

Friday, April 26, 2024

## Community Monitoring Group Focus Area Recommendation

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### The Ask

- As the public member of the task force representative of private domestic well owners . I am asking for the Task Force Member's support of my recommendation of a focus area for Technical Support and Funding for Community Monitoring of Domestic Wells. The Community Monitoring effort would be coordinated through public agencies with the goal of incorporating community-based data to inform water management decisions through adoption of regulations and policies protective of domestic wells at the local/regional level. Community monitoring programs would be a proactive focus area of the drought emergency, recovery and resiliency planning for implementing SB552.
- I am asking you to support community monitoring as an effort to: further engage and educate domestic well owners on the personal responsibility of owning and maintaining their private wells; understanding the importance of well owners knowing the significance of water levels in their own in wells: and the importance of participating in community-based data gathering that will contribute to implementing well protection measures beneficial to themselves and their community.
- The Vision
  - The community monitoring focus area is envisioned to develop guidelines for community groups coordinating with public agencies which will include engagement with the public, agreements to enter private property to collect data on wells, and coordination with local agencies in the use of the data in a consistent and prescribed manner with the degree of accuracy necessary to inform policy and actions protective of domestic well communities
  - Community monitoring data is envisioned as an “early warning system” to get ahead of the problem of large numbers wells going dry in rural communities through preemptive action, and community/regional policies developed with the support of the domestic well community to be implemented by the domestic well community when required as part of drought resiliency.
- The Example
  - Personally, I have lived for over 40 years in a large rural community of domestic well owners that has taken an active interest in preserving the rural heritage of the area and the rural lifestyle as a choice by working with local agencies to adopt and implement policies protective of the community.
  - The Sustainable Groundwater Management Act of 2014 and the requirements of public outreach and engagement brought the rural community in my area together in the public discussion of water and the role of domestic well owners in the GSP development and

groundwater sustainability management of our sub basin by local groundwater sustainability agencies.

- In our community, with the support of local GSAs, a domestic well protection committee was formed in Spring 2022 with interested community members, as a planning group for the formation of a Domestic Well Advisory Group. We planned and held our first public engagement event in Oct 2022 and over 70 residents attended the meeting at a local restaurant and gathering place for “locals”. After presentations from the GSAs and the domestic well committee members, 17 residents signed up to have their wells monitored by committee members that formed a monitoring team.
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- In 2024 a Domestic Well Advisory Group was formed and the well monitoring team reported on its activities as follows:
  - **Monitoring**
  - Currently about 25 wells are monitored on a biannual basis in April and October to correspond to GSA well monitoring. Five community members are on the team. Team members monitor the wells closest to the them—their neighbors’ wells. Time spent by team members for each well is estimated at about 30 minutes for travel and set up, 15-30 minutes to monitor and chat with resident if they are home and 30 minutes for data collection processing and posting.
  - An elevation survey is done initially at each well head to convert the depths to water to water level elevation relative to mean sea level which takes an hour or so.
  - **Equipment**
  - Elevations are accurate to within a few inches using an Emlid Reach RS2+ RTK GPS system.
  - A well sounding device, the Eno Scientific Well Sounder 2010 Pro <https://enoscientific.com/well-sounder-2010-pro/> portable sonic water level sensor is used to measure water levels. It works by sending sound waves down the well and timing how long it takes those waves to return. The deeper the water level, the longer it takes the sound wave to go down, bounce off the water, and come back up. The measuring process involves unscrewing a plug at the top of the well to reveal a hole (all standard well tops have this plug), then placing the nose of the unit down in the hole. Once it is put on the well and turned on, it sends sound waves down from the nose, times the return, and the screen will show the depth to water. The benefit of this type of water level measuring device is there is no risk of contamination because nothing is lowered down into the well water. The drawback is a higher uncertainty than the tape method - it's not accurate to hundredths of a foot, but is probably accurate within tenths of a foot so is fine for detecting long term trends.
  - **Procedure**
  - The procedure is to open the port on the well, put the sounder in the port and turn it on, listen for the pump to make sure that the pump isn't on at the time of measurement, wait a minute to make sure the water level isn't changing, then record the number. The homeowner is provided a written record of the well level or email results, depending on homeowner preference. Results are mailed to the GSA for addition to the database for the subbasin to inform the annual GSP reviews and the five year GSP assessment required by DWR.
  - **Scheduling**
  - It's pretty informal - team members call or text the homeowners on their list to set up a time that works for team member and homeowner. E-mail is used to coordinate who uses the sounding equipment at a given time so all of the team obtain the measurements needed during the appropriate timeframe using the 2 units purchased by team members which are shared amongst the 5 team members.

- **Data gaps**
- Note that well locations are not specifically chosen to fill in data gaps in the GSP. Locations are limited to locations where homeowners volunteered to have their wells tested on a regular basis. It was suggested by the team that would be useful to compare the team's monitoring well locations to the shallow monitoring network used for the GSP. Next steps would be to identify data gaps in the GSP and recruit more volunteer team members for these areas.
  
- **The Recap**
  
- I hope the Task Force Members can see how successful the Domestic Well Advisory Group Monitoring Team has been in establishing itself in monitoring, gathering and coordinating with GSAs in reporting data on community wells. These individual efforts will attract and encourage more community interest and participation in well monitoring as part of a community or as an individual well owner. Future public engagement meetings scheduled by the Domestic the Advisory Group have a new basis for discussion that can broaden the community conversation to more topics involving the personal responsibility of owning and maintaining private domestic wells and beginning discussions of proactive community drought emergency planning, drought recovery and long term resiliency supported by domestic well community well monitoring.
  
- As a public member with a domestic well I believe Community Monitoring can provide a can be a viable longterm planning tool and important community forum and educational opportunity for domestic well owners that will benefit the entire community. I believe community monitoring is part of the solution as a proactive approach to building drought resiliency
  
- I ask for the Task Force Member's support of my recommendation of Technical Support and funding for Community Monitoring of Domestic Wells as a Focus Area for the implementation of SB 552.

## Questions