or non-profits to meet requirements of other regulatory programs, which focus on the prevention of degradation of groundwater quality. The existing groundwater monitoring programs that the Tule Subbasin GSAs coordinate with are described in **Table 3**.

To prevent duplication of efforts and competing datasets for the ILRP, CV-Salts Nitrate Control Program, and SGMA GSAs, the Tule Subbasin utilizes a single group to manage the monitoring efforts within the Subbasin for collectively meeting the various requirements of these programs being implemented at the local level. This level of coordination between these agencies and groups ensures that the efforts performed under each program help provide a cohesive response to providing short term and long-term solutions to groundwater management.

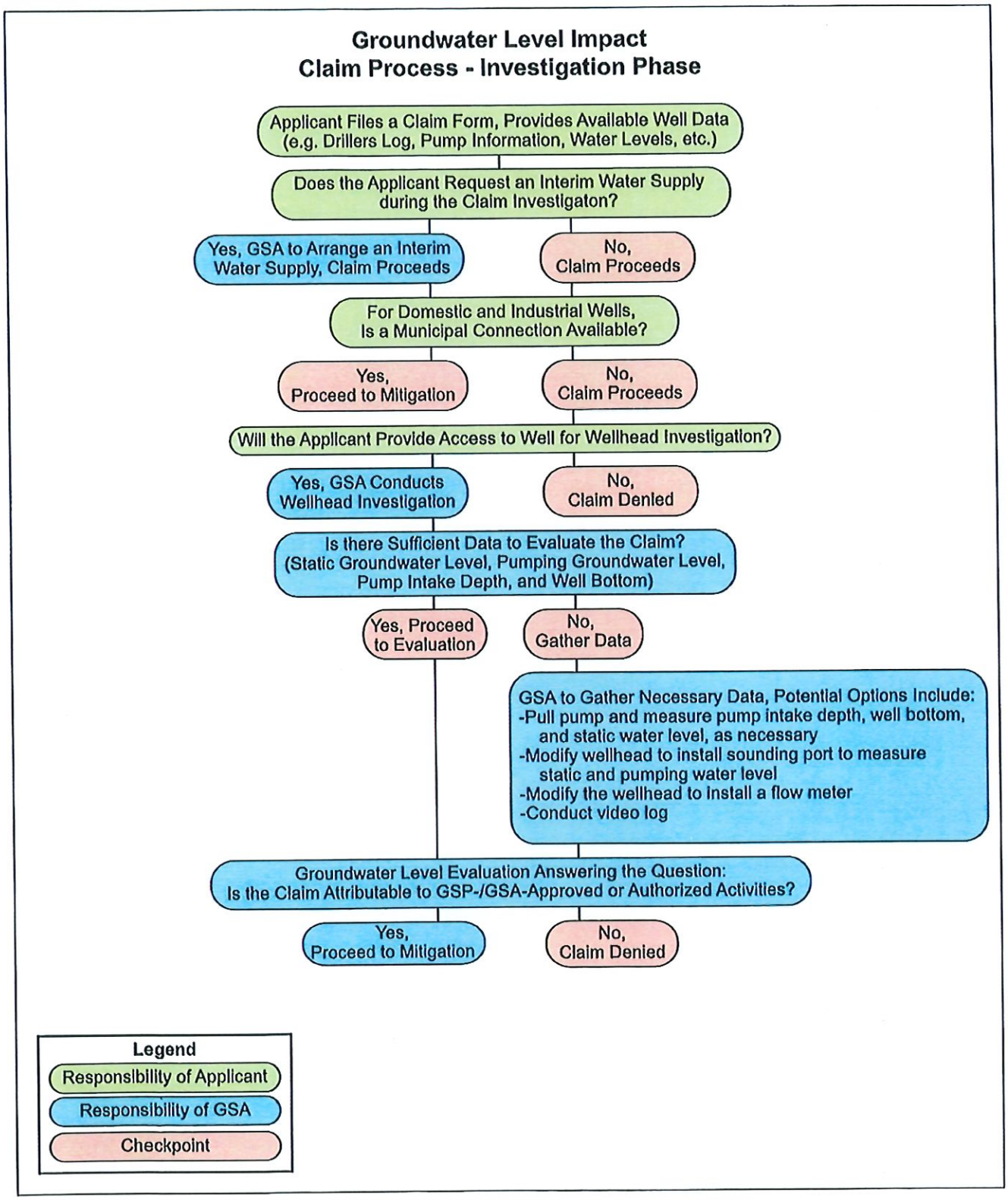
The evaluation as to whether the implementation of a GSP may be contributing to the degradation of water quality will be completed as outlined in Attachment 7 of the Tule Subbasin Coordination Agreement. The types of mitigation for degradation of groundwater quality will vary by GSA and will be coordinated with the agencies listed in Table 2.

Other forms of mitigation may consist of joint ventures to secure grant funding to address GSA related impacts.

**Table 3**: Existing Groundwater Quality Monitoring Programs

| Programs or Data Portals | Tule Subbasin Agency Coordinating with GSAs | Parameters | Monitoring Frequency | Program Objectives |
|---|---|---|---|---|
| AB-3030 and SB-1938 Groundwater Management Plans | Tule Subbasin GSAs, requirements incorporated into GSP Annual Reports | • Water levels are typically monitored annually.<br>• Ag Suitability analysis (limited suite of general minerals) monitoring frequency between annual to once every 3 years. | Semiannual to Annual | |
| California SDWIS | Varies Public Water Systems | Database for all public water system wells and historical sample results. Data available includes all Title 22 regulated constituents. | • Title 22 General Minerals and Metals every 3 years.<br>• Nitrate as N annually, if ≥ 5 ppm, sampled quarterly<br>• VOCs and SOCs sampled every 3 years.<br>• Uranium sampling depends on historical results but varies between 1<br>sample every 3 (when ≥ 10 pCi/L), 6 (when < 10 pCi/L) or 9 (when no historical detection) years. | Demonstrate compliance with Drinking Water Standards through monitoring and reporting water quality data. |
| CV-SALTS | Tule Basin Management Zone, Tule Basin Water Foundation | Sampling parameters required through Waste Discharge Requirements (WDR): typically include monthly sodium, chloride, electrical conductivity, nitrogen species (N, NO2, NO3, NH3), pH and other constituents of concern identified in the Report of Waste Discharge. A limited suite of general minerals is required quarterly from the source and annually from the wastewater. | Most constituents sampled monthly, quarterly general minerals from source water and annual general minerals from waste discharge. | To monitor degradation potential from wastewaters discharged to land application areas and provide interim replacement water when MCL for nitrate as N is exceeded while developing long term solutions for safe drinking water. |
| Department of Pesticide Regulation | County of Tulare | Pesticides | Annual | DPR samples groundwater to determine:<br>(1) whether pesticides with the potential to pollute groundwater are present,<br>(2) the extent and source of pesticide contamination, and<br>(3) the effectiveness of regulatory mitigation measures. |
| GAMA (Collaboration with SWQCB, RWQCB, DWR, DPR, NWIS, LLNL) | | • Constituents sampled vary by the Program Objectives.<br>• Typically, USGS is the technical lead in conducting the studies and reporting data. | Varies | • Improve statewide comprehensive e groundwater monitoring.<br>• Increase the availability of groundwater quality and contamination information to the public. |
| Geotracker and Envirostor Databases | | Many contaminants of concern, organic and inorganic. | Depends on program. Monthly, Semiannually, Annually, etc. | Records database for cleanup program sites, permitted waste dischargers |
| ILRP | Tule Basin Water Quality Coalition | • Annually: static water level, temperature, pH, electrical conductivity, nitrate as nitrogen, and dissolved oxygen.<br>• Once every five years: general minerals collection | Annual and Every 5 years | Monitor impacts of agricultural and fertilizer applications on first encountered groundwater |
| USGS California Water Science Center | | Conducted multiple groundwater quality studies of the Tule Subbasin. | Reports, factsheet, and data publications range from 1994through 2017. | Special studies related to groundwater quality that provide comprehensive studies to characterize the basin. |

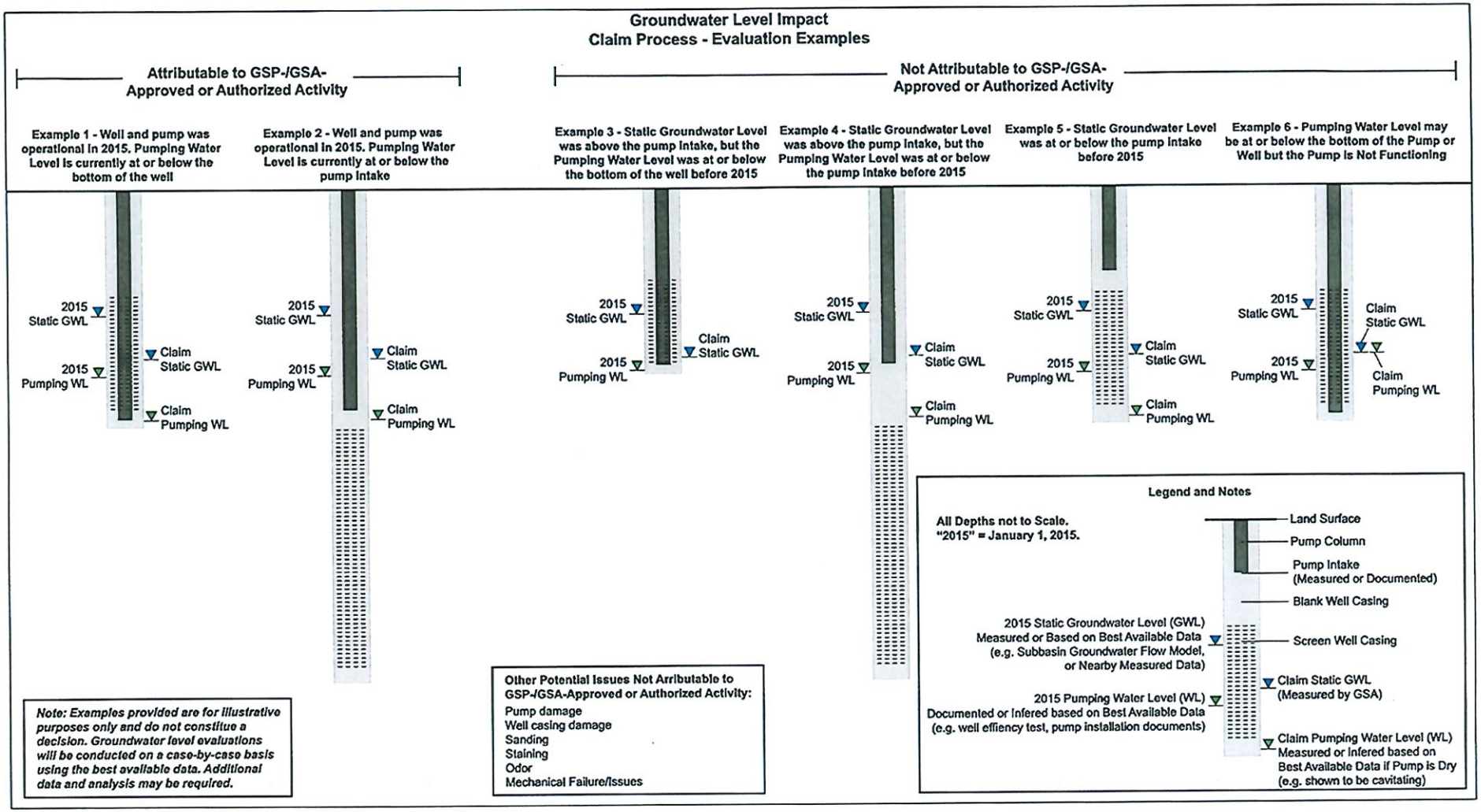
**Figure 1**




Thomas Harder & Co.
Groundwater Consulting

December 2022

Figure 2




Thomas Harder & Co.
Groundwater Consulting

December 2022

Lower Tule River and Pixley Irrigation Districts
Groundwater Sustainability Agency
Groundwater Level Impact Claim Form

| Claimant Information | |
|---|---|
| **Contact Name:** | **Well Location Sketch:** |
| **Phone Number:** | |
| **Mailing Address:** | |
| **Well Name:** | |
| **Well Location (Address/Description):** | |
| **Well Type:** | |

☐ Domestic ☐ Industrial ☐ Agricultural ☐ Other (Specify):

| Interim Water Supply | |
|---|---|
| **Does the Claimant Request an Interim Water Supply?** | ☐ Yes ☐ No |
| **Number of Residences/Business Served (If Applicable):** | |
| **Number of Cropped Acres and Crop Type (If Applicable):** | |
| **Estimated Daily Water Use (Gallons, Cubic Feet, or Acre-Ft):** | |

| Well Construction Information | | |
|---|---|---|
| **Is a Department of Water Resources Well Completion Report (i.e. Driller's Log) Available?** | ☐ Yes (Attach if Available) ☐ No | |
| **Casing/Well Depth (ft):** | | |
| **Perforation Interval(s) (ft):** | | |
| **Casing Material:** | **Casing Diameter (inches):** | |
| **Date Constructed (If Known) and/or Well Age (Estimated):** | | |
| **Date of Last Video Survey (If Available):** | | |
| **Well Photos Attached:** | ☐ Yes | ☐ No |

| Pump Information | |
|---|---|
| Type: ☐ Submersible | ☐ Vertical Turbine |
| Intake Depth (ft): | Motor Size (horsepower): |
| Age (Known or Estimated): | Typical Discharge Rate (gpm): |
| Last Pump Test Date (Attach Record if Available): | |
| Last Service Date (Attach Record if Available): | |

| Issue Status | | | |
|---|---|---|---|
| Date Issue Arose: | | | |
| Issue: ☐ No flow | ☐ Reduced Flow | ☐ Breaking Suction | ☐ Future Concern |
| Comments/Description: | | | |
| Static Water Level (ft): | Pumping Water Level (ft): | | |
| Status: ☐ Not Resolved, Contractor not Contacted (Note: Contacting a Contractor Not Required)<br>☐ Not Resolved, Contractor Provided Estimate (attach estimate if applicable)<br>☐ Resolved (attached records if applicable) | | | |
| Contractor Company Name: | | | |
| Contractor Contact Name: | Contact Phone Number: | | |
| Contractor Address: | | | |

| Applicant | |
|---|---|
| By signing this Groundwater Level Impact Claim Form, the applicant agrees to provide the GSA with access to the well for the Wellhead Investigation. | |
| Print Name: | Date: |
| Signature: | |

| GSA Use Only | |
|---|---|
| Received By: | Date: |

# Lower Tule River and Pixley Irrigation Districts Groundwater Sustainability Agency Groundwater Level Impact Well Inspection Form

| Inspector | |
|---|---|
| **Inspector Name:** | **Date:** |
| **Representing (e.g. Irrigation District, Consultant, etc.):** | |

| Owner Information |
|---|
| **Owner's Name:** |
| **Field Contact Name (If Different):** |
| **Address:** |
| **Phone Number:** |

| Well Information |
|---|
| **Well Name:** |
| **Date Constructed:** |
| **Casing/Well Depth:** |
| **Casing Material:** |
| **Casing Diameter (inches):** |
| **Perforation Interval(s):** |

| Pump Information: | |
|---|---|
| **Type:** ☐ Submersible ☐ Vertical Turbine | |
| **Electrical Power (kW):** | **Motor Size (horsepower):** |
| **Intake Depth (ft):** | |
| **Equipped with Flow Meter:** ☐ Yes ☐ No | |
| **Flow Meter Description (Attach Photo):** | |
| **Discharge Rate (gpm) and Source:** | |
| **Discharge Line Diameter (Inches):** | |

| Site Inspection | |
|---|---|
| **Sounder Access Port Description and Opening Diameter (in):** | |
| **Reference Point Description and Stick Up (ft):** | |
| **Time Since Last Pumped:** | **Time Since Pumping Started:** |
| **Measured Static Water Level (ft):** | **Measured Pumping Water Level (ft):** |
| **Observed Pumping Description (e.g., working, won't turn on, dry after 5 minutes, pumping air, cavitating, etc.):** | |
| **Observed Pumping Rate (gpm) and Description (e.g., flow meter, bucket test, etc.):** | |
| **Distribution System Description (e.g., pressure tank, storage tank, residence, etc.)** | |

| Location Sketch | | |
|---|---|---|
| | | |
| **Well Coordinates:** | | |
| **Survey Method:** | **Latitude:** | **Longitude:** |

**LOWER TULE RIVER AND PIXLEY IRRIGATION DISTRICTS**
**GROUNDWATER SUSTAINIBILITY AGENCY**

**WAIVER AND RELEASE OF LIABILITY AND INDEMNITY AGREEMENT**

Landowner Names and Addresses (Please Print):

_____ _____
_____ _____
_____ _____

I have submitted an impact claim form to the Groundwater Sustainability Agency ("GSA"). It is understood that I must give access to my well for inspection and that the GSA may provide a temporary alternative water supply.

**It is acknowledged and agreed that any temporary water supply being provided is non-potable and is not for human consumption, and that the entities providing such water make no representation, warranty or guarantee as to the quality of the water provided or its suitability for any particular use. It is acknowledged and agreed that the temporary water supply provided shall be used for in-home emergency use only and shall not be used or applied outside of the home on, including but not limited to, hardscapes, landscapes, vegetation, plants, crops, etc. It is acknowledged and agreed that the provision of an interim water supply hereunder is temporary; neither this agreement nor the provision of water hereunder creates a water right, public utility service right or any right to continued or permanent water service; and the provision of this temporary water supply may be terminated in the sole discretion of the entities listed above.**

In consideration for the provision of temporary water supplies to the Property, I, for myself and on behalf of any other person residing at or visiting the Property, if any (collectively "Water Users"), do hereby release, waive, discharge, and covenant not to sue the above named irrigation district serving as the GSA, and the district's respective project participants, including the directors, officers, owners, employees, independent contractors or agents of all of the same (collectively referred to herein as the "GSA"), from liability for any and all claims for personal injury, illness, death, property damage, or any other claim, including but not limited to claims arising out of the negligence of the GSA that relates to or results from the provision of a temporary interim water supply to the Property.

It is expressly agreed that the GSA shall not be liable for any injuries or any damages to the Water Users, or the property of such persons, or be subject to any claim, demand, damages or causes of action arising out of or relating to any use of the interim temporary water supply, and well inspections by the GSA, regardless of whether the negligence of the GSA caused or contributed to the injury or damage. This waiver and release of claims is intended to be as broadly interpreted as allowed under California law but does not include gross negligence or willful misconduct by the GSA.

By signing this waiver and release the Water User is agreeing to waive all rights that they may have under the provisions of section 1542 of the Civil Code of California, which reads in part as follows:

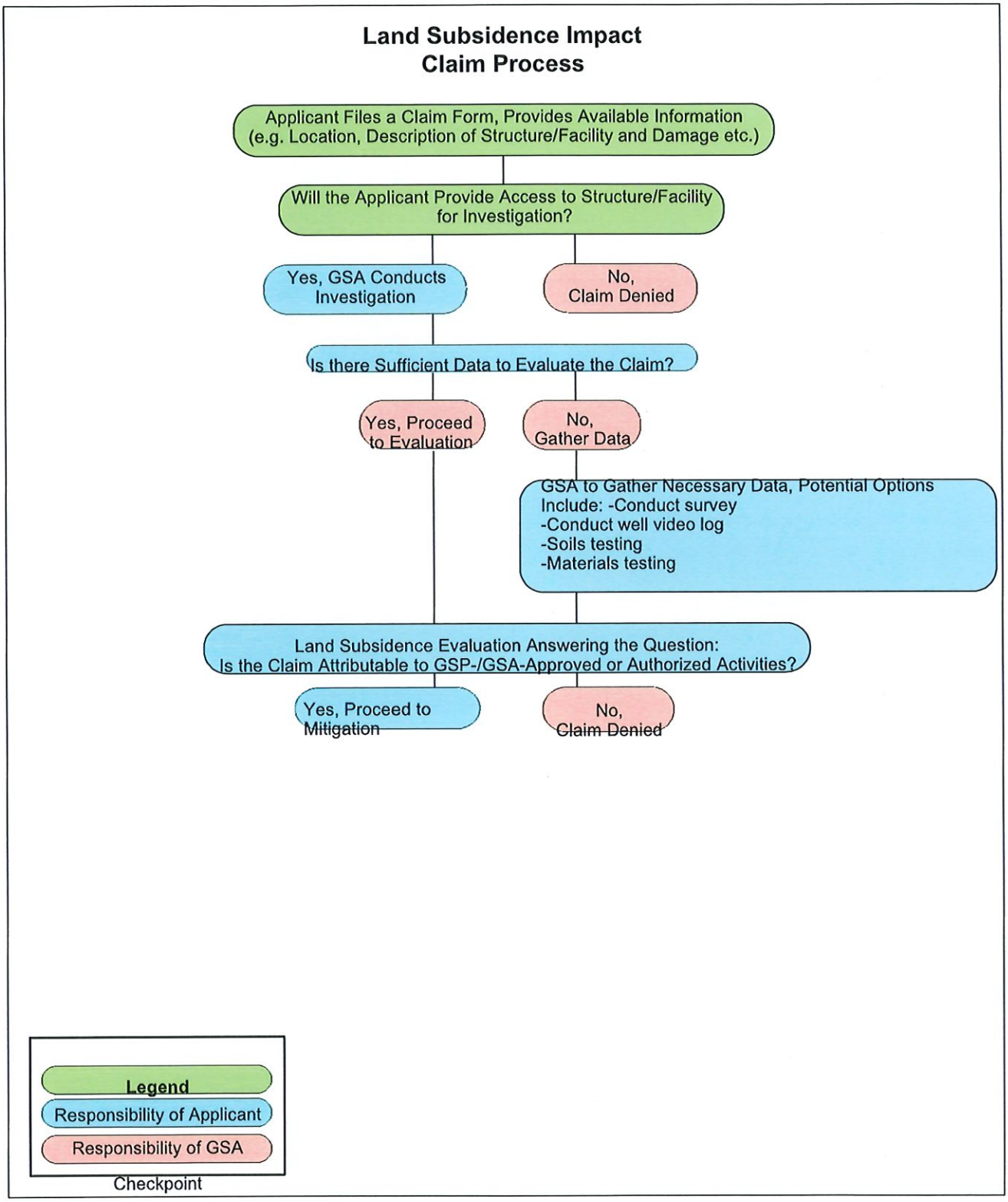
> "A general release does not extend to claims that the creditor or releasing party does not know or suspect to exist in his or her favor at the time of executing the release and that, if known by him or her would have materially affected his or her settlement with the debtor or released party."
> _____ (Water User's initials)

The Water User acknowledges that if the GSA ultimately accepts the claim and provides mitigation measures, the well subject to the claim is not eligible for future mitigation and the Water User releases the GSA from future claims regarding such well.

The Water User executing this waiver and release of liability hereby agrees to hold the GSA harmless from all claims which may be made by or on behalf of the Water User, and to indemnify the GSA from any such claims to the fullest extent allowed under California law. This express indemnification provision specifically includes reimbursement for all attorneys' fees and litigation costs incurred by the GSA or on their behalf as a result of any such claim. Neither this Agreement nor the provision (or offering) of temporary, emergency water supplies hereunder constitutes any admission of liability or wrongdoing, or an agreement or admission of any duty, fact, matter, or contention whatsoever.

Signature:_____ Date: _____ Signature:_____ Date: _____

## Land Subsidence Impact Claim Process



Lower Tule River and Pixley Irrigation Districts
Groundwater Sustainability Agency
Subsidence Impact Claim Form

| Claimant Information | |
|---|---|
| **Contact Name:** | **Location Sketch:** |
| **Phone Number:** | |
| **Mailing Address:** | |
| **Well Name:** | |
| **Location (Address/Description):** | |
| **Infrastructure Type:** | |

☐ Domestic ☐ Industrial ☐ Agricultural ☐ Other (Specify):

| Interim Water Supply | |
|---|---|
| **Does the Claimant Request an Interim Water Supply?** | ☐ Yes ☐ No |
| **Number of Residences/Business Served (If Applicable):** | |
| **Number of Cropped Acres and Crop Type (If Applicable):** | |
| **Estimated Daily Water Use (Gallons, Cubic Feet, or Acre-Ft):** | |

| Well Construction Information (If applicable) | | |
|---|---|---|
| **Is a Department of Water Resources Well Completion Report (i.e. Driller's Log) Available?** | ☐ Yes (Attach if Available) ☐ No | |
| **Casing/Well Depth (ft):** | | |
| **Perforation Interval(s) (ft):** | | |
| **Casing Material:** | **Casing Diameter (inches):** | |
| **Date Constructed (If Known) and/or Well Age (Estimated):** | | |
| **Date of Last Video Survey (If Available):** | | |
| **Well Photos Attached:** | ☐ Yes | ☐ No |

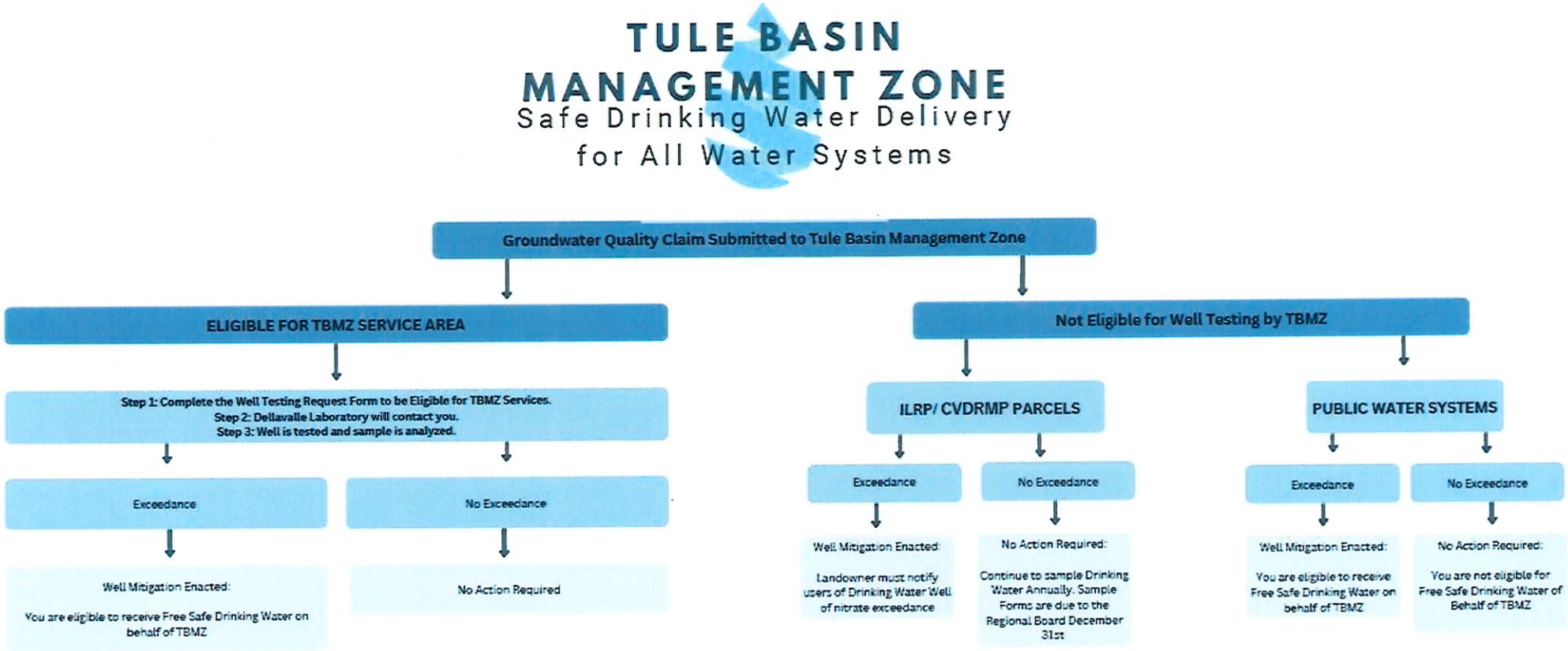
| Pump Information | |
|---|---|
| Type: ☐ Submersible | ☐ Vertical Turbine |
| Intake Depth (ft): | Motor Size (horsepower): |
| Age (Known or Estimated): | Typical Discharge Rate (gpm): |
| Last Pump Test Date (Attach Record if Available): | |
| Last Service Date (Attach Record if Available): | |

| Issue Status | | | | |
|---|---|---|---|---|
| Date Issue Arose: | | | | |
| Issue: ☐ No flow | ☐ Reduced Flow | ☐ Breaking Suction | ☐ Future Concern | |
| Comments/Description: | | | | |
| Static Water Level (ft): | | Pumping Water Level (ft): | | |
| Status: ☐ Not Resolved, Contractor not Contacted (Note: Contacting a Contractor Not Required)<br>☐ Not Resolved, Contractor Provided Estimate (attach estimate if applicable)<br>☐ Resolved (attached records if applicable) | | | | |
| Contractor Company Name: | | | | |
| Contractor Contact Name: | | Contact Phone Number: | | |
| Contractor Address: | | | | |

| Applicant | |
|---|---|
| By signing this Groundwater Level Impact Claim Form, the applicant agrees to provide the GSA with access to the infrastructure for the investigation. | |
| Print Name: | Date: |
| Signature: | |

| GSA Use Only | |
|---|---|
| Received By: | Date: |

Figure 1 – TBMZ Potentially Impacted Well Eligibility Flow Chart



Lower Tule River and Pixley Irrigation Districts
Groundwater Sustainability Agency
Groundwater Quality Impact Claim Form

| Claimant Information | |
|---|---|
| **Contact Name:** | **Well Location Sketch:** |
| **Phone Number:** | |
| **Mailing Address:** | |
| **Well Name:** | |
| **Well Location (Address/Description):** | |
| **Well Type:** | |

☐ Domestic ☐ Industrial ☐ Agricultural ☐ Other (Specify):

| Interim Water Supply | |
|---|---|
| **Does the Claimant Request an Interim Water Supply?** | ☐ Yes ☐ No |
| **Number of Residences/Business Served (If Applicable):** | |
| **Number of Cropped Acres and Crop Type (If Applicable):** | |
| **Estimated Daily Water Use (Gallons, Cubic Feet, or Acre-Ft):** | |

| Well Construction Information | | |
|---|---|---|
| **Is a Department of Water Resources Well Completion Report (i.e. Driller's Log) Available?** | ☐ Yes (Attach if Available) ☐ No | |
| **Casing/Well Depth (ft):** | | |
| **Perforation Interval(s) (ft):** | | |
| **Casing Material:** | **Casing Diameter (inches):** | |
| **Date Constructed (If Known) and/or Well Age (Estimated):** | | |
| **Date of Last Video Survey (If Available):** | | |
| **Well Photos Attached:** | ☐ Yes | ☐ No |

| Pump Information | |
|---|---|
| Type: ☐ Submersible | ☐ Vertical Turbine |
| Intake Depth (ft): | Motor Size (horsepower): |
| Age (Known or Estimated): | Typical Discharge Rate (gpm): |
| Last Pump Test Date (Attach Record if Available): | |
| Last Service Date (Attach Record if Available): | |

| Issue Status | | | | |
|---|---|---|---|---|
| Date Issue Arose: | | | | |
| Issue: | ☐ No flow | ☐ Reduced Flow | ☐ Breaking Suction | ☐ Future Concern |
| Comments/Description: | | | | |
| Static Water Level (ft): | | Pumping Water Level (ft): | | |
| Status: | ☐ Not Resolved, Contractor not Contacted (Note: Contacting a Contractor Not Required)<br>☐ Not Resolved, Contractor Provided Estimate (attach estimate if applicable)<br>☐ Resolved (attached records if applicable) | | | |
| Contractor Company Name: | | | | |
| Contractor Contact Name: | | Contact Phone Number: | | |
| Contractor Address: | | | | |

| Applicant | |
|---|---|
| By signing this Groundwater Quality Impact Claim Form, the applicant agrees to provide the GSA with access to the well for the investigation. | |
| Print Name: | Date: |
| Signature: | |

| GSA Use Only | |
|---|---|
| Received By: | Date: |

**The Tule Basin Management Zone** is a California nonprofit corporation created to serve Tulare County and a small portion of Kern County.

Our mission is to educate residents within the Management Zone Service Area of potential nitrate contamination in their drinking water and to ensure the availability of safe drinking water to these residents.

Our program offers free, safe drinking water to those residents whose drinking water supply is contaminated by nitrates.

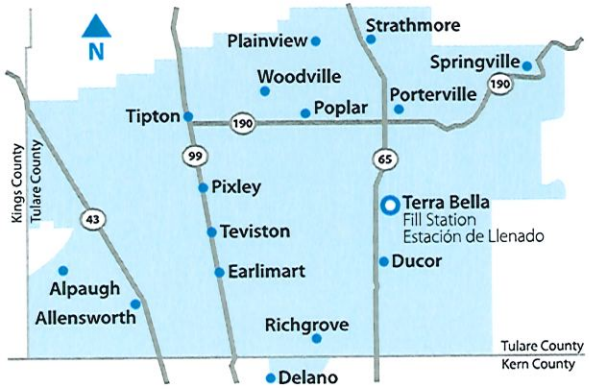
**La Zona de Manejo de la Cuenca de Tule** es una corporación sin fines de lucro de California creada para servir al Condado de Tulare y a una pequeña porción del Condado de Kern.

Nuestra misión es educar a los residentes dentro del Área de Servicio de la Zona de Manejo de la posible contaminación de nitratos de su agua potable y garantizar la disponibilidad de agua potable segura para estos residentes.

Nuestro programa ofrece agua potable gratuita y segura a aquellos residentes cuyo suministro de agua potable está contaminada por nitratos.

## TULE BASIN MANAGEMENT ZONE

Service Area • Área de Servício




### Free Water Fill Station

TBMZ has constructed a water fill station in the community of Terra Bella and is working towards constructing additional water fill stations.

The fill station is available to any person to access clean drinking water, 24 hours a day, 7 days a week. You must provide your own drinking water container and the size must be 5 gallons or less, but there is no limit on the number of containers you may fill. To learn more about water fill stations, including future locations, visit www.tulemz.com/safe-drinking-water/.

### Estación de Llenado de Agua Gratis

La TBMZ ha construido una estación de agua en la comunidad de Terra Bella y está en proceso de construir dos estaciones adicionales de llenado de agua.

La estación de agua está disponible para que cualquier persona pueda acceder agua potable limpia, las 24 horas del día los 7 días de la semana. Usted debe proporcionar sus propios garrafones y el tamaño del contenedor debe ser de 5 galones o menos, pero no hay límite en el número de contenedores que puede llenar. Para obtener más información sobre estaciones de lleno de agua, incluyendo sitios futuros, visite www.tulemz.com/safe-drinking-water/.


**TULE BASIN**
**MANAGEMENT ZONE**

Mon-Thurs 8am-5pm | Friday 8am-12pm
324 S. Santa Fe Visalia, CA 93292 | 559.429.6970
admin@tulebasin.com | Facebook @tulebasin


# Is your domestic well water safe to drink?

## ¿Es seguro beber el agua de su pozo domestico?


**TULE BASIN**
**MANAGEMENT ZONE**


www.tulemz.com | 559.429.6970

## Safe Drinking Water Program & Well Test Request

**FREE-SAFE drinking water programs are being offered by the Tule Basin Management Zone (TBMZ) to residents that use a private well for their drinking water and it is determined that the well water has an elevated nitrate concentration, which may be harmful for your health.**

To determine if you are eligible to enroll in the Safe Drinking Water Program, fill out the form to the right and return to:

Tule Basin Management Zone
324 S. Santa Fe, Visalia, CA 93292

Or scan and email to: admin@tulemz.com

Or you can fill out the application online at:
tulemz.com/safe-drinking-water/

Eligibility will be contingent on TBMZ's review of the applicant's information. If eligible, TBMZ staff or consultant will contact you to schedule the collection of a water sample from the drinking water well at your residence.

TBMZ will share the results from your well test with the following determinations:

1. If the nitrate water quality sample exceeds 10 mg/L, this determines that you are eligible for the Safe Drinking Water Program which provides for you to receive safe drinking water by:
   - Bottled water regularly delivered to your home (limit of 60 gallon per month per household). TBMZ staff will coordinate the delivery of safe drinking water with you.

   Or

   - In-home water treatment device installed at your residence (subject to additional evaluation criteria).

2. If the nitrate content in your water sample is less than 10 mg/L, you will not be eligible for the Safe Drinking Water Program, but you may still access safe drinking water at our water fill station at no cost to you.

*Note: Results showing nitrate concentrations less than 10 mg/L does not guarantee your water is safe for drinking. Your water may contain other harmful constituents not covered under this program. If you have questions or concerns regarding well failure or a dry well, contact* ***Self-Help Enterprises at 559.802.1685 or 559.802.1284*** *for water quality issues. Applicant information may be shared with other organizations operating safe drinking water programs.*

## Programa de Agua Potable Segura y Solicitud de Prueba de Pozo

**La Zona de Manejo de la Cuenca del Tule (TBMZ) ofrece programas de agua potable GRATIS y SEGURA a los residentes que usan un pozo privado para su agua potable y se determina que el agua del pozo tiene una concentración elevada de nitratos, lo que puede ser perjudicial para su salud.**

Para determinar si usted es elegible para inscribirse en el Programa de Agua Potable Segura, complete el formulario a la derecha y regreselo a:

Tule Basin Management Zone
324 S. Santa Fe, Visalia, CA 93292

O por correo electonico: admin@tulemz.com

O puede completar la solicitud en línea en:
tulemz.com/safe-drinking-water/

Su eligibilidad dependerá de la revisión de la información del solicitante por parte de TBMZ. Si es elegible, el personal o consultor de TBMZ se comunicará con usted para programar la colección de una muestra de agua del pozo de agua potable de su residencia.

TBMZ compartirá los resultados de su prueba de pozo con las siguientes determinaciones:

1. Si la muestra de calidad de agua de nitrato excede los 10 mg/L, esto determina que usted es elegible para el Programa de Agua Potable Segura que le proporciona recibir agua potable segura por medio de:
   - Agua embotellada entregada regularmente a su hogar (límite de 60 galones por mes por hogar). El personal de TBMZ coordinará la entrega de agua potable segura con usted. O...
   - Dispositivo de tratamiento de agua en el hogar instalado en su residencia (sujeto a criterios de evaluación adicionales).
2. Si el contenido de nitrato en su muestra de agua es menos de 10 mg/L, no será elegible para el Programa de Agua Potable Segura, pero aún puede acceder a agua potable segura en nuestras estaciones de llenado de agua sin costo alguno para usted.

*Nota: Los resultados que muestran concentraciones de nitrato menos de 10 mg/L no garantizan que su agua sea segura para beber. Su agua puede contener otros componentes dañinos no cubiertos por este programa. Si tiene preguntas o inquietudes acerca de la falla de su pozo o sobre un pozo seco, comuníquese con* ***Self-Help Enterprises al 559.802.1685 o al 559.802.1284*** *para asuntos de agua. La información del solicitante puede compartirse con otras organizaciones que operan programas de agua potable segura.*

## Inquiry Form for Domestic Use Well

Do you receive water from a public water system or private domestic well? ☐ Public ☐ Private ☐ Not Sure

**Legal Owner of Property Information:**

Name: _____

Mailing Address: _____

Street Address: _____

Phone: _____

Email: _____

**Authorization to Test for Nitrates:**

I am the legal owner of the property described above as Domestic Well/Household information and I hereby grant the Tule Basin Management Zone (TBMZ) authority to test my domestic well for nitrate contamination. The cost to test my well for nitrate will bore by the TBMZ, and I will be provided a copy of the test results. I understand that my domestic well will be tested for nitrates only, and that lack of nitrate contamination does not construe that water in my private well is safe to drink. I have read the attached brochure and understand and accept the terms of the Bottled Water Delivery.

Date: _____

Signature: _____

## Formulario de Consulta de Uso de Pozo Doméstico

¿Recibe agua de un sistema publico de agua o de un pozo domestico privado?

☐ Público ☐ Privado ☐ No Estoy Seguro

**Informacion de Propietario Legal de la Propiedad:**

Nombre: _____

Dirección Postal: _____

Dirección de Calle: _____

Teléfono: _____

Correo Electrónico: _____

**Autorización para la Prueba de Nitratos:**

Yo soy el propietario legal de la propiedad descrita anteriormente como información de Pozo Doméstico/Hogar y por la presente otorgo a la Zona de Manejo de la Cuenca del Tule (TBMZ) autoridad para probar mi pozo doméstico para detectar contaminación de nitratos. El costo de probar mi pozo para detectar nitrato será soportado por el TBMZ, y se me proporcionará una copia de los resultados de la prueba. Entiendo que mi pozo doméstico será analizado solo para detectar nitratos, y que la falta de contaminación de nitratos no significa que el agua en mi pozo privado es segura para beber. He leído el folleto adjunto y entiendo y acepto los términos de la Entrega de Agua Embotellada.

Fecha: _____

Firma: _____

**DOMESTIC WELL MITIGATION AGREEMENT**

THIS DOMESTIC WELL MITIGATION AGREEMENT ("Agreement") is made and entered into this DAY day of MONTH 2025 by and between the Vandalia Water District Groundwater Sustainability Agency, hereinafter referred to as "VANDALIA WATER DISTRICT GSA," and Self-Help Enterprises, a California nonprofit corporation, hereinafter referred to as "SHE." Collectively, VANDALIA WATER DISTRICT GSA and SHE shall be referred to as the "Parties." This Agreement is entered into in reference to the following facts:

**RECITALS**

A. VANDALIA WATER DISTRICT GSA is a Groundwater Sustainability Agency formed under and pursuant to the provisions of the Sustainable Groundwater Management Act ("SGMA") (California Water Code Section 10720 et seq.) and is required to prepare and implement a Groundwater Sustainability Plan ("GSP") in order to provide for the sustainable management of groundwater basins;

B. VANDALIA WATER DISTRICT GSA has approved such GSP, and coordinating with GSAs in the Tule Subbasin GSAs to update the Subbasin Coordination Agreement and have agreed to coordinate the development and implementation of their GSPs and mitigation actions;

C. The Coordination Agreement describes a Tule Subbasin Mitigation Plan designed to "evaluate and protect beneficial users from lowering groundwater levels" (Coordination Agreement, Section 4.3) and states that each GSA will participate in a Subbasin-wide Mitigation Plan or will adopt an independent Mitigation Plan consistent with the Subbasin-wide Mitigation Plan;

D. VANDALIA WATER DISTRICT GSA has drafted a Mitigation Plan that implements the Framework within VANDALIA WATER DISTRICT GSA 's jurisdiction;

E. The Mitigation Plan establishes a Drinking Water Well Mitigation Track, by which users of domestic wells may obtain emergency, interim, and long-term mitigation of dry wells if the VANDALIA WATER DISTRICT GSA determines that the dry well is caused by overdraft conditions in the Subbasin;

F. SHE is a community development organization that operates in the Tule Subbasin jurisdiction;

G. One of SHE's programs involves providing emergency water and interim supplies to domestic water well users who submit claims to SHE;

H. VANDALIA WATER DISTRICT GSA and SHE have determined it is efficient and beneficial for VANDALIA WATER DISTRICT GSA to collaborate with and support SHE's existing programs as a means of implementation of the Drinking Water Well Mitigation Track;

I. VANDALIA WATER DISTRICT GSA and SHE desire to enter into an agreement to establish said collaboration and define the respective obligations of each Party.

**NOW THEREFORE,** in and for consideration of the mutual covenants, conditions, and promises hereinafter set forth, the Parties hereby agree as follows:

1. **Recitals.** The above recitals are hereby incorporated by reference and made a part of this Agreement as though fully set forth herein.

2. **Purpose.** The purpose of this Agreement is to clarify the respective responsibilities of each Party for the purpose of the implementation and funding of the Mitigation Plan.

3. **Term.** The Term of this Agreement shall be a period of one year from the date of execution. The Agreement will be automatically renewed for an additional Term at the expiration of the Term, unless terminated by either Party pursuant to Section 17.

4. **Definitions.** As used herein, the following terms shall be defined as follows:

    a. "Claimant" shall mean a landowner within the GSA who submits an application for mitigation by submitting SHE's online intake form pursuant to the Mitigation Plan.

    b. "Contractor" shall mean any third-party construction, well drilling, or other professional company that is contracted to provide interim supplies or long-term mitigation measures.

    c. "Dry Well" shall mean the domestic well, or agricultural well used for domestic purposes, that is the subject of mitigation.

    d. "Emergency Water" shall mean the delivery of up to 60 gallons of bottled drinking water.

    e. "Interim Supplies" shall mean the delivery of bottled drinking water, not to exceed 60 gallons per household per month, and the installation of temporary water tanks or delivery of hauled water, not to exceed 50 gallons per day per individual.

    f. "Long-Term Mitigation" shall mean measures taken to ensure long-term access to water, including but not limited to connecting the impacted party with an existing water system, deepening the well, constructing a new well, modifying pump equipment, or establishing a new small public water system.

    g. "Outreach" shall mean communication with landowners within the VANDALIA WATER DISTRICT GSA about the Mitigation Plan, including but not limited to the development and distribution of educational materials regarding stewardship of domestic wells, notification to landowners of the availability of the Track, and workshops explaining the Track and other available support.

    h. "Project" shall mean the entire process of implementing mitigation measures, beginning when a Claimant submits an application for mitigation, and ending when VANDALIA WATER DISTRICT GSA determines the appropriate mitigation measures, whether long-term or interim, have been fully and completely administered.

    i. "Qualified Claimant" means a claimant who has been approved for Long-Term Mitigation by the VANDALIA WATER DISTRICT GSA.

    j. "Track" shall mean the Drinking Water Well Mitigation Track as described in the Mitigation Plan.

5. **SHE Responsibilities.** SHE shall have the following obligations:

    a. Provide all technical and administrative services as needed for Program implementation; monitor, supervise, and review all work performed; and coordinate budgeting and

scheduling to ensure the Program is implemented within budget, on schedule, and in accordance with approved procedures, applicable laws, and regulations;

b. Conduct outreach to prospective Applicants including developing and distributing outreach materials by mail, door-to-door canvassing, community events and workshops, and other venues as appropriate;

c. Receive and review all applications submitted by Claimants;

d. Perform initial investigation of the Dry Well;

e. Provide Emergency Water and Interim Supplies to Claimants;

f. Provide VANDALIA WATER DISTRICT GSA, or Mitigation Advisory Committee, with a recommendation for Long-Term Mitigation pursuant to the Mitigation Plan, and coordinate with VANDALIA WATER DISTRICT GSA staff and consultants to modify or refine said recommendation;

g. Upon approval of the Long-Term Mitigation proposal by VANDALIA WATER DISTRICT GSA or Mitigation Advisory Committee, present final Long-Term Mitigation Proposal (Terms of Award and Cost Estimate) to Claimant, and obtain consent and approval from Claimant in a form substantially similar to Exhibit A (if the Claimant elects not to move forward with the selected Proposal, SHE shall obtain documentation to that effect, and explain to Claimant that all further support by VANDALIA WATER DISTRICT GSA, including the Interim Supplies, will be terminated);

h. Act as contract coordinator between Claimant and any Contractor used to implement the final Long-Term Mitigation;

i. Lend Claimant the funding necessary to pay Contractor to implement Long-Term Mitigation;

j. Install water quality filtration and monitoring equipment, and perform water quality testing, on Claimants new or mitigated well as necessary to ensure safe drinking water pursuant to SGMA and other state and local laws, and provide a certified copy of the testing results to VANDALIA WATER DISTRICT GSA, or Mitigation Advisory Committee;

k. Terminate Interim Supplies and remove all related equipment, notify Claimant of said termination;

l. Host a Well Stewardship Training workshop for Claimant and provide additional educational resources;

m. Conduct a final inspection of the well no later than 60 days after completion of Long-Term Mitigation to verify that the work performed was satisfactory and within the Project's scope of work;

n. Obtain Acknowledgement and Release (Payment Request) (in a form substantially similar to Exhibit B attached hereto) from Claimant, and provide a Notice of Project Completion to VANDALIA WATER DISTRICT GSA.

6. **VANDALIA WATER DISTRICT GSA Responsibilities.** VANDALIA WATER DISTRICT GSA shall have the following obligations:

a. Reimburse SHE for the costs incurred in supplying Emergency Water, Interim Supplies, and Long-Term Mitigation to Qualified Claimants within the GSAs jurisdiction;

b. Upon receipt of SHE's recommendation for Long-Term Mitigation, VANDALIA WATER DISTRICT GSA 's Mitigation Advisory Committee (MAC) shall conduct an investigation into whether each Dry Well qualifies for GSA funding pursuant to Step 6 of the Track;

c. If necessary, coordinate with SHE to modify or refine the recommended Long-Term Mitigation action;

d. Review and, if appropriate, approve funding for the final recommended Long-Term Mitigation within one month of receipt of the recommendation by the Mitigation Qualification Committee;

7. **Funding.** VANDALIA WATER DISTRICT GSA shall reimburse SHE, on a monthly basis, the costs of implementing the Track throughout the VANDALIA WATER DISTRICT GSA.

8. **Accounting.** SHE shall provide to VANDALIA WATER DISTRICT GSA, on a monthly basis, the following for VANDALIA WATER DISTRICT GSA review and approval:

   a. Invoice of Costs Incurred. SHE shall provide VANDALIA WATER DISTRICT GSA with a detailed invoice for the total costs incurred the prior month from the administration of Emergency Water, Interim Supplies, and Long-Term Mitigation.

   b. "Costs" as used in this Section 8 shall include both Direct Project Costs and Administrative Costs.

      i. Administrative Costs may include, but are not limited to personnel, travel, and overhead costs including staff salary and fringe benefits, mileage reimbursement or rental vehicles and fuel costs, and overhead including routine clerical and administrative support, office expense, space, telephone, insurance, etc.

      ii. Direct Project Costs may include, but are not limited to bottled water, hauled water, tank and pump purchase, professional contracted services, permits, laboratory analysis, water filtration devices, and water quality monitoring equipment.

9. **VANDALIA WATER DISTRICT GSA Consultation and Cooperation.** SHE hereby agrees to consult with and coordinate with VANDALIA WATER DISTRICT GSA staff, including but not limited to VANDALIA WATER DISTRICT GSA Board of Directors, Technical Advisory Committee, Mitigation Advisory Committee, and any consultants hired by VANDALIA WATER DISTRICT GSA, regarding the Emergency Water, Interim Supplies and Long-Term Mitigation. SHE further agrees that it will not commence, cause to be commenced, or allow commencement of, any Long-Term Mitigation without first consulting with VANDALIA WATER DISTRICT GSA and obtaining its written consent to the proposed actions.

10. **Recordkeeping.** SHE agrees to obtain copies of all documents related to the Project, including documents executed by Claimant and/or Contractor, including but not limited to any permits, site plans, Contractor estimates, Contractor invoices, Contractor contracts, lending agreements, disbursement receipts, Claimant agreements and consents, Claimant approvals to Project actions, water testing results and/or certifications, and any and all technical reports generated in relation to the Project. SHE further agrees to provide VANDALIA WATER DISTRICT GSA copies of all documents in its possession.

11. **Audit/Accounting.** On reasonable request, VANDALIA WATER DISTRICT GSA shall have the right to, at its own expense, inspect, audit, and copy from SHE's books, records, and other

documents, including computer files, supporting orders, and invoices, as necessary to verify SHE's adherence to this Agreement and to balance the accounts of VANDALIA WATER DISTRICT GSA related to the Projects.

12. **Outreach.** The Parties shall coordinate Outreach pursuant to the Mitigation Plan.

13. **Exhibits.** Each Exhibit attached to this Agreement is incorporated herein and made a party hereof by this reference.

14. **Insurance.** SHE shall carry workers compensation insurance in accordance with workers compensation laws of the State of California. SHE shall furnish VANDALIA WATER DISTRICT GSA with a Certificate of insurance with combined single limits of at least $1,000,000.00 for bodily injuries and property damages on each occurrence. The Certificate of Insurance shall state that the contractual liability assumed under this Agreement is covered and shall provide that ten (10) days' notice of cancellation or reduction in coverage shall be given to VANDALIA WATER DISTRICT GSA. Certificates of said coverage shall be filed with VANDALIA WATER DISTRICT GSA before any work commences.

15. **Indemnification.** To the fullest extent permitted by law, SHE shall indemnify, hold harmless, and defend VANDALIA WATER DISTRICT GSA, its directors, officers, employees, consultants, agents, or authorized volunteers, and each of them, from any and all claims, demands, causes of action, damages, costs, expenses, losses, or liabilities, in law or in equity, of every kind or nature whatsoever, arising out of or in any manner directly or indirectly connected to this Agreement, including but not limited to any action related to water quality, water quantity, water supply, water source, well performance, well location, or well construction.

    To the fullest extent permitted by law, VANDALIA WATER DISTRICT GSA shall indemnify, hold harmless, and defend SHE, its directors, officers, employees, consultants, agents, or authorized volunteers, and each of them, from any and all claims, demands, causes of action, damages, costs (including attorneys' fees), expenses, losses, or liabilities, in law or in equity, of every kind or nature whatsoever, arising out of or in any manner directly or indirectly connected to this Agreement, including but not limited to any action related to water quality, water quantity, water supply, water source, well performance, well location, or well construction.

16. **Disclaimer.** Nothing in this Agreement represents or should be construed to represent that VANDALIA WATER DISTRICT GSA, or any GSA, is responsible for water levels, well performance, wells going dry, or any other injury and adverse consequences related to groundwater use, levels, or elevations. The GSAs in the Tule Subbasin manage groundwater but do not pump groundwater and have no liability related to overdraft, pumping, water levels, or the impacts therefrom.

17. **Termination of Agreement.** This Agreement may be terminated with or without cause by either Party by giving thirty (30) days prior written notice to the other. Any funds SHE has expended pursuant to this Agreement prior to the date of termination shall be reimbursed by VANDALIA WATER DISTRICT GSA pursuant to Section 7, above. Any funds SHE has received in excess of its actual costs shall be returned to VANDALIA WATER DISTRICT GSA promptly.

18. **Default.** Failure to perform any of the terms of this Agreement shall be deemed a material default of either party.

19. **Remedies.** If either party defaults, or otherwise materially breaches this Agreement, each party may demand recission of this Agreement, damages, or any other action it deems appropriate for the implementation of the Mitigation Plan or the performance of this Agreement.

20. **Successors and Assigns.** All of the terms, covenants, and provisions hereof shall inure to the benefit of and be finding upon the respective successors and assigns of the Parties hereto.

21. **Compliance with all Laws.** The Parties are required to comply with all laws, regulations, permitting, including but not limited to VANDALIA WATER DISTRICT GSA Rules and Regulations, as they may exist from time to time.

22. **Attorney's Fees.** In the event of a dispute between the Parties related to or arising from this Agreement or any of the actions or events described herein, the prevailing party in any litigation or arbitration shall be entitled to recover all costs and fees associated with the action or arbitration, including, without limitation, all attorney's fees and expert witness fees.

23. **Governing Law.** The laws of the State of California shall govern under the interpretation and enforcement of this Agreement.

24. **Interpretation.** The Parties agree that the terms and provisions of this Agreement embody their mutual intent and that such terms and conditions are not to be construed more liberally in favor, or more strictly against, any party.

25. **Partial Invalidity.** If any term or provision of this Agreement, or the application thereof to any person or circumstance shall, to any extent, be invalid or unenforceable, a provision shall be added to this Agreement as similar in terms to such invalid or unenforceable provision as may be possible, and be legal, valid and enforceable, and the remainder of this Agreement or the application of such term or provision to persons or circumstances other than those to which it is held invalid or unenforceable, shall not be affected thereby, and each remaining term and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

26. **Counterparts.** This Agreement may be executed in counterparts, each of which shall be deemed an original and all of which, when taken together, shall constitute one and the same instrument.

27. **Independent Contractor Status.** It is mutually understood that, in performing the services herein specified, SHE shall act as an Independent Contractor and shall have control of the work and the manner in which it is performed. SHE shall be responsible for providing legally mandated benefits and to comply with the state and federal withholding regulations. VANDALIA WATER DISTRICT GSA retains the general right of inspection in order to judge whether, in VANDALIA WATER DISTRICT GSA's opinion, SHE is performing the work in accordance with the terms of this Agreement.

IN WITNESS WHEREOF, this Agreement is executed and made effective on the date first written above.

SELF-HELP ENTERPRISES

By: _____
Thomas J. Collishaw, President/CEO
P.O. Box 6520
Visalia, CA 93230

VANDALIA WATER DISTRICT GSA

By: _____
Eric Limas, General Manager
357 E. Olive Ave.
Tipton, CA 93272

## Exhibit A

### **Terms of Award**

In addition to the work included in the signed estimate submitted by _____ (hereby referred to as contractor) and dated _____ along with any fully executed and approved change orders, and upon completion of the water well at _____, _____, California. Contractor will have water from the well tested and sent to a California State Certified ELAP Lab for E. Coli and Coliform Bacteria which are known contaminants in the area. Results shall be provided to the homeowner _____ by Contractor. In addition, Contractor will request the results be sent electronically to Water Quality Intake Department at Self-Help Enterprises. Please make sure to provide the following information to the lab: Water Quality Intake, 559-802-1285 waterquality@selfhelpenterprises.org.

By signing this form, Contractor acknowledges they have been awarded the contract to perform the work described on the signed estimate referenced above and agree to the water testing requirements as noted. Self-Help Enterprises requires well drilling completion (construction) to be no more than 60 days from the date the Ready to Go is issued. Failure to complete well drilling (construction) by this date will result in the Terms of Award being terminated. Self Help Enterprises will not be responsible for any costs or fees incurred should the Terms of Award be terminated. Termination will occur in writing and driller will not be entitled to compensation or reimbursement. Any changes to the original signed estimate must be submitted in writing and approved via a change order issued by Self-Help Enterprises.

_____

Owner Signature Dated

_____

Owner Signature Dated

_____ _____

Contractor Signature Dated

_____

Authorized Contractor Signatory Name

**WELLS AND PUMPS License #**
**BUSINESS INFORMATION**

BUSINESS CONTACT INFORMATION: 559 -555-5555 BUSINES EMAIL ADDRESS BUSINESS WEBSITE

# Estimate / Contract for New Water Well

| Name / Address | Date | Invoice | Job Description |
|---|---|---|---|
| HOMEOWNER NAME<br>PROPERTY ADDRESS<br>CITY, STATE, ZIP CODE<br><br>PHONE NUMBER | 9/22/2022 | | 5" 600' PVC CASED WATER WELL GRAVEL PACKED AND DEVELOPED WITH A 20' ANNULAR SEAL AND 5'X 5' CONCRETE SLAB. THE WELL ESTIMATE INCLUDES A 580' GRAVEL PACK , 20' CONCRETE SEAL, 5'x5' CONCRETE SLAB AIR LIFT DEVELOPING OF THE WELL AND ALL THE PERMITS REQUIRED.<br>MUST BE 150' FROM ALL SEPTIC TANK SYSTEMS |
| | WELL DRILLING COMPANY | | |

| Terms | Due Date | Owner | APN # | PRICING IS GOOD FOR 30 DAYS<br>ADDRESS, CITY, STATE, ZIP CODE | | |
|---|---|---|---|---|---|---|
| As Per Contract | | | | | | |
| Qty | Item | Description Of Work | | | Cost | Total |
| 600' | Well | 5" 600' PVC GRAVEL PACKED WATER WELL WITH( 20' CONCRETE SANITARY SEAL 5' x 5'SLAB) | | | | |
| 1 | Permit | MADERA COUNTY NEW WELL & PERMIT & METER & ELECTRICAL PERMITS | | | | |
| 1 | DESTR | WELL DESTRUCTION PER MADERA COUNTY FILLED WITH SAND AND 20' CONCRETE SEAL | | | | |
| 1 | AL | AIR LIFT AND DEVELOP WELL | | | | |
| | | DRILLLING AND PUMP WORK CAN TAKE UP TO 3 WEEKS FROM START TO FINISH | | | | |
| 1 | PUMP | 2HP EST 10 - 16 GPM PUMP MOTOR & PUMP END 2 HP CONTROL BOX & PUMP SAVER | | | | |
| 441' | PIPE | 441' 1 1/4 GALVANIZED DROP PIPE | | | | |
| 441' | WIRE | 441' # 8/3 WIRE | | | | |
| 1 | Misc | Misc parts and fittings | | | | |
| 1 | Tank | 119 Gallon Captive Air Tank | | | | |
| 1 | Meter | Water Flow Meter as per Madera County Code | | | | |
| 1 | Labor | Labor to Install pump and meter | | | | |
| 1 | Connect | Water and electrical connection to new well and house 20 FT Max ($20.00 PER FT AFTER 20') | | | | |
| 1 | Test | Self Help Required Water Test (water bacteria, total coliform and e.coli) | | | | |
| 1 | | Disinfect Included for 1st water test only | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | Total | |

By signing this contract you give us permission to pump water and mud on to your property as much as we need and require to do our job. We will level dirt, mud and gravel to the best of our ability before we leave. Any removal or extra spreading of dirt, mud and or gravel can be arranged for a fee this is not free. Drilling water wells is not easy and there are times when the total depth desired is not reached. If and when this happens the price on the contract will be adjusted to the new depth drilled. PLEASE NOTE OUR JOB IS TO DRILL YOU A QUALITY WATER WELL BUT WE ARE NOT SCIENTIST AND DO NOT GUARANTEE THE QUANTITY OR QUALITY OF WATER THAT YOU'RE NEW WELL CAN AND OR WILL PRODUCE. WE CAN ONLY GUARANTEE YOU THAT WE WILL DO OUR BEST TO DRILL YOU A QUALITY WATER WELL TO THE BEST OF OUR ABILITIES. IF IN THE CASE WE DRILL AND CASE YOU A NEW WATER WELL AND YOU HAVE NO WATER AND OR THE WELL RUNS OUT OF WATER THE CONTRACT IS TO BE PAID IN FULL AS WE CANNOT GUARANTEE THAT YOUR NEW WELL WILL HAVE WATER AND OR KEEP PRODUCING WATER. Special adds if needed - If your property requires surveying due to being in a flood zone additional costs will be added to overall price of the new well ($800.00.). If your property requires a deeper seal that will need to be pumped at whatever depth past the standard 20' annular seal. Reasons per the county - Industrial wells, Animal Enclosure distance, Dairy, Seepage pit distance and Some Agricultural wells require 50' -150'pumped concrete sanitary seals. This will require additional costs that will be added to the overall price of the new well and included in the estimate. Drilling is not a science and we do not pretend to know the quality and quantity of the water before the well is drilled, therefore we cannot guarantee anything other than we are a licensed C-57 Well drilling contractor and we will do everything we can to drill you a quality water well based on our agreement and contract. Please be aware that after the well has been drilled, cased, gravel packed and blown out/developed there will be some sand, soil and sediment that will settle at the bottom of the inside of the casing. We do our best to get the well as clean as possible while developing but cannot guarantee that the bottom of the well casing will be 100% free from sand, soil and or sediment. Our contract is for what we Drill and Case (the Depth Drilled and Cased) not the quality of water and or what the well is able to produce (GPM). Please understand drilling a well makes a mess, water and mud will be pumped onto your property and left until it evaporates the contractor and the owner will discuss and agree as to where this mud and water will be pumped and left. We will do our best to clean up what we can but the ground will be wet and soft and because of this we are limited as to what we can and can't do. If you want us to come back at a later date to clean and move dirt around an added cost will be required. This cost will be discussed with the owner and approved before we proceed. Again drilling is messy and during the winter months even worse and our foot print can be as large as a 50' x 50' area when drilling. By signing this contract you agree to all of the above on this contract including price. PUMP WORK NOT INCLUDED IN ESTIMATE UNLESS STATED ABOVE WITH PRICES. THIS IS AN ESTIMATE AND PRICES CAN AND DO CHANGE IF SO WE WILL INFORM THE CUSTOMER AHEAD OF TIME BEFORE WORK IS DONE.

**Exhibit B**

**SELF-HELP ENTERPRISES**
**NON-CONTRACT PAYMENT REQUEST _____**

Date:_____

Participant: _____ Project:_____ Job #_____

Project Address:_____

Payable to: _____ Total Payment Amount: $_____

Self-Help Enterprises Charges:

- ☐ Appraisal $ _____
- ☐ Title Report $ _____
- ☐ Blueprints $ _____
- ☐ Termite Report $ _____
- ☐ Recording Fees $ _____
- ☐ Lead Paint Insp. $ _____
- ☐ Relocation Fees $ _____

Other Non-Contract Charges:

- ☐ Fire/Course of Construction Insurance $ _____
- ☐ Flood Insurance $ _____
- ☐ Disposal Bin $ _____
- ☐ Storage $ _____
- ☐ Owner Receipts $ _____
- ☐ Other (list below) $ _____
- ☐ Lead Paint Clearance $ _____

_____

_____

_____

**APPROVED:**

_____

OWNER'S SIGNATURE DATE

**REVIEWED BY:**

_____

SELF-HELP ENTERPRISES DATE

Special Instructions:

_____

_____

Distribution: White: Self-Help Enterprises Yellow: Owner Pink: Supervisor

# Tule Subbasin Mitigation Plan

# Table of Contents

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## Appendices

A.

# 1.0 Introduction

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package, composed of AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley), collectively known as the Sustainable Groundwater Management Act (SGMA) and is codified in Section 10720 et seq. of the California Water Code. In his signing statement, Governor Edmund G. Brown, Jr., emphasized that "groundwater management in California is best accomplished locally." This legislation created a statutory framework for groundwater management in a manner that can be sustained during the planning and implementation horizon without causing undesirable results.

SGMA requires governments and water agencies of high and medium priority basins to achieve sustainability by avoiding undesirable results. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, including the Tule Subbasin the deadline for achieving sustainability is 2040.

In order to comply with the requirements of SGMA, the Tule Subbasin Groundwater Sustainability Agencies (GSAs) have prepared groundwater sustainability plans (GSPs). The GSP serves to do the following:

- *Describe the basin setting (Hydrogeologic Conceptual Model) to define and describe the geographic, geologic and hydrogeologic conditions, as we understand them.*
- *Identify and describe the Sustainability Goal for the Tule Subbasin.*
- *Identify and describe the six sustainability indicators set forth in SGMA, as they pertain to the Tule Sub-Basin GSAs jurisdictional area.*
- *Identify and describe the specific Minimum Thresholds and Measurable Objectives required for the Tule Subbasin GSAs to achieve the Sustainability Goal.*
- *Define and identify Projects and Management Actions proposed by Tule Subbasin GSAs to achieve the Sustainability* Goal.

## 1.1 Description of the Tule Subbasin

Description of each GSA

Include Contact Information

## 1.2 Purpose and Need for the Mitigation Program

Prior to SGMA, groundwater pumping in the Tule Subbasin resulted in overdraft conditions that may have contributed to impacts to wells and critical infrastructure. Since the implementation of the first iteration of the Tule Subbasin GSA's GSPs, the GSAs and Subbasin partners have introduced projects and management actions to correct the overdraft conditions and achieve sustainability before the regulatory requirement of 2040 and beyond. While on the path towards sustainability, it is recognized that transitional pumping in overdraft has the potential to contribute to impacts to wells and critical infrastructure.

The purpose of the Tule Subbasin Mitigation Plan (Plan) is to describe a detailed process for avoiding undesirable results by mitigating adverse impacts ~~(undesirable results)~~ to wells and critical infrastructure attributed to declining groundwater levels, land subsidence, and degraded groundwater quality caused while the Tule Subbasin GSAs transition from historical groundwater overdraft to sustainability through implementation of their GSPs.

Recognizing the importance of mitigation, the seven (7) Tule Subbasin GSAs committed to a Mitigation Program that has been revised concurrently with thise Mitigation Plan development. The original iteration of the Mitigation Program was included as Appendix x of the Tule Subbasin Coordination Agreement contained in the 2022 Amended Tule Subbasin GSA's GSPs (July 2022). The revised Mitigation ~~Program~~ Plan coordinates the development of a common subbasin-wide mitigation plan with details on the Mitigation Program claims processes, qualification criteria, and schedule.

The Tule Subbasin Mitigation Program requires mitigation be awarded for qualifying drinking water wells following adoption of this Mitigation Plan. The Mitigation Program also provides technical assistance ~~funding to be awarded to~~for qualifying non-drinking water wells and/or critical infrastructure. The ~~Tule Subbasin Plan~~Mitigation Program has elected to consider claims of impact from owners of any well type (drinking water or non-drinking water) and critical infrastructure in determining mitigation qualification.

This mitigation plan is adaptive and will be implemented in two phases. The first phase of this plan (Phase I; as presented herein) includes the complete claims process, investigation methodology, evaluation criteria, mitigation, and funding plan for any impacted well (drinking water or non-drinking water), as described herein. Phase II of the plan will include a detailed funding plan for mitigation of non-well critical infrastructure resulting from land subsidence. Phase II of the plan will be finalized in the second quarter of 2025.

Drinking Water Well Mitigation

- Emergency Drinking Water & Interim Water Supplies – No Qualification Criteria
- Long-term Drinking Water Mitigation - subject to qualification criteria

Non-Drinking Water Well Mitigation and/or critical infrastructure

- Technical Assistance

## 1.3 Potentially Impacted Beneficial Uses and Users of Groundwater Covered by the Program

The Tule Subbasin GSAs recognizes that multiple different types of wells and infrastructure may be impacted from GSA activities. Furthermore, differences in well types and infrastructure may warrant different responses and mitigation. Drinking water wells include all wells used for potable supply including private domestic wells, agricultural wells also used for domestic potable supply, and municipal wells used for public supply. Non-drinking water wells are those wells used solely for irrigation or industrial uses (including agricultural wells). These differences are reflected in the well/infrastructure categories identified below.

### 1.3.1 Drinking Water Well Owners

#### *1.3.1.1 Private Domestic Well Owners*

As stated in the California Water Code Section 106.3, "every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes." In the Tule Subbasin, many private residences in the small communities and rural portions of the area rely on private wells to meet their domestic water supply needs. As these wells are typically shallow, they are vulnerable to, among other things, lowered groundwater levels from overdraft conditions. A primary objective of the Tule Subbasin Mitigation Plan is protection of the human right to water for the most vulnerable populations, which are residents who rely on individual domestic wells for their water supply.

The Tule Subbasin Mitigation Plan is structured to ensure a water supply for domestic well owners impacted by GSA activities. The plan stipulates full mitigation and funding for domestic well owners impacted because of GSA groundwater pumping, if the landowner has not contributed to groundwater overdraft conditions.

#### *1.3.1.2 Agricultural Well Owners Using Their Well for Domestic Supply*

Some private well owners use their wells for both domestic potable supply and irrigation. For these well owners, the Tule Subbasin Mitigation Plan stipulates full mitigation and funding for impacts attributed to GSA groundwater pumping, if the landowner has not contributed to groundwater overdraft conditions.

#### *1.3.1.3 Municipal Well Owners*

Municipal wells providing potable water supply that are impacted by GSA activities will be eligible for technical assistance from the Tule Subbasin GSAs to identify the cause of the impact, management actions to prevent further impacts, and mitigation options. Municipal potable water supply well owners will not be eligible for full mitigation (e.g. well replacement, lowering pumps, wellhead treatment, etc.).

### 1.3.2 Non-Drinking Water Well Owners

#### *1.3.2.1 Non-Potable Agricultural (Ag) Well Owners*

Agricultural wells used exclusively for non-potable irrigation water supply that are impacted by GSA activities will be eligible for technical assistance from the Tule Subbasin GSAs to identify the cause of the impact, management actions to prevent further impacts, and mitigation options. Agricultural irrigation supply well owners (non-potable) will not be eligible for full mitigation (e.g. well replacement, lowering pumps, wellhead treatment, etc.).

#### *1.3.2.2 Industrial Well Owners*

Industrial wells used for non-potable water supply that are impacted by GSA activities will be eligible for technical assistance from the Tule Subbasin GSAs to identify the cause of the impact, management actions to prevent further impacts, and mitigation options. Industrial non-potable water supply well

owners will not be eligible for full mitigation (e.g. well replacement, lowering pumps, wellhead treatment, etc.).

### 1.3.3 Entities with (Non-Well) Critical Infrastructure Impacted by Land Subsidence

Phase II of the mitigation plan will describe the process and procedures for owners and/or managers of critical infrastructure to file a claim if they feel their infrastructure has been impacted by land subsidence. Phase II of this plan is scheduled to be finalized in the second quarter of 2025.

## 1.4 Partnerships with Existing Mitigation Programs

Two local programs offer mitigation support for those affected by impaired access to drinking water within the Tule Subbasin, (1) The Tule Basin Water Foundation (TBWF) and (2) Self-Help Enterprises (SHE). The TBWF supplies free drinking water and water testing, and SHE offers emergency drinking water supplies, long-term mitigation support, and well stewardship educational resources for those that qualify under their program. Both local programs have been consulted for their feedback and recommendations in developing this Mitigation Program.

The TBWF and SHE have recommended that the Tule Subbasin GSAs partner with their existing services rather than develop additional overlapping mitigation programs. Accordingly, the Tule Subbasin has entered into an agreement to financially support SHE's existing well mitigation, interim supplies, bilingual communications, and well stewardship educational services to implement the Tule Subbasin Mitigation Program most effectively. The agreement between the Tule Subbasin GSAs and SHE is such that the GSAs shall reimburse SHE for costs associated with program administration, groundwater quality sampling, interim drinking water supplies, and long-term mitigation measures for all drinking water well claims that qualify for Tule Subbasin ~~mitigation~~Mitigation Program. SHE serves as a contract mediator and lender for the claimants to arrange mitigation with well drillers to perform the long-term physical mitigation.

There are many reasons why a well may experience operational failure. The GSAs are responsible for mitigating wells that have been impacted by overdraft conditions since January 1, 2015. Impacts from overdraft may be reflected by chronic lowering of groundwater levels dewatering a well, land subsidence causing structural damage to a well, and/or declining water levels introducing new groundwater quality contamination to a well. Therefore, the GSAs are reimbursing SHE for addressing claims in which the impact was induced by groundwater overdraft after January 1, 2015 (see *Claims Process* for more information). SHE offers emergency drinking water assistance and mitigation for households who have lost drinking water supplies due to non-groundwater overdraft induced well failure, and the funding for those activities are sourced by other state initiatives in the spirit of protecting the human right to water.[1]

All claims for non-drinking water wells and critical infrastructure shall be administered, investigated, and, if applicable, funded directly by the GSAs.

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[1] In instances in which a drinking water well may not meet the criteria above, the well user is encouraged to contact Self-Help Enterprises to access mitigation assistance via alternative programs.
Website: www.selfhelpenterprises.org SHE's Phone Number: (559) 651-1000

| | Groundwater level impacts<br><br>Drinking Water Well | Groundwater Quality<br><br>Drinking Water Well | Non-Drinking Water Well & Land Subsidence |
|---|---|---|---|
| Outreach | GSA/TBWF/SHE | TBWF/SHE? | GSA |
| Claim Acceptance | SHE | TBWF | GSA |
| Claim Evaluation | GSA/SHE | GSA | GSA |
| Mitigation Qualification Determination | GSA | GSA/TBWF | GSA |
| Mitigation Implementation | GSA | GSA | GSA |

## 2.0 Program Description

The Mitigation Plan establishes requirements for mitigation of wells and critical infrastructure demonstrated to have been adversely affected by declining groundwater levels, land subsidence, and groundwater quality degradation associated with groundwater overdraft.

## 2.1 Outreach Program

The Tule Subbasin GSAs are conducting an outreach program to ensure, to the extent possible, that individuals and communities within the Tule Subbasin are aware of the Mitigation Plan and how to apply for assistance if they've been impacted. The outreach program will begin upon Board approval of the Plan.

The Tule Subbasin GSAs are establishing the following Outreach process for notifying and implementing the Mitigation Plan:

1. Inform domestic well owners with the following messages:
    a. General information about SGMA
    b. General information about the Tule Subbasin
    c. Specific information about overdraft conditions in the Subbasin
    d. Potential for impacts to domestic wells such as theirs
    e. Notice that the Subbasin is prepared to mitigate for well impacts caused by overdraft conditions
    f. Information on how to seek assistance for well impacts
2. Reach out to domestic well owners by one or more of the following means:

a. Subbasin/GSA Website dedicated Mitigation page
b. Emails
c. Mass mailings of flyers
d. Collaborate with the Tule Basin Water Foundations (TBWF)
    i. One-on-one, face-to-face conversations
        1. At community events such as health fairs, swap meets, holiday celebrations, etc
        2. Door-to-door canvasing
        3. Hand delivered flyers
    ii. As TBWF and SHE administrate their daily programs, they will respond to dry well needs they hear about

3. Outreach documents will be made available in English and Spanish and review the need for additional language translations. Additionally, most one-on-one encounters will be prepared for translation needs.
4. Notify and open all administration meetings to stakeholders who wish to attend with opportunities to comment and provide suggestions.
5. Hold special events specifically on the Domestic Well Mitigation Plan, including after work hours to provide attendance opportunities for working families.

## 2.2 Evolving Program

As the GSAs gather data and understanding from changes in demand management, projects, improved analysis tools, and Well Registration Program, opportunities to refine the Mitigation Program are expected. In addition to improved data and analytics, lessons will be learned through the implementation of the Mitigation Program. Costs to mitigate wells, provide interim supplies, and administration may also evolve over the 15+ year implementation horizon. The Tule Subbasin GSA's intend the Mitigation Program to be iterative and evolve as new information, funding, and efficiencies are understood.

## 2.3 Proactive Mitigation

Proactive mitigation refers to GSA activities to help prevent future well failures. Apart from addressing impact claims, as described in Section 3, the Tule Subbasin Mitigation Program implements proactive measures to avoid installing wells that may cause or contribute to undesirable results in the Tule Subbasin.

### 2.3.1 Well Permit Review

The Tule Subbasin GSAs are working towards entering a Memorandum of Agreement (MOA) with Tulare County. A component of this agreement is the review of all new well permit applications by GSA before they are approved by the County. The review may include:

- The proposed location of the new well.

- The planned depth and perforated interval of the new well; GSA will determine which aquifer (Upper, Lower, or Single) the well is planned to extract from.
- The planned use of the water from the well (domestic supply, agricultural irrigation, etc.).
- Identifying the closest Representative Monitoring Sites to the proposed well to determine minimum thresholds for groundwater levels, water quality and subsidence.
- Identifying existing domestic wells and critical infrastructure in the area.
- Estimating current groundwater levels around the proposed well.

Following review of each permit application, the GSA will inform the permit applicant of the relative risk that their well could go dry or experience issues associated with lowered groundwater levels in the future. In this way, it would allow the prospective well owners to take proactive measures to limit their risk of impact. As part of the notification, the GSA will provide a recommended well depth that is protective of their water supply should groundwater levels fall in the future.

### 2.3.2 Well Registration

The Tule Subbasin GSAs have committed to develop a well registration program by Spring 2025. The purpose of registering wells is to create a baseline record for each well in the event of a future claim and to have the necessary information on file to identify at-risk domestic wells for notification and advance mitigation purposes. This can be particularly beneficial for drinking water wells, as many of these wells' construction, maintenance, and exact location are considered a data gap. SGMA noted wells that extract less than 2 acre-ft per year were deemed De Minimis, and not required to participate in the GSP process. Existing domestic well records through the DWR include inactive and abandoned wells and documentation errors. The exact locations of most domestic wells are not well understood. The registration will require the well owner to provide information on well location, construction, water quality, and well maintenance history. Having a well registered will not be a prerequisite for Mitigation Plan qualification, but it should speed up the GSA's assessment of a claim, should it arise, because there is already background information on the well. Additionally, if a well is registered it may be possible to apply for mitigation before the well goes dry.

### 2.3.3 Adaptive Management

A key aspect of the Tule Subbasin Mitigation Plan is the incorporation of adaptive management. As additional data becomes available and/or our understanding of the potential for future impacts changes, each GSA will implement projects and management actions to minimize impacts. The adaptive management process is summarized in Table 1 and includes a color-coded tiered approach for activation of management actions. Each tier represents groundwater conditions relative to the established minimum thresholds and measurable objectives. Observed groundwater conditions at Tule Subbasin GSA's Representative Monitoring Sites (RMS) that indicate yellow, orange or red tiers will trigger a combination of outreach and management actions to avoid impacts, to the extent possible. Management actions could include (but are not limited to) changes in groundwater allocations, new or localized increases in recharge, surface water supplies, or other. These management actions are backed up by this Mitigation Plan, to ensure that those parties who are impacted by GSA activities are given the assistance they need to ensure their human right to water.

## 3.0 Mitigation Claims Process

There are separate processes for claims related to impacted drinking water wells and claims related to non-drinking water wells and critical infrastructure. Drinking water well claims may qualify for funding for interim drinking water supplies and physical well mitigation. Non-drinking water wells and critical infrastructure claims may qualify for funding for the claimant for technical assistance.

## 3.1 Drinking Water Wells

Claimants who have lost access to drinking water can contact Self-Help Enterprises to initiate the mitigation application process. A mitigation agreement will be made with the well owner; however, domestic well owners (including tenants) and agricultural domestic well owners will automatically receive interim drinking water supplies within 24 hours of filing a claim.

For questions on the claims process or tenant questions on advocating for mitigation support with your landlord(s), please contact the respective Tule Subbasin GSA and/or Self-Help Enterprises.

### Step 1. Stakeholder Outreach

The Tule Subbasin GSAs are committed to ensuring that the public, including domestic well owners, are adequately informed of the services available to them should their wells be impacted. Upon release of the Tule Subbasin Mitigation Plan, the GSAs will conduct an outreach program to inform domestic well owners and landowners of the availability of the Mitigation Program and how they can apply for assistance should their wells or land uses be impacted. Outreach will be provided in multiple languages as determined appropriate by each GSA. Outreach will continue throughout the process to maintain stakeholder engagement with the Mitigation Program.

The initial stakeholder outreach will include notification of the Mitigation Program, qualifications, and how to submit a claim via:

a. Update on Mitigation Program progress at the Tule GSA advisory committees and Board meetings (prior to Mitigation Plan adoption).
b. Website notification (prior to Mitigation Plan adoption).
c. Email notification to the Tule Subbasin GSAs listed stakeholders (prior to/following Mitigation Plan adoption).
d. Mitigation Program Presentation and Q&A at community outreach events.

Continued Stakeholder Outreach will include at a minimum:

1. At least one workshop in April through May 2024, following adoption of the Mitigation Program to notify the public of the resources, claims process, and opportunities available to support the local communities. If possible, the workshop will be held in an underrepresented community in English and Spanish. Self-Help Enterprises will partner with the GSAs in workshop outreach.
2. The GSAs' advisory committee and/or Board of Directors will hold an agenda item to discuss Mitigation Plan implementation at least once every quarter.
3. The GSAs will develop a notification-proactive warning criteria and notification system, intended to notify well users and critical infrastructure owners of groundwater conditions nearing the possibility of potential impacts to their well/infrastructure.
4. The GSAs will develop and keep an updated page on their respective websites that outlines the Tule Subbasin Mitigation Program and Plan. Materials explaining the

process, mitigation and the application will be housed on this website page and accessible in English and Spanish.

5. Domestic Well Education materials will be provided by SHE and/or the GSAs following mitigation services or by request.

### Step 2. Identify Need for Mitigation

Claimants seeking mitigation support for drinking water well impacts will submit an application consistent with SHE's existing application protocol and system. The Tule Subbasin GSAs will provide information on how to submit a drinking water mitigation claim with SHE with links to their website and contact information for the GSAs and SHE. In addition, information on where immediate access to drinking water supplies will also be available. For example, the Tule Basin Water Foundation free drinking water kiosks are available 24 hours a day at the following locations:

- Terra Bella

Claim applications must be submitted by landowners on whose property the adversely impacted well is located; however, in the event a tenant is experiencing loss of access to drinking water, the well user is encouraged to contact the GSA, and the GSA will work with SHE to notify the well owner how to apply for mitigation and the benefits of the Mitigation Program.

### Step 3. Interim Drinking Water Supplies

Following the Claimant notifying SHE of the need for mitigation, SHE will arrange emergency drinking water supplies within 24-hours in the form of bottled water. Interim supplies, which may entail water tanks with delivered supplies, or other appropriate interim measures. The GSA will fund and/or reimburse SHE for administering and supplying emergency and interim drinking water supplies for qualifying Claimants (see Step 7).

### Step 4. Mitigation Need Assessment

SHE's field staff will perform an initial assessment, to include a site visit and discussions with the landowner and/or tenants. Translation services for Spanish, Punjabi, and/or Hmong will be made available by SHE, as needed. Following the assessment, SHE will provide the Tule Subbasin Mitigation Advisory Committee (MAC) (see Step 5) and Claimant with their findings, documentation, and initial recommendation for mitigation. SHE will also provide a planning level cost estimate to implement the recommended mitigation.

### Step 5. Funding Qualification Assessment

Upon receipt of SHE's Mitigation Need Assessment findings, documentation, initial recommendation for mitigation needs, and planning level cost estimate, the Tule Subbasin MAC will review and evaluation. The Tule Subbasin MAC will be composed of qualified technical contractors and/or GSA technical representatives. At least one SHE technical representative will be included on the committee.

The purpose of the committee is to:

- Review well investigation and mitigation recommendations from SHE.

- Review other hydrogeological data, such as (but not limited to) groundwater level trends, precipitation trends, recent-historical subsidence, groundwater quality, and local land use.
- Conduct additional analyses, as needed, to assess the relative cause of groundwater pumping on the well impacts observed. This could include analyses using the calibrated groundwater flow model of the Tule Subbasin.
- Evaluate any links between the reported impact and groundwater pumping, in overdraft, by the GSAs.
- If appropriate, coordinate with SHE to refine their recommendations based on additional analyses.
- Review and provide comments on the proposed mitigation planning-level cost estimate.
- Provide recommendations to the GSA's Board where the claim occurred for funding the claim.

To qualify for GSA funding reimbursement, the well impact must have (1) occurred after January 1, 2015 and (2) been induced by groundwater overdraft conditions **(Figure 2)**. Criteria for evaluating connection between impact claims and groundwater overdraft, as they relate to groundwater levels, groundwater quality, and land subsidence, are provided in Section 4 of this Mitigation Plan.

For claims of impact to municipal drinking water wells, the GSAs will provide technical assistance, as needed, to identify the cause of the impact, management actions to prevent further impacts, and mitigation options.

### Step 6. Mitigation Measure Selection Agreement

In cases where the claim meets the qualification criteria of the drinking water well being impacted by groundwater overdraft conditions and the impact occurring after January 1, 2015, SHE and GSA staff will develop an agreement on the proposed mitigation and costs association with administering and implementing the mitigation (including interim supplies). The GSA and SHE will determine the appropriate funding process, which may involve reimbursement following the completion of the long-term mitigation installation with an up-front deposit. The funding transaction protocol will be assessed on a case-by-case basis until SHE and the GSAs have identified the most effective and efficient method. Lessons are expected to be learned during the first year of Mitigation Program implementation, and intentional flexibility is necessary to facilitate timely adoption of the Mitigation Program.

In cases where the claim does not meet the qualification criteria, the Claimant may qualify for mitigation support via other programs that SHE administers. SHE will work directly with those Claimants to discuss what options they may have.

SHE and GSA staff will consider each claim on a case-by-case basis to identify the most effective long-term mitigation measure. Long-term mitigation for drinking water wells may include (but not necessarily be limited to):

1. Deepen the well.
2. Construct a new well.
3. Modify pump equipment, including lowering the pump.
4. Consolidation with an existing water system in the vicinity.
5. Establishment of a new small public water system.

6. With the consent of the affected user, providing other acceptable means of mitigation.

### Step 7. GSA Board Approval for Funding

Following SHE and GSA staff agreement on an appropriate mitigation measure for qualifying claims, the recommended mitigation measure and cost estimates will be presented to the respective GSA Board to consider approval for deposit and reimbursements. The GSA Board will consider long-term mitigation reimbursement within one Board Meeting cycle, following SHE and GSA staff completion of Step 6.

### Step 8. Mitigation Funding Award

Following completion of all necessary legal and transactional agreements, SHE will lend the Claimant funding to implement the agreed upon mitigation measure. SHE does not carry out the mitigation measures but acts as a contract coordinator and lender between the driller/pump contractor and the Claimant. The GSA will reimburse SHE for the funding lent to the Claimant for all mitigation support services, including interim supplies and Mitigation Program administration. SHE and the GSA may agree to deposits to maintain sustainable cashflow for SHE's administration of the Mitigation Program.

### Step 9. Well Stewardship Education

After the qualifying claim's long-term mitigation is implemented and the household is no longer provided interim supplies, SHE will coordinate and host a Well Stewardship Training workshop for the Claimant. Following completion of the training, the Claimant will be supplied with educational resources to reference in the future (translation services available).

## 3.2 Non-Drinking Water Well and Critical Infrastructure Technical Assistance Claims Process

The Tule Subbasin Mitigation Program is planned to extend mitigation in the form of technical assistance funding (capping at $25,000 per qualifying claim) to landowners who have experienced impacts to their non-drinking water wells and/or critical infrastructure in Q2 2025. To qualify, the impacts must be induced by groundwater overdraft and have occurred after January 1, 2015. If the Claimant is contributing to overdraft by extracting more than their allocated amount (use of transitional groundwater pumping) on any Tule Subbasin parcel, then the Claimant shall not qualify for Technical Assistance funding via the Mitigation Program or Plans.

The Non-Drinking Water Well and Critical Infrastructure Technical Assistance Claims Applications shall be made available on each Tule Subbasin GSA's website.

### Step 1. Stakeholder Outreach

Stakeholder outreach for non-drinking water wells and drinking water well mitigation is the same. For more information, visit **Drinking Water Claims – Step 1. Stakeholder Outreach** above.

### Step 2. Identify Need for Technical Assistance

Claimants seeking mitigation support for non-drinking water well impacts and/or critical infrastructure will submit an application on the respective GSA's website. The Technical Assistance Claim Application is attached as **Appendix A**. More information will be obtained and discussed with the Claimant in Step 3 below.

### Step 3. Meeting with Claimant and GSA Staff

Within 10-days of submittal of the Technical Assistance Claim Application, GSA staff will contact the Claimant to meet and discuss the impact, additional data and information needed, and Claims process.

### Step 4. Technical Assistance Needs Assessment

A qualified technician, arranged by the GSA, will perform a field and desktop assessment to identify the likely cause of well or infrastructure failure and make an initial recommendation of whether technical assistance is needed. The information is to be documented in a memorandum with photos and any other relevant information for the Tule Subbasin MAC to review in Step 5. The Tule Subbasin MAC will be composed of qualified technical contractors and/or Tule Subbasin GSA technical representatives. **Appendix B** includes considerations that may be made during the assessment.

### Step 5. Funding Qualification Assessment

Following completion of the Technical Assistance Needs Assessment, GSA staff and the Tule Subbasin MAC will review all provided materials. The Tule Subbasin MAC may review additional localized data, such as groundwater level trends, recent-historic subsidence, groundwater quality, land use, and more to determine if the claim qualifies for funding reimbursement under the Mitigation Plan. To qualify for Tule Subbasin GSA funding reimbursement, the well impact must be (1) induced by groundwater overdraft conditions and (2) having occurred after January 1, 2015.

If the Claimant's groundwater use is contributing to or has contributed to overdraft in any year after January 1, 2015, then they shall not qualify for mitigation support from the Tule Subbasin GSA Mitigation Plan. Overdraft is considered groundwater pumping in excess of native yield plus carryover water and storage accounts. In these cases, the Claimant may be invited to a meeting with GSA staff to discuss ways the Claimant can improve demand management and localized groundwater stewardship.

To determine if an impact was induced by groundwater overdraft conditions, the Tule Subbasin MAC will compare groundwater level trends local to the impacted well and well construction information, such as well completion depth, perforated intervals, pump depth, and nearby land use and groundwater extractions. If the impact is physical damage, recent-historic subsidence shall be evaluated and compared to well construction. **Appendix B** includes considerations that may be made during the assessment.

There may be limited data available which may hinder the extent of the qualification assessment. The GSA staff will coordinate with the Claimant and original well driller, construction manager, or design engineer, as needed, to determine reasonable mitigation solutions and impact attribution determinations.

### Step 6. Technical Assistance (Funding) Selection Agreement

In cases where the claim meets the qualification criteria for technical assistance award, the GSA staff will communicate the recommended technical assistance and funding award amount (maximum $25,000 per qualifying Claim) to the Claimant. During this communication, the GSA staff will reiterate the GSA is providing funding for the technical assistance and not administering, arranging, or performing the technical assistance in-house. The GSA staff and Claimant will enter a verbal and written agreement (email documentation is acceptable) confirming both parties agree with the recommended funding amount to be proposed to the GSA Board for consideration.

### Step 7. GSA Board Approval for Funding

Following agreement between the Claimant and GSA staff (Step 6), GSA staff will present the recommended technical assistance funding award for GSA Board consideration of approval within one GSA Board meeting cycle following completion of Step 6.

### Step 8. Technical Assistance and Indemnification Agreement

Following GSA Board approval for administering funds for qualifying Claims, the GSA staff and Claimant will enter a legal agreement acknowledging the amount of funding, intent of use, and indemnification of liabilities. This step must be completed prior to funding award. A draft concept of the agreement is attached as **Appendix C**. The actual agreement may vary on a case-by-case basis considering the nuances of every impact and claim.

### Step 9. Technical Assistance Funding Awarded by GSA

After the qualifying Claimant and GSA enter a Technical Assistance and Indemnification Agreement (Step 8 and **Appendix C**) the GSA will provide the qualifying Claimant with the agreed upon funding award.

## 3.3 Claims Dispute

The Tule Subbasin GSAs are developing a dispute resolution process in the event a claimant disagrees with the mitigation proposed by the GSA, or claims that are mad across GSA boundaries. The dispute resolution process will be completed during Phase II of the Mitigation Plan, to be completed by the second quarter of 2025.

## 3.4 Claims Privacy

Once a claim application and subsequent information is provided to the GSA, it becomes subjected to the California Public Records Act, which may allow the information provided to become public. If a Claimant is concerned about sensitive information requested in the Mitigation Claim Application (**Attachment**), the Claimant should contact the GSA to discuss data and information sharing confidentiality solutions.

## 3.5

# 4.0 Criteria for Determining GSA-Related Impacts to Wells and Infrastructure

## 4.1 Potential GSA-Related Groundwater Level Impacts to Wells

Groundwater pumping in overdraft results in systemic, long-term lowering of groundwater levels. While overdraft can result in land subsidence (see Section 4.2 herein), the most vulnerable infrastructure to lowered groundwater levels is water wells, and particularly shallow wells. In a water well, if the groundwater levels decline such that a pump in the well is no longer adequately submerged, the pump may not operate correctly. Further lowering of groundwater levels below the pump's intake will render the pump inoperable. If there is no room to further lower the pump in the well, the well is considered dry (**Figure 5**). DWR released a guidance document in March 2023 detailing additional considerations to identify adverse impacts to drinking water wells. This guidance document has informed the Tule Subbasin Mitigation Program.[2]

The most vulnerable wells to groundwater level declines in the Tule Subabsin are shallow private domestic wells. Based on analysis of the California Department of Water Resources Online System of Well Completion Reports (OSWCR), most of these shallow domestic wells are in the northeast portion of the subbasin and surrounding the rural unincorporated communities (see Figure X). As these well owners are also the most vulnerable to losing the basic human right to water from lowered groundwater levels, the areas where they are concentrated will be prioritized for proactive mitigation as described in Section 2.3. Distribution of municipal and agricultural wells are shown on Figures X and X.

During the funding qualification assessment (Step 5 of Section 3), groundwater pumping in overdraft will need to be distinguished from seasonal and longer-term precipitation patterns (i.e. drought). These differences can be distinguished through an analysis of groundwater level hydrographs for RMS wells in the vicinity of the claim of impact. Apart from clear cases of seasonal impact in wells with total depths shallower than 50 ft, the overriding conclusion from claims of impact in the Tuel Subbasin during periods when groundwater pumping exceeds the sustainable yield and where the impact is determined to be related to groundwater levels will be that the impact is caused by GSA activities.

For private domestic wells shown to be impacted by groundwater overdraft, including agricultural domestic wells, the well owner will be eligible for full mitigation and funding. For all other wells (municipal, industrial, and agricultural irrigation), the GSA will provide technical assistance to the claimant to identify the cause of the impact, management actions to prevent further impacts, and mitigation options.

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[2] DWR. March 2023. Considerations for Identifying and Addressing Drinking Water Well Impacts. https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Files/Considerations-for-Identifying-and-Addressing-Drinking-Water-Well-Impacts_FINAL.pdf

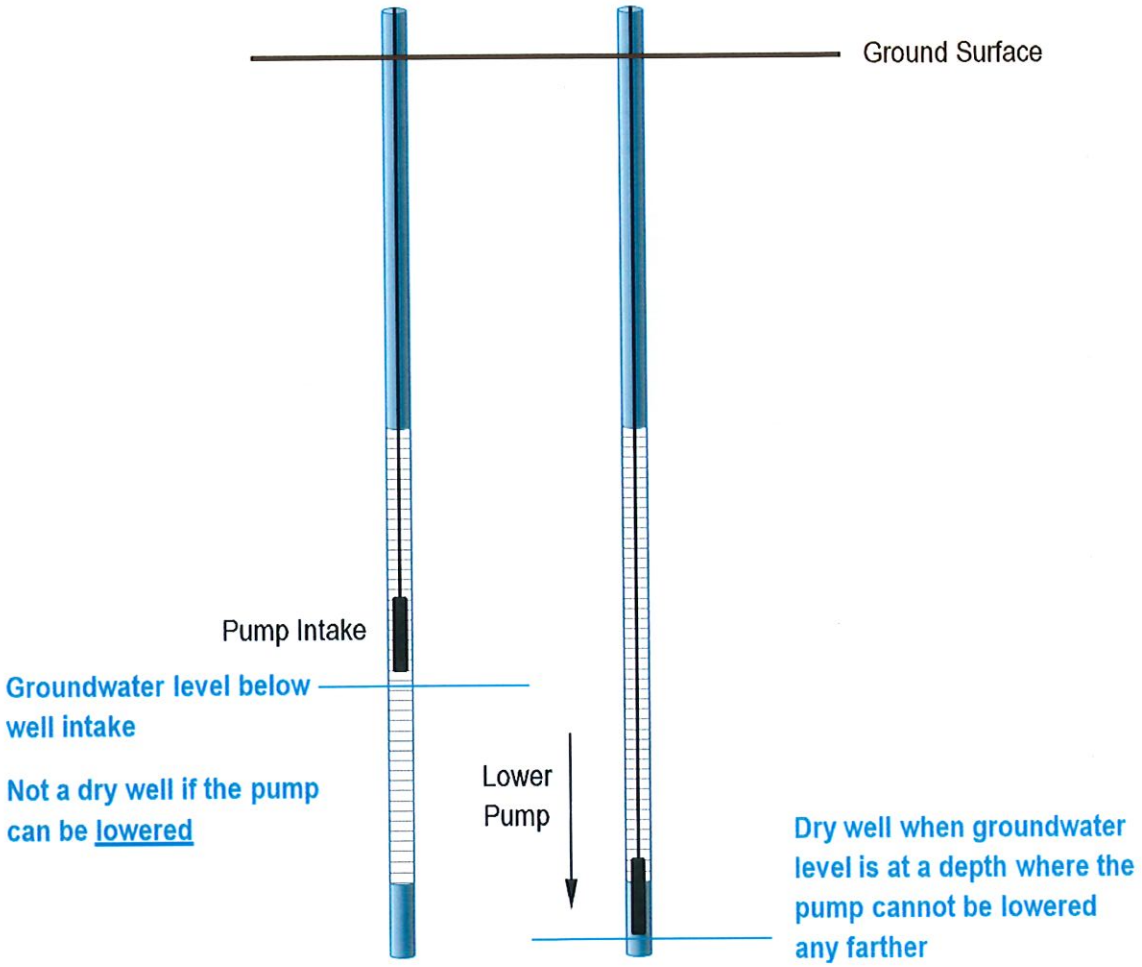


**Figure 5. Groundwater Levels Relative to Pump Intake and Bottom of Well**

## 4.2 Potential GSA-Related Subsidence Impacts

### 4.2.1 Potential Subsidence Impacts to Wells

Groundwater level declines, particularly in deeper confined aquifers, in areas where the geology in the subsurface is favorable can cause land subsidence. The most common subsidence-related impact to wells is casing failure. Wells installed across compacting subsurface clay layers are subject to compressive forces that can deform and eventually damage or collapse well casing. Potential damage from subsidence shown on **Figure 6** includes breaks or ruptures in casing, spiraling casing, oval casing or out of round casing, and rippling casing. A well can be destroyed by subsidence, but in some less severe cases the damage can be repaired. Often wells can be repaired by installing a sleeve to patch the damaged area, commonly called swaging.

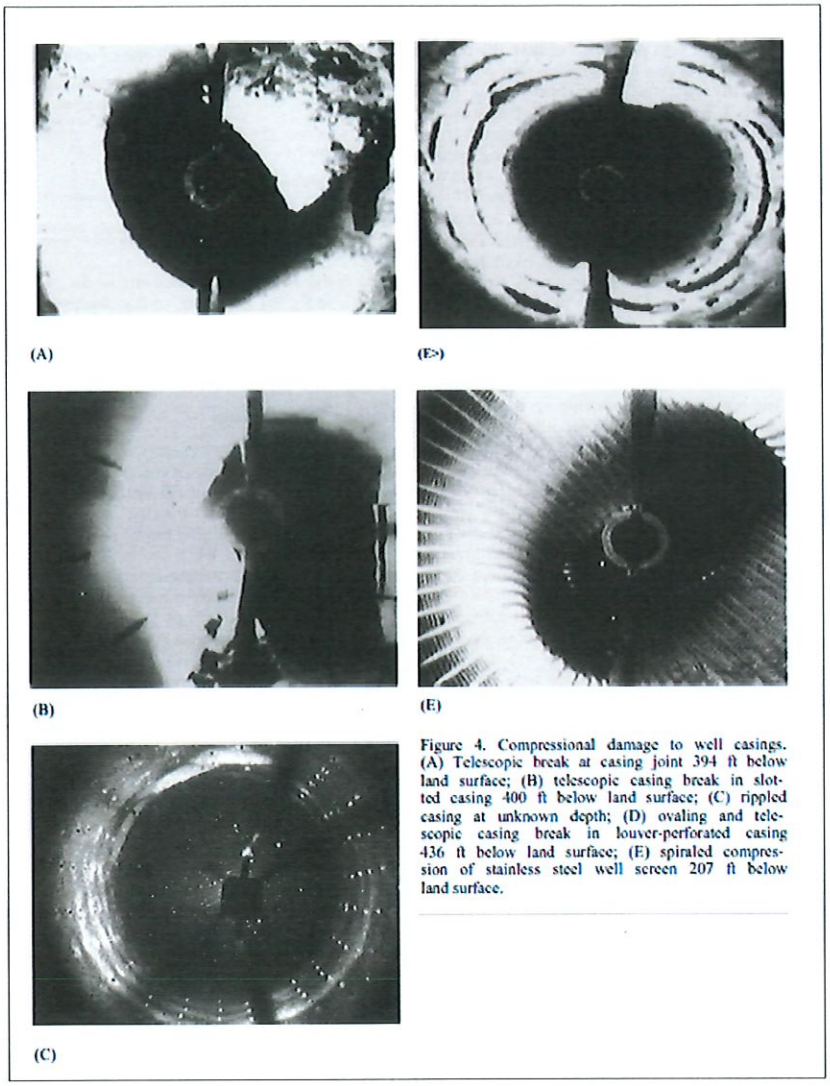


Figure 4. Compressional damage to well casings. (A) Telescopic break at casing joint 394 ft below land surface; (B) telescopic casing break in slotted casing 400 ft below land surface; (C) rippled casing at unknown depth; (D) ovaling and telescopic casing break in louver-perforated casing 436 ft below land surface; (E) spiraled compression of stainless steel well screen 207 ft below land surface.

**Figure 6. Well Damage Attributed to Subsidence (Borchers et al., 1998)**

The wells in the Tule Subbasin most vulnerable to land subsidence are those drilled to depths greater than approximately 500 feet, where the aquifer is typically confined to semi-confined beneath clay layers subject to compaction and the groundwater level fluctuations are greater than in shallower wells. Deep wells in the portion of the Tule Subbasin where the Corcoran Clay has been mapped in the subsurface (approximately west of Highway 99) are particularly vulnerable as that is where the highest rates of land subsidence have historically been observed. Private domestic wells are not typically as vulnerable to subsidence because they are shallower with lower pumping rates that do not cause the groundwater level drawdown that results in subsidence.

During the Technical Needs Assessment (Step 4) for well impact claims, SHE will evaluate whether there is evidence that the claim is caused by land subsidence. If appropriate, they will conduct a downhole video survey to determine if there is casing damage indicative of subsidence. All data will be submitted to the Mitigation Qualification Committee for review and recommendation of appropriate mitigation (Step 5). For private domestic wells, including agricultural domestic wells, the well owner will be eligible for full mitigation and funding for GSA-related impacts. For all other wells (municipal, industrial, and

agricultural irrigation), the GSA will provide technical assistance to the claimant to identify the cause of the impact, management actions to prevent further impacts, and mitigation options.

### 4.2.2 Potential Subsidence Impacts to Infrastructure

Land subsidence can cause impacts to non-well critical infrastructure and overlying land uses. The types of non-well infrastructure in the Tule Subbasin that are potentially vulnerable to land subsidence include:

- Canals
- Gravity Pipelines
- Flood Control
- Roads and Bridges
- Electrical Power Lines
- Sanitary Sewers
- Gas and Water Pipelines
- Railroad Tracks

Claims associated with impacts to infrastructure from land subsidence will be addressed in Phase II of this plan. Phase II of the plan will be finalized in the second quarter of 2025.

## 4.3 Groundwater Quality Impacts

The Tule Subbasin Mitigation Plan, as it relates to degradation of groundwater quality, is structured to address claims of impact that are associated with GSA activities. Several groundwater quality constituents of concern have been identified include:

- Arsenic
- Nitrate
- Chromium VI
- Dibromochloropropane (DBCP)
- 1,2,3 trichloropropane (1,2,3 TCP)
- Tetrachloroethene (PCE)
- Chloride,
- Sodium,
- Total Dissolved Solids (TDS)
- Perchlorate

The Tule Subbasin Mitigation Plan are intended to mitigate adverse water quality impacts associated lowered groundwater levels from GSA groundwater pumping. Therefore, groundwater quality issues must be related to chronic lowering of groundwater levels to be considered for mitigation qualification. Degraded groundwater quality may be related to allowable overdraft if chronic lowering of groundwater levels has a direct correlation with introduction of a new constituent of concern or significant increase in concentration of a constituent of concern. The causation and correlations of changes in groundwater quality are to be considered during the investigation phase of the mitigation claims process.

# 5.0 Mitigation Funding and Anticipated Costs

The Tule Subbasin Technical Team has performed a Well Impact ~~Analyis~~Analysis which provided a conservative cost mitigation cost estimate under different drought scenarios. The mitigation cost estimates include costs to physically mitigate wells, emergency and interim supplies, SHE's administration of the program, GSAs' administration of the program, and contractor assistance during the assessment phase. The Tule Subbasin GSAs' mitigation budgets are designed to be sufficient to address mitigation needs, independent of the positive projects and demand management changes that are being made and have been made.

In the event the costs to implement the Mitigation Program require revisions, the Tule Subbasin GSAs shall revisit their funding mechanisms and mitigation budgets to meet the mitigation commitments herein this Mitigation Plan. Alternatives may include raising groundwater extraction fees and/or a property-based tax.

The GSAs will explore grant funding at the state and federal levels. The state has many existing grant programs for community water systems and well construction funding; however, the state's SAFER funding is not permitted to be used for Mitigation Program implementation. County, state, and federal assistance may be needed to ~~best~~ maximize the Mitigation Program effectiveness in conjunction with similar regulatory programs with overlapping objectives~~that sprout up from similar regulatory programs~~ to SGMA, ~~like~~ such as CV-SALTS and the Irrigated Lands Regulatory program (ILRP). The GSAs will also work with local non-governmental organizations (NGO) that may be able to aid or seek grant monies to assist Mitigation Program implementation.

# Alternative MAC Write-up

## 6.0 Mitigation Advisory Committee

A Mitigation Advisory Committee (MAC) will be formed as part of the Mitigation Program to review data collected and technical reports prepared in response to claims of impact. The MAC will consist of technical experts assigned by the stakeholders as defined in Section 4.1 below.

The MAC will be a standing committee and will be subject to open meeting requirements of the Ralph M. Brown Act.

### 6.1 Representation

The MAC shall consist of eight representative technical experts from the following agencies:

- Alpaugh ID GSA (one representative with alternate),
- Delano-Earlimart Irrigation District GSA (one representative with alternate),
- Eastern Tule GSA (one representative with alternate),
- Kern-Tulare Water District GSA (one representative with alternate),
- Lower Tule River Irrigation District GSA (one representative with alternate),
- Pixley Irrigation District GSA (one representative with alternate),
- Tri-County Water Authority GSA (one representative with alternate), and
- Self-Help Enterprises (one representative with alternate).

Additionally, representatives of the MAC may consult with other public agencies deemed to have relevant expertise or interest such as the California State Department of Water Resources, County of Tulare, United States Geological Survey (USGS), or others. Representatives of the MAC may also invite guests to participate in meetings to present, explain, or clarify the data and analyses collected in accordance with the mitigation program.

### 6.2 Role of the MAC

The role of the MAC is to:

1. Review the data and analyses collected in response to a claim.
2. Assess the probable cause of the impact and evaluate the role of GSA activities in the impacts being reported.
3. Provide a recommendation(s) to the GSA Board in which the impact was reported to address the claim of impact.

Data to inform the claim will be collected in accordance with Section 3.1.3. The analysis and report of probable cause will be prepared by_____technical representatives from the GSA in

which the claim was made as described in Section 4.5 herein. A draft report will be submitted to the committee for review and comment prior to meeting.

## 6.3 Reporting

Each report submitted to the MAC will initially be in draft form and prepared under the supervision of a California registered Professional Engineer, Geologist or Certified Hydrogeologist who is authorized to sign and stamp the final report. The report shall include:

- A description of the claim of impact
- Data reviewed and/or collected to evaluate the claim
- A description of the analyses or methodology used to evaluate the claim
- Findings from the claim analysis
- Recommendations for mitigation
- A planning-level cost for the recommended mitigation (if applicable)

Other members of the MAC may review the data and report and provide comments and recommended edits for the final document. The final report will be included with the recommendations to the GSA in which the claim was reported.

## 6.4 Meeting Schedule

The MAC will convene meetings, as needed, to discuss data and reports related to claims of impact. All MAC meetings will be subject to open meeting requirements of the Ralph M. Brown Act.

## 6.5 Recommendations to the Tule Subbasin Boards

Conclusions and recommendations from the MAC to the Tule Subbasin Boards may include (but are not limited to):

- Probable cause of claimed impact.
- Mitigation measures to address impacts caused by GSA activities (this could include a recommendation of no mitigation if the data indicate the claim is not caused by GSA activities).
- A cost estimate to implement the mitigation measure(s).
- A schedule to implement the mitigation.

# 7.0 Mitigation Funding Plan

# 8.0 References

# Figures

# Tables

# Appendices

# Appendix A

## Groundwater Level Field Measurement Form

# Appendix B

## Chalk/Tape Groundwater Level Measurement