

Napa County's Voluntary Groundwater Level Monitoring Program

The Voluntary Groundwater Level Monitoring Program measures groundwater levels in spring and fall. These measurements improve the understanding of groundwater for both the well owner and the County. A network of privately volunteered wells, along with publicly owned wells, provide a greater understanding of our aquifers. The program is strengthened by expanding the voluntary well network to areas where data are lacking or nonexistent.

FAQ'S

Well owner benefits for participating:

- Receive accurate groundwater level readings twice per year (*spring and fall*);
- See seasonal and long-term groundwater level trends for their well;
- Receive water quality data for their well (*if testing is agreed to and conducted*); and
- Receive notification if anyone submits a public records request for information.

The County currently monitors wells throughout our community, if you are interested in volunteering your well for County monitoring, please contact us, as we periodically update our monitoring network. The County publishes an annual report on the status of overall groundwater conditions.

Do it Yourself (DIY) Groundwater Level Monitoring

Napa County has a Groundwater Self-Monitoring Program. This DIY program offers training and a special hand-held sonic measuring device to determine the depth to water in most wells.

How do I borrow the tool from the County?

1. Contact County staff and indicate your interest ,
2. Napa County Resource Conservation District staff will demonstrate the equipment at your well and help with initial tool calibration,
3. Then borrow the equipment seasonally to measure your water level.

Reserve the tool or learn more:

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paul@naparcd.org

Jamison Crosby, 707-253-4823,
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Why should I measure water depth in my well?

To know how water depth changes over the course of the year and better understand how the groundwater system beneath your land responds to winter recharge and use over the dry months. Measurements are best taken in spring and fall over multiple years to see long-term trends in response to recharge.

Will someone curtail my well use if I participate?

No. The Voluntary Groundwater Level Monitoring Program is a non-regulatory, voluntary program that measures the depth to groundwater (level only). Groundwater use is not being measured or monitored as part of the program.

Will my well information be kept confidential?

Napa County will make every effort to maintain the confidentiality of a well owner's information. However, such information may be accessed through a public records request. In such a case the County will notify the well owner.

How long is the voluntary groundwater level monitoring program going to last?

The monitoring is intended to be long-term, however an individual well owner may leave the program at any time.

Who is eligible to participate?

If your well is in an area where data are lacking and well construction information is available, your well may be eligible to participate in the program.

How will the collected information be used?

The information will be used to monitor and track groundwater level trends to help better understand relationships between surface water and groundwater, maintain a centralized data system, and improve the accuracy and reliability of relevant water resource models.



Groundwater Resources in Napa County Monitoring for Sustainability



The Importance of Groundwater in Napa County

Groundwater is water below ground contained in formations known as aquifers, which supply significant quantities of water to wells and springs. Groundwater is a vital source of water supply in Napa County. Many residents, businesses and agriculture rely on groundwater, as do fish, wildlife and natural habitats. These water demands make it essential that we:

- Preserve the quality and availability of local and imported water supplies;
- Sustain groundwater supplies and meet water needs during drought conditions;
- Anticipate and avoid potential negative environmental effects due to groundwater use; and
- Anticipate and avoid adverse changes in long-term groundwater availability and quality.

What we know

Napa County and other public agencies have been monitoring local groundwater resources since the mid 1900s. Based on long-term data and recent studies by the County's consultants, Luhdorff & Scalmanini Consulting Engineers (LSCE) and MBK Engineers, the County continues to:

- Expand voluntary groundwater monitoring in key locations to provide better data and fill data gaps;
- Develop and implement better groundwater data collection procedures;
- Report on annual groundwater conditions and trends;
- Estimate the rates of aquifer replenishment and study groundwater and surface water interaction;
- Update groundwater basin water budgets and models; and
- Implement actions in compliance with the Sustainable Groundwater Management Act (SGMA).

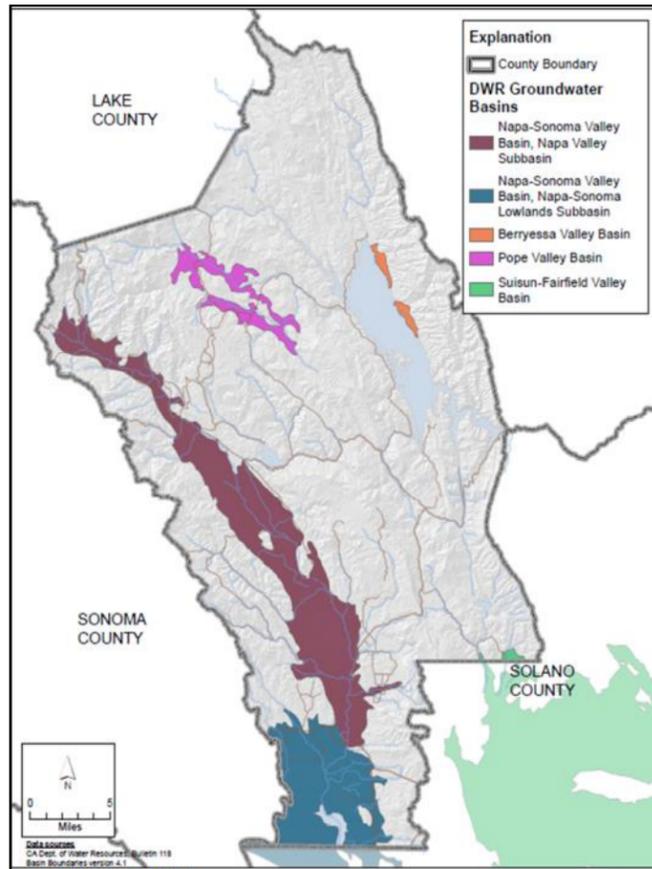
What Are We Trying to Learn?

- How does groundwater move through our aquifer system?
- What is the overall status of the groundwater aquifers within the county?
- What are the amounts of loss and replenishment to creeks, rivers and aquifers?
- What are the key relationships between groundwater and surface water in our creeks, rivers, and lakes?



DWR Groundwater Basins

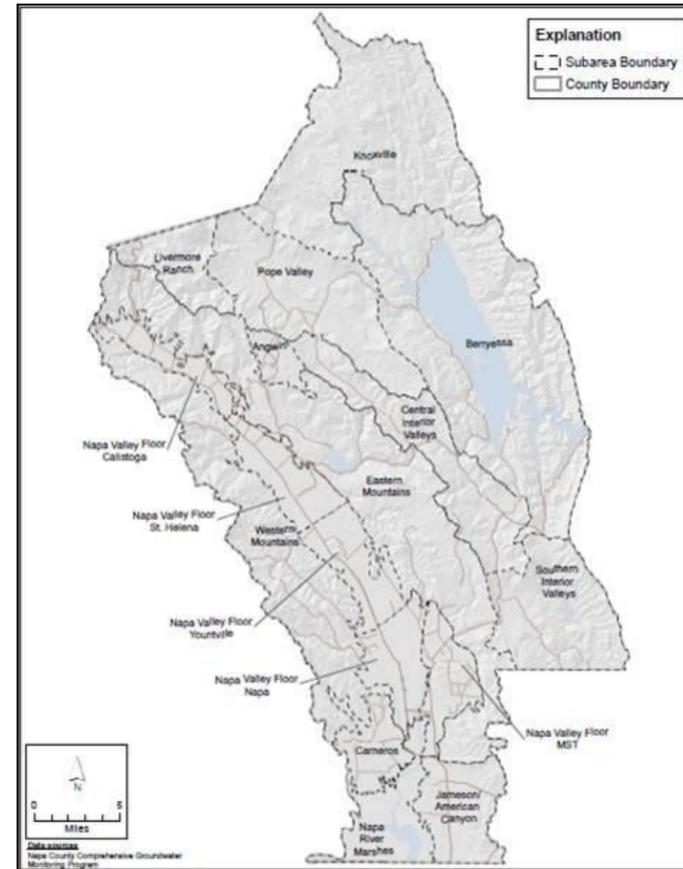
The Department of Water Resources (DWR) collects, summarizes, and evaluates groundwater data. DWR has defined five alluvial groundwater basins in Napa County (see map below). The 2014 Sustainable Groundwater Management Act (SGMA) sets basin management priorities based upon these basin boundaries. Whenever basin boundaries change, DWR is required to assess and reprioritize SGMA management actions for that basin.



DWR Groundwater Basin Map

Groundwater Subareas

Groundwater conditions outside of DWR designated basins are also important in Napa County. To improve our understanding of groundwater throughout the county, seventeen subareas have been designated. These subareas are used for local planning and are based upon watershed boundaries, groundwater basin boundaries, and other data. There are five subareas covering the floor of the Napa Valley. Other subareas include the MST, Carneros, Angwin, eastern/western mountains, interior valleys, among others.



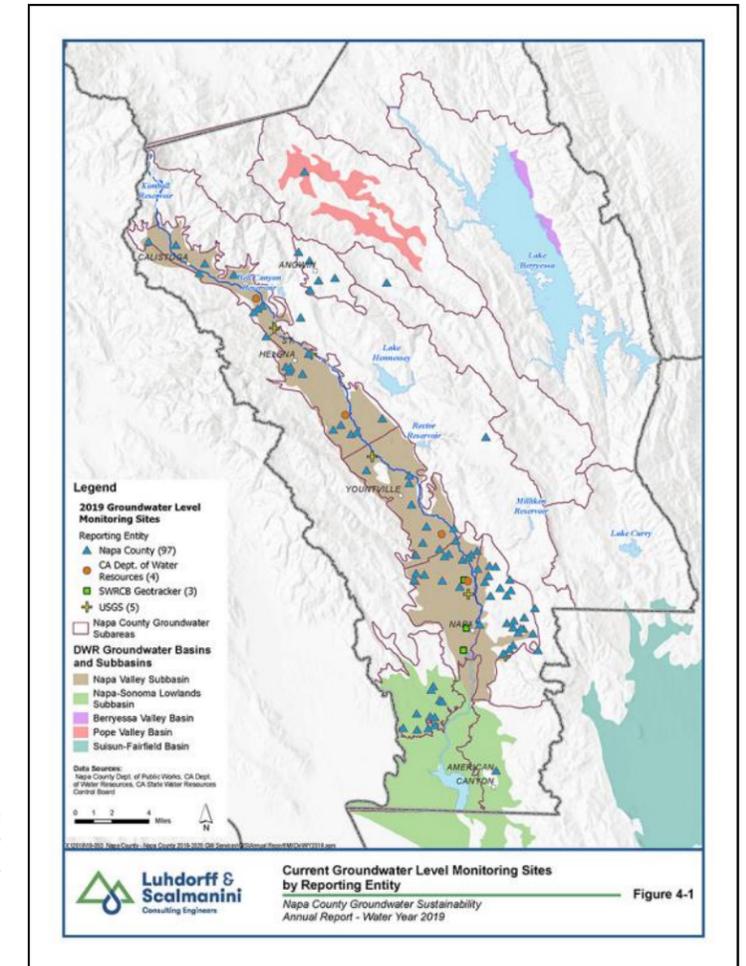
Napa Groundwater Subareas Map

Groundwater Levels and Trends

Based on recent studies and on-going bi-annual monitoring of groundwater levels in 109 volunteered wells, level trends in the Napa Valley Sub-basins of the Napa-Sonoma Valley Groundwater Basin are stable in the majority of wells with long-term records. Overall, the increased recharge potential in 2019 due to Wet year conditions (33.29 inches of rainfall), groundwater levels in fall 2019 remained comparable to levels in recent years. Groundwater levels in spring and fall 2019 were also generally above levels recorded in 2011, the most recent water year with a similar annual precipitation total.

Groundwater level declines observed in the Milliken-Sarco-Tulucay (MST) Subarea as early as the 1960s and 1970s have stabilized since about 2009. Groundwater level responses differ within the MST Subarea and even within the north, central, and southern sections of this subarea, indicating that localized conditions, whether geologic or anthropogenic in nature, might be the primary influence on groundwater conditions in this local subarea.

Since 2011, Napa County has developed a more focused understanding of the geology that controls the occurrence and availability of groundwater and doubled the number and distribution of wells in the voluntary monitoring network. Additionally the County constructed ten dedicated monitoring wells in five key locations designed to provide data on the interactions between groundwater and surface water. Additional information about groundwater conditions is available online: www.napawatersheds.org/groundwater



Groundwater Monitoring Network Map

Contact Information and Resources

More Information:

Learn more about Napa County's groundwater resources, levels, trends and reports at:

<https://www.countyofnapa.org/3074/Groundwater-Sustainability>

For Questions Contact:

Jamison Crosby

Jamison.Crosby@countyofnapa.org

Join the Napa County Groundwater Email List:

<http://www.countyofnapa.org/groundwater>



Scan to sign up on the groundwater list serve

Groundwater Quality

Overall groundwater quality appears to be good except in select areas in the most northern and southern parts of the County. Areas near Calistoga exhibit geothermal influences and the southern lowlands of the County exhibit elevated levels of naturally occurring dissolved solids and chlorides, likely due to their close proximity to San Pablo Bay. Additional groundwater quality monitoring is underway and also planned for the upcoming year.



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