California's Sustainable Groundwater Management Act

Well Mitigation Template 2024

COMMUNITY WATER CENTER
EL CENTRO COMUNITARIO POR EL AGUA

Self-Help Enterprises

LEADERSHIP COUNSEL FOR JUSTICE & ACCOUNTABILITY

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PART 1: WELL MITIGATION PROGRAM GUIDANCE

A. Background

The Sustainable Groundwater Management Act (SGMA) requires local Groundwater Sustainability Agencies (GSAs) to consider all beneficial uses and users of groundwater as they develop and implement Groundwater Sustainability Plans (GSPs or Plans). At the same time, domestic water use is at the highest risk of contamination and loss of water supply. The future of families on shallow domestic and small community water system wells is uncertain as GSAs decide how to protect their wells. Many families who depend on shallow domestic wells or small water systems cannot afford to deepen wells or treat their water, because they lack the economies of scale that large public water systems have for addressing impacts to water supply and quality.

In March 2023, the Department of Water Resources (DWR) published guidance to assist GSAs in addressing potential impacts to drinking water users as they implement and update their GSPs under SGMA. DWR's guidance, titled Considerations for Identifying and Addressing Drinking Water Well Impacts, acknowledges that water use for domestic purposes is the highest use of water and that SGMA and other state laws "...require careful consideration and a well-supported management approach..." to address impacts to drinking water users. DWR's guidance outlines an approach for collecting data, engaging the public, setting up monitoring systems, and taking action to protect drinking water wells.

Photo Credit: Self-Help Enterprises

B. Objective

Community Water Center, Self-Help Enterprises, and Leadership Counsel for Justice and Accountability developed this drinking water well protection template to provide guidance and technical assistance for GSAs that are developing drinking water well impact mitigation programs.

This template builds upon DWR's guidance and provides specific, actionable items that GSAs can use to address potential and actual impacts to drinking water users.

Photo Credit: Self-Help Enterprises

C. Human Right to Water

DWR Guidance:

> Under the Sustainable Groundwater Management Act (SGMA), groundwater sustainability agencies (GSAs) must consider all beneficial uses and users in a groundwater basin when developing and implementing their locally developed groundwater sustainability plans (GSPs or Plans). Drinking water well users, which can include municipal entities, small communities, and individual domestic wells, have been identified and are considered beneficial users in all medium and high priority basins and can experience adverse effects such as dry wells, deteriorated water quality, and well damage from land subsidence when excessive groundwater extraction occurs.

In 2012, California recognized the Human Right to Water, codifying "the established policy of the state that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes."[1]

Under the Human Right to Water law, DWR and the State Water Resources Control Board (SWRCB) must consider how their actions will impact the Human Right to Water when reviewing GSPs[2]. In order to comply with these obligations, GSAs must consider how projects and management actions will impact communities' access to drinking water.

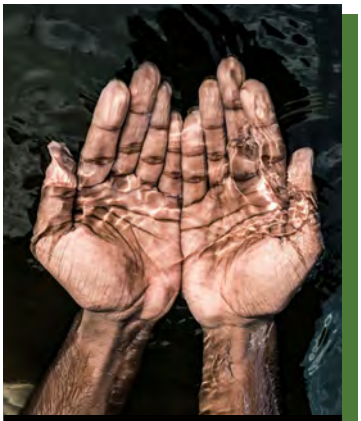


Photo Credit: Jacob Kelvin.J

[1] Cal. Water Code § 106.3(a).

[2] Cal. Water Code § 106.3(b); 23 CCR § 350.4 subd. (g); *see generally City of Burbank v. State Water Res. Control Bd.*, 35 Cal. 4th 613, 625 (2005) (explaining that taking into consideration means "to take into account various factors," including those specified in legislation).

State Water Resources Control Board. Resolution No. 2016-0010 Adopting the Human Right to Water as a Core Value and Directing Its Implementation in Water Board Programs and Activities (February 2016).

Department of Water Resources. Human Right to Water Policy (April 2021)

GSAs developing mitigation programs are encouraged to focus on drinking water wells and small community water systems in disadvantaged communities, given the disproportionate impact on domestic wells and the responsibility of the GSAs to consider and avoid undesirable results that may include impacts to drinking water users.

Photo Credit: Community Water Center

Considering Drinking Water Users Throughout SGMA Implementation

FIGURE 1: Considering Drinking Water Users Throughout SGMA Implementation[3]

(complete DWR infographic can be found in Appendix: Part B)

GSAs developing mitigation programs are encouraged to focus on drinking water wells and small community water systems in disadvantaged communities, given the disproportionate impact on domestic wells and the responsibility of the GSAs to consider and avoid undesirable results that may include impacts to drinking water users.

Addressing impacts such as a dry well or contaminated well should be an emergency action for GSAs or, if GSA management did not cause the issue, the respective county should consider addressing impacts. Counties are required to develop and implement drought resilience plan under requirements of Senate Bill 552 (SB552).

[3] Department of Water Resources. Considerations for Identifying and Addressing Drinking Water Well Impacts (March 2023).

However, this should not take the place of adaptive management actions, such as setting SMCs protective of shallow drinking water wells (further explained below). For residents experiencing dry, contaminated wells, this is a worst-case scenario. A well-designed trigger system is one method that can be used to identify issues early on, as a problem is developing, and intervene. Early action avoids both monetary and human costs.

D. Developing a Well Mitigation Program

Step 1 Identify drinking water users

DWR Guidance:

> "While SGMA does not require that all impacts to individual drinking water well users be avoided or mitigated, SGMA and other state laws and policies do require deliberate and careful consideration and a well-supported management approach regarding potential impacts to these users. Attempts to ignore or dismiss such impacts are inconsistent with the intent and requirements of SGMA and GSP Regulations.[4]"

Photo Credit: Self-Help Enterprises

In order to ensure all beneficial uses and users of groundwater are being taken into consideration when developing GSPs, projects, management actions, etc, it is important to account for all users in your basin. As part of this process, GSAs should identify all drinking water users in the basin, which includes de minimis users, domestic wells, state small water systems, small water systems, public and community water systems, and Tribes.

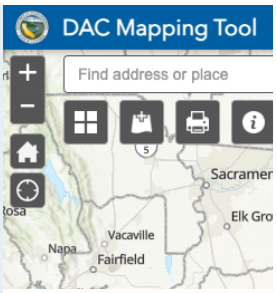
[4] Department of Water Resources. Considerations for Identifying and Addressing Drinking Water Well Impacts (March 2023). (p10)

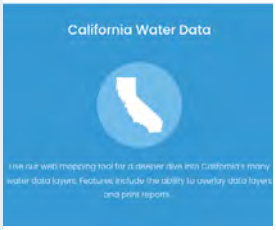
Below are some tools to assist with this first step:

- **Disadvantaged Communities (DAC) Mapping Tool**:
  This tool is a web-based application to assist local agencies and other interested parties in evaluating disadvantaged community (DAC) status throughout the State. The tool is an interactive map application that allows users to overlay three US Census geographies as separate data layers: 1) Census Place, 2) Census Tract, 3) Census Block Group.

- **CWC Drinking Water Tool**:
  The tool identifies communities with either domestic wells communities and or community water systems, and provides information about vulnerabilities to groundwater challenges that could affect a community's access to long-term safe and affordable drinking water.

- **Dry Well Reporting System**:
  This site is for Californians to report voluntarily when their private well has gone dry. The site provides cumulative reports of reported dry wells by county from 2014 to the present.





These tools are a starting point for identifying areas to conduct outreach.

The following section outlines effective steps for conducting outreach to the groups identified in the previous step above. While the tools above provide a helpful baseline, actual confirmation of domestic well locations and numbers is critical.

Answering the questions on the next page will help ensure your GSA is adequately accounting for all drinking water users in your basin:

Photo Credit: Self-Help Enterprises

Drinking Water User Questions

1. Has the GSA developed a well registration program (that is, a list of domestic wells and public supply wells in the Subbasin)?
2. What domestic well communities (e.g., communities relying on domestic wells, or a group of users sharing a well) are located within the GSA's boundaries? *(Please include a map)*
3. How many domestic wells are located in each community?
4. What public water systems are located within the GSA's boundaries? *(Please include a map)*
5. How many wells does the public water system have?
6. Have you discovered a new cluster of domestic wells that wasn't identified in your latest GSP update?
7. How could these wells impact the viability of your earlier domestic well impact analysis and previously proposed SMC (including minimum thresholds and measurable objectives)?
8. How many DACs are located within the GSA's boundaries?
9. Provide the following information **for each identified DAC**:
    a. Name of DAC
        i. Population Size:
        ii. Source of water:
        iii. Land Area or Parcel Size (acres):
        iv. Number of Households/Parcel:
        v. Estimated Water Use (AC/ft per year):
        vi. Contact person or local community-based organization within each DAC (Aim for 2-3 per DAC)
            1. Name
            2. Email/phone number
            3. Address
            4. Last contacted (Should make contact at least 5 times per year)

Step 2 Perform Public Outreach

DWR Guidance:

> Direct outreach to drinking water well users with a meaningful approach for how to engage and involve community members and organizations in decision-making; meet the community in suitable locations and at times when community members are available; communicate in the preferred language of drinking water well users; provide materials so community members can engage and understand technical information for a non-technical audience.[5]

Photo Credit: Christina Morillo

After identifying drinking water users, the GSA must conduct public outreach. Public outreach can take many different forms. Below we outline some steps to ensure you are conducting meaningful and direct outreach.

2a. Planning for Public Outreach

(To be completed prior to public outreach):

In order to effectively include impacted residents, the GSA should partner with established, trusted, groups in the area, such as community based organizations, religious groups, etc. This will help generate better attendance at public meetings. Additionally, public meetings should be held during the week, ideally Tuesday through Thursday, at or after 5:30 pm. For many working residents, this is a time that allows them time to drive to in-person meetings after work and/or attend to family-related obligations prior to the meeting. Also, hosting meetings that allow for the flexibility of bringing children to the meeting reduces barriers for head of household participation.

[5] Department of Water Resources. Considerations for Identifying and Addressing Drinking Water Well Impacts (March 2023), pg. 4.

Asking the following questions will help you plan public outreach efforts that maximize accessibility and inclusivity:

- What would be a reasonable and accessible day AND time for the majority of interested parties, including working residents, to attend this meeting?
- Can meetings include translation / interpretation support, including both written and verbal translation?
- What meeting venue would be accessible to the majority of interested parties?
- Can we provide a virtual/call-in option?
- Do we have a list of potential interested parties and stakeholders?
    - » For example: residents, schools, childcare facilities, state small water systems, drinking water utilities (including privately owned), community service districts, food pantries, community based organizations, housing assistance providers, etc.

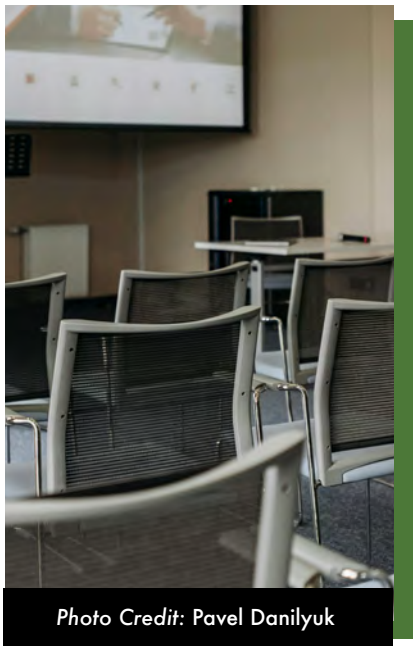


Photo Credit: Pavel Danilyuk

A combination of outreach strategies will be needed to maximize effective outreach to the communities. Consider using as many of the following outreach methods as possible, in order to increase equity and inclusion:

- ☐ Conducting door-to-door outreach
    - ☐ Attending existing community meetings/events to share meeting details and/or information about how to engage.
- ☐ Discussing drinking water mitigation with decision-makers of local governing boards (e.g. Community Services Districts, City Councils, etc.).
- ☐ Making sure the topic is listed on publicly posted agendas for those meetings.
- ☐ Sending Direct Mail Fliers or Announcements with response or follow-up options.
- ☐ Distributing information/flyers about meetings or informational materials on community message boards at high traffic locations such as local grocery stores, community centers, religious centers, libraries, water filling stations, and gas stations

- ☐ Sending a media advisory or press release to local media outlets (e.g., radio and television; include non-English language outlets, where available)
- ☐ Posting about drinking water well mitigation, or meetings, on social media outlets posted (Facebook event/ad/post, Instagram, Twitter, NextDoor, etc.):
- ☐ Sending announcements through a mobile messaging platform (e.g.,ThruText)
- ☐ Using other methods: (for example: outreach to other trusted spaces used by the community such as family resource centers, schools, etc.)

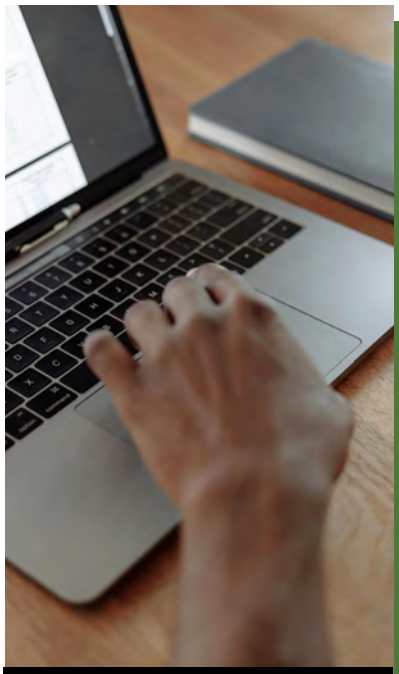


Photo Credit: Thirdman

Potential barriers to participation should be considered throughout the outreach and engagement process (examples: language, location, time, transportation, childcare, power dynamics, etc.). The specific barriers your GSA is trying to address will inform which outreach and engagement methods will be most effective.

Which potential participation barriers is your GSA specifically trying to address?

Your GSA will also want to consider the following:

- How and when will we notify the general public about the meeting / project?
- What avenues can we make available for interested parties to provide comments and feedback?
  - » (Examples: dedicated time in the meeting open for public comment, a written/online form in which comments/ feedback can be provided, contact information for someone to speak directly with, etc.)
- How will we incorporate interested parties' comments / feedback into the project?

Photo Credit: Community Water Center

2b. Engaging in Public Outreach *(To be completed following meeting/project completion):*

Now that you have planned for outreach, it's important to start reaching out to individuals/organizations and tracking your interaction with them. We recommend tracking the following information:

1. Title of the meeting or project
2. Name of organization/individual who will lead public outreach/provided feedback
3. Email and/or phone number of organization or individual contact for the event
4. Community represented
    - Is this defined as a disadvantaged community?
5. Outreach method(s) used to invite (door-to-door, public event, flyering, phone, email, etc.)

Step 3 Understand basin conditions

To ensure mitigation programs reflect up-to-date basin conditions, GSAs should incorporate all data relevant to drinking water users and local groundwater conditions. The following data sources, tools, and research can be used to map basin conditions.

Tools & Resources for Step 3

- **SGMA Data Viewer:**

  This interactive tool shows California groundwater level data, including depth below ground surface, groundwater elevation, and groundwater change in elevation. The tool also includes additional information, for example, domestic wells that have been reported dry, the density of domestic wells that are susceptible to going dry, and DAC block groups, places, and tracts. This tool will support the GSA in understanding conditions for domestic wells and DACs. GSAs should use this tool as an initial review of groundwater conditions.

- **California's Groundwater Live:**

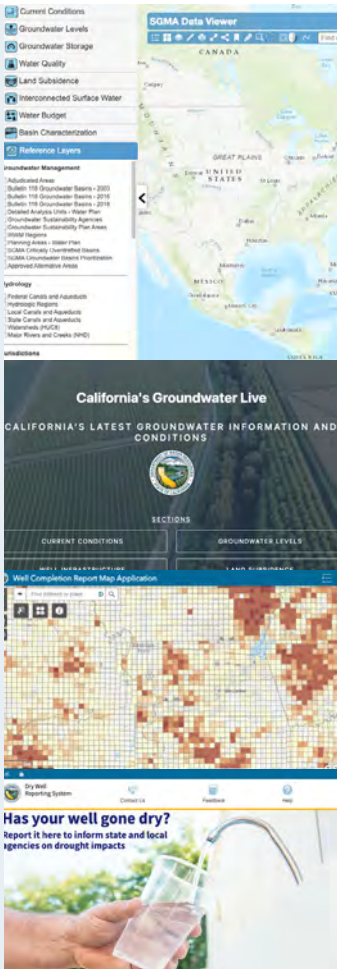
  This tool features the latest groundwater information, live statistics, and a series of interactive dashboards with a focus on groundwater levels, well infrastructure information, and subsidence. This site also includes the Dry Domestic Well Susceptibility tool.

- **Online System of Well Completion Reports (OSWCR) database:**

  This database is a repository of data for GSAs, including location of wells, planned use, and well depth. This repository helps GSAs create a representative monitoring network for groundwater levels and groundwater quality for shallow domestic wells.[6]

- **Dry Well Reporting System:**

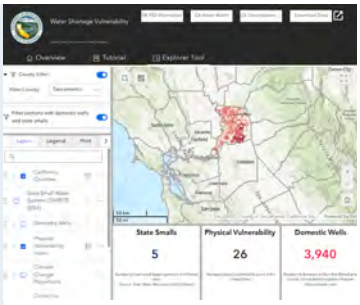
  This site is for Californians to voluntarily report when their private well has gone dry. The site provides cumulative reports of reported dry wells by county from 2014 to the present.



[6] OSWCR represents a database of WCRs submitted to DWR, not an inventory of all wells. The quality of the information in OSWCR is only as good as what is submitted (i.e., location accuracy, lithology, etc.). GSAs can work with all available information, including WCRs and well permit databases, etc. to compile and maintain a well inventory.

- **Water Shortage Vulnerability Tool:**

  This tool, which provides information on small water systems and domestic wells at risk for being dewatered, was created to support the implementation of SB 552. GSA can use this tool to identify areas where demand management should take place immediately, and where mitigation programs may be most needed, to prevent dewatering.



- **CWC Drinking Water Tool:**

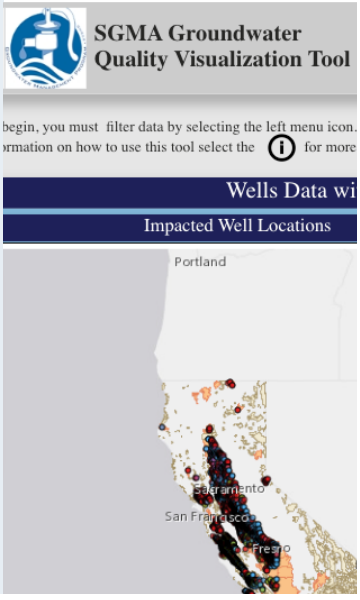
  This tool identifies communities with either domestic wells communities and/ or community water systems, and provides information about vulnerabilities to groundwater challenges that could affect a community's access to long-term safe and affordable drinking water.

- **Groundwater Ambient Monitoring and Assessment (GAMA):**

  This tool helps users assess groundwater quality and identify potential groundwater quality issues, and includes a time frame option for data display, which enables GSA to assess trends in contaminants during drought and ensure groundwater quality is included in mitigation programs. The tool displays groundwater quality data from several different sources, and provides access to approximately 87 million analytical results from over 290,000 wells in California.

- **SGMA Groundwater Quality Visualization Tool:**

  This tool was developed to support GSAs in identifying water quality criteria exceedances within their basins. GSAs can use this tool to identify which contaminants increase during extreme weather events, such as droughts or floods, in order to determine which contaminants to include in mitigation programs. The tool also displays which wells have exceedances, data can be sorted by contaminant, and can show basin trends by constituent. Increased Pumping in California's Central Valley During Drought Worsens Groundwater Quality The USGS National Water Information System (NWIS): Intensive pumping of aquifers during drought can speed up deterioration of groundwater quality, highlighting clean drinking water supply vulnerabilities in California and other western states that experience record drought conditions. GSAs should consider this when creating mitigation programs.



Be sure to include the following, as you gather information about basin conditions:

1. How are disadvantaged communities impacted by groundwater level conditions (i.e., at which point are domestic wells going dry) in the basin?
   - Include a map with these impacts, if any.
2. How are disadvantaged communities impacted by water quality degradation in the basin?
   - Include a map with these impacts.
3. How are disadvantaged communities impacted by subsidence in the basin?
   - Include a map with these impacts.
4. How are disadvantaged communities impacted by seawater intrusion impacts in the basin?
   - Include a map with these impacts.
5. What new information has been gathered via outreach regarding groundwater conditions in disadvantaged communities (i.e. number of wells impacted since 2015, water quality impacts, subsidence impacts, current issues with accessing safe drinking water, etc.)?
6. Are there any gaps you are finding as you are analyzing basin conditions (e.g. no monitoring wells near small water systems, domestic wells, DACs, etc)?

Photo Credit: Self-Help Enterprises

Step 4 Evaluate monitoring network and representative monitoring sites

Photo Credit: Self-Help Enterprises

It is important to have a robust monitoring network and representative monitoring sites in order to effectively manage and monitor groundwater in a way that is protective of all beneficial uses and users of groundwater. As GSAs are working on mitigation programs, it is important to evaluate current monitoring networks and representative monitoring sites to ensure they are adequately capturing groundwater levels and groundwater quality for domestic wells and small water systems.

Follow the steps below to evaluate monitoring networks and representative monitoring sites:

4a. Map all DACs, domestic wells, and small water systems in the subbasin.

This is a necessary first step to adequately evaluate monitoring networks and representative monitoring sites.

4b. Use an overlay system to determine proximity of both monitoring network wells and representative monitoring wells to DACs, domestic wells, and small water systems.

Representative monitoring wells should be at least within one mile of DACs, domestic wells, and small water systems.

4c. Identify and address any data gaps in your monitoring network.

Existing monitoring networks and representative monitoring sites may not adequately capture groundwater levels and groundwater quality for domestic wells and small water systems within DACs. If this is the case, the GSA will need to develop and implement a plan to address this gap. This can include coordinating with appropriate domestic well owners and entering into agreements for their wells to be used as representative monitoring sites.

DWR Guidance:

- Establish representative monitoring sites near high densities of drinking water well users, DACs, SDACs, or other rural communities;
- Establish representative wells with similar depths as drinking water wells to be able to monitor and measure groundwater levels and conditions for drinking water well users;
- Educate, train, and empower drinking water well owners to measure water levels, report to GSA, and understand the meaning of groundwater levels and conditions at their well locations, including what the minimum threshold is at or near their well's location.[7]

Framework

Evaluate groundwater levels and predict potential groundwater impacts to drinking water wells with a representative monitoring system. The representative monitoring system should be used to do the following:

- Monitor and forecast changes in groundwater levels and quality;
- Monitor and forecast any localized areas for special attention [such as DACs, domestic wells, and small public supply wells] and/or monitoring;
- Identify domestic wells or small public supply wells at risk of groundwater level and water quality impacts;
- Determine if triggers have been met based on the adaptive management framework;
- Incorporate the results above into an annual GSP progress report given to domestic well owners and community water systems.[8]

Photo Credit: Self-Help Enterprises

[7] Department of Water Resources. Considerations for Identifying and Addressing Drinking Water Well Impacts (March 2023), pg. 4.

[8] ibid.

Step 5 Evaluate Sustainable Management Criteria

DWR Guidance:

> Establish and revise sustainable management criteria based on analysis of understanding of basin conditions and considering potential impacts to drinking water well users; if minimum thresholds are set below 2015 groundwater levels, consider projects and management actions to address impacts or carefully justify how unaddressed impacts are consistent with the basin's sustainability goal.

5a. Minimum Threshold (MT)

Set and/or revise MTs to protect drinking water users. For shallow wells within close proximity to representative monitoring sites, ensure the depth of the shallow drinking water well is below the minimum threshold established at the monitoring site. If the depth of a drinking water well is equal to or shallower than the minimum threshold at the nearby monitoring well, the drinking water well is not protected.

5b. Adaptive Trigger System and Quantifiable Measures

As part of an adaptive management approach, developing a protective warning system can alert groundwater managers when groundwater levels and groundwater quality are dropping to a level that could potentially have a negative affect on drinking water users. Establishing a "trigger" that is just above the minimum threshold is a useful tool for groundwater management that can be adjusted to meet the needs of different management actions and the basin as a whole.

It is important that such a trigger system incorporates notification points for not only lowering of groundwater levels, but also for degradation of groundwater quality associated with depleting groundwater supply.Arsenic and nitrates are particularly important contaminants, directly tied to lowering of groundwater levels. Many residents may have wells with both declining water levels and water quality degradation.

The trigger system should be developed in collaboration with stakeholders for qualitative and anecdotal input as well as ground truthing data(especially groups that are more susceptible to groundwater changes), and then tied back to quantifiable measures such as the GSP measurable objectives, MCLs, and the number of drinking water wells that are partially or fully dry. For lowering of groundwater levels, triggers should be developed based on an estimate of the number of drinking water wells across the GSA at risk of going dry if current trends continue.

The GSA's mitigation program will need to budget for and address the percentage and/or number of impacted wells.

The table on the next page provides an example trigger system using "green, yellow, and red light" indicators or triggers. It also identifies potential corrective actions groundwater managers can take to improve the condition or address negative impacts. This is a simple tool for evaluating current conditions, and responding accordingly, in order to prevent negative impacts.

5c. Corrective Actions; Immediate Support

When groundwater conditions reach the "yellow light" level, the GSA should provide immediate support to the drinking water user, in coordination with the respective county. Potential actions include replacement water (bottled water and/or water tank), wellhead treatment, point of use treatment, etc. Based on the Human Right to Water [Water Code sec. 106.3], minimum best practice is to ensure residents receive emergency bottled water within 24 hours of a reported outage.

5d. Analysis

Once immediate support is provided, the GSA should conduct a site-specific analysis to investigate and determine the cause of the impact. The analysis should include basic well data, such as depth, elevation of screen(s), pump depth, static depth, water levels during pumping, groundwater quality trends, and seawater intrusion trends (depending on the impact). This information will help the GSA identify potential causes of the impact. These could include: overpumping, overall lowering of groundwater elevation, well interference, movement of contaminant plumes, etc.

5e. Evaluate SMCs and Pumping

Once the investigation is complete, the GSA should consider:

- reassessing pumping allocations and pumping patterns,
- restricting or limiting groundwater extraction near the triggered area, and
- reevaluating SMCs (minimum thresholds or measurable objectives)

in order to prevent the same or similar negative impact from recurring in the future.

EXAMPLE TRIGGER SYSTEM			
Trigger	**Groundwater Conditions & Impacts**	**Quantifiable Measures**	**Corrective Actions**
Green Light	Groundwater levels are stable.	Firmly in compliance with MOs.	No action required.
	Groundwater quality is stable.	Firmly in compliance with MCLs.	No action required.
	Seawater intrusion is stable.	Firmly in compliance with the chloride MCL.	No action required.
Yellow Light	Groundwater elevations are approaching concerning levels; negative impacts may occur or are already occurring. Some corrective action is needed.	3% of drinking water wells have gone partially or fully dry, or 5% of drinking water wells in the GSP area are projected to go dry if current trends continue. ___# of wells	• Conduct analysis to determine the cause; • Conduct water quality testing for select domestic and public supply wells; • Provide immediate support to groundwater users experiencing impacts; • Reassess pumping allocations and pumping patterns; • Consider restricting or limiting groundwater extraction near the impacted area.
	Groundwater quality is approaching concerning levels; negative impacts may occur or are already occurring. Some corrective action is needed.	Water quality reaches 70% of the MCL in any given monitoring well. ___# of wells	• Conduct an analysis to determine the cause; • Conduct water quality testing for selected domestic and public supply wells; • Provide immediate support to groundwater users experiencing impacts; • Reassess pumping allocations and pumping patterns; • Consider restricting or limiting groundwater extraction near the impacted area.
	Seawater intrusion is approaching concerning levels; negative impacts may occur or are already occurring. Some corrective actions are needed.	Chloride levels reach 70% of the MCL in any given monitoring well. ___# of wells	• Conduct an analysis to determine the cause; • Conduct chloride testing for selected domestic and public supply wells; • Provide immediate support to groundwater users experiencing impacts; • Reassess pumping allocations and pumping patterns; • Consider restricting or limiting groundwater extraction near the impacted area.

EXAMPLE TRIGGER SYSTEM			
Trigger	**Groundwater Conditions & Impacts**	**Quantifiable Measures**	**Corrective Actions**
Red Light	Time to stop groundwater pumping and any projects or management actions that are causing wells to go dry. The GSA needs to mitigate impacts immediately; significant impacts are imminent or are already occurring.	More than 7% of drinking water wells have gone dry, or 10% of drinking water wells in the GSP area are projected to go dry if current trends continue. ___# of wells	• Reassess pumping allocation and pumping patterns; • Consider further restricting or limiting groundwater extraction near the triggered area or reevaluating minimum thresholds or measurable objectives; • Provide interim emergency solution(s) while working with impacted groundwater users and local and state agencies to pursue a permanent, long-term solution.
	Time to stop groundwater pumping and any projects or management actions that are causing contaminated wells. The GSA needs to mitigate impacts immediately; significant impacts are imminent or are already occurring.	Water quality reaches 85% of the MCL in any given monitoring well. ___# of wells	• Reassess pumping allocations and pumping patterns; • Consider further restricting or limiting groundwater extraction near the triggered area or reevaluating minimum thresholds or measurable objectives; • Provide interim emergency solution(s) while working with impacted groundwater users to pursue a permanent, long-term solution.
	Time to stop groundwater pumping and any projects or management actions that are causing seawater intrusion. The GSA needs to mitigate impacts immediately; significant impacts are imminent or are already occurring.	Chloride levels reach 85% of the MCL in any given monitoring well. ___# of wells	• Reassess pumping allocations and pumping patterns; • Consider further restricting or limiting groundwater extraction near the triggered area or reevaluating minimum thresholds or measurable objectives; • Provide interim emergency solution(s) while working with impacted groundwater users to pursue a permanent, long-term solution.

Step 6 Develop and Implement Projects and Management Actions: Drinking Water Mitigation Program

6a. Equity & Inclusion

DWR Guidance:

> Support drinking water well users to have a long-term, reliable water supply with projects and management actions that address impacts; avoid projects and management actions that exclude certain drinking water well users and ensure that the benefits of projects and management actions are not arbitrary or inequitable; coordinate with local well permitting agencies to ensure new drinking water wells are constructed to provide reliable supply under minimum threshold conditions and that new, large supply wells will not have impacts on nearby drinking water wells.[9]

DWR Guidance:

> ...such a [mitigation] program should be reasonably structured so that it does not arbitrarily or inequitably exclude certain drinking water well users and GSAs should be cautious in program requirements that may exclude users based on age of well, location, socioeconomic status, demographics, and other relevant factors.[10]

Photo Credit: Self-Help Enterprises

[9] Department of Water Resources. Considerations for Identifying and Addressing Drinking Water Well Impacts (March 2023), pg. 4.

[10] Department of Water Resources. Considerations for Identifying and Addressing Drinking Water Well Impacts (March 2023), pg. 11.

6b. Funding

Any drinking water mitigation program should be coordinated with the State Water Resources Control Board's (State Water Board) Safe and Affordable Drinking Water Fund Program, through the Division of Drinking Water. This program aims to implement short- and long-term drinking water solutions within vulnerable communities; funding from the Program cannot be used to ameliorate negative impacts to safe drinking water access in vulnerable communities that result from GSP implementation. However, coordinating with the Safe and Affordable Drinking Water Fund Program for administration of services fully funded by the GSA is appropriate, and likely more efficient. State Water Board staff are already connected to technical assistance providers, and can ensure a quick and effective response. GSAs have the authority and responsibility to manage groundwater use in a manner that is sustainable, and considers drinking water uses and users, as required under SGMA. Management decisions should be made based on the full costs that the GSA may incur if management decisions lead to impaired wells.

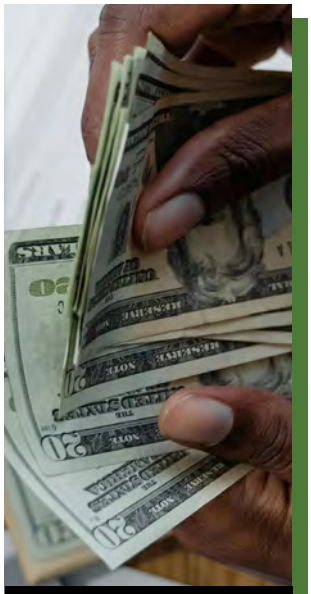


Photo Credit: Tima Miroshnichenko

6c. Agency Coordination

DWR Guidance:

> "Prior to planning or implementing activities to address drinking water impacts, GSAs are encouraged to begin coordination with other local entities such as local water systems and counties. Small water suppliers will have water shortage contingency plans for compliance with SB 55258 as a stand-alone plan and larger suppliers will have a drought contingency plan as part of their urban water management plans. Under SB 552, counties will have a drought resilience plan that addresses domestic wells either as a stand-alone or as part of an existing county plan such as a local hazard mitigation plan, emergency operations plan, climate action plan, or general plan."[11]

[11] Department of Water Resources. Considerations for Identifying and Addressing Drinking Water Well Impacts (March 2023), pg. 18.

Outlined below is a series of questions to guide the GSA through a process to develop Projects and Management Actions for the Well Mitigation Program that are equitable and inclusive, coordinated with other relevant agencies, and includes a funding strategy.

1. Coordinate with Counties on Drought Resilience / SB552 Plans

- Has the GSA identified the County contact for emergency response and/or responsible for drought resilience plans?
- Has the GSA invited the County emergency/drought contact to be part of the GSP implementation process?
- Has the GSA informed the County emergency/drought contact of GSP implementation activities related to drinking water users?
- Has the GSA identified opportunities for collaboration with County emergency / drought staff on projects and management actions?

2. Coordinate with Water Quality Programs

- Has the GSA formed a coordination agreement, Joint Powers Agreement (JPA), or formal Memorandum of Understanding (MOU) with relevant water quality programs (CV-SALTS, Irrigated Lands Regulatory Program, etc.)?
  - » How often does the GSA coordinate with each of these water quality programs?
  - » Is the GSA obtaining updated water quality data through coordination with these water quality programs?
- Is the GSA coordinating with water quality programs to track all contaminants of concern within the basin that can be exacerbated by groundwater use?
  - » Is this coordination conducted via public meeting?
- What action items do the coordinating parties commit to, in order to implement the mitigation program and ensure continuous access to safe and affordable drinking water?

3. Identify Sustainable Funding Sources

- What is the main funding source for the drinking water well mitigation program?
- How many years will this source cover?
- If the previous source cannot be secured or runs out, what pumping fee amount would cover the cost of the program?

Photo Credit: Self-Help Enterprises

- Does this funding cover administrative costs to implement the program?
  - » Is there staff dedicated to implementing the program?
- If the compromised well meets the criteria, will the GSA cover the full costs of the mitigated well?
- Reimbursement processes place undue burden on the well owner. Will the GSA provide upfront funding to cover well mitigation costs?

4. Establish Commitments and Timelines for Mitigation Program Implementation

- What is the GSA's goal for the number of wells to receive mitigation?
- How will the GSA provide emergency bottled water within 24 hours for all well failures?
- What is the GSA's strategy to haul water for longer-term outages?

5. Define Eligibility Criteria and Corrective Actions

- What is the process for determining individual well eligibility? Does the process include a field inspection?
  - » Has the GSA verified well construction and pump setting information, where possible?
  - » Has the GSA defined what level of mitigation is necessary, based on field inspection, to determine static depth to groundwater levels within the impacted well?
    - Has the GSA defined a groundwater level that acts as a trigger, or decision point, at which a well requires remediation?
  - » Has the GSA defined the level of mitigation that is necessary, based on \ field inspection, to determine groundwater quality within the impacted well?

6. Create an Accessible Application Process

- Review examples: 1) Request Form and 2) Online Application
- What documentation does the well user need to demonstrate eligibility?
- Has the application been translated into Spanish and other commonly used languages?
- Are there barriers to users demonstrating past use?
  - » How will the GSA address those barriers?

Photo Credit: Self-Help Enterprises

7. Track and Report Progress

- How often does the public receive information about the mitigation program?
- Are updates provided at GSA board meetings, advisory meetings, and other public meetings?
- Are updates included in annual reports submitted to DWR?

8. Invest in Long-Term Solutions

- What is the GSA's strategy to fund long-term solutions for clusters of shallow wells that are consistently at risk of going dry and/or becoming contaminated?
- What domestic well communities are located within the GSA's boundaries?
  - » Is it feasible to connect the identified domestic wells to a public water system?
- What public water systems are located within your boundaries?
  - » Which public water systems have the capacity to bring on additional connections?
- If a domestic well or cluster of domestic wells cannot be connected to a public water system, what is the best alternative?
  - » Can a new public water system be created?
    - How would the construction of a new public water system be funded?
    - What is the estimated timeline to construct and bring online a new public water system?
    - How will the GSA address on-going operations and maintenance costs of a new public water system?
  - » Can funding be allocated to deepen impacted wells or lower well pumps?
  - » Can funding be allocated for digging a new, deeper well? Can the new well be drilled below the established minimum threshold?
  - » Can funding be allocated to treat contaminated water?
  - » What alternative water source can be used to provide adequate water supply?

Photo Credit: Self-Help Enterprises

SB 552 Minimum Resiliency Requirements reduce the risk of small water suppliers experiencing impacts to drinking water supply due to lowering of groundwater levels. GSAs should consider providing support to small water suppliers to meet these requirements, and thus reduce potential negative impacts to groundwater users

9. Drought Planning, Small Water Suppliers (SB 552)

- Will funding be allocated to support on-going monitoring of the small water system and water quality, per the SB 552 Minimum Resiliency Requirements?
- Has the GSA reviewed the Minimum Resiliency Requirements for small water suppliers under SB 552?
- Has the GSA identified the small water suppliers (between 15-999 connections) that are at risk of water shortage?
  - » Are any small water suppliers located in disadvantaged communities?
  - » Have any small water suppliers experienced water shortage in the past?
  - » Do any small water suppliers have aging or inadequate infrastructure?
  - » How does the GSA communicate with the identified small water suppliers in order to understand the small water suppliers' possible drinking water resilience needs?
  - » Are any small water suppliers in need of the following developments:
    - Additional well or intertie?
    - Adequate water supply, water treatment system, or water flow rate needed to fight fires?
    - Monitoring system to detect groundwater levels?
    - Service connection metering?
    - Backup electrical supply?

Photo Credit: Self-Help Enterprises

Step 7 Continue Engagement and Fill Data Gaps

The purpose of this section is to evaluate the effectiveness of management actions already implemented, and propose useful and/or necessary changes to the program based on that evaluation. It is important to address all data gaps identified through the public engagement process, such as groundwater levels, water quality, and impacts to drinking water users.

DWR Guidance:

> "Engage drinking water well users during Plan updates and implementation of projects and management actions; continue filling data gaps that could support and improve the understanding of current and future impacts to drinking water well users.[12]"

The questions below will guide the GSA through establishing a plan to fill those data gaps:

1. What instruments have been used to evaluate the effectiveness of this program (e.g., surveys, feedback from program participants, etc.)? What were the results of that evaluation?
2. What process will the GSA use to identify data gaps across the basin?
3. What technologies and/or software are being used to populate and monitor data?
4. How have data points previously been selected, and what events triggered awareness of data gaps?
5. How will data gaps in data be prioritized for resolution?
6. What is the process to resolve identified data gaps? Has the GSA coordinated with the relevant state and local agencies?
7. How will the GSA modify the plan, projects, and management actions with new data?
8. How will the GSA solicit feedback from interested parties/stakeholders as the plan evolves and is updated?

[12] Department of Water Resources. Considerations for Identifying and Addressing Drinking Water Well Impacts (March 2023), pg. 4.

PART 2: WELL MITIGATION PROGRAM PLANNING
RESPONSE FORM

Step 1 Identify drinking water users

1. Has the GSA developed a well registration program (that is, a list of domestic wells and public supply wells in the Subbasin)?

   ☐ Yes ☐ No

2. What domestic well communities (e.g., communities relying on domestic wells, or a group of users sharing a well) are located within the GSA's boundaries? (Please include a map)

   List communities below:

   Link to map:

3. How many domestic wells are located in each community?

4. What public water systems are located within the GSA's boundaries? (Please include a map)

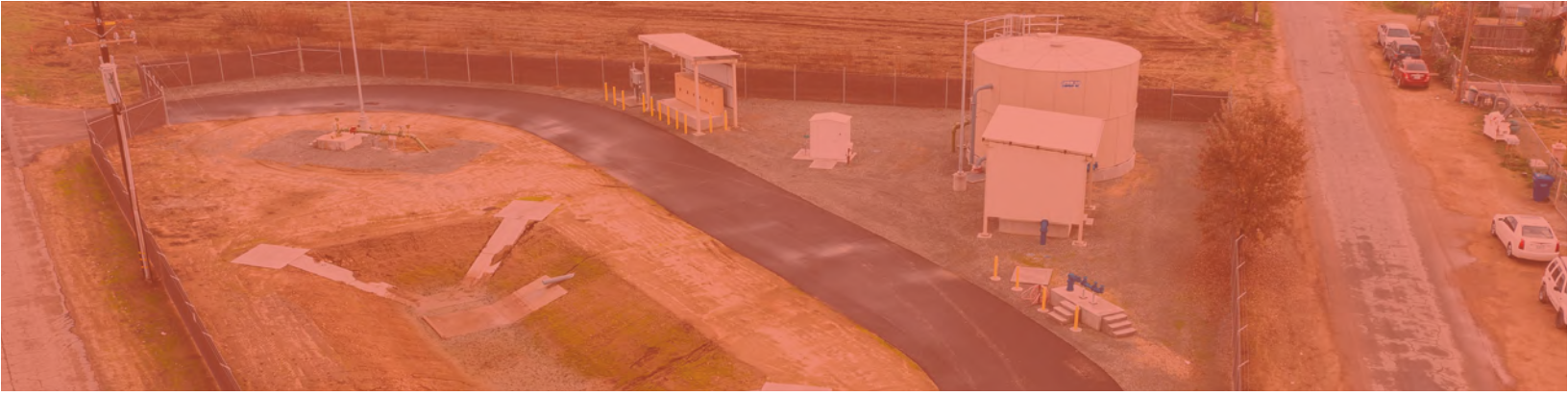
   List public water systems:

   Link to map:

5. How many wells does the public water system have?

6. Have you discovered a new cluster of domestic wells that wasn't identified in your latest GSP update?

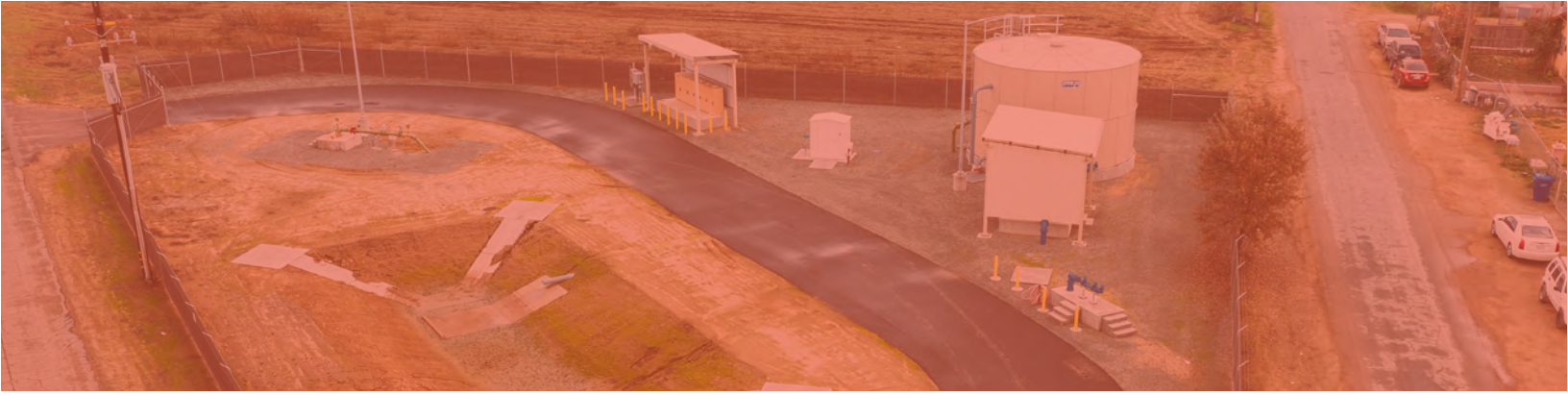
   ☐ Yes ☐ No



7. How could these wells impact the viability of your earlier domestic well impact analysis and previously proposed SMC (including minimum thresholds and measurable objectives)?

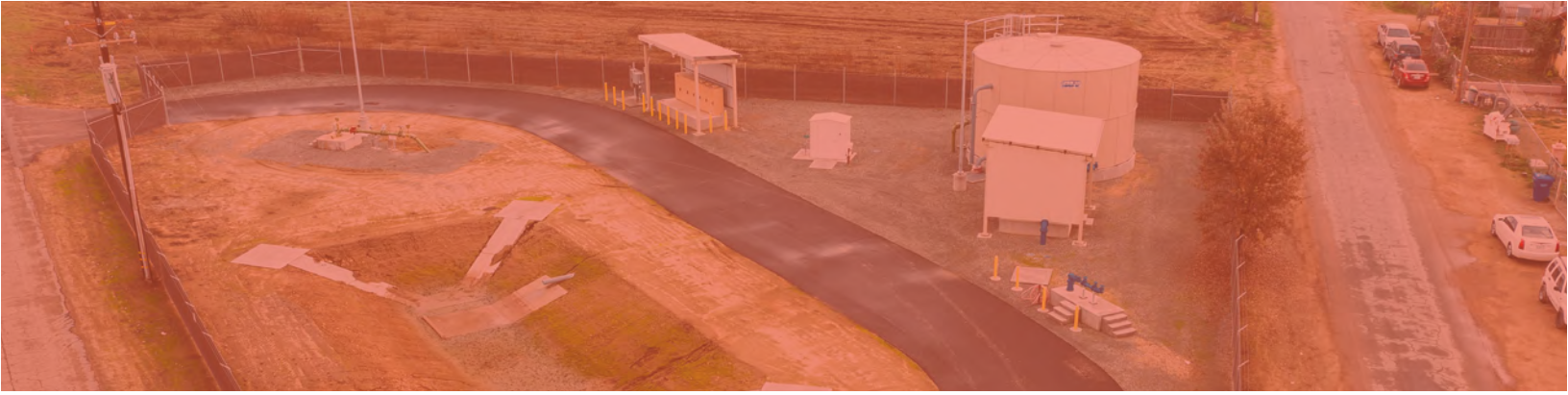
8. How many DACs are located within the GSA's boundaries?

9. Provide the following information for each identified DAC:
   - Name of DAC #1
   - Population Size:
   - Source of water:
   - Land Area or Parcel Size (acres):
   - Number of Households/Parcel:
   - Estimated Water Use (AC/ft per year):
   - Contact or local community-based organization #1:
     - » Name
     - » Email/phone number
     - » Address
     - » Last contacted (Should make contact at least 5 times per year)



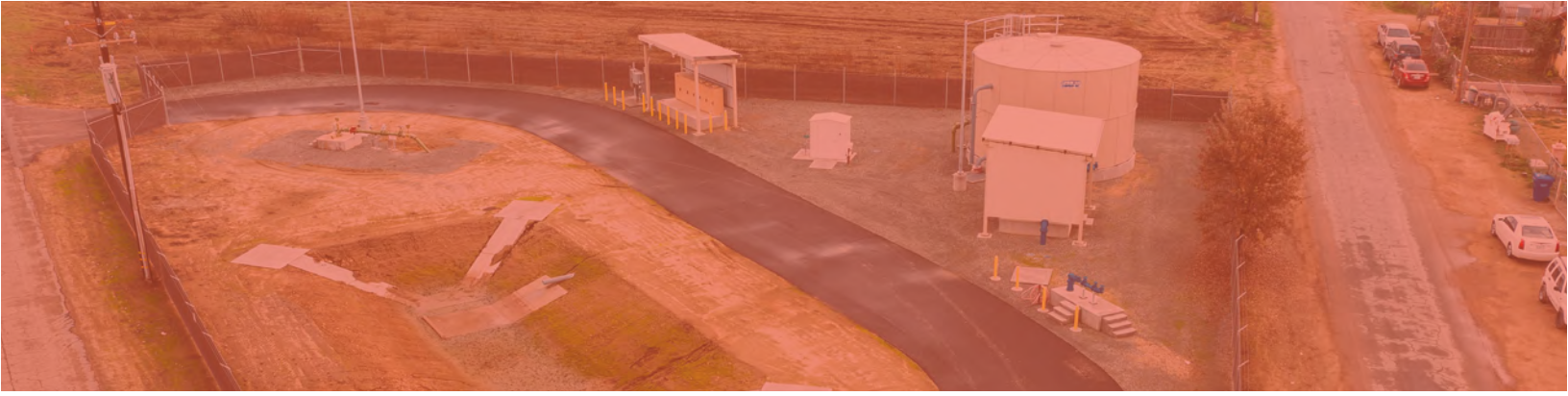
- Contact or local community-based organization #2:
  - » Name
  - » Email/phone number
  - » Address
  - » Last contacted (Should make contact at least 5 times per year)
- Contact or local community-based organization #3:
  - » Name
  - » Email/phone number
  - » Address
  - » Last contacted (Should make contact at least 5 times per year)

- Name of DAC #2
- Population Size:
- Source of water:
- Land Area or Parcel Size (acres):
- Number of Households/Parcel:
- Estimated Water Use (AC/ft per year):
- Contact or local community-based organization #1:
  - » Name
  - » Email/phone number
  - » Address
  - » Last contacted (Should make contact at least 5 times per year)
- Contact or local community-based organization #2:
  - » Name
  - » Email/phone number



  - » Address
  - » Last contacted (Should make contact at least 5 times per year)
- Contact or local community-based organization #2:
  - » Name
  - » Email/phone number
  - » Address
  - » Last contacted (Should make contact at least 5 times per year)
- Contact or local community-based organization #3:
  - » Name
  - » Email/phone number
  - » Address
  - » Last contacted (Should make contact at least 5 times per year)

- Name of DAC #3
- Population Size:
- Source of water:
- Land Area or Parcel Size (acres):
- Number of Households/Parcel:
- Estimated Water Use (AC/ft per year):
- Contact or local community-based organization #1:
  - » Name
  - » Email/phone number
  - » Address
  - » Last contacted (Should make contact at least 5 times per year)

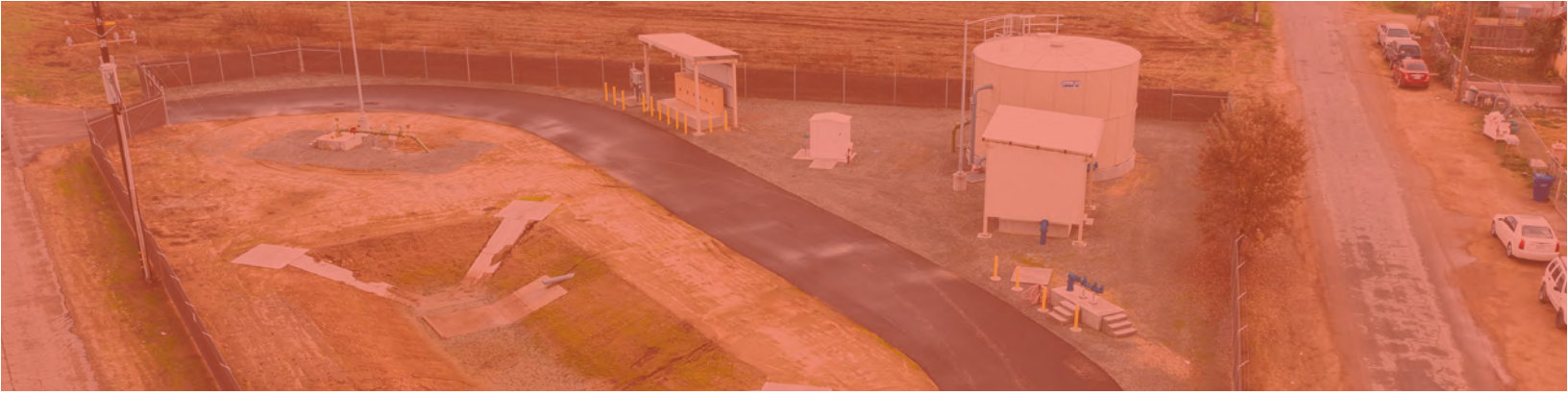


- Contact or local community-based organization #2:
  - » Name
  - » Email/phone number
  - » Address
  - » Last contacted (Should make contact at least 5 times per year)
- Contact or local community-based organization #3:
  - » Name
  - » Email/phone number
  - » Address
  - » Last contacted (Should make contact at least 5 times per year)

Step 2 Perform Public Outreach

2a. Planning for Public Outreach:

1. Title of meeting or project:
2. Date outreach will begin:
3. If meeting, date and time of meeting(s):
   - Is this a reasonable and accessible day AND time for the majority of interested parties, including working residents, to attend this meeting? ☐ Yes ☐ No
   - Will meetings include translation / interpretation support? ☐ Yes ☐ No
4. Does this translation / interpretation support include written translation, verbal, or both:
5. Location of the meeting:
   - Is the meeting venue accessible to the majority of interested parties? ☐ Yes ☐ No
   - Are you providing a virtual/call-in option? ☐ Yes ☐ No



6. Do you have a list of potential interested parties and stakeholders? ☐ Yes ☐ No

Check off which of the following outreach methods you will use, and record information for each outreach effort:

☐ Conducting door-to-door outreach

i. Places, dates, and times conducted: _____

ii. Was outreach conducted at accessible days/times for the public? ☐ Yes ☐ No

iii. Translation/ interpretation provided (list what type(s)): _____

☐ Attending existing community meetings/events to share meeting details and/or information about how to engage.

i. Meeting/events where details were shared (include organization hosting meeting, title of meeting, and date of meeting): _____

ii. Translation/ interpretation provided: _____

☐ Discussing drinking water mitigation with decision-makers of local governing boards (e.g. Community Services Districts, City Councils, etc.).

i. Making sure the topic is listed on publicly posted agendas for those meetings.

☐ Sending Direct Mail Fliers or Announcements with response or follow-up options.

i. Dates mailed: _____

ii. Distribution list (include link): _____

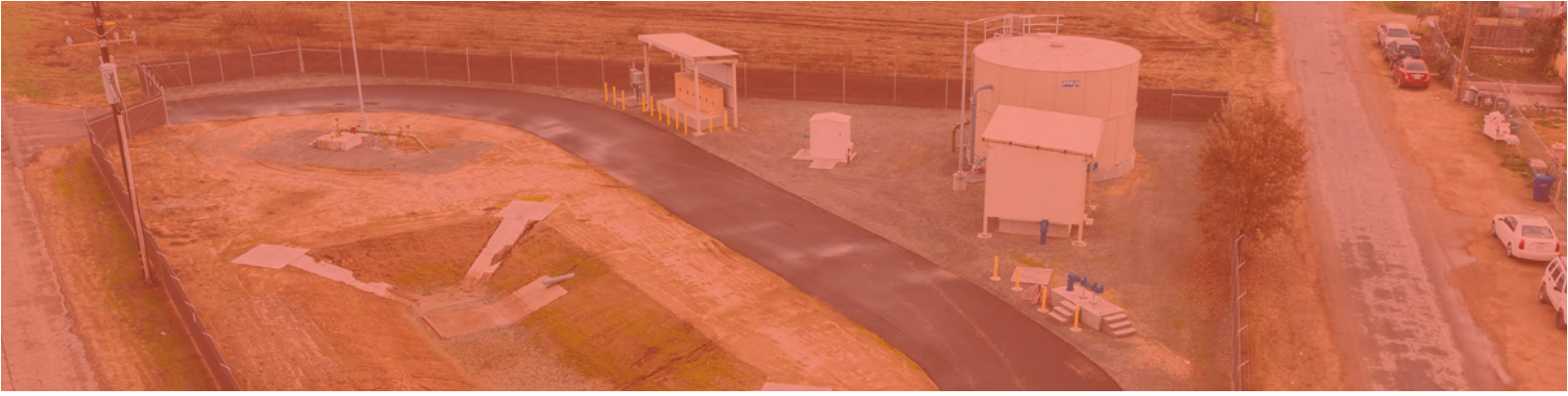
iii. Translation provided: ☐ Yes ☐ No

1. If yes, list which language(s): _____

☐ Distributing information/flyers about meetings or informational materials on community message boards at high traffic locations, such as local grocery stores, community centers, religious centers, libraries, water filling stations, and gas stations

i. List & link item to be posted: _____

ii. List locations to be posted: _____



iii. Translation provided: ☐ Yes ☐ No

1. If yes, list which language(s): _____

☐ Sending a media advisory or press release to local media outlets (e.g., radio and television; include non-English language outlets, where available)

i. List the media outlets reached with dates: _____

ii. Translation provided: ☐ Yes ☐ No

iii. If yes, list which language(s): _____

☐ Posting about drinking water well mitigation, or meetings, on social media outlets (e.g., Facebook event/ad/post, Instagram, Twitter, NextDoor, etc.):

i. Translation provided: ☐ Yes ☐ No

ii. If yes, list which language(s): _____

☐ Sending announcements through a mobile messaging platform (e.g.,ThruText)

i. Date(s) sent: _____

ii. Translation provided: ☐ Yes ☐ No

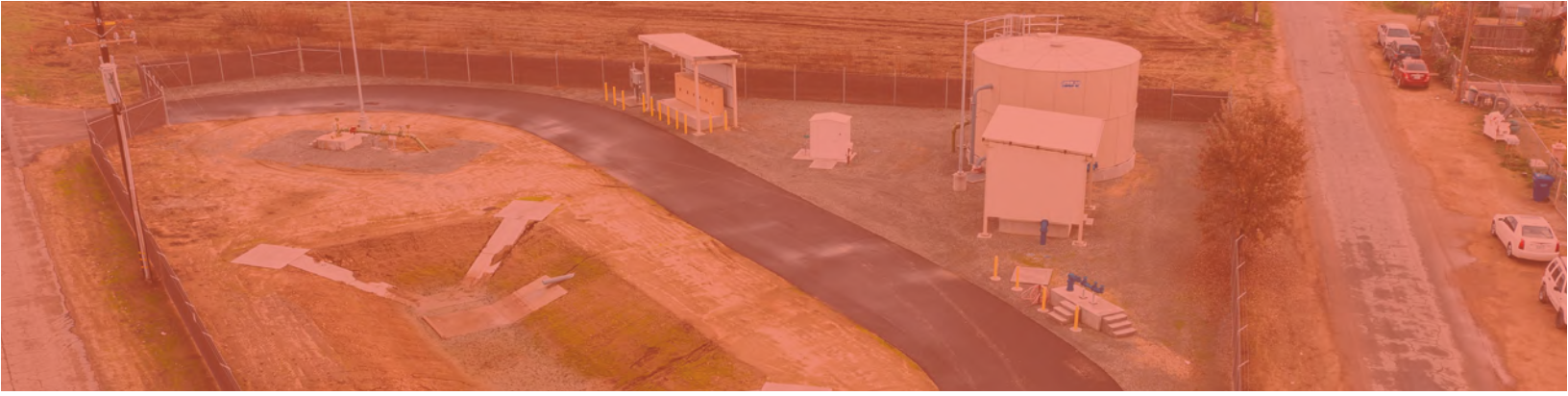
iii. If yes, list which language(s): _____

☐ Using other methods: (for example: outreach to other trusted spaces used by the community such as family resource centers, schools, etc.); please describe:

_____

7. Which potential participation barriers is your GSA specifically trying to address?

_____



8. Has the general public been notified about the meeting / project? ☐ Yes ☐ No

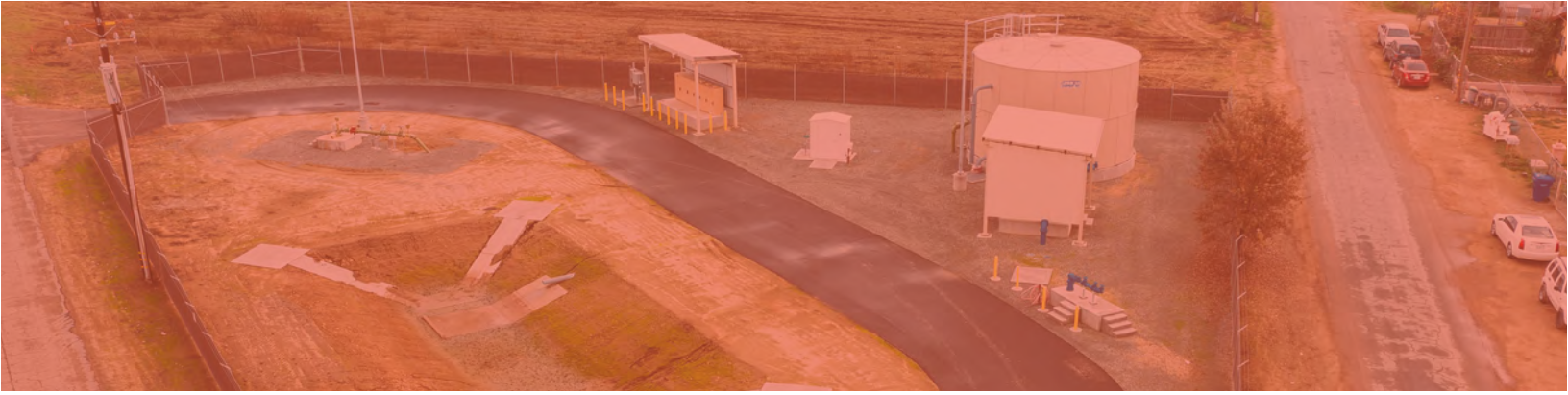
   - If yes, how and when (date/s) was the public notified?

     Method: _____ Date: _____
     Method: _____ Date: _____
     Method: _____ Date: _____

   - If no, what is the justification for not notifying the public?

9. What avenues are being provided for interested parties to provide comments and feedback? (Examples: dedicated time in the meeting open for public comment, a written/online form in which comments/ feedback can be provided, contact information for someone to speak directly with, etc.)

10. How will interested parties' comments/ feedback be incorporated into the project?



2b. Engaging in Public Outreach (duplicate this page for additional engagement efforts)

Engagement Tracking Form

1. Title of meeting or project:

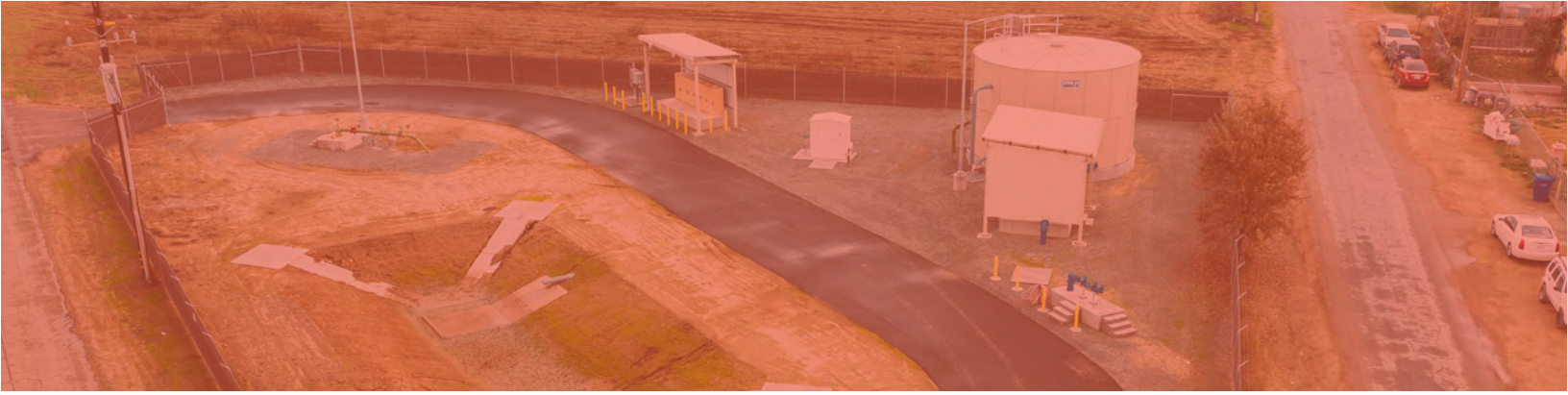
2. Name of organization / individual who will lead public outreach / provide feedback:

3. Contact information for organization or individual contact for the event:
   a. Email:
   b. Phone:

4. Community/ies represented:

5. Is this defined as a disadvantaged community? ☐ Yes ☐ No

6. Outreach method(s) used to invite the community (e.g., door-to-door, public event, flyering, phone, email, etc.):



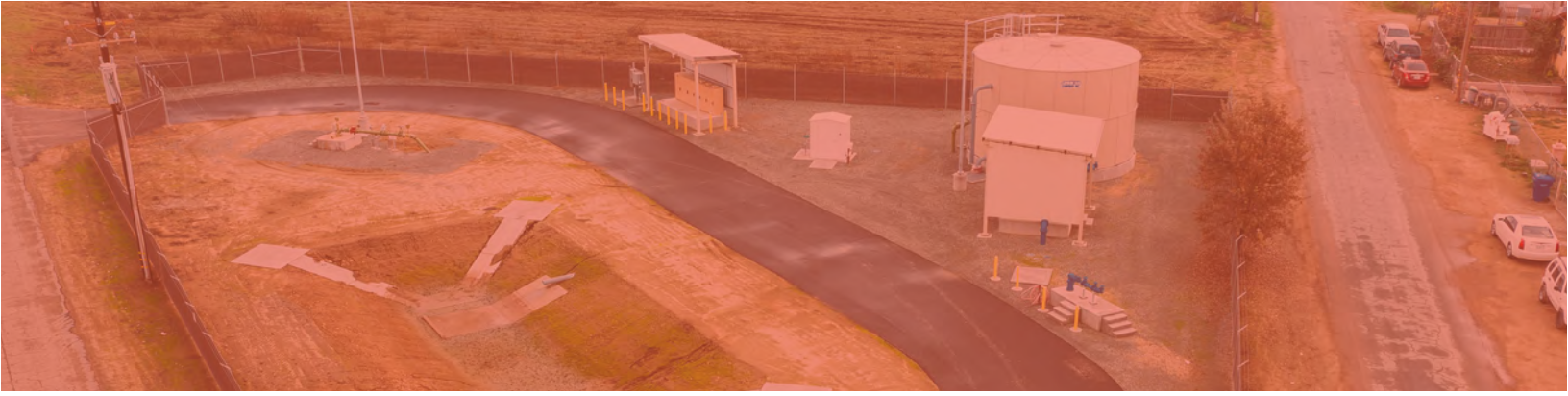
Step 3 Understand basin conditions

Check off which tools & resources you used for Step 3:

- ☐ SGMA Data Viewer
- ☐ California's Groundwater Live
- ☐ Online System of Well Completion Reports (OSWCR) database
- ☐ Dry Well Reporting System
- ☐ Water Shortage Vulnerability Tool
- ☐ CWC Drinking Water Tool
- ☐ Groundwater Ambient Monitoring and Assessment
- ☐ SGMA Groundwater Quality Visualization Tool

Basin Conditions Responses:

1. How are disadvantaged communities impacted by groundwater level conditions (i.e., at which point are domestic wells going dry) in the basin?
   a. Description
   b. Map of impacts (insert link):
2. How are disadvantaged communities impacted by water quality degradation in the basin?
   a. Description
   b. Map of impacts (insert link):
3. How are disadvantaged communities impacted by subsidence in the basin?
   a. Description
   b. Map of impacts (insert link):



4. How are disadvantaged communities impacted by seawater intrusion in the basin?
   a. Description
   b. Map of impacts (insert link):
5. What new information has been gathered through outreach regarding groundwater conditions in disadvantaged communities (e.g., number of wells impacted since 2015, water quality impacts, subsidence impacts, current issues with accessing safe drinking water, etc.)?
6. What, if any, gaps are you finding as you analyze basin conditions (e.g., no monitoring wells near small water systems, domestic wells, DACs, etc.)?

Step 4 Evaluate monitoring network + representative monitoring sites

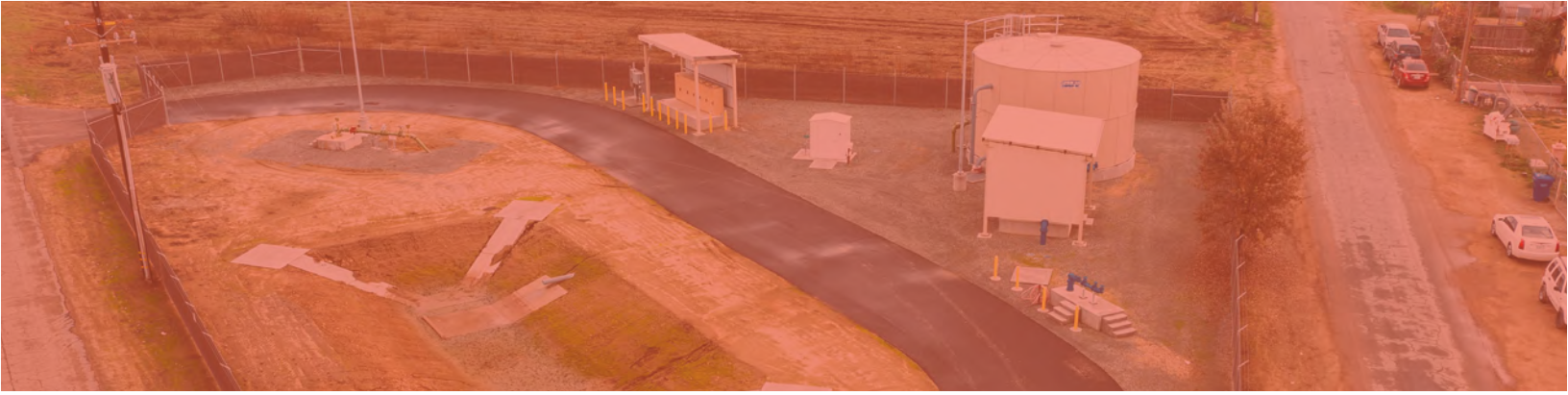
4a. Map all DACs, domestic wells, and small water systems in the subbasin.

Link to map:

4b. Use an overlay system to determine proximity of both monitoring network wells and representative monitoring wells to DACs, domestic wells, and small water systems.

Link to map:

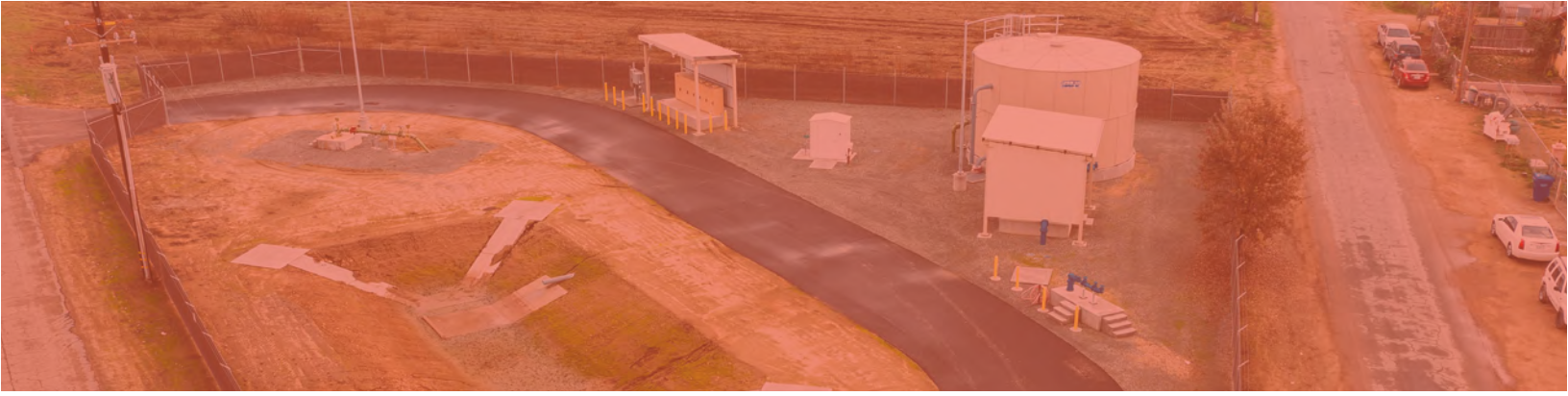
4c. Identify and address any data gaps in your monitoring network.
Describe the GSA's plan for addressing monitoring network gaps:



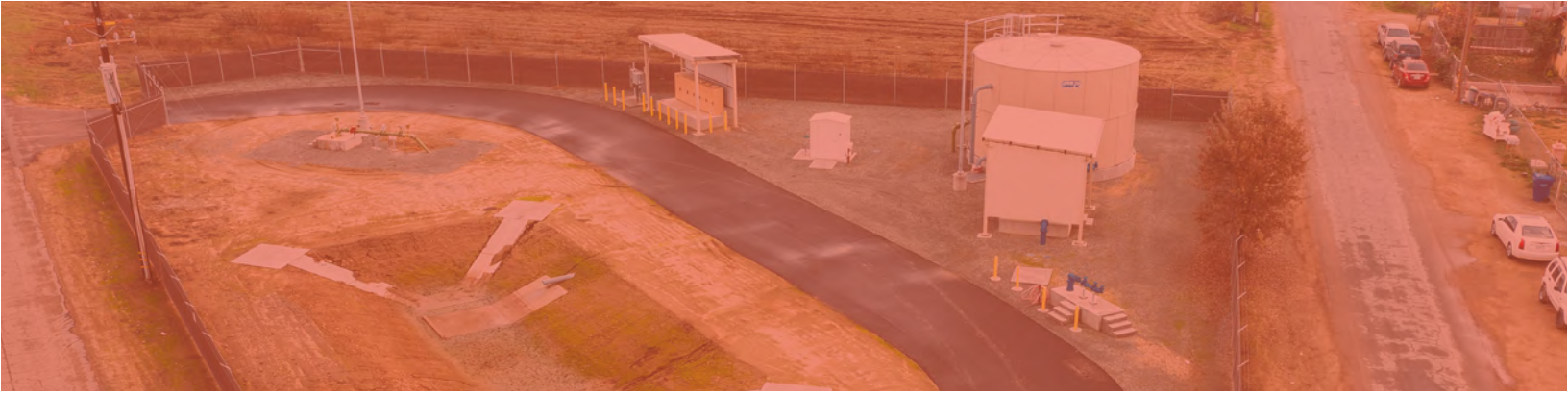
Step 5 Evaluate Sustainable Management Criteria

Complete this table for your Well Mitigation Trigger System:

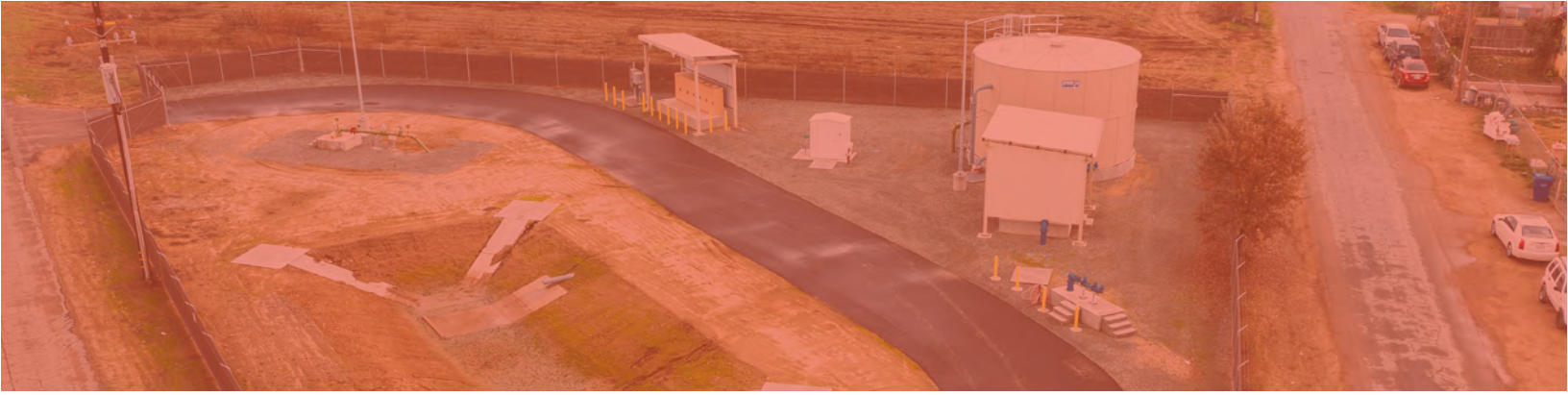
TRIGGER SYSTEM			
Trigger	**Groundwater Conditions & Impacts**	**Quantifiable Measures**	**Corrective Actions**
Green Light			



TRIGGER SYSTEM			
Trigger	**Groundwater Conditions & Impacts**	**Quantifiable Measures**	**Corrective Actions**
Yellow Light			



TRIGGER SYSTEM			
Trigger	**Groundwater Conditions & Impacts**	**Quantifiable Measures**	**Corrective Actions**
Red Light			

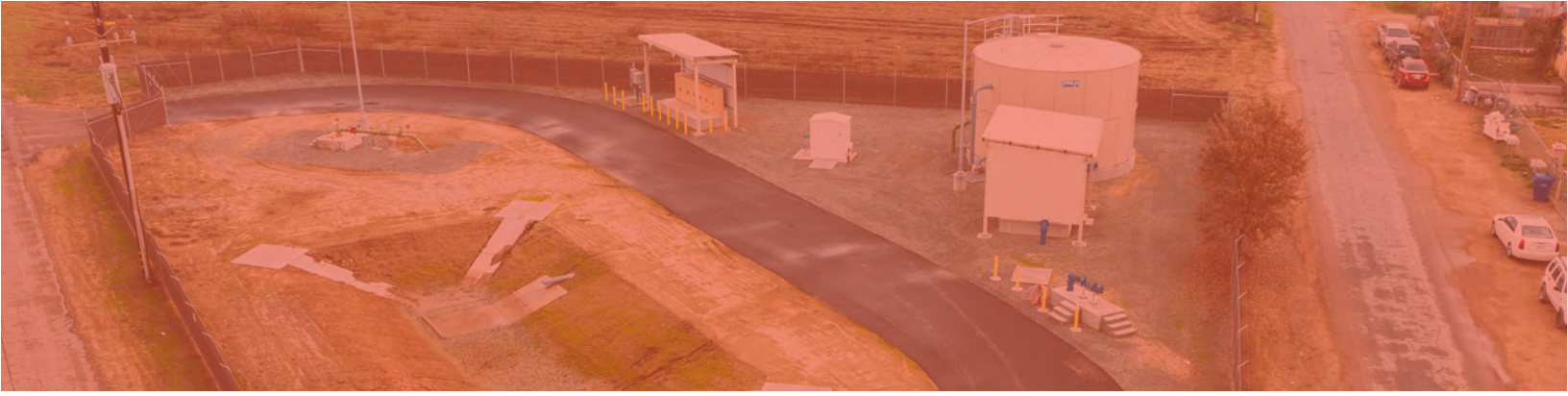


Step 6 Develop and Implement Projects and Management Actions: Drinking Water Mitigation Program

1. Coordinate with Counties on Drought Resilience / SB 552 Plans
   a. Identify the County contact for emergency response and/or responsible for drought resilience plans:
      i. Name:
      ii. Phone:
      iii. Email:
   b. Has the GSA invited the County emergency/drought contact to be part of the GSP implementation process? ☐ Yes ☐ No
   c. Has the GSA informed the County emergency/drought contact of GSP implementation activities related to drinking water users? ☐ Yes ☐ No
      i. Contact method:
      ii. Date:
   d. Describe any opportunities for collaboration the GSA has identified with County emergency / drought staff on projects and management actions:

2. Coordinate with Water Quality Programs
   a. List the relevant water quality programs (CV-SALTS, Irrigated Lands Regulatory Program, etc.) that the GSA has formed coordination agreements, Joint Powers Agreements (JPA), or formal Memoranda of Understanding (MOU):

Agency:		Agreement Type:	
Agency:		Agreement Type:	
Agency:		Agreement Type:	



b. How often does the GSA coordinate with each of these water quality programs?

Program: _____ Coordination Interval: _____

Program: _____ Coordination Interval: _____

Program: _____ Coordination Interval: _____

c. Is the GSA obtaining updated water quality data through coordination with these water quality programs? ☐ Yes ☐ No

d. Is the GSA coordinating with water quality programs to track all contaminants of concern within the basin that can be exacerbated by groundwater use? ☐ Yes ☐ No

i. Is this coordination conducted via public meeting? ☐ Yes ☐ No

e. What action items do the coordinating parties commit to, in order to implement the mitigation program and ensure continuous access to safe and affordable drinking water?

i. Parties: _____

ii. Action items:

_____

3. Identify Sustainable Funding Sources

a. What is the main funding source for the drinking water well mitigation program?

_____

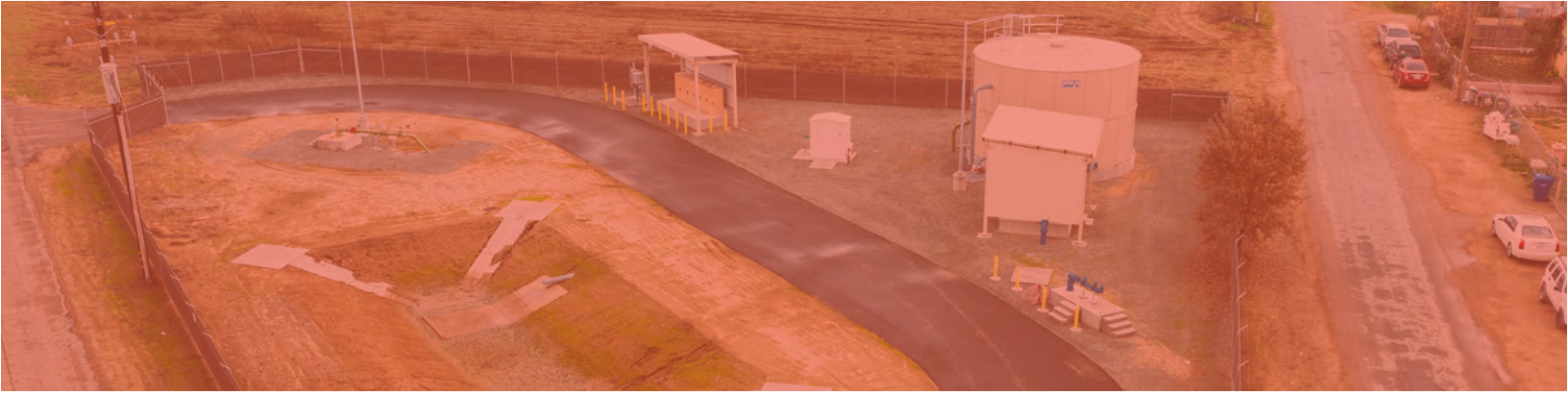
b. How many years will this source cover? _____

c. If the previous funding source cannot be secured or runs out, what pumping fee amount would cover the cost of the program? $ _____

d. Does this funding cover administrative costs to implement the program? Is there staff dedicated to implementing the program? ☐ Yes ☐ No

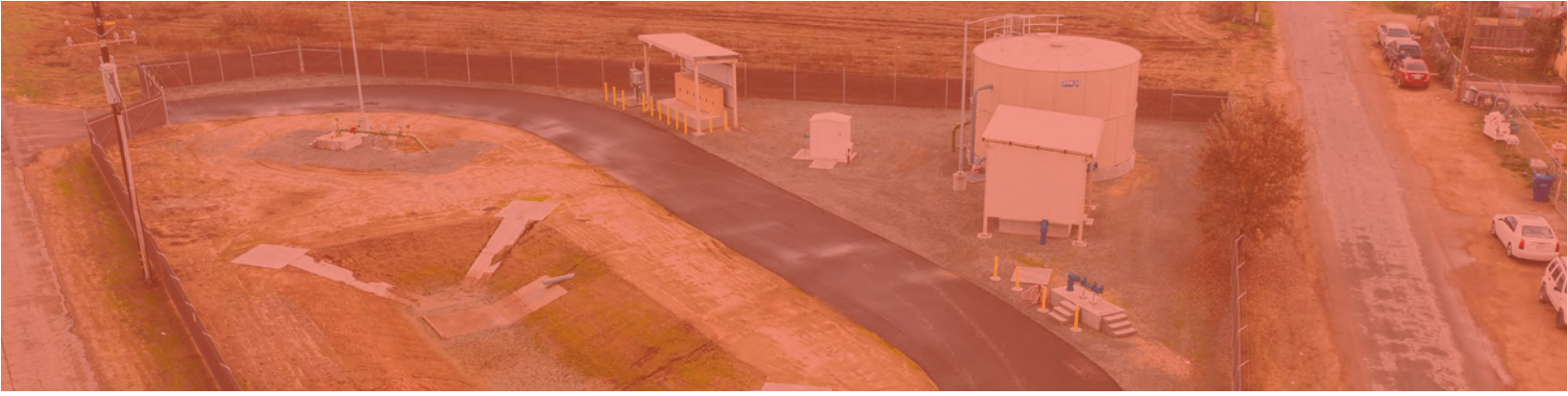
e. If the compromised well meets the criteria, will the GSA cover the full costs of the mitigated well? ☐ Yes ☐ No

f. Reimbursement processes place undue burden on the well owner. Will the GSA provide upfront funding to cover well mitigation costs? ☐ Yes ☐ No



4. Establish Commitments and Timelines for Mitigation Program Implementation
   a. What is the GSA's goal for the number of wells to receive mitigation?
   b. How will the GSA provide emergency bottled water within 24 hours for all well failures?
   c. Describe the GSA's strategy to haul water for longer-term outages?
5. Define Eligibility Criteria and Corrective Actions
   a. Describe the process for determining individual well eligibility:
      i. Does the process include a field inspection? ☐ Yes ☐ No
   b. Has the GSA verified well construction and pump setting information, where possible?

      ☐ Yes ☐ No
   c. Define what level of mitigation is necessary, based on field inspection, to determine static depth to groundwater levels within the impacted well:
      i. Define what groundwater level acts as a trigger, or decision point, at which a well requires remediation?



ii. Define the level of mitigation that is necessary, based on field inspection, to determine groundwater quality within the impacted well:

6. Create an Accessible Application Process

   a. List all documentation a well user needs in order to demonstrate eligibility:

   b. Has the application been translated into Spanish and other commonly used languages?

   ☐ Yes ☐ No

   c. Which other languages?

   d. What, if any, barriers exist for users to demonstrate past use?

   e. Explain how the GSA will address those barriers:

7. Track and Report Progress

   a. How often does the public receive information about the mitigation program?

   b. Are updates provided at GSA board meetings, advisory meetings, and other public meetings? ☐ Yes ☐ No

   c. Are updates included in annual reports submitted to DWR? ☐ Yes ☐ No

8. Invest in Long-Term Solutions

   a. Explain the GSA's strategy to fund long-term solutions for clusters of shallow wells that are consistently at risk of going dry and/or becoming contaminated:

   b. List the domestic well communities located within the GSA's boundaries:

      i. Is it feasible to connect the identified domestic wells to a public water system?

      ☐ Yes ☐ No

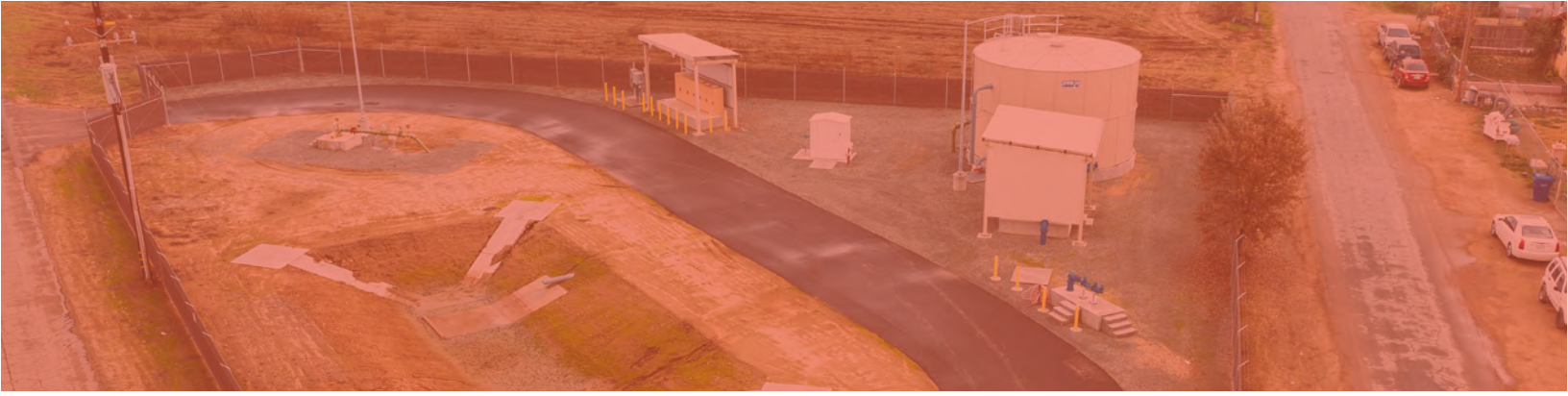
         1. What public water systems are located within your boundaries?

            • Which of these have the capacity to bring on additional connections?

      ii. If a domestic well or cluster of domestic wells cannot be connected to a public water system, describe the best alternative:

      iii. Can a new public water system be created? ☐ Yes ☐ No

            • Explain how the construction of a new public water system would be funded?



- What is the estimated timeline to construct and bring online a new public water system?

- Explain how the GSA will address on-going operations and maintenance costs of a new public water system:

iv. Can funding be allocated to deepen impacted wells or lower well pumps? ☐ Yes ☐ No

- Can funding be allocated for digging a new, deeper well? ☐ Yes ☐ No

v. Can the new well be drilled below the established minimum threshold? ☐ Yes ☐ No

vi. Can funding be allocated to treat contaminated water? ☐ Yes ☐ No

vii. What alternative water source(s) can be used to provide adequate water supply?

9. Drought Planning, Small Water Suppliers (SB 552)

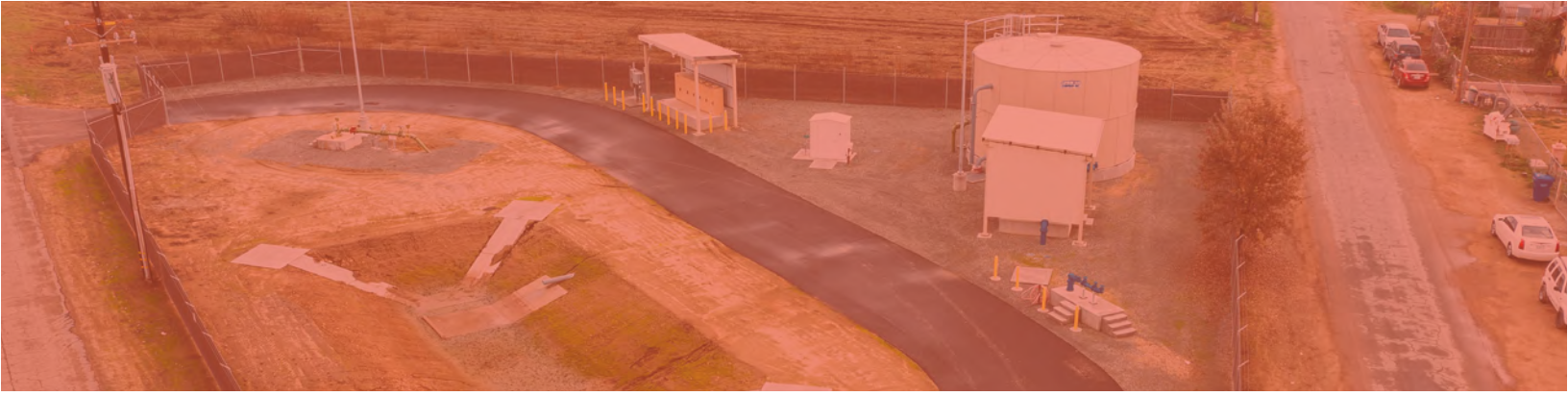
a. How much funding will be allocated to support on-going monitoring of the small water system and water quality, per the SB 552 Minimum Resiliency Requirements?

i. Has the GSA reviewed the Minimum Resiliency Requirements for small water suppliers under SB 552? ☐ Yes ☐ No

ii. List the identified small water suppliers (between 15-999 connections) that are at risk of water shortage:

- Check off those that are located in disadvantaged communities:

- Which, if any, small water suppliers experienced water shortage in the past?

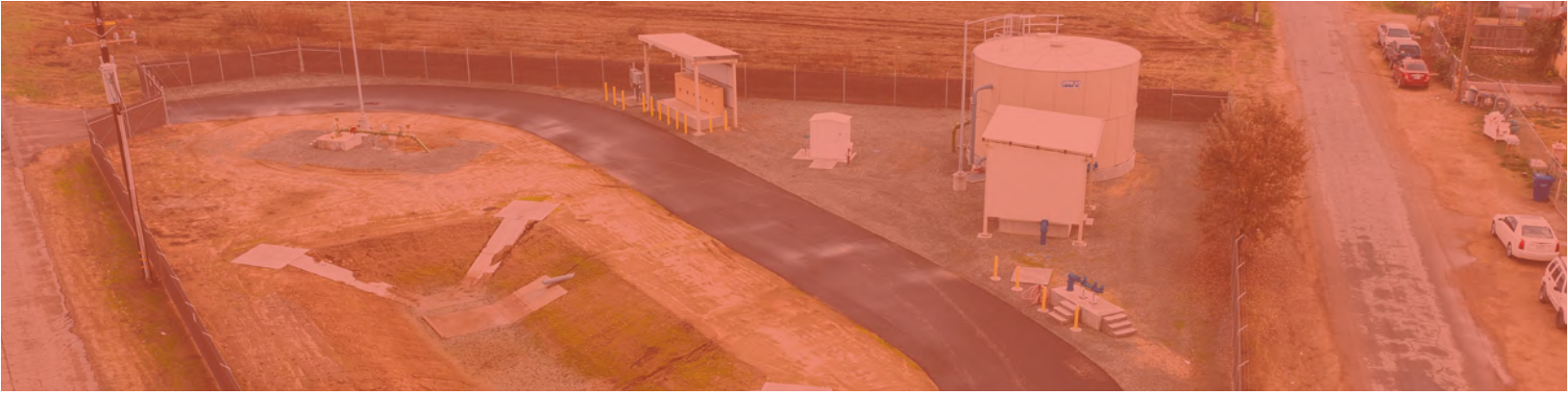


- Which, if any, small water suppliers have aging or inadequate infrastructure?

iii. Describe how the GSA communicates with the identified small water suppliers in order to understand the small water suppliers' possible drinking water resilience needs:

iv. Check off which of the following developments are needed by small water suppliers:

- ☐ Additional well or intertie
- ☐ Adequate water supply, water treatment system, or water flow rate needed to fight fires
- ☐ Monitoring system to detect groundwater levels
- ☐ Service connection metering
- ☐ Backup electrical supply



Step 7 Continue Engagement and Fill Data Gaps

1. List the instruments that have been used to evaluate the effectiveness of this program (e.g., surveys, feedback from program participants, etc.), and the results of that evaluation:

   Instrument:

   Result:

   Instrument:

   Result:

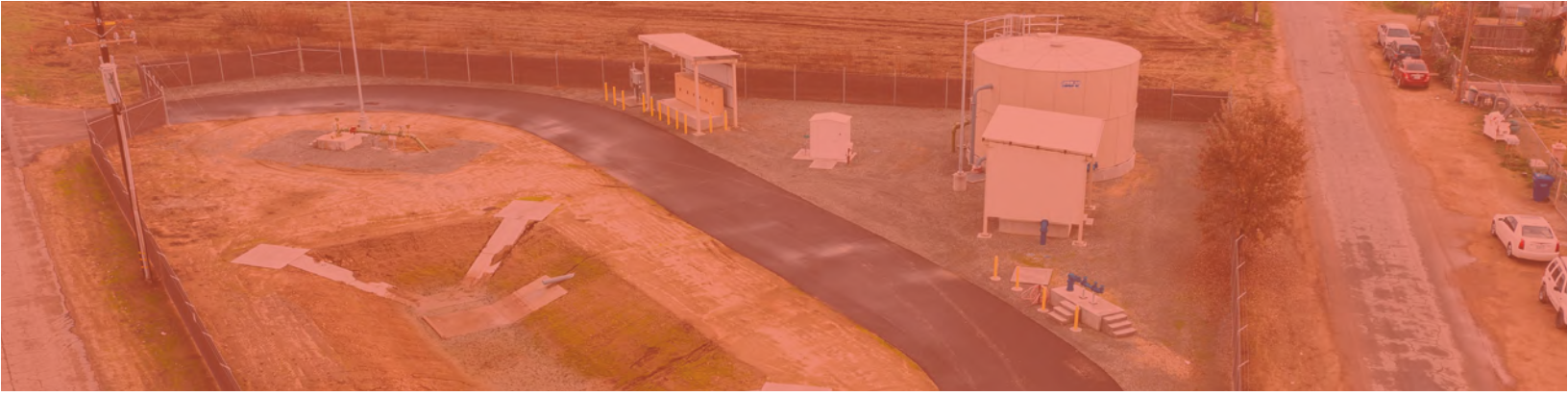
   Instrument:

   Result:

2. Describe the process that the GSA will use to identify data gaps across the basin.

3. List the technologies and/or software the GSA is using to populate and monitor data:

4. Describe how data points have previously been selected:



5. List events triggered awareness of data gaps:

6. Describe how the GSA will prioritize which data gaps to resolve:

7. Describe the process the GSA will follow to resolve identified data gaps:

8. Which relevant state and local agencies does the GSA need to coordinate with?

9. Explain how the GSA will modify the plan, projects, and management actions with new data:

10. Describe how the GSA will solicit feedback from interested parties / stakeholders as the plan evolves and is updated:

PART 3: APPENDIX

A. Additional Resources

Mitigation:

DWR Guidance

Framework for a Drinking Water Well Impact Mitigation Program

Well Mitigation Case Studies

Consolidation:

US Water Alliance resources

Outreach Materials:

SGMA Glossary (English)

SGMA Glossary (Spanish)

GSA Factsheets

B. Cover Page and Header Photo Credits

Cover Page Photos
Water Pouring on Pipe, Photo Credit: Nitin Sharma
Grass Texture, Photo Credit: DWR Website
Body of Water Photography, Photo Credit: Lisa Fotios

Header Images
Rain Drops, Photo Credit: Pixabay
Ag - Aerial, Photo Credit: Self-Help Enterprises
Recharge Project, Photo Credit: Self-Help Enterprises

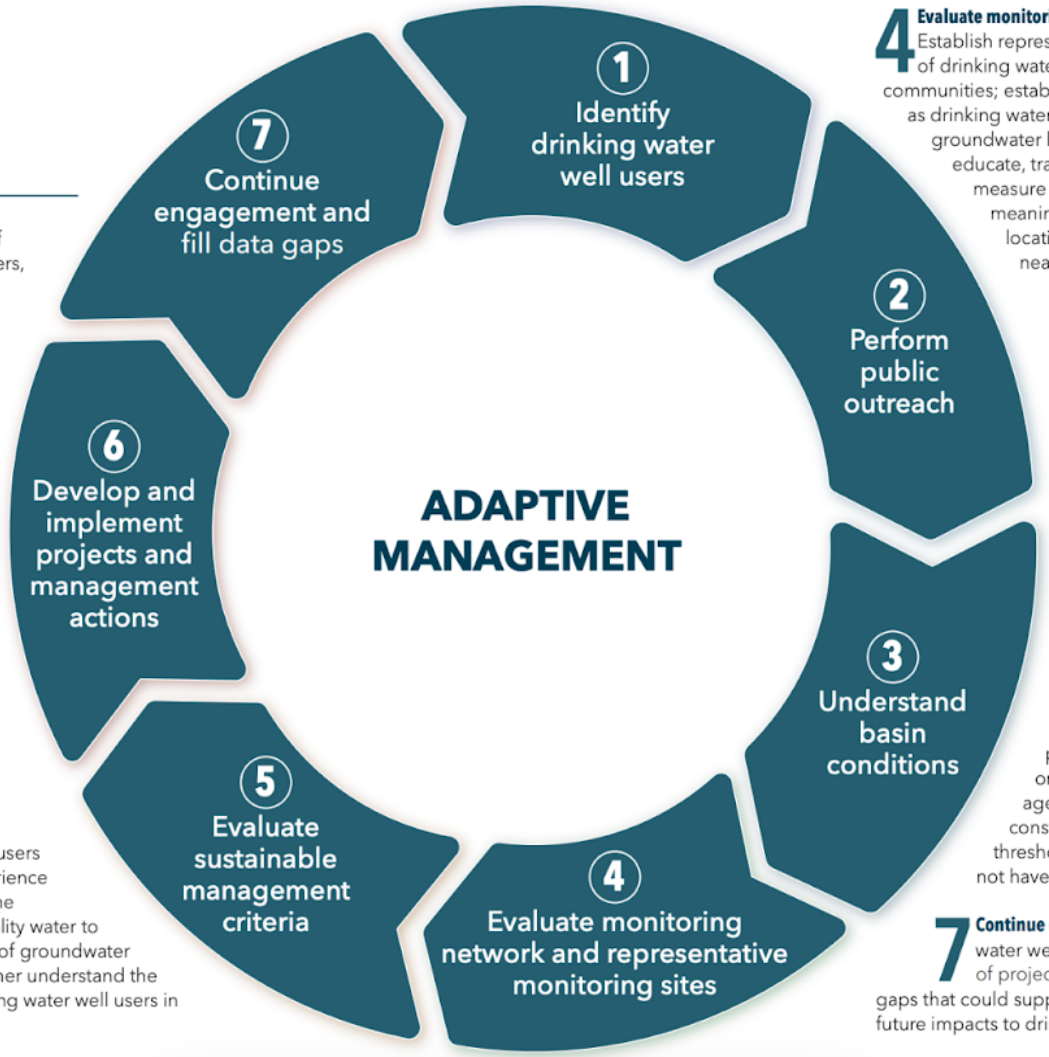
C. Complete DWR Infographic: Considering Drinking Water Users Throughout SGMA Implementation

Considering Drinking Water Users Throughout SGMA Implementation

1 Identify drinking water well users: Identify all types of drinking water well users, including de minimis users, domestic wells, state small water systems, small water systems, public and community water systems, and Tribes that rely on groundwater for drinking water; do not exclude known drinking water well users; establish a thorough understanding of the location and construction details of all drinking water wells.

2 Perform public outreach: Direct outreach to drinking water well users with a meaningful approach for how to engage and involve community members and organizations in decision-making; meet the community in suitable locations and at times when community members are available; communicate in the preferred language of drinking water well users; provide materials so community members can engage and understand technical information for a non-technical audience.

3 Understand basin conditions: Conduct well susceptibility or vulnerability analyses for all drinking water well users; do not exclude subsets of drinking water well users in assessing groundwater conditions; analyze the number of drinking water well users and/or percentage of users in the basin that may experience impacts if future water level conditions were to reach the minimum threshold; analyze the potential for poor quality water to affect drinking water well users in the future as a result of groundwater pumping in association with Plan implementation; further understand the basin conditions of the shallow aquifers used by drinking water well users in relation to the entirety of the basin.



4 Evaluate monitoring network and representative monitoring sites: Establish representative monitoring sites near high densities of drinking water well users, DACs, SDACs, or other rural communities; establish representative wells with similar depths as drinking water wells to be able to monitor and measure groundwater levels and conditions for drinking water well users; educate, train, and empower drinking water well owners to measure water levels, report to GSA, and understand the meaning of groundwater levels and conditions at their well locations, including what the minimum threshold is at or near their well's location.

5 Evaluate sustainable management criteria: Establish and revise sustainable management criteria based on analysis of understanding of basin conditions and considering potential impacts to drinking water well users; if minimum thresholds are set below 2015 groundwater levels, consider projects and management actions to address impacts or carefully justify how unaddressed impacts are consistent with the basin's sustainability goal.

6 Develop and implement projects and management actions: Support drinking water well users to have a long-term, reliable water supply with projects and management actions that address impacts; avoid projects and management actions that exclude certain drinking water well users and ensure that the benefits of projects and management actions are not arbitrary or inequitable; coordinate with local well permitting agencies to ensure new drinking water wells are constructed to provide reliable supply under minimum threshold conditions and that new, large supply wells will not have impacts on nearby drinking water wells.

7 Continue engagement and fill data gaps: Engage drinking water well users during Plan updates and implementation of projects and management actions; continue filling data gaps that could support and improve the understanding of current and future impacts to drinking water well users.