



UKIAH VALLEY BASIN GROUNDWATER SUSTAINABILITY AGENCY

340 Lake Mendocino Dr. • Ukiah • California 95482 • (707)463-4363 • fax (707)463-5474

GSA Administration Staff Report

Item No.	5
Date	12/07/2022
From	UVBGSA General Manager (Erik Cadaret, West Yost)
To	Technical Advisory Committee
Subject	Status of DWR Round 2 SGM Implementation Grant
Consent Agenda ☐ Regular Agenda ☒ Notice of Public Hearing ☐	

Recommended Action

TAC will receive update from GSA Staff on status of coordination effort with County and Legal Counsel to comply with Executive Order N-7-22. TAC will discuss and provide feedback to GSA Staff on next steps to continue making progress on developing the GSA's process to coordinate with the County and comply with Executive Order N-7-22.

Background

On November 15th, 2022, the UVBGSA and the County of Mendocino Department of Environmental Health Services (County EHS) held a workshop on well permitting as it related to the Executive Order N-7-22 at Barra of Mendocino Winery in Redwood Valley, CA. The Executive Order N-7-22 states the following in section 9(a) and 9(b):

9(a): To protect health, safety, and the environment during this drought emergency, a county, city, or other public agency shall not Approve a permit for a new groundwater well or for alteration of an existing well in a basin subject to the Sustainable Groundwater Management Act and classified as medium- or high-priority without first obtaining written verification from a Groundwater Sustainability Agency managing the basin or area of the basin where the well is proposed to be located that groundwater extraction by the proposed well would not be inconsistent with any sustainable groundwater management program established in any applicable Groundwater Sustainability Plan adopted by that Groundwater Sustainability Agency and would not decrease the likelihood of achieving a sustainability goal for the basin covered by such a plan; or

9(b): To protect health, safety, and the environment during this drought emergency, a county, city, or other public agency shall not Issue a permit for a new groundwater well or for alteration of an existing well without first determining that extraction of groundwater from the proposed well is (1) not likely to interfere with the production and functioning of existing nearby wells,



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and (2) not likely to cause subsidence that would adversely impact or damage nearby infrastructure.

This paragraph shall not apply to permits for wells that will provide less than two acre-feet per year of groundwater for individual domestic users, or that will exclusively provide groundwater to public water supply systems as defined in section 116275 of the Health and Safety Code.

Feedback from workshop

At this workshop, the UVBGSA and County shared with workshop attendees how the County's well permitting process is being impacted by Executive Order N-7-22, how the GSA is required to be involved in the well permitting process, the proposed process the County and GSA are considering to adopt, and requested feedback from attendees on the proposed process. Attachments 1 – 3 include the workshop agenda, workshop presentation slides, and flowchart of the proposed review process. Attendees voiced numerous concerns which were captured by the workshop facilitators. Feedback received at the workshop is summarized Attachment 4.

Based on the feedback received at the workshop, the following questions were identified as a priority to address at the December TAC meeting for wells that are not exempt from the Executive Order N-7-22.

Existing wells for repair/modification:

- If the repair/modification will NOT result in an increase in pumping, is pumping test data required for the GSA to conduct its analysis for 9(a)?
- In the event of an emergency, should the County consider allowing the well owner to proceed with the repair/modification before a permit is filled and formal approval is given?

New wells:

- If there's no known issue with well interference at an existing well at the current level of pumping and a new well is proposed to meet the following conditions outlined below, does the GSA need pumping test data for a new well to conduct its analysis for 9(a)?
 - New well will pump the same amount or less
 - New well is screened in the same interval as the existing well
 - New well is to be located on the same property as existing well that's not in close proximity to neighboring well(s)
- If a new well doesn't meet any of the above-mentioned conditions, are pumping tests required by the GSA to conduct its analysis for 9(a)?

Review process:

- How can we decrease the review time so permits may be reviewed by the GSA ASAP?
- How can we modify the process to make the GSA's review more feasible for well owners to follow and support?



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State permitted surface water diversion wells:

- Should these wells be exempt from County/GSA review?

Pumping tests:

- Costs to conduct a pumping test and complete the analysis are a concern. Is it reasonable for the County to require pumping tests on existing and/or new wells where (1) no pumping test data exists and (2) the well repair/modification will result in increased pumping and a new well cannot be exempt?

What are pumping tests and what is the value?

Pumping tests are a field experiment in which a well is pumped at a constant rate and water-level response (drawdown) is measured in one or more surrounding observation wells and optionally in the pumped well (control well) itself. The response data from pumping tests are used to estimate the hydraulic properties of aquifers, evaluate well performance and identify aquifer boundaries.

Pumping tests may also be done in two parts, a step-rate test and a constant rate. Step-rate tests typically will discharge water from a well at three to four different pumping rates. The results from these different pumping rates help inform which pumping rate is most appropriate for the constant rate test and also help inform the pump contractor/licensed PE, PG, or CHG which pump and what rate would likely be the most appropriate for the well to pump at over time. Example of step-rate test data below in figure 1.

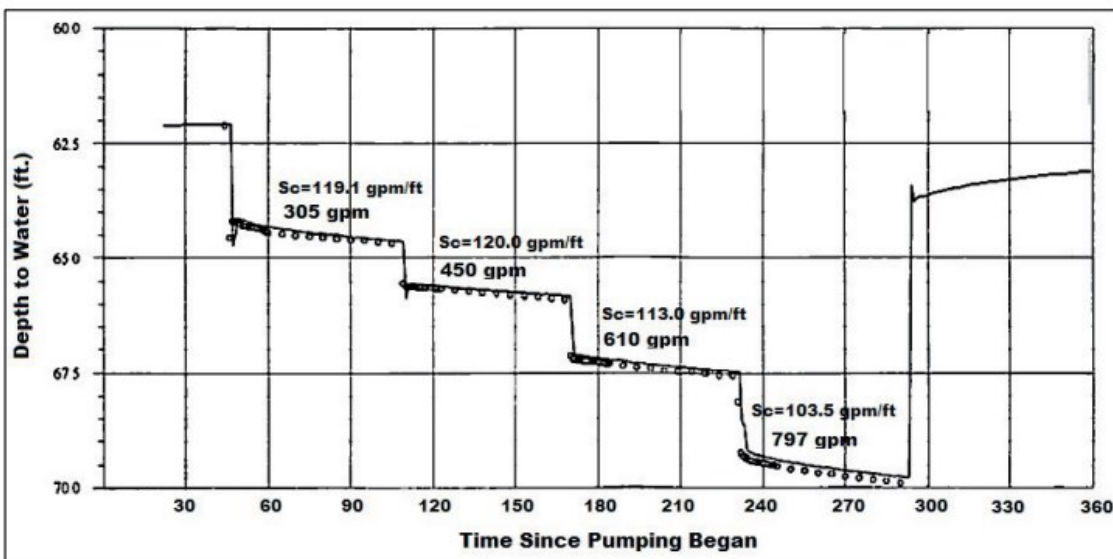


Figure 1: step rate test data shows that with increased pumping, the greater the drawdown in the pumping well.



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Constant rate tests typically will discharge water for a minimum of 24-hours (pending local well ordinance requirements, site conditions, etc.). The results from this test provide an estimation of aquifer transmissivity, storativity, and extent of which drawdown may occur and what nearby wells may be affected. Example of constant rate test data below in figures 2a, 2b, and 3.

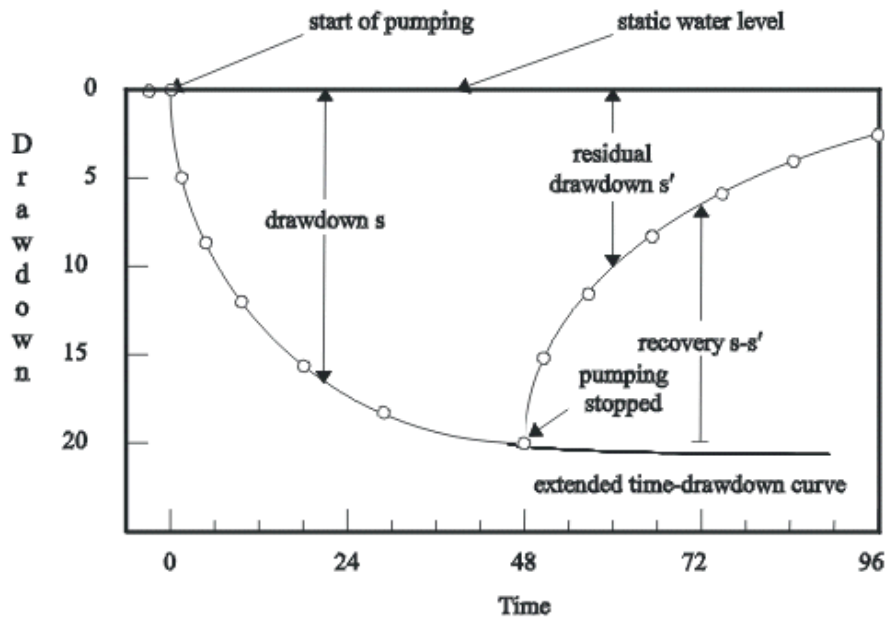


Figure 2(a): drawdown increases over time in the pumping well, but the water level recovers once the pumping stops.

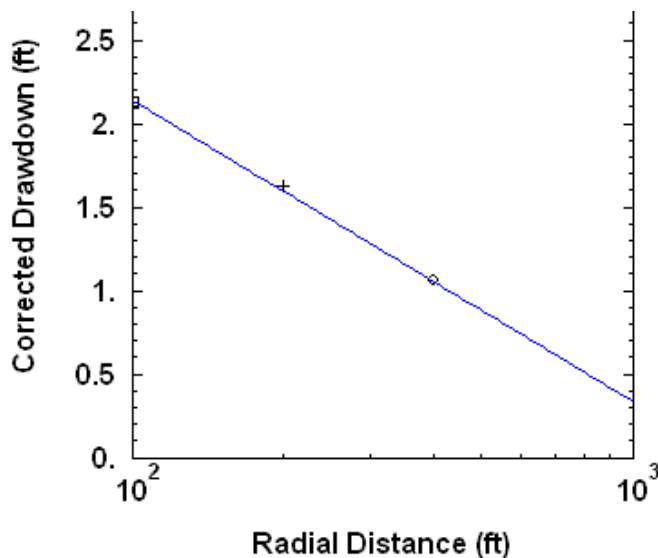


Figure 2(b): total drawdown that was observed is ~2.1 feet at a well that's 100 feet from the pumping well and ~0.3 feet at a well that's 1,000 feet from the pumping well.



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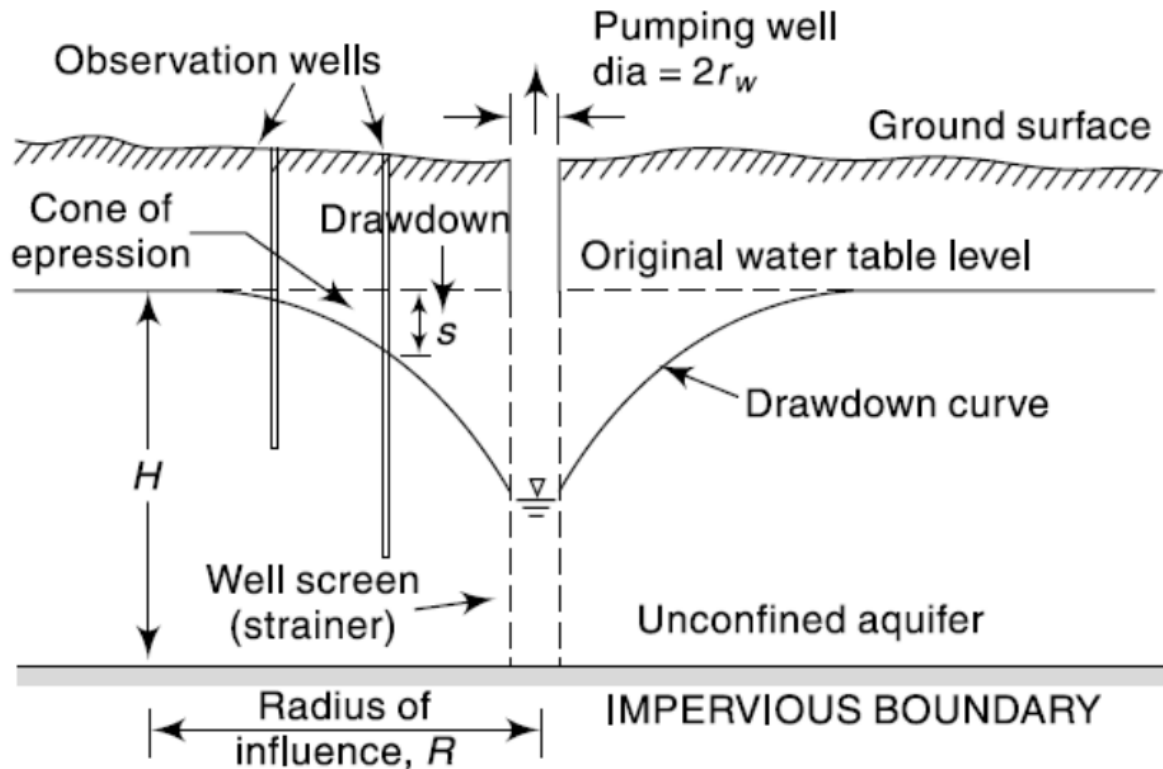


Figure 3: Diagram depicting a typical pumping test in an unconfined aquifer.

Downside of pumping tests is they can be expensive, especially if there is any contamination that requires special permitting/disposal requirements OR if the well pumps at a high enough rate that the well will discharge more than 1 AF by the end of the testing that would require additional permits. The typical cost to perform a pumping test in a well without contamination is between \$25,000 - \$50,000.

Important considerations

The basin's GSP outlines the GSA's Sustainable Management Criteria (SMCs) for which the GSA will use to measure progress against achieving the mandated requirements associated with the Sustainable Groundwater Management Act (SGMA). Cumulative impacts of pumping at wells is a key factor that should be considered when the GSA is reviewing well permits and data provided by the County for the GSA to provide verification (GSA does verify or GSA cannot verify) that a well meets the requirements of 9(a).



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Fiscal Impact

None.