Lower Tule River Irrigation District Groundwater Sustainability Agency
Pixley Irrigation District Groundwater Sustainability Agency
Groundwater Sustainability Plan Impact Mitigation Plan

1.0 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. 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 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 Lower Tule River Irrigation District GSA and Pixley Irrigation 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, 2023
- 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, 2022.
- 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 Groundwater Planning Commission (GPC). The GPC 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 GPC decisions to the GSA Governing Body.

Decisions by the GPC or 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 GPC, 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 July 1, 2023
- 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 Groundwater Planning Commission (GPC). The GPC is delegated authority by the GSA Governing Body to determine whether to accept claims, and to determine mitigation measures. Claimant has right to appeal GPC decisions to the GSA Governing Body.

Decisions by the GPC or 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:

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

Mitigation measures will be determined by the GPC, 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 July 1, 2023
- 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 Groundwater Planning Commision 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 Groundwater Planning Commission (GPC). The GPC is delegated authority by the GSA Governing Body to determine whether to accept claims, and to determine mitigation measures. The claimant has right to appeal GPC decisions to the GSA Governing Body.

Decisions by the GPC or 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 GPC, 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.

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?

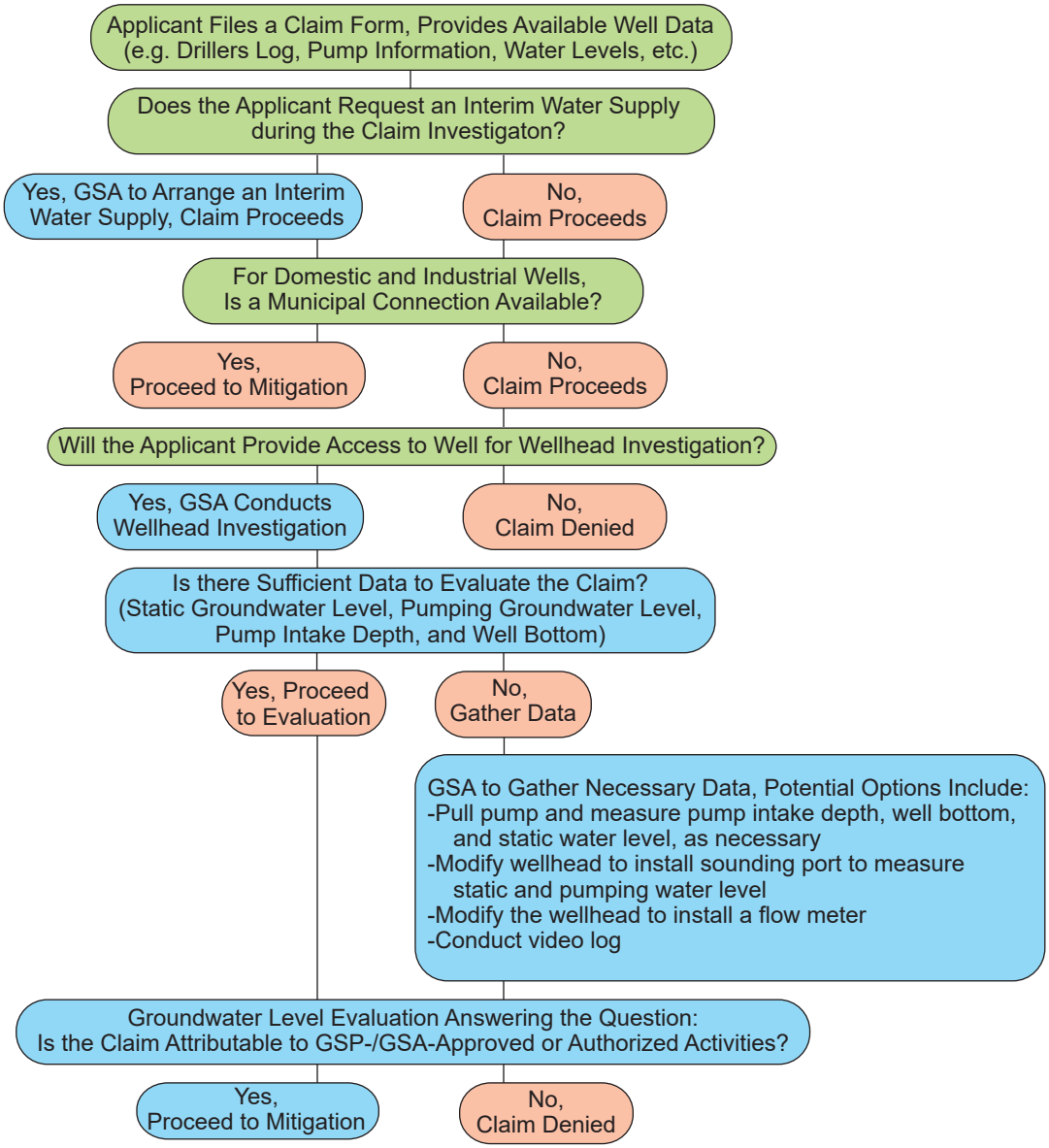
4 Potential Options for Mitigation

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

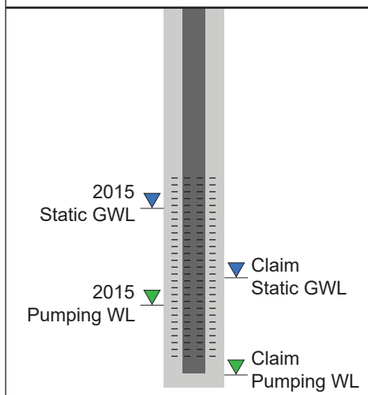
Groundwater Level Impact Claim Process - Investigation Phase



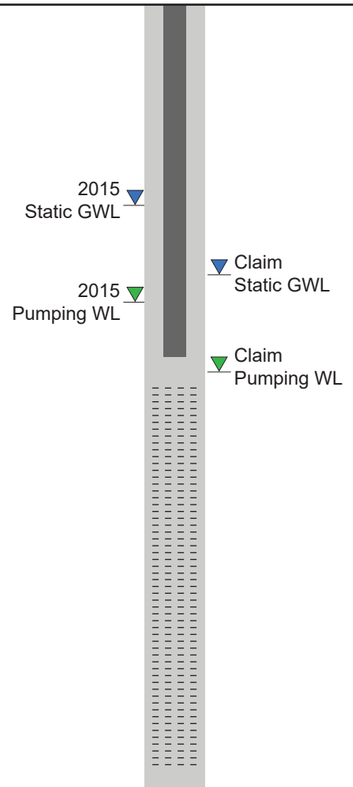
Groundwater Level Impact
Claim Process - Evaluation Examples

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

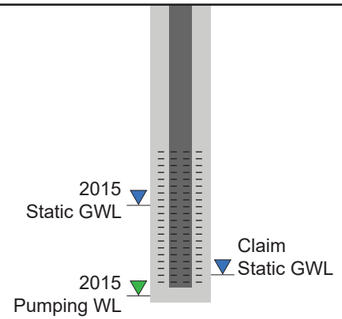


Example 2 - Well and pump was operational in 2015. Pumping Water Level is currently at or below the pump intake

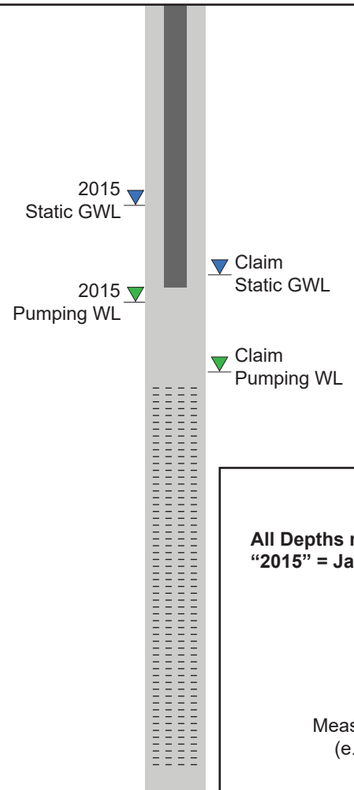


Not Attributable to GSP-/GSA-Approved or Authorized Activity

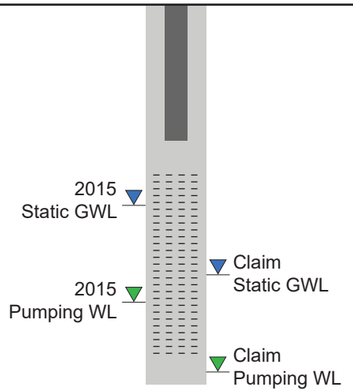
Example 3 - Static Groundwater Level was above the pump intake, but the Pumping Water Level was at or below the bottom of the well before 2015



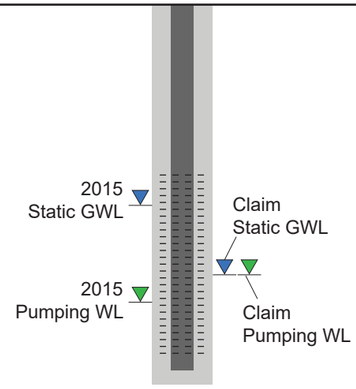
Example 4 - Static Groundwater Level was above the pump intake, but the Pumping Water Level was at or below the pump intake before 2015



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



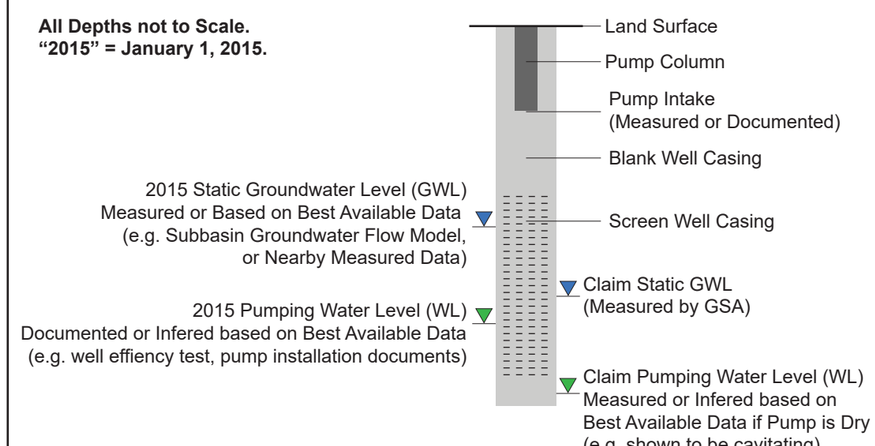
Note: Examples provided are for illustrative purposes only and do not constitue a decision. Groundwater level evaluations will be conducted on a case-by-case basis using the best available data. Additional data and analysis may be required.

Other Potential Issues Not Arributable 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.



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)** ☐ **Not Resolved, Contractor Provided Estimate (attach estimate if applicable)** ☐ **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:**

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.

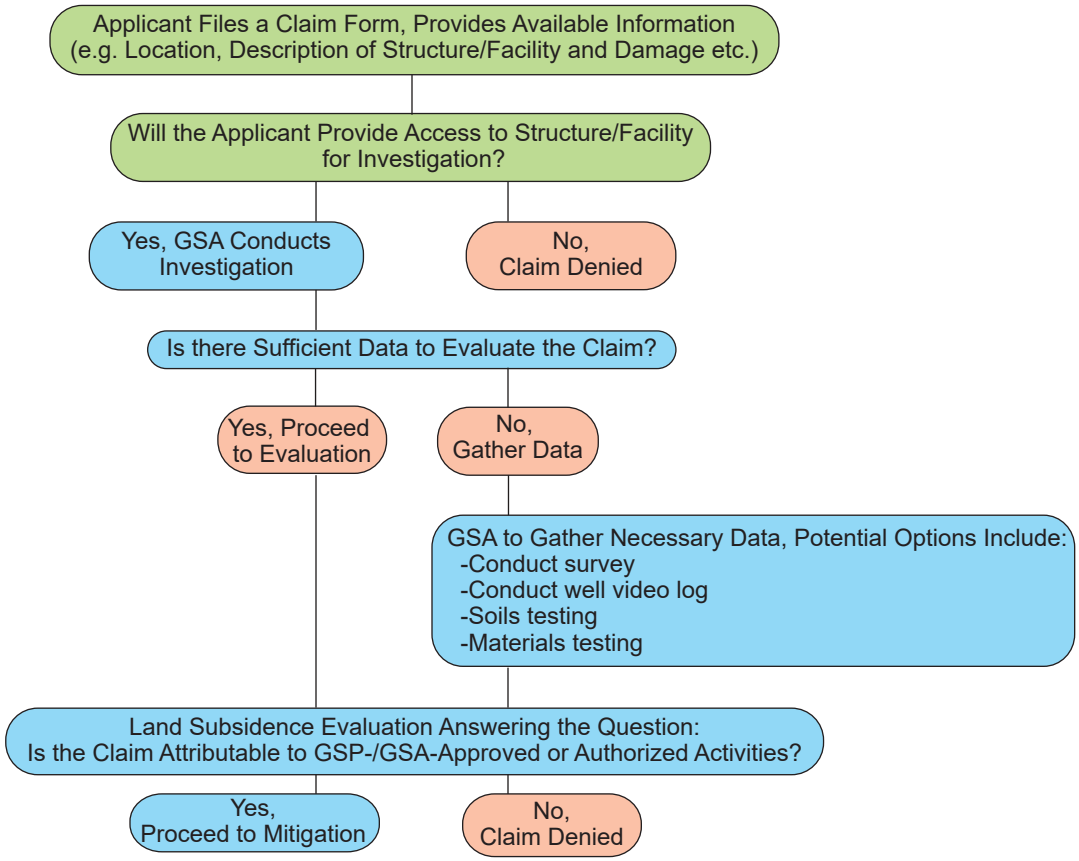
4 Potential Options for Mitigation

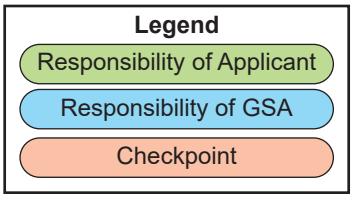
Mitigation measures, if approved, could include (but are not necessarily limited to) one or more of the following:

- 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





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)** ☐ **No**
Date Structure/Facility was Constructed:	
Are Geotechnical Reports, Borehole Logs, Hydraulic Studies, or Other Data Available?	☐ **Yes (Attach if Available)** ☐ **No**
Are Structure/Facility Photos Prior to Impact Available?	☐ **Yes (Attach if Available)** ☐ **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)** ☐ **Not Resolved, Contractor Provided Estimate (attach estimate if applicable)** ☐ **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.):

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.

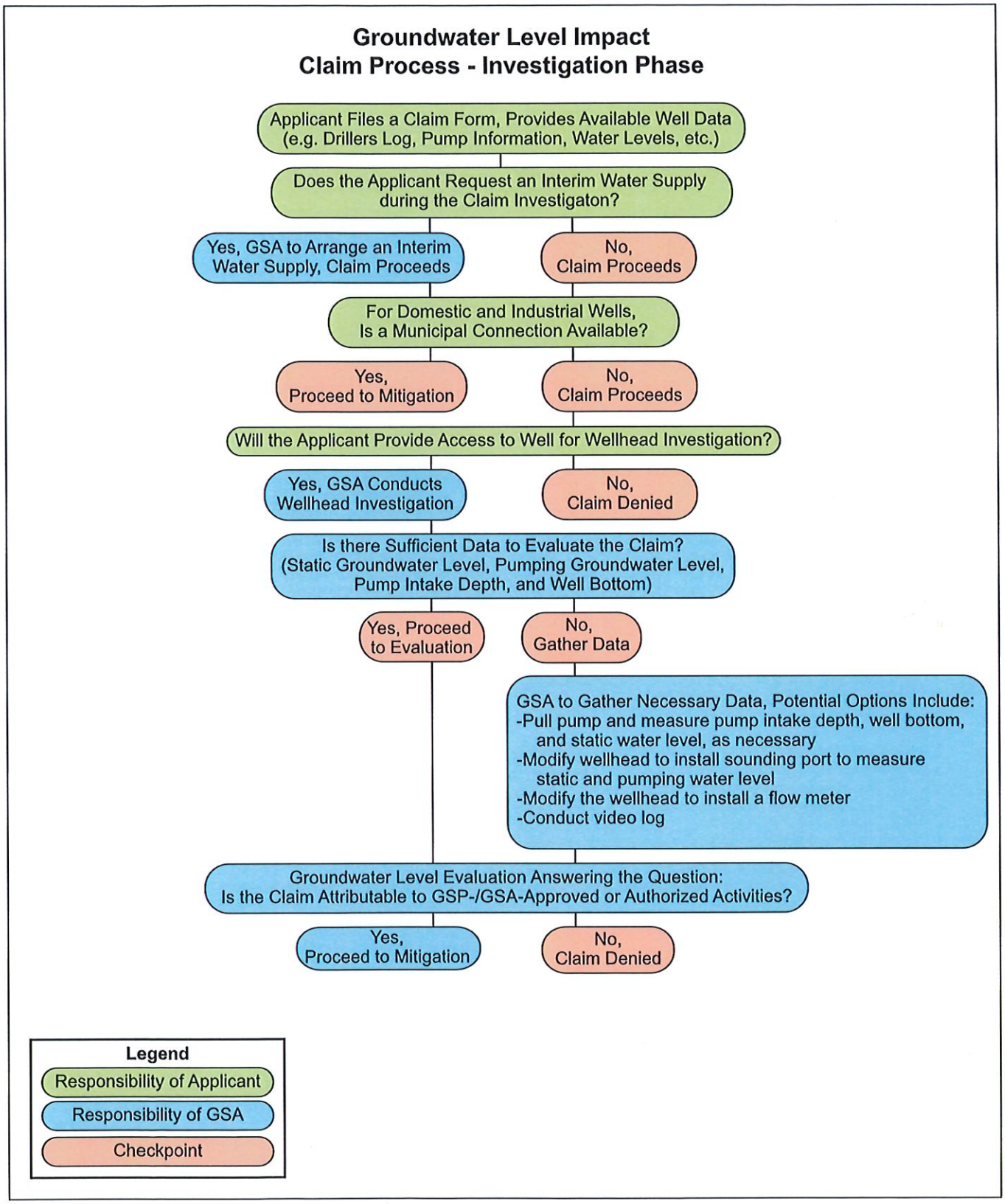
Table 3: Existing Groundwater Quality Monitoring Programs

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. • 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. • Nitrate as N annually, if ≥ 5 ppm, sampled quarterly • VOCs and SOCs sampled every 3 years. • Uranium sampling depends on historical results but varies between 1 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: (1) whether pesticides with the potential to pollute groundwater are present, (2) the extent and source of pesticide contamination, and (3) the effectiveness of regulatory mitigation measures.
GAMA (Collaboration with SWQCB, RWQCB, DWR, DPR, NWIS, LLNL)		• Constituents sampled vary by the Program Objectives. • Typically, USGS is the technical lead in conducting the studies and reporting data.	Varies	• Improve statewide comprehensive e groundwater monitoring. • 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. • 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.

Attachment 3 - Groundwater Level Impact Claim Process - Investigation Phase Flow Chart

Tule Subbasin Technical Advisory Committee
Mitigation Program - Technical Framework

Figure 1



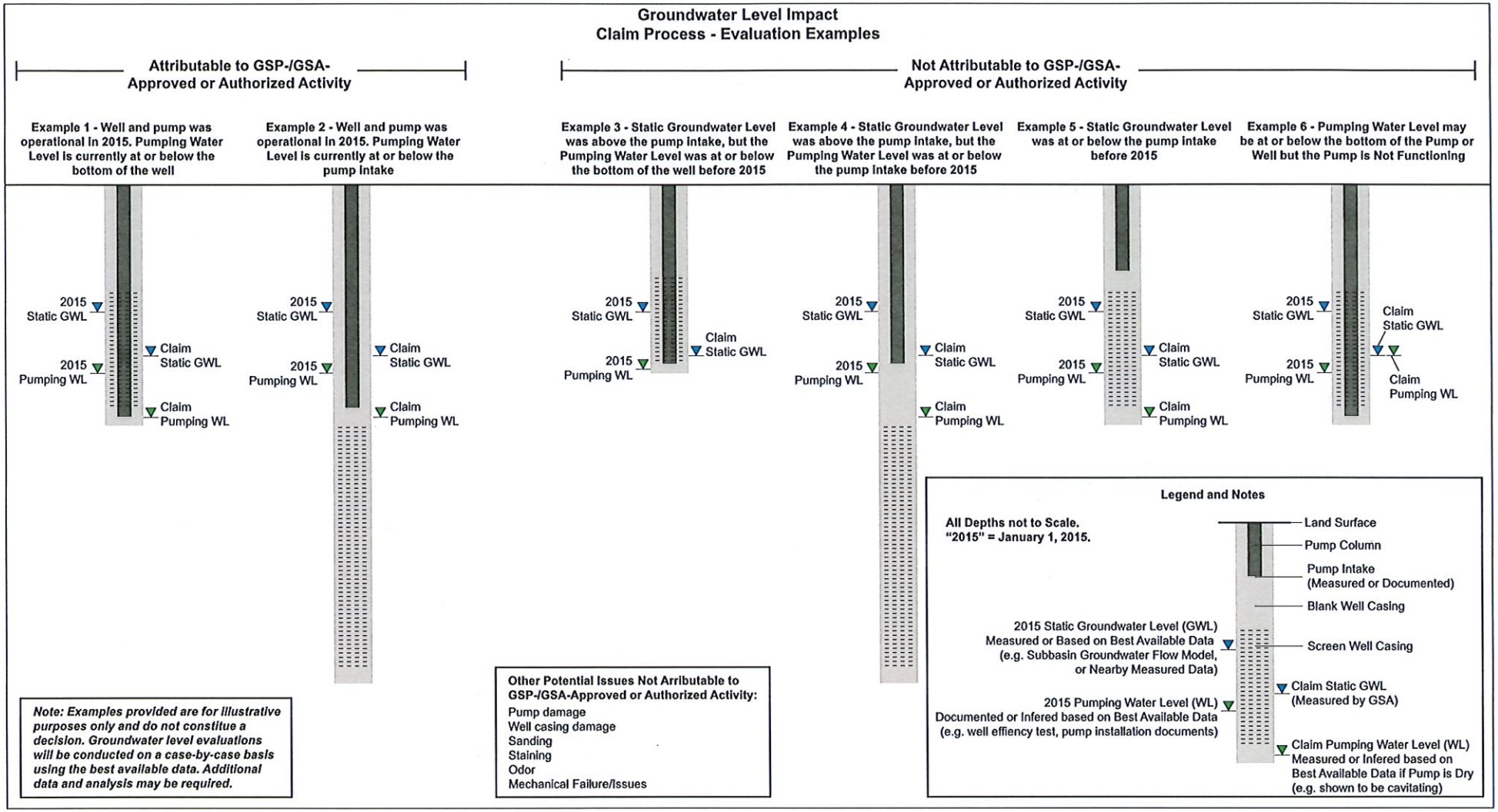
Thomas Harder & Co.
Groundwater Consulting

December 2022

Attachment 4 - Groundwater Level Impact Claim Process - Evaluation Examples

Tule Subbasin Technical Advisory Committee
Mitigation Program - Technical Framework

Figure 2



Thomas Harder & Co.
Groundwater Consulting

December 2022

Attachment 5 - Claim Form

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)** ☐ **Not Resolved, Contractor Provided Estimate (attach estimate if applicable)** ☐ **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 6 - Well Inspection Form

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:**

Attachment 7 - Waiver and Release of Liability

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:

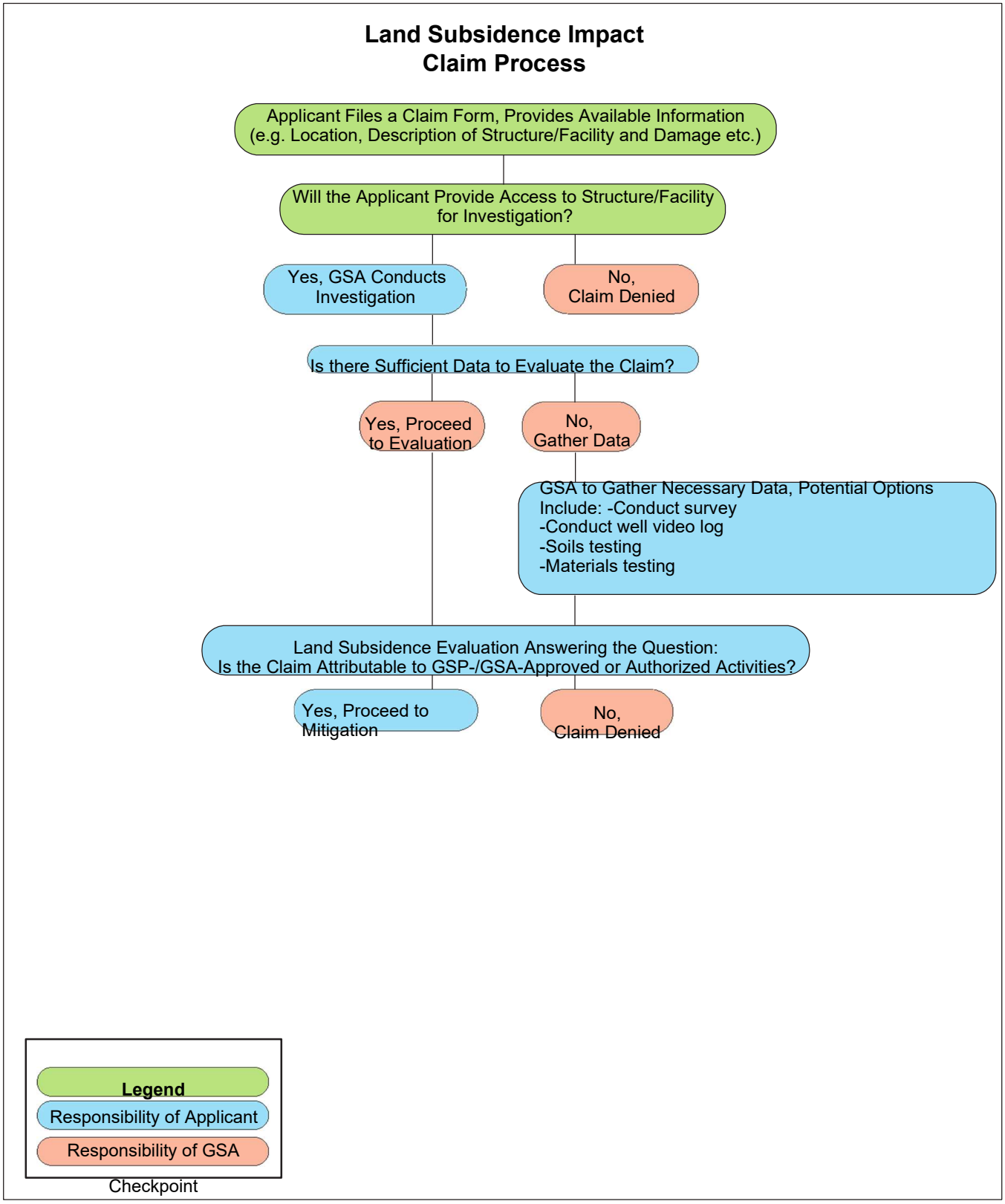
> "A general release does not extend to claims that the creditor or releasing party does not know or suspect to exist in his or her favor at the time of executing the release and that, if known by him or her would have materially affected his or her settlement with the debtor or released party."
> _____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

Attachment 8 - Land Subsidence Impact Claim Process



Attachment 9 - Land Subsidence Impact Claim Form

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):	

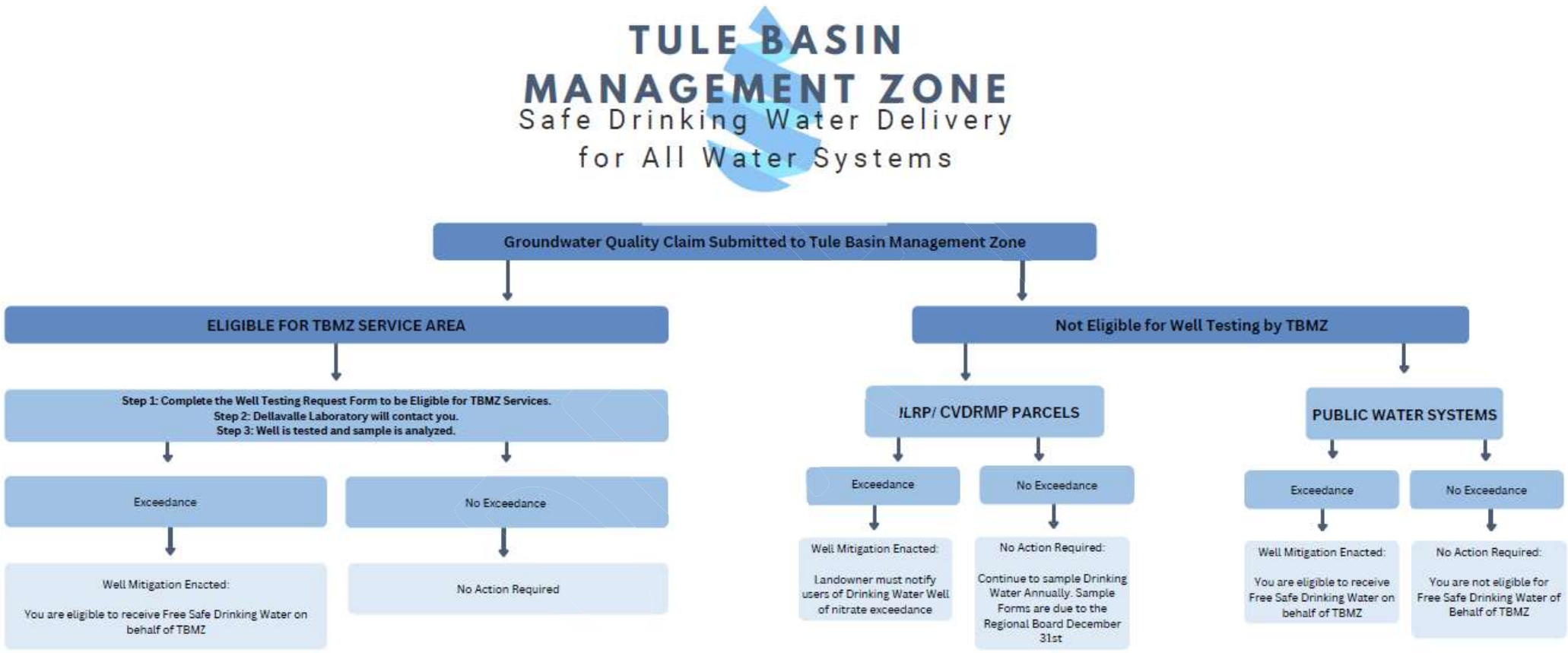
Issue Status				
Date Issue Arose:				
Issue: ☐ **No flow**	☐ **Reduced Flow**	☐ **Breaking Suction**	☐ **Future Concern**	
Comments/Description:				
Static Water Level (ft):		**Pumping Water Level (ft):**		
Status: ☐ **Not Resolved, Contractor not Contacted (Note: Contacting a Contractor Not Required)** ☐ **Not Resolved, Contractor Provided Estimate (attach estimate if applicable)** ☐ **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:**

Attachment 10 - Tule Basin Management Zone Safe - Eligibility Investigation Process

Figure 1 – TBMZ Potentially Impacted Well Eligibility Flow Chart



Attachment 11 - Water Quality and Tule Basin Management Zone Claim Form

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)** ☐ **Not Resolved, Contractor Provided Estimate (attach estimate if applicable)** ☐ **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.

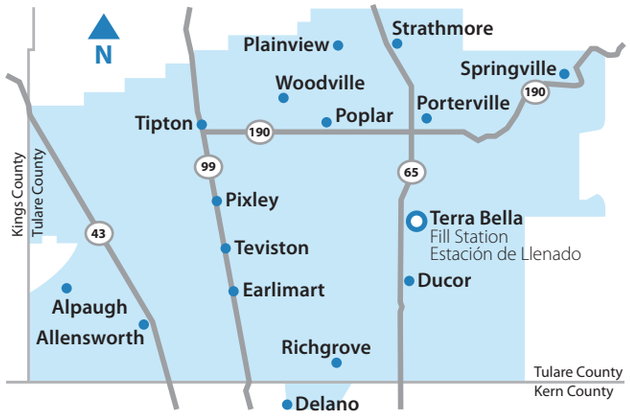
La Zona de Manejo de la Cuenca de Tule es una corporación sin fines de lucro de California creada para servir al Condado de Tulare y a una pequeña porción del Condado de Kern.

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: _____