Framework for a Drinking Water Well Impact Mitigation Program

Written by Self-Help Enterprises, Leadership Counsel for Justice and Accountability, and the Community Water Center

Dear Reader,

This tool was developed to aid Groundwater Sustainability Agencies (GSAs) in the development and implementation of their Groundwater Sustainability Plans (GSPs). The Sustainable Groundwater Management Act (SGMA) tasks GSAs with the important responsibility of protecting our precious shared groundwater resources. As GSAs navigate these previously uncharted waters, one thing is clear: as GSAs decide how to bring their local areas into compliance with SGMA, they must do so in a way that protects drinking water resources. SGMA requires GSAs to consider all beneficial uses and users of groundwater as they create and implement GSPs, and California law lists domestic use of water as the highest priority of use. At the same time, domestic water use is at the highest risk contamination and loss of water supply. The future of families on shallow private domestic and small community water systems wells hangs in the balance as GSAs decide whether and 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.

This framework provides a clear roadmap for how a GSA can best structure its data gathering, monitoring network and management actions to proactively monitor and protect drinking water wells, and mitigate impacts should they occur. We hope GSAs can use this framework as a reference when developing and implementing their GSPs.

Sincerely,

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Management Action Name: Drinking Water Well Impact Mitigation Program

Potential Implementing Organization(s): Groundwater Sustainability Agencies (GSAs) in partnership with project participants.

Purpose Statement: The purpose of this document is to be utilized by GSAs to mitigate, prevent, and address any adverse effects on drinking water wells caused by groundwater pumping volume or location, conjunctive management, or any other forms of active management as part of Groundwater Sustainability Plan (GSP) implementation. By doing so, GSAs can better achieve the goals of the Sustainable Groundwater Management Act (SGMA), avoid jeopardizing access to safe water in vulnerable communities, and also avoid violating California laws that establish a statewide Human Right to Water and that protect access to safe water. Adverse effects can include both issues with access to safe drinking water due to increased contamination, as well as issues with sustained access to water due to changes in groundwater levels.

This document provides a framework of elements to consider when GSAs are developing a drinking water well impact mitigation plan. Every community and every GSA will have to evaluate their own needs and particular considerations in order to develop a mitigation program that works best for all users. This document is broken down into the following sections:

1. Importance of Drinking Water Well Impact Mitigation Programs;
2. Framework for developing a program and key elements to consider;
3. Cost considerations for short- and long-term solutions and potential funding sources; and
4. Examples of existing Drinking Water Well Impact Mitigation Programs.

House receiving water from a temporary emergency tank due to dry groundwater well.

Section 1

Importance of a Drinking Water Well Impact Mitigation Program

How can GSP implementation impact domestic wells and small community wells?

Across the state, critically overdrafted basins have developed GSPs to manage groundwater resources sustainably under SGMA. Many GSPs have developed sustainable management criteria, including minimum thresholds (MTs) and measurable objectives (MOs), that if reached, would cause significant impacts to access to safe and affordable drinking water for vulnerable communities. GSP implementation, including management actions and projects, can either serve to protect or harm drinking water resources. For example, GSA actions that could harm drinking water include setting minimum thresholds too low, resulting in completely or partially dewatered wells. Besides the cost of deepening a well, partial or complete dewatering of a well results in the need to lower the well pump, clean the well screen more frequently, all of which leads to higher energy costs from pumping, and emotional impacts from not having access to safe water. The GSA could also develop groundwater pumping allocations, and pumping regimes or sustainable management criteria which allow for an increased movement of contaminant plumes, an increase in the concentration or release of contaminants, or an increase in salinity due to sea water intrusion in coastal wells.

The following significant impacts could occur as a result of GSA policies (such as setting minimum thresholds and measurable objectives that are not protective enough of drinking water) or GSA activities (such as projects or management actions that damage water quality or allow groundwater levels to decline too far). This list is not exhaustive, merely just the most likely negative outcomes:

- Partially dry wells
- Fully dry wells
- Contaminated drinking water
- Unaffordable water rates due to the above

If GSP sustainable management criteria are developed in a way that could potentially cause significant impacts on drinking water users, the GSP must also include a robust drinking water well impact program to prevent and mitigate the drinking water impacts that occur. In some GSAs, up to 85% of domestic wells are at risk of being dewatered or partially dewatered. In these same GSAs, rural domestic and small water system demand does not contribute substantially to the overdraft conditions, yet the risks imposed on these drinking water users are overlooked and neglected, creating a disproportionate impact on already vulnerable communities.

What are the drinking water challenges facing disadvantaged communities?

Without an adequate GSP that is protective of groundwater sources near or within communities, more drinking water wells will run dry or be unable to provide safe, potable water to residents. This will further jeopardize the livelihood of California's most vulnerable communities. Vulnerable communities, including severely disadvantaged communities (SDACs), disadvantaged communities (DACs), small water systems, and domestic well owners, have limited technical, managerial, and financial capacity to respond to drinking water challenges.

Climate change further exacerbates drinking water challenges with more frequent, longer, and more severe droughts and flood periods expected. Small water systems and rural communities reliant on domestic wells are, and will continue to be, the most adversely impacted and most at risk of experiencing water shortages and/or having to rely on contaminated drinking water supplies. In order to increase water system resiliency, we must protect current water sources. Other ways to increase resilience are to secure more than one water source, assist communities with maintenance and operation costs, and ensure water affordability.

A Drinking Water Well Impact Mitigation Program is key to increasing water resilience through minimizing risks of both short-term and long-term impacts. Having adequate plans and policies to support drinking water resilience in the face of climate change is essential to reducing the amount of emergency funding needed to respond to a water shortage emergency and to prevent human health crises. A carefully designed and implemented well impact mitigation program can support efforts to ensure all communities have long-term and sustainable access to clean, safe, and affordable drinking water.

How does California law prioritize drinking water?

A GSP which lacks a mitigation program to curtail the effects of projects and management actions on the safety, quality, affordability, or availability of domestic water, goes against the intent and spirit of both SGMA and the Human Right to Water law. The Human Right to Water (AB 685) (HR2W) was signed in 2012 and added § 106.3 to the California Water Code, declaring, "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] The HR2W applies to all state agencies, requiring that they "consider this state policy when revising, adopting, or establishing policies, regulations, and grant criteria when those policies, regulations, and criteria are pertinent to the uses of water."[2] With this passage of AB 685, relevant state agencies, including the State Water Resources Control Board (SWRCB) and the Department of Water Resources (DWR), are now required to consider this state policy when revising, adopting, or establishing policies, regulations, and grant criteria that may impact the uses of water for domestic purposes. To ensure compliance with the legislature's long established position, the HR2W requires that DWR consider the effects on domestic water users when reviewing and approving GSPs.[3] DWR should continue to collaborate with the SWRCB on matters of drinking water and water quality as part of GSP review, and the SWRCB should continue to offer its expertise on these matters as part of GSP review.

Residents standing next to their new groundwater well in Monson, CA.

Further, the California legislature has recognized that water used for domestic purposes has priority over all other types of uses since 1913.[4] Reserving top priority for domestic water use was later codified in 1943, in Water Code § 106, which declares it the, "established policy of this State that the use of water for domestic purposes is the highest use of water and that the next highest use is for irrigation."[5] Further, the passage of the Safe and Affordable Drinking Water Act by Governor Newsom indicates a clear state-level commitment to providing safe and affordable drinking water to California's most vulnerable residents.[6] Poor implementation of SGMA would threaten the success of the Safe and Affordable Drinking Water Fund and would run counter to Governor Newsom's vision of providing safe water to all.

A carefully designed and implemented Drinking Water Well Impact Mitigation Program can support a statewide goal of ensuring DACs' access to clean, safe, reliable, and affordable drinking water. Including this type of program in a GSP also helps to create a groundwater management plan that understands DACs' unique social and economic vulnerabilities, is sensitive to their drinking water needs, and avoids causing a further disparate impact on low-income communities.

[1] *WAT § 106.3 (a).*
[2] *WAT § 106.3(b).*
[3] *See generally, WAT § 106.3 (b).*
[4] *California Water Commission Act of 1913 § 20.*
[5] *WAT § 106; This policy is also noted in the Legislative Counsel's Digest for AB 685.*
[6] *SB 200, Monning (2019).*

Section 2

Key Elements and a Framework for Developing a Drinking Water Well Impact Mitigation Program

1) Drinking water well monitoring network:

Many drinking water users depend on shallow domestic wells and community supply wells, which are the most vulnerable to impacts from groundwater management activities. Thus monitoring networks must be able to capture impacts to deeper public water system wells as well as shallow domestic wells.

The following approach will allow GSAs to comply with the GSP regulations and take a proactive approach to protect DACs' and domestic well owners' access to safe and affordable drinking water:

1. **Map and assess drinking water well vulnerabilities to better understand:**
   - Locations and depth of drinking water wells (both domestic and public supply well
   - Whether changes in groundwater levels and quality may be exacerbated in specific areas by pumping volume or location, conjunctive management (i.e. groundwater recharge projects), or other forms of active management as part of GSP implementation;
   - The proximity of potentially impacted wells to nearby existing public water systems; and
   - If there are areas with a high density of likely impacted wells.

The assessment should acknowledge that not all existing and utilized wells may be documented in available resources from DWR or Counties and the GSA must include a plan for filling any data gaps that may exist.

2. **Designate key monitoring wells to assess impacts to drinking water wells:**

Based on the drinking water well vulnerability assessment, identify which wells from the GSP proposed monitoring network are critical to assess impacts to drinking water wells caused by changes to groundwater levels and quality. Expand and improve the monitoring network to assess potential impacts in particular for groundwater conditions near DACs, areas with high density of private domestic wells, and water systems serving schools. The monitoring network needs to be representative of conditions in all aquifers in general, including the shallow aquifer upon which domestic wells rely. The water quality monitoring network needs to routinely monitor for all contaminants that could impact public health (not only nitrate, but also chromium-6, arsenic, 123-TCP, uranium, and DBCP). This will allow the GSA to accurately monitor for impacts on the most vulnerable beneficial users, and take a proactive approach to protect DACs' and domestic well owners' access to safe and affordable drinking water.

2) Develop an adaptive management trigger system:

Developing a protective warning system, also referred to as an adaptive management approach, can alert groundwater managers when groundwater levels and groundwater quality are dropping to a level that could potentially negatively affect drinking water users. These "triggers" are essential for groundwater management and can be adjusted to fit the needs of different management actions as well as the basin as a whole.

The trigger system should be developed in collaboration with stakeholders, in particular groups that are more susceptible to groundwater changes, and then tied back to quantifiable measures such as the GSP measurable objectives, MCLs, and numbers of partially or fully dry drinking water wells.

The table on the below provides an example of what a warning system might look like, using green, yellow, and red light indicators or triggers, and some potential corrective actions groundwater managers can take to remedy the problem. Ultimately, this approach allows for the evaluation of current conditions in order to respond accordingly to prevent or mitigate negative impacts.

Triggers	Groundwater Conditions and Impacts	Examples of Quantifiable Measures	Potential Corrective Actions
Green light	Groundwater levels and quality are stable.	Firmly in compliance with Measurable Objectives and MCLs.	No action required.
Yellow light	Groundwater levels and quality are approaching concerning levels and impacts may occur or are occurring. Some corrective actions are needed.	Groundwater levels[7]: 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. Groundwater quality: Water quality reaches 70% of the MCL in any given monitoring well.	- Undertake an analysis to pinpoint the cause; - Undertake water quality testing for selected domestic and public supply wells; - Provide immediate support to groundwater users experiencing impacts; - Reassess pumping allocation and pumping patterns; - Consider restricting or limiting groundwater extraction near the impacted area.
Red light	Time to stop groundwater pumping and any projects or management actions which are causing dry wells. The GSA needs to mitigate as significant impacts are imminent or are occurring.	Groundwater levels: 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. Groundwater quality: Water quality reaches 85% of the MCL in any given monitoring well.	- 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 to pursue a permanent, long-term solution.

3) Drinking water well impact model:

Develop a model tied to the monitoring network and the adaptive management framework (trigger system) to evaluate groundwater levels and predict potential groundwater impacts to drinking water wells. Update the model regularly with current data, so that the model accurately predicts potential groundwater impacts to drinking water wells. The model 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 and/or monitoring;
- Attempt to identify domestic wells or small public supply wells at risk of impacts;

[7] *For groundwater levels, triggers should be developed based on an estimate of potential drinking water wells being impacted across the GSA, or drinking water wells at risk of going dry if current trends continue.*

- 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.

4) Public outreach and education:

In developing a Drinking Water Well Impact Mitigation Program, GSAs should ensure that residents are aware of the benefits of such a program and how to access the program. This outreach should inform residents about the potential well impacts that could occur based on groundwater management actions, describe potential options available for well mitigation, and include information regarding whom to contact in the event that residents' wells experience negative impacts.

This outreach should take place in whatever form will be the most accessible for all stakeholder groups in the GSP area, particularly disadvantaged community residents. Outreach can be done in the form of pamphlets, mailers, additions to the public website, or radio announcements. GSAs should also conduct regular, door-to-door outreach (in partnership with other outreach experts as needed) to ensure that communities — particularly communities in areas the trigger system identifies within the yellow and red light ranges. The GSA should work with local agencies, organizations, and associations to spread materials about the program. This information should also be mentioned at regular GSA meetings for those in attendance. To ensure that this program can benefit S/DAC residents, information about the program must be disseminated widely, and such materials must be translated into all threshold languages.

5) Mitigation measures:

As soon as a GSP area experiences a yellow light trigger, the GSA should implement the steps below:

1. Third Party Determination of Causality: Work with an objective third party to establish whether the GSA's policies and actions caused the drinking water impact.

2. Change Groundwater Management Activities: Any groundwater management activities or policies that are causing drinking water impacts should be changed to avoid reaching the red light indicator.

3. Define the level of mitigation that is necessary based on a field inspection to determine static depth to groundwater levels within the impacted well. Verify well construction information and pump setting information, if possible.

4. Provide short-term drinking water supply while a permanent solution is pursued. Short-term interim solutions serve to address the immediate impacts and ensure access to water suitable for consumptive and other domestic needs, such as sanitation. Short-term emergency supplies shall be provided as soon as reasonably possible and can include bottled water, bottled water paired with tanked water, or another combination. For groundwater quality issues, bottled water may be an acceptable interim solution. However, if the issue is lack of access to water, providing bottled water is not an adequate interim solution and would require a combination of solutions as well as a long-term sustainable plan
    a. Since short-term solutions are expensive over a prolonged period of time, it is important to quickly identify potential long-term solutions. As an example, GEI's feasibility study for East Porterville at the height of the drought in 2016 estimated tank and bottled water programs cost $633,500 per month just for East Porterville, which has an estimated population of 7,331 residents.

5. Implement a long-term water supply solution:
    a. Whenever possible, the GSA(s) should facilitate connection of impacted well users to a nearby municipal water system by providing financial and technical support.
    b. Other long-term water supply solutions can include (where appropriate):
        i. In areas that are not located near a public water system that can take on additional connections, the establishment of a new small public water system may be feasible;
        ii. Providing funding to lower a well pump and/or deepen the well;
        iii. Providing an equivalent water supply from an alternate source;
        iv. Providing funding to replace the affected

well with a deeper well;

v. Providing funding to treat contaminated water;
vi. Reducing or adjusting pumping near the impacted drinking water well as necessary to avoid the impact; and/or
vii. Providing other acceptable mitigation through a collaboration with the affected drinking water well users.
viii. Note that lowering the pump and/or deepening the well will increase operational costs of the well and may require additional monitoring to ensure the well is not dewatered again. Further, these solutions may not address water quality concerns, depending upon aquifer conditions and screen depths.

A note on the prioritization of connecting impacted wells with existing nearby municipal water systems: Public water systems have an obligation to test water quality for water served, and although some public water systems have limited resources, they do have a greater ability to install treatment systems to address water quality impacts, recoup funds for litigated contamination such as 1,2,3-TCP, and apply for and receive grant funding for beneficial projects. Because of this, public water systems, including small community water systems, often provide a more reliable drinking water source than privately-owned domestic wells. It should be noted that once a resident is connected to a public water system, they are then subject to water bills that will likely be higher than the operation costs of the well.

As these long-term solutions are being developed, the community should be engaged in the process to learn about the benefits of a public water supply in terms of water reliability and water quality, and should also be informed of why water bills may be more costly. It is possible that residents may request assistance in paying monthly water bills associated with their new water connection. Water systems should work to provide affordable rate options to their ratepayers, such as through budget-based rate structures. The State Water Resources Control Board has also submitted a framework for a statewide low-income rate assistance program to the Legislature in January 2020, as required by AB 401 (Dodd, 2015), although the report has not yet been acted upon by the Legislature as of the publishing of the report.

6) Eligibility and access:

1. Eligible beneficiaries should include communities that qualify as DAC or SDAC, and households who qualify as low-income.

2. In developing a Drinking Water Well Impact Mitigation Program, a GSA should ask the following questions, and ensure that the program is easily accessible to all intended beneficiaries:
    a. What is the process for determining eligibility?
    b. Who determines if the well is eligible?
    c. What documentation does the well user need to demonstrate eligibility? Is there an unreasonable onus on the user to demonstrate past use that would constitute a barrier to access?
    d. When a well is found to have been constructed in a way that is not consistent with current regulations, is it still eligible?
    e. If a well is poorly constructed, does the program address replacing or repairing the well rather than just deepening it?

3. S/DAC residents should not be required to undertake burdensome actions or overcome other barriers to entry in order to benefit from the program. For example, residents should not be required to register before impacts occur in order to benefit from the program, and residents should not be required to prove that the GSA's activities or lack of action caused impacts. Instead, the GSA should proactively identify all well locations and information. When the GSA is notified of an impacted well, it should use the well information collected to rapidly evaluate the cause of the impact and provide adequate mitigation measures.

4. The GSA should work with local agencies and organizations to ensure that residents with impacted wells are referred quickly to the GSA for assistance.

Section 3

Costs and Potential Funding Sources

Costs are dependent on many factors including but not limited to the following:

- How protective the GSA defines its sustainability goal and related sustainability criteria;
- The number of vulnerable wells;
- The condition of the vulnerable wells;
- Proximity of vulnerable wells to existing public water systems;
- Depth of the aquifer;
- Local contractor costs; and
- Fluctuations in material costs.

For an example of the cost of several types of water supply solutions for a dry well, the San Antonio, TX, well mitigation project materials include the following average costs per well:

- Perform well diagnostics ($2,700);
- Lower pump ($4,000);
- Drill/outfit/connect replacement well ($58,000);
- Water purveyor connection ($5,000), and close existing well ($4,500).

The table below provides examples of interim and long-term solution costs based on Self-Help Enterprises' experience in providing solutions to disadvantaged communities in the San Joaquin Valley during the 2012-2014 drought. Costs are provided for illustrative purposes only and should be considered as rough estimates.

Solution	Problem	Options	General Overview of Pros and Cons	Estimate of Costs[8]
Interim Solution	Water Quality	Point-of-Use	Treats water for one tap within the household. While this option does provide safe drinking water in the home, if everything is perfect, maintenance can be inadequately carried out and assistance must be provided until a long-term solution is implemented.	- $1,000 to $4,500 per unit per home, for one year. - Costs include: initial capital costs (installation, treatment system, monitoring system) and also ongoing operation, maintenance, routine monitoring, and waste disposal costs. - Costs vary depending on the contaminant and filtration.
		Bottled water	Bottled water provides an effective and reliable source of safe drinking water and may be the only option available depending upon contaminant concentrations. However, bottled water can be expensive over a long period of time and can come with distribution challenges.	$75 per month, per house, includes delivery. Costs vary on household size.

[8] *Costs are estimates based on Self-Help Enterprises' experience in providing interim and permanent solutions to disadvantaged communities in the San Joaquin Valley during the 2012-2014 drought. Costs are provided for illustrative purposes only and should be considered as rough estimates.*

Interim Solution	Access to Water	Water tank program with bottled water	Tank water can meet basic sanitation needs but should not be used to meet drinking water needs, as tank water is susceptible to bacteriological or other issues making it unsafe for consumptive purposes. Instead, the program must be paired with delivery of bottled water to meet drinking water needs.	One-time fees: - 2,600 gallon water tank and materials: approximately $2,100. - Labor and tank installation: $1,500, does not include mileage. - Electrical permit: $80, depending on the county. On-going fees: - Tank water between $500 to $900 depending on delivery charge by water hauler, per load or per hour. - For bottled water: $30 to $50 per month per house, including delivery. - Not estimated: other fees associated with ongoing maintenance of the tank, including routine cleaning. - All costs above are for one house per parcel. Costs can vary depending on conditions.	
Permanent Solution	Water Quality	Water treatment system	Technical, managerial, and financial capacity of the community should be considered when assessing water treatment options.	Costs vary depending on the technology, water contaminant(s), and number of households.	
		Alternate supply source	Options include surface water, construction of a new well, and consolidation with a nearby water system.	Costs vary depending on the desired solution, technology, and number of households.	
	Access to Water	Lowering of well pump	Least expensive long-term solution, if conditions allow. The following factors should be taken into account: lowering of a pump in the well is limited by the depth of the well, pumps near the base of the well increases energy consumption, may require more frequent screen cleaning, and water quality may be degraded due to sediments that are drawn in.	One time cost: Between $5,000 and $10,000.	
		Drill a new deeper well	A well test is necessary to assess yield capacity and water quality on deeper levels.	Private wells	$20K to $45K
				Water systems	Up to $1.5M.
		Alternative water supply source	Options include surface water or consolidation with a nearby water system. Recommend considering consolidation when households understand and agree with the advantages and disadvantages of connecting to a local water system.	Costs vary depending on the desired solution, technology, and number of households	

Resident with bottled water delivery due to dry well.

A secure and reliable funding source and mechanism for the implementation of this type of mitigation program needs to be identified in the GSP. While grant or emergency funding could potentially be available to support a mitigation program, the availability of these funds is not certain. Therefore, the GSA should plan to establish a more secure, on-going funding mechanism that accrues funds that would be available as water levels decline in the future. Funding for these types of programs should be considered as an operational cost of the GSA and funded with other ongoing costs such as administration and monitoring and therefore included in the annual budget for the GSA. The following are potential other sources of funding to consider:

- Service or land-based fee assessments using Proposition 26 or Proposition 218;
- State Water Resource Control Board programs such as Proposition 1 Groundwater Grant Program and Prop 68 Groundwater Treatment and Remediation Grant Program;
- Department of Water Resources funding programs for groundwater projects and technical assistance programs to aid SGMA implementation;
- Central Valley Basin Plan Amendment (BPA) project funding: The BPA for the regulation of salts and nitrates has been approved by the SWRCB and implementation may result in additional funding sources for nitrate contaminated aquifers. If appropriate, GSAs should consider coordinating with nitrate dischargers forming Management Zones formed to comply with the BPA in order to streamline administrative costs and leverage resources;
- United States Department of Agriculture (USDA) Rural Development Utilities funding (if available).

Note that any well mitigation projects should be coordinated with the SWRCB's Safe and Affordable Drinking Water Fund Program (which will be seeking to implement short- and long-term drinking water solutions within vulnerable communities) via the SWRCB's Division of Drinking Water. Funding from the SWRCB's Safe and Affordable Drinking Water Fund Program should not be utilized to ameliorate negative impacts to safe drinking water access in vulnerable communities that are a result of implementation of the GSPs.

Mitigation measures should not put a financial burden on S/DAC residents and communities. Where feasible, GSAs should coordinate with relevant agencies to procure funding for cost-effective and affordable solutions. GSAs should also solicit stipends and grants from agencies where there will be an added cost on residents.

Wherever consolidation is possible, the GSA should assist in pursuit of feasibility studies and assist in negotiations with public water systems. GSAs should also assist in pursuit of grants/funds to ensure that this water is affordable. This work must be initiated with community involvement, oversight, and leadership during the yellow light phase. GSAs play a unique role in regional groundwater management and the ability to convene multiple agencies to leverage multiple funding sources can support both long-term access to safe and affordable drinking water while also supporting sustainable groundwater management.

Section 4

Case Studies of Existing Mitigation Programs

It is important to note that we need not re-create the wheel when designing Drinking Water Well Impact Mitigation Programs. In fact, quite a few concepts discussed above come from existing Drinking Water Well Impact Mitigation Programs that are already part of efforts to manage groundwater resources in other areas of the state and the country. We encourage GSAs to learn from those programs and contact those agencies to find out more about how their programs are implemented.

Please visit the link below for four examples of existing Drinking Water Well Impact Mitigation Programs:

https://bit.ly/MitigationPlanCaseStudies

For questions or for more information, please contact:

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