Consideration of a Well Mitigation Program in the Vina Subbasin

Stakeholder Advisory Committee
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1

1

Why this item is before the SHAC now

- The Vina GSP already identifies domestic well mitigation as a management action.
- In December 2025, the GSA Boards directed staff to bring back information on other GSAs' mitigation programs and well registries. SHAC had requested this as well.
- The immediate decision point is not whether to launch a full program in 2026.
- The immediate question is what intended path and expected schedule should be reflected in the Periodic Evaluation.

GSAs could clarify the intended path and expected schedule in the Periodic Evaluation

December Board Direction

Bring back information regarding:

1) Domestic Well Registry - information regarding what others are doing related to well mitigation and well registries for domestic wells to inform an initial framework for the Vina subbasin,

2) Minimum Threshold Domestic Well Impact Analysis - Prepare summary of the number of domestic wells impacted at MT levels using the GSP dataset (2022) of domestic wells and using the 2025 refined dataset of domestic wells.

2

Minimum Threshold domestic-well impact analysis

Board request: summarize the number of domestic wells impacted at current MTs using the 2022 GSP dataset and the 2025 refined dataset. See Attachment A, LWA Tech Memo for details.

2022 GSP dataset		2025 refined dataset	
1,920	Sustainably constructed (post-1980) wells treated as active	1,253	Sustainably constructed (post-1980) wells treated as active
462	wells estimated at risk at current MTs	400	wells estimated at risk at current MTs
24%	of wells estimated at risk	32%	of wells estimated at risk
$18.5M*	maximum total mitigation cost	$16.0M*	maximum total mitigation cost

* Cost assumes $40,000 for well replacement

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Takeaway: both approaches produce a similar order-of-magnitude result — several hundred domestic wells could be at risk if groundwater levels reach the current Minimum Thresholds.

3

What the Vina GSP says, and does not define

Management Action in GSP (Section 5.3.2)

Domestic Well Mitigation
The following steps are proposed:
1. Establish a voluntary domestic well registry
2. Compile well logs, screen depths, and locations
3. Secure funding to improve, deepen, or replace select wells
4. Provide emergency response for homes with dry wells, including providing bottled water and potable water for sanitation.

Priority in the GSP would be given to disadvantaged communities dependent on groundwater.

What is not yet defined

- Eligibility criteria
- Funding mechanism or reserve
- Administrative process and appeals
- Implementation triggers
- Dedicated staff / consultant support

DWR's recommended corrective actions do not direct Vina to adopt a mitigation program, however that was required of neighboring subbasins that initially received an 'incomplete' GSP determination; The Periodic Evaluation could be an opportunity to better clarify the GSA's intended path and schedule.

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3

4

Stakeholder input already received

Themes below are drawn from the Fall 2025 stakeholder meetings and the December 2025 SHAC discussion.

Domestic well users	• Consensus support for developing a mitigation program • Support notification to at-risk well owners • Support mitigation assistance for repair, deepening, or replacement • GSA should set aside funds to cover the costs of wells going dry
Agricultural users	• Support protecting domestic wells, but want clarity on scope, funding, and responsibilities of a mitigation program • Want economic impact of potential MT changes or mitigation program • Consider well eligibility based on well age and requiring well registration, as other basins have done
SHAC / other stakeholders	• Support further exploration of options, and understanding neighbors • Emphasized the need to avoid duplicating Butte County's short-term drought program • Program should be informed by well inventory and consider ag well data

5

What programs elsewhere generally look like

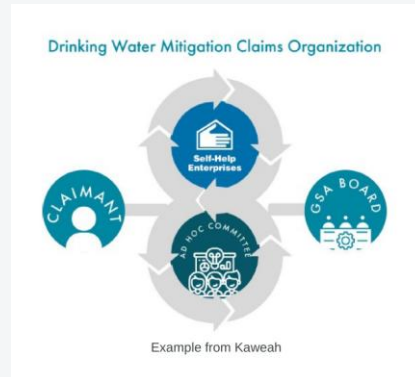
Programs reviewed: Colusa, Corning, Tehama, Kings, Tule, Madera, Chowchilla, and Kaweah subbasins.

• The examples are not all the same type of program: some are adopted and operating; others are pilots or MOUs

• Most distinguish between interim assistance and long-term mitigation.

• Most narrow eligibility in some way - by well type, timing, age, income, good standing, permit compliance, or registration.

• Several rely on partner implementation rather than direct GSA administration.



Adapted example from Kaweah materials

6

Eligibility is where most of the policy choices are

Common categories and varying policy choices

Well type and service

- Domestic wells only in many programs
- Some include State Small Water Systems or other drinking-water-serving wells
- Combination ag-domestic wells may be excluded

Applicant and property status

- Landowner-only requirements are common
- Some require owner occupancy, a habitable residence, or one claim per parcel
- Good standing with the GSA appears in several programs

Causation and timing

- Often requires linkage to groundwater decline
- Some explicitly include subsidence; some mention water quality
- Programs often only cover impacts that occur after a specified date

Age, compliance, equity, registry

- Some cap eligibility by well age; others pro-rate reimbursement
- Permit compliance may be required
- Income thresholds and well registration are used in some basins, but not all

These choices drive cost, equity, and public expectations.

7

Specific examples of eligibility differences across programs

Category	Examples seen in reviewed programs
Timing of impact	After 1/1/2015 (Kaweah); after 1/31/2020 (Chowchilla); after program adoption 10/1/2024 (MAGSA); after 1/1/2026 (Madera)
Age / condition of well	<=25 years (Eastern Tule); <=30 years (Madera); <=50 years (Kings / MAGSA); Tehama replaces any age well (but pump etc not provided for wells > 20 yrs)
Income / standing	No income threshold in some programs; <=80% of statewide median income in Kings / MAGSA; good-standing requirements appear in several programs
Registration / compliance	Well registration required in Kings-related programs, also Tehama; permit compliance may be required; not all basins use registration as an eligibility requirement

8

Mitigation measures are similar - administration choices vary

What tends to be similar across programs

- Interim assistance: bottled water, bulk water, tanks, or temporary delivery
- Long-term assistance: pump lowering, well deepening, replacement wells, or system connection
- Typical process: application, assessment, eligibility review, and mitigation selection

What varies more

- Administrator (staff, consultant, or partner)
- Board role and appeal process
- Funding mechanics such as fees, caps, cost share, or liens

9

For Consideration: Program framing in the Periodic Evaluation

Should the PE describe next steps and anticipated timing of this management action?
The question is whether to recommend a general program type and schedule to the Board.
Staff is not asking SHAC to choose a specific trigger threshold today.

	Trigger-based standby framework	Active program
What gets developed	A framework that identifies what to monitor, when staff returns to the Board, and what actions could be activated	A full draft program with eligibility, application steps, interim response measures, and funding options
Effort now	Lower upfront effort, but still requires clear policy direction and readiness tools	Higher upfront legal, technical, policy, and outreach effort and funding plan
What the PE would say	The GSA intends to monitor specified conditions and return for action if pre-defined triggers are reached	The GSA intends to develop / consider adoption of a program on a stated schedule
Best fit if…	The Board wants a clearer path without committing to immediate program development	The Board wants a more developed program package brought forward in the near term

10

Capacity and timing considerations

- GSA does not have staff capacity, consultant support, or available funding to develop a Vina-specific mitigation program in 2026.
- With dedicated consultant support and funding, program development likely to take roughly 9-12 months.
- Any Board direction has implications for: the FY 2026-27 budget, scope for the next technical support consultant team, and how the Periodic Evaluation describes this management action.
- DWR facilitation support services could potentially help with outreach and engagement to reduce program development costs

11

Requested SHAC feedback

Staff is seeking discussion and, if the SHAC wishes, a recommendation to the Board on these items:

Should the Periodic Evaluation further clarify the scope and expected schedule of this management actions? If so,

1. Which general path should be reflected in the Periodic Evaluation: a trigger-based standby path or an active-program path?
2. Should the PE describe an expected schedule for program development? If so, what does SHAC recommend considering staff and funding constraints?

12

Backup | What changed in the refined 2025 inventory

BACKUP

The updated desktop survey refined location information and screened the OSWCR dataset to focus on wells more likely to be active and sustainably constructed.

Comparison point	2022 GSP dataset	2025 refined dataset
Starting point	Post-1980 domestic wells in OSWCR assumed active	LWA desktop survey of OSWCR records
Location refinement	No additional parcel / APN refinement for this comparison	2,134 wells with refined location information (50% of WCRs)
How active / eligible wells were screened	Risks based on whether the bottom of the well is above the MT elevation	Removed pre-1980 wells, wells in urban water service areas / replaced wells, and wells above historical lows
Result at current MTs	462 wells at risk out of 1,920 total (24%)	400 wells at risk out of 1,253 total (32%)

Key takeaways

1. The refined inventory reduces the assumed active well count, but the estimated number of at-risk wells remains in the same general range.
2. The cost figures are upper-bound screening estimates assuming every at-risk well would require a full $40,000 replacement or deepening response.
3. LWA recommends a well registration program, as funding allows, to further improve the domestic well inventory.

Context from the memo

- These results respond to the Board request to compare impacts at MTs using the original GSP dataset and the refined 2025 dataset.
- The detailed technical memorandum remains in the packet as Attachment A for members who want the full methodology and RMS-zone detail.

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13

Backup | Vina GSP and "sustainably constructed" wells

BACKUP

How the current GSP approached the domestic well dataset for groundwater-level MTs:

- The GSP links Groundwater Level MTs to protection of the majority of "sustainably constructed" domestic wells in each RMS zone.
- The GSP describes sustainably constructed wells as wells installed following County well standards within permeable aquifer material and appropriately maintained.
- In building the refined dataset, the GSP removed wells installed before 1980 as a proxy intended to screen out the oldest wells and those likely replaced after the 1976-77 drought.
- That means the 1980 cutoff in the GSP functioned as a dataset-refinement proxy to work with an imperfect dataset

DWR feedback staff recently received is that arbitrary age-only cutoffs are generally discouraged; where feasible, the better question is whether a well is active and being relied upon.

14

Backup | Example trigger concepts for a standby framework

BACKUP

Examples only - included to illustrate how a standby approach could be framed. Staff is not asking SHAC to choose among these today.

- Representative shallow groundwater indicators reach or exceed prior historic lows in areas with concentrations of domestic wells
- A defined number of verified domestic-well complaints or dry-well reports occur in a season or localized area
- Monitoring or modeling shows a meaningful increase in the number of domestic wells at risk under forecasted dry-year conditions
- The Board makes specific findings that groundwater or drought conditions warrant interim assistance, more program development, or full program consideration

A trigger framework answers three questions in advance:

1. What will be monitored?
2. When does staff return?
3. What action comes back for consideration?

Backup | Well registry examples and linkage to mitigation

BACKUP

The packet appendix shows that registration is most clearly linked to mitigation in the Kings-related programs reviewed.

North Kings / North Fork Kings	Broad well registration is used and tied to the Kings Subbasin mitigation approach.
MAGSA	De minimis domestic wells are not generally required to register, but registration is still required if a domestic-well owner seeks mitigation assistance.
Kings shared program	Registration is a program requirement before or with the mitigation application.
Kaweah examples	The reviewed materials describe registration as voluntary or not clearly mandatory, and not a mitigation prerequisite.
Other reviewed programs	Most other examples reviewed did not clearly use registration as an eligibility gate for mitigation.

Note: the registry appendix in the packet was compiled from public information and generalized research tools and was not independently verified by staff with each GSA.

Backup | Policy choices table from the staff memo

Table 1. Policy Choices to Consider in Development of Domestic Well Mitigation Program.

Category	Examples of Direction Needed	Why It Matters
Program timing and scope	Adopt now; prepare a ready-to-launch standby program; or adopt only a framework and return later with a full program.	This is the threshold policy issue and will determine the level of effort the GSA should undertake now.
Eligible well types	Domestic wells only; agricultural wells used for domestic supply; state small water systems; other drinking-water-serving wells.	Expanding the pool of eligible wells can significantly increase costs
Causation standard	Require linkage to declining groundwater levels associated with GSP implementation; include or exclude subsidence; include or exclude water quality impacts.	This determines which claims qualify and whether the program is limited to SGMA-related impacts or broader drinking water concerns.
Geographic focus	Entire Vina Subbasin; mapped at-risk areas only; or phased implementation based on monitoring results.	A more targeted program may be easier to administer and budget.
Ownership and occupancy	Landowner only; claims initiated by tenants with owner follow-up; living trusts; owner-occupied versus non-owner-occupied homes.	These choices affect fairness, ease of implementation, and how readily affected households can access assistance.
Well age and permit compliance	Age cap; depreciation based on age; legal/permitted wells only; whether permit recommendations must have been followed.	These are common ways programs manage cost and avoid subsidizing older or non-compliant wells without limitation.
Income and equity approach	No income threshold; DAC / low-income priority; income-based eligibility; or tiered assistance levels.	This affects both equity outcomes and total cost.
Interim assistance	Whether to provide bottled water, bulk water, tanks, or only referrals; desired response time; maximum duration.	Even a trigger-based program may benefit from a defined interim response protocol.
Long-term mitigation menu	Pump lowering; well deepening; replacement well; connection to an existing system; treatment; other case-by-case measures.	The menu of measures should align with local conditions, legal authority, and available funding.
Funding approach	Program reserve, annual budget, application fee, reimbursement cap, cost share, liens/recordation, grants, partner administration, or GSA-fee funding.	Funding structure will shape both feasibility and claimant expectations.
Administration and appeals	Staff-administered, consultant-administered, or third-party/nonprofit-administered; Board approval for each claim or delegated approval; appeal process.	Programs with more formal administration may be more defensible but require more staff time and transaction cost.
Monitoring and readiness tools	Well registration, domestic well reporting, permit review, at-risk mapping, or notification triggers.	These tools can support either an active program or a trigger-based standby approach.