Delta-Mendota Subbasin
Domestic Well Mitigation Policy

Adopted: _____, 2025

The Groundwater Sustainability Agencies (GSAs) in the Delta-Mendota Groundwater Subbasin (Subbasin) have historically worked with disadvantaged communities to improve drinking water access. For example, the San Joaquin River Exchange Contractors have provided drinking water to the City of Dos Palos for nearly 100 years, because groundwater extracted in Dos Palos has historically been too salty for potable use. Nonetheless, the GSAs realize more must be done to ensure that domestic well users in the Subbasin do not face undesirable impacts from groundwater level depletion during implementation of the Delta-Mendota Groundwater Sustainability Plan (GSP), in compliance with the Sustainable Groundwater Management Act (SGMA).

This Domestic Well Mitigation Policy (Policy) was developed by the Delta-Mendota Subbasin Coordination Committee considering recommendations found in the following two public documents: *Framework for a Drinking Water Well Impact Mitigation Program* (Self Help Enterprises, *et al.*) and *Considerations for Identifying and Addressing Drinking Water Well Impacts* (CA Dept. of Water Resources).

Policy Purpose

This Policy will consider impacts to domestic wells, as well as water systems that supply water for domestic or residential use to no more than fourteen (14) service connections, using groundwater wells. Individual GSAs within the Subbasin may consider including additional well uses within their jurisdictional boundaries.

The purpose of the Policy is to mitigate the effects that may be felt by domestic water users whose wells have gone dry or are in imminent threat of going dry due to groundwater levels dropping as a result of groundwater management in the Subbasin. Subject to specific conditions, this Policy also addresses mitigation for water quality for domestic well users.

Pursuant to the single Subbasin Groundwater Sustainability Plan (GSP), Minimum Thresholds (MTs) for lowering of groundwater levels across the Subbasin are set at 2015 seasonal low groundwater levels. This means GSAs in the Subbasin are already committed to maintaining groundwater levels above what was measured in 2015 ("The plan may, but is not required to, address undesirable results that occurred before, and have not been corrected by, January 1, 2015." (CWC §10727.2(b)(4)). Since implementation of the Subbasin's original GSPs began in 2020, GSAs in the Subbasin have successfully avoided undesirable results that would occur by water levels dropping below 2015 seasonal lows. This Policy is meant to serve as a last line of defense to protect domestic groundwater users in the unlikely event that the Subbasin GSAs' efforts fail to maintain those groundwater levels above the MTs.

Data from the California Department of Water Resources (DWR) and county records indicates that since 2015, counties within the Delta-Mendota Subbasin have received a total of only 37 well replacement applications.[1] However, as DWR notes on its website, their data comes from self-reporting on DWR's Dry Well Reporting System, and some GSA representatives receive reports of dry wells directly from users. In these cases, groundwater users were responding directly to GSA representatives, because some GSA members (e.g., water districts and/or irrigation districts) have been engaging in well mitigation activities without formal policies or programs in their individual service areas prior to SGMA's enactment in 2015.

[1] California's Groundwater Live: Well Infrastructure (https://sgma.water.ca.gov/CalGWLive/#wells).

Well replacement applications were identified on the Merced County Environmental Health Department's list of domestic well permits issued for "out of water" or "low water" wells and on Stanislaus County's voluntary well reporting system. The applicable counties reported that there were two well permits identified in the Subbasin portion of Fresno County and zero from the Subbasin portion of Madera County. As mentioned above, it is unknown whether this total number includes any dry wells not reported to DWR.

Merced County permits do not disclose whether or not those reported dry wells were "out of water" due to lowered groundwater levels, collapse or other mechanical failure, or some other reason. Of the 12 well permit applications submitted to the Stanislaus County system for the Subbasin since 2015, four were reported as dry wells, six were either undefined or outage reports, and two were other issues including well casing failure and/or sediment intrusion. Of the two replacement well permit applications for the Fresno County portion of the Subbasin, one was an agricultural production well, not a domestic supply well. There is no indication of the reason for the well replacement requests.

In summary, during the last 10 years, fewer than 40 wells across the nearly 1,200 square miles of the Subbasin have been reported dry or applied for replacement. Though it is known that not all of those were drinking water wells, the exact number of drinking water wells replaced since 2015 is unknown due to a lack of information collected on the replacement well permit applications.

Policy Eligibility

This Policy primarily applies to landowners using groundwater for domestic health and safety supply purposes as of November 19, 2024, the date the revised Subbasin GSP was adopted by all GSAs. Though owners of all types of wells are eligible to file for relief under the Policy, relief is not guaranteed and will be subject to analysis by the applicable GSA where a claim for relief is filed and pursuant to the provisions of Executive Order N-3-23. Well owners must participate or agree to participate in a GSA's Well Registration Policy/Program to be eligible for mitigation, if such a policy exists or is developed.

This Policy does not apply to wells installed after the date of GSP adoption, if the well(s) is/are installed at a screen interval depth shallower than minimum threshold levels or in areas with known degraded water quality conditions, as designated by the applicable GSA.

Public Outreach

Initial stakeholder outreach was conducted during the development of the Policy and the Subbasin single GSP. The Policy was discussed in open and public meetings of the various GSAs and at open and public meetings of the Coordination Committee. A draft of the Policy was posted to the Subbasin's SGMA website (www.deltamendota.org) as both a separate item and as a part of the draft single GSP. The public was able to submit written comments on the Policy and the single GSP through the website.

This Policy was discussed during public meetings designed to secure input on both the Policy and the single GSP. Both verbal and written comments were accepted at the meetings. The comments received were summarized and published on the Subbasin website. Finally, comments on the Policy, as well as responses from the Subbasin Coordination Committee, were addressed in the adopted single GSP, which contains the Policy.

Discussion of the Policy status and implementation will be placed on the Subbasin Coordination Committee meeting agendas no less than quarterly during GSP implementation. Similarly, the Policy may be placed on each of the Subbasin GSAs' governing bodies' agendas at least semi-annually during the first year of single GSP implementation. The Policy will be available on the Subbasin SGMA website with relevant information such as electronic instructions for filing an application and a form to submit the

application electronically via the website. GSAs may place the Policy on their own websites or have a link on their websites that directs interested persons to the Subbasin SGMA website.

As part of the GSP's Pumping Reduction Plan (PRP; *see* Chapter 16 of the GSP), the Subbasin Coordination Committee will review current or projected exceedances of the MT for groundwater levels and water quality reported by GSAs, at regularly scheduled Coordination Committee public meetings. In the event a groundwater level reading or a water quality sample for the GSP's constituents of concern (COC) at a representative monitoring well (RMW) exceeds its respective MTs as a result of GSA actions and projects, GSAs may contact well users/owners within an up to three (3)-mile radius of the RMW to alert them of the MT exceedance and provide them with information and resources in the event their well is impacted. Each GSA has developed criteria, a notification method, and protocols to address such situations within its jurisdictional boundaries. However, typical templates for such notices are provided as attachments to this Policy. An up to three (3)-mile radius was selected because it is consistent with the average radius of coverage of each RMW in the Subbasin.

If the RMW is near the jurisdictional boundary between two or more GSAs, the GSA where the well is physically located will notify the adjacent GSA(s) of the potential impact to well owners located in that adjacent GSA's jurisdictional area. The GSAs will cooperate according to the terms of the Adaptive Management Framework in the Subbasin Memorandum of Agreement (MOA) on any costs associated with notification.

Any notification provided to well users/owners pursuant to the above will include information on this Policy and how and where to file a claim for mitigation. Other information that may be included and/or requested in the notification will be determined by the individual GSAs.

Plan Area

For a full description of the Subbasin Plan Area, please refer to GSP Chapter 5, which may also be found at www.deltamendota.org.

Well Completion Report (WCR) records compiled by DWR indicate an estimated 2,295 domestic wells, 81 public supply wells, and 514 other production wells are located in the Subbasin as of November 19, 2024. This DWR dataset is known to have limitations, but is accepted as a conservative estimate of the number of wells installed within the Public Land Survey System (PLSS) sections that fall within the Subbasin. Additionally, this Policy recognizes that it is likely that wells included in DWR's WCR data set:

- May not currently be in use;
- Are inaccurately located; and/or
- Have inaccurate well construction and/or destruction information.

Given these assumptions and limitations, for the purposes of this Policy, the Coordination Committee conservatively estimates that there are 2,890 wells in the Subbasin as of November 19, 2024. From 2015 to the end of 2024, there have been only 37 known applications for replacement wells in the Subbasin. The reasons for those well replacement applications (e.g., dewatering from over-pumping, mechanical failure, etc.) are unknown.

Monitoring Network

There are 110 wells in the representative monitoring network for water levels for the Subbasin, which the GSAs use to monitor groundwater levels. Of those, 60 wells are in the upper aquifer and 50 wells are in the lower aquifer. There are 85 wells in the representative monitoring network for water quality for the Subbasin, which the GSAs use to monitor groundwater quality. Of those, 46 wells are in the upper aquifer and 39 wells are in the lower aquifer. Most rural domestic drinking water wells are assumed to be

in the upper aquifer, while most municipal and small water system supply wells are assumed to be in the lower aquifer. Agricultural wells are known to be in both the upper and lower aquifers, with some being "composite" wells (with screen intervals in both the upper and lower aquifers).

The distribution of domestic supply wells across the Subbasin and distribution of the Subbasin's monitoring network wells provide a suitable framework for evaluating the potential for domestic supply wells to become dewatered due to lowering of groundwater levels or impacted by water quality degradation caused by GSAs' actions and projects. As previously noted in the "Public Outreach" section of this Policy, the Coordination Committee reviews possible MT exceedances or trends in the representative monitoring network following the requirements of the PRP. This will help GSAs avoid potential dewatering of domestic wells or degrading their water quality beyond MTs within their boundaries as a result of GSA actions and projects.

Using a stochastic predictive modeling process to assess potential well impacts and current MT (2015 water levels) exceedances at 25% of representative monitoring wells, the Subbasin could potentially experience 28 total "production" wells dewatered. That leads to an estimated average of three drinking water wells per year *across the Subbasin* during implementation of the GSP through 2040. This estimation supports the approximate current number of replacement well permit applications identified in records from the counties in the Subbasin.

Well Mitigation Process – Water Levels

GSAs will conduct public education and outreach to notify landowners as to how and where to file an application for assistance, and the information that the GSA will require to evaluate the mitigation application. Copies of the application form will be included with education and outreach materials.

Upon receiving a completed application, the receiving GSA, or its representative, will conduct a preliminary review of the application to determine completeness. The applicant will be notified within twenty-four (24) hours, and the GSA will subsequently document such notification, if the application is complete or if there is any further information needed to evaluate the application. If deemed complete and appearing to meet all the requirements to receive assistance, the receiving GSA will provide a short-term emergency water supply to domestic well users as soon as reasonably possible, and will make all reasonable efforts to do so within twenty-four (24) hours of submission of a complete application. Short-term emergency water supplies shall consist of the delivery of bottled water and, after a site investigation, the delivery and installation of water tanks on a case-by-case basis at the GSA's discretion; all reasonable efforts made to provide tanked water within seventy-two (72) hours. The GSAs also commit to working with Self Help Enterprises, Valley Water Collaborative, or similar entities, to assist with the feasibility of providing water tanks.

The short-term emergency water supply will be provided by the GSA at the location of the de-watered well. The GSA in which the well is located will be responsible for providing the short-term emergency water supply and the costs for the investigation. However, if it is determined that over-pumping is the result of another GSA, the GSAs will follow the Adaptive Management Framework process regarding cost sharing (Delta-Mendota Subbasin MOA, Article VII, Article X, Article XIII, and/or Exhibit "C").

The GSA(s) may develop a professional well assessment report including, but not limited to: age of the well; well construction information (including pump depth, screening intervals, and pipe type [material]) and thickness; well maintenance information; indication of past well performance and any recent performance changes; any recent changes in well use or related land use; and, other additional information as necessary to determine if the failure is caused by declining water levels and/or GSA projects or groundwater management actions.

The GSA's preliminary review of a well mitigation application will consist of all of the following:

- A review of well construction information,
- A review of well and pump maintenance records,
- A review of historic water level data for nearby representative monitoring network wells,
- A review of nearby known production well information,
- A review of nearby land use and any recent land use changes, and/or
- An analysis of nearby conjunctive use activity (if known).

If the nearest representative monitoring network well does not represent water level data that can be used as evidence for consideration of the applicant's claim, a GSA may review additional data from other wells in the monitoring network, or supplemental data from DWR and/or local agencies to support the preliminary review analysis.

If, after completion of the preliminary review, a GSA determines a well is eligible for mitigation, the GSA will measure water levels in the applicant's well and in representative monitoring wells in the area, and will perform a field investigation. To be eligible for mitigation assistance, the applicant must consent to the field investigation/inspection and execute an appropriate release with the GSA. Failure to consent to the field investigation/inspection and/or execute an appropriate release voids the application for mitigation. The field investigation may include, but is not limited to:

- Removing a pump to measure intake depth, well bottom, and static water level,
- Conducting a video log,
- Modifying the wellhead to measure static and pumping level,
- Investigating the site for consolidation feasibility, and/or
- Investigating nearby land and water use.

The field investigation may show the well as ineligible for mitigation. Such criteria indicating ineligibility include, but are not limited to:

- Pump failure,
- Clogged screens,
- Well pipe and/or casing failure or collapse which are unrelated to lowering groundwater levels or other potential GSA actions,
- Other maintenance-related well or pump issues which are unrelated to lowering of groundwater levels or other potential GSA actions, or
- Normal wear and tear based on the age of the well.

The GSA will notify the applicant if the well is ineligible for mitigation and subsequently document such notification. This finding will also be included in the Subbasin's Annual Report.

If the applicant desires to appeal the results of the GSA's investigation, the applicant may do so in writing to the Delta-Mendota Subbasin Coordination Committee. The Coordination Committee shall create an ad hoc committee of no more than three members to review the GSA's written investigation, obtain additional data if necessary, and either (a) confirm the findings of the GSA, (b) provide guidance to the GSA and request further review by the GSA, or (c) propose to the Coordination Committee that it adopts its own findings. If the Coordination Committee chooses to adopt its own findings and recommendations, those shall be binding upon the GSA, to the extent allowed by the Memorandum of Agreement.

If, after the field investigation, a GSA determines a well is eligible for mitigation, the GSA will work with the well owner/landowner on a solution appropriate for the site (each, a "Mitigation Measure"). Such Mitigation Measures may include, but are not limited to, the following:

- Lowering the well pump or otherwise modifying pump equipment,
- Deepening the well if the existing well has an open bottom,
- Installing a new well,
- Assisting landowner with facilitating a connection to an existing municipal or community water system or other water supply, if feasible, or
- Other appropriate mitigation as may be agreed to by both parties.

If the applicant disagrees with the proposed Mitigation Measure(s), a technically qualified third party agreed to by the GSA and applicant may facilitate and recommend a mutually agreeable Mitigation Measure(s). The GSA has the right to identify which Mitigation Measure(s) is optimal on a case-by-case basis. The technically qualified third party's role is to provide a recommendation. The appropriate GSA Board and/or Manager shall approve the application before any well mitigation (other than provision of emergency drinking water) begins.

The applicant must sign a Mitigation and Indemnification (MI) Agreement prior to the GSA commencing the Mitigation Measure. Terms of the MI Agreement will depend on the nature of the Mitigation Measure provided. New wells will be required to meet state and county well drilling standards and comply with Executive Order N-3-23. In order to be eligible for mitigation from a GSA, the MI agreement may stipulate minimum criteria in addition to state and county requirements for new wells as they apply to GSA review and the opinion granted under EO N-3-23. Criteria may include well construction materials, minimum depth beyond 2015 seasonal low groundwater level measurements, and/or screening interval levels, among other potential criteria.

At its discretion and in the event a new well is installed as mitigation for a failed well, the GSA may choose to convert the abandoned well into a monitoring well. Such provision(s) may be included in the MI Agreement and agreed to by both parties. In such a case, the MI Agreement shall grant access by the property owner to the GSA for the monitoring well for SGMA data gathering and compliance activities, and ownership of the abandoned and converted monitoring well will revert to the GSA. Terms and conditions for access to the monitoring well may be negotiated between the GSA and the well's former owner.

If the well will be abandoned as part of a Mitigation Measure agreed to by the GSA and will not be converted to a monitoring well under SGMA, the cost for sealing/destroying the well shall be borne by the GSA as part of the Mitigation Measure.

<u>Water Quality Mitigation</u>
The Delta-Mendota Subbasin is known to have widespread degraded water quality due to naturally occurring conditions (i.e., geology). As such, in coordination with the State Water Resources Control Board (SWRCB), the Delta-Mendota Subbasin GSAs have identified six COCs for consideration in the Basin's GSP development and implementation: Total Dissolved Solids (TDS), Nitrate, Gross Alpha, Chromium VI, Arsenic, and 1,2,3-Trichloropropane (TCP).

The GSAs have identified the following conditions under which domestic well mitigation for water quality and related actions will occur.

- *Condition 1.* If groundwater levels remain above the MTs, which are set at 2015 levels, then additional water quality mitigation beyond what is currently committed to in the GSA's respective PRPs is not required, except pursuant to Condition 2.
- *Condition 2.* If a GSA's implementation of Projects or Management Actions (P/MAs) to achieve sustainability causes water quality degradation beyond the water quality MTs at a domestic well for Nitrate, Gross Alpha, Chromium VI, Arsenic, or 1,2,3-TCP (as determined based on the monitoring and management processes laid out in the applicable PRP and the Basin MOA), then

the GSAs will mitigate the impacted domestic well. Impacts from TDS will be addressed through the complementary CV-Salts program, as detailed in the Memorandum of Understanding with Valley Water Collaborative (VWC MOU).

- *Condition 3.* If groundwater levels decline below the MTs, which are set at 2015 levels, and this causes water quality degradation beyond the water quality MT at a domestic well for Gross Alpha, Chromium VI, Arsenic, or 1,2,3-TCP (as determined based on the monitoring and management processes laid out in the applicable PRP and Basin MOA), then the GSAs will mitigate the impacted domestic well. Impacts from Nitrate and TDS will be addressed through the complementary CV-Salts program, as detailed in the VWC MOU.
- *Condition 4.* If groundwater levels remain above MTs, which are set at 2015 levels, the GSAs will continue to implement the PRPs which include monitoring, management and mitigation commitments, including evaluation of water level and water quality trends to proactively address and avoid water quality impacts to domestic wells from GSA P/MAs.

The application, review, and field investigation process for water quality mitigation shall follow the same procedures established in the Well Mitigation Policy for water levels, including submission requirements, field access and consent, investigation protocols, eligibility criteria, and documentation of findings. GSAs retain the authority to conduct technical investigations consistent with their jurisdictional responsibilities and to determine eligibility for water quality mitigation in accordance with this Policy.

Any short-term or emergency water supply associated with a water quality impact will be provided in accordance with the timelines and procedures outlined in the Well Mitigation Policy for Water Levels. The right to appeal, the formation and function of an ad hoc committee by the Coordination Committee, and the process for binding decisions shall also apply to water quality mitigation determinations.

Pursuant to the PRPs and the Basin MOA, technical analysis regarding causality will be conducted on behalf of the GSA by a qualified technical professional using statistical and/or field verification and/or modeling approaches. Findings will be presented to the Coordination Committee (or designated sub-committee) for review and concurrence.

If the findings of the technical analysis determine that the water quality impacts in a domestic well were caused by GSA P/MAs, the applicable GSA will fund a total not to exceed cost of $2,500 per impacted domestic well for the installation of a point-of-use reverse osmosis system and up to three (3) years of filter replacements, or other mutually agreed alternative including but not limited to providing bottled water or connection to another existing water system, pursuant to the MI Agreement described above. The applicant must sign a MI Agreement prior to the GSA commencing the Mitigation Measure. The current Well Mitigation Fund (which requires replenishment of any used funds) will also be used to support such water quality mitigation.
GSAs in the Delta-Mendota Subbasin desire to mitigate/compensate for legitimate impacts resulting from GSA management actions failing to maintain water levels at or above 2015 seasonal lows. As noted in the "Plan Area" section of this Policy, a total of only 37 replacement well applications were received by counties in the Subbasin since 2015. However, it is unknown how many of those wells, if any, were dewatered due to the groundwater levels falling below 2015 seasonal low levels, or how many of those are wells for domestic use.

Individual GSAs will fund the mitigation of wells within their boundaries upon determining whether Mitigation Measures pursuant to this Policy are appropriate and justified as detailed in the "Well Mitigation Process" section. In some cases, where historical wells are impacted, adjustments may be made for equipment depreciation. All costs to mitigate claimed impacts at a well site will be initially allocated to the applicable GSA where the well is located.

In the event of interbasin or intra-basin disagreements for determining responsibility for dewatering of a domestic well, Subbasin GSAs shall follow the Adaptive Management Framework processes as outlined in the executed MOA, including Article VII, Article X, Article XIII, and/or Exhibit C therein.

Though the stochastic predictive modeling indicates no more than three domestic wells in the Subbasin will be dewatered annually due to groundwater management activities, GSAs in the Subbasin will establish a common financial account sufficient to annually mitigate ten (10) domestic wells. A limit of ten (10) wells annually was selected because it reflects the undesirable result for lowering of groundwater levels in the GSP.

Not all GSAs in the Subbasin have domestic wells located within their jurisdictional areas. However, the seven GSA groups that are represented on the Delta-Mendota Subbasin Coordination Committee agree to equally fund a common account to a total of $300,000.[2] Costs to fund this reasonably prudent reserve will be split based on Coordination Committee costs identified in the MOA and will be funded over three (3) years (i.e. $100,000 per year, until the fund reaches $300,000). Funds from the common financial account may be used only for approved Mitigation Measure costs. GSAs receiving funds will be required to repay the total amount withdrawn.

Subject to the provisions in the previous section (Well Mitigation Process), individual GSAs will be responsible for all other costs for implementing this Policy, including but not limited to: preliminary review, a professional well assessment report, a field investigation, and/or emergency water supply expenses. Specific escrow instructions for use of the common account will be developed.

Other Resources

If an application requires immediate action, qualifies only for partial mitigation, or receives no mitigation by a GSA, there are other programs that may assist well owners, especially for rural domestic/*de minimus* wells.

- Self Help Enterprises has a water sustainability program that includes tank water access, domestic well repair or replacement, and water system connections. Their services are free, based on income eligibility and other qualifications. They may be contacted at 1-559-802-1865 or visit their website at https://www.selfhelpenterprises.org/programs/emergency-services/water-sustainability/.
- California's Office of Emergency Services recommends residents contact their County Office of Emergency Services to begin the process of seeking assistance with drinking water wells that go dry.
- The State Water Resources Control Board manages the Safe and Affordable Funding for Equity and Resilience (SAFER) Program. The SAFER Program provides assistance with interim drinking water supplies, emergency repairs, technical assistance, administrators, planning, operations and maintenance and construction projects via various funding sources.
- Additionally, the GSAs in the Subbasin will commit to working with the existing coalitions and drainage authorities who provide support to domestic well owners whose wells are negatively impacted by water quality degradation.

Summary

This Well Mitigation Policy formalizes a process that landowners and GSAs in the Subbasin have voluntarily subscribed to, in some cases for over 100 years. GSA members do not want the wells of their

[2] Recent (5/2/2024) cost estimates for domestic well replacement vary from a low of less than $15,000/well up to $30,000/well.

constituents, employees, neighbors, friends, and families to go dry or otherwise be impacted. That is why GSAs in the Subbasin are committed to keeping groundwater levels above 2015 historic low levels.

This Policy describes the process well owners can follow to apply for mitigation/assistance if their wells go dry or have water quality impacts due to projects or groundwater management actions of the GSAs under SGMA. It specifies the process GSAs across the Subbasin may follow if there are indications that a representative monitoring well is nearing MTs, and the process GSAs and well owners will follow in the event a drinking water well goes dry or has a water quality impact for specific COCs.

As previously noted, since 2015, only 37 replacement well applications were received across the Subbasin. County records do not indicate whether wells were replaced due to groundwater levels falling or for other reasons. GSAs in the Subbasin are committed to eliminating the need for this Policy by maintaining groundwater levels above 2015 thresholds and managing the Subbasin's groundwater sustainably.

Domestic well owners are encouraged to be aware of information on local groundwater conditions as provided by local GSAs and the State of California. In particular, DWR has a website dedicated to keeping domestic well owners informed about resources needed to maintain and protect domestic water supply. This includes information about well maintenance and other assistance via DWR's "Be Well Prepared" website, which can be found at the following link: Be Well Prepared (ca.gov).

The Delta-Mendota Subbasin Coordination Committee shall review this Policy at least every five (5) years.