

**REPORT SUMMARY:**  
**NAPA COUNTY GROUNDWATER SUSTAINABILITY**  
**ANNUAL REPORT – WATER YEAR 2017**

The 2017 Annual Report provides the latest information on efforts underway since 2008 by Napa County and others to implement groundwater management actions to better understand groundwater conditions, establish monitoring to track conditions, conduct education and outreach, and develop programs to assess and maintain groundwater sustainability. These efforts have included:

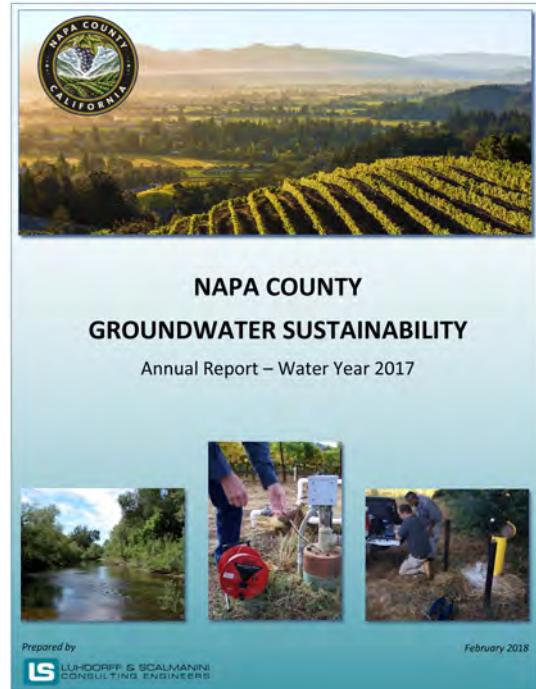
- Adoption of 2008 General Plan Goals & Policies
- New groundwater resources studies began in 2009
- Created Groundwater Resources Advisory Committee to lead implementation and outreach (2011-2014)
- Provide ongoing community outreach through the Watershed Information & Conservation Council

The Annual Report meets the reporting requirements of the Sustainable Groundwater Management Act (SGMA) for the Napa Valley Subbasin, which underlies much of the Napa Valley Floor. It provides an update on recommended SGMA implementation actions in Napa County's Basin Analysis Report (LSCE, 2016) that was submitted to the California Department of Water Resources (DWR) (see Section 7) and presents groundwater conditions (see Section 5) and water use updates for the Napa Valley Subbasin (see Section 6).

The Annual Report includes recommendations currently being implemented to maintain or improve groundwater conditions to ensure overall water resources sustainability in the Napa Valley Subbasin (see Section 8).

**Key findings from the Annual Report include:**

- Groundwater level trends in the alluvial aquifer system of the Napa Valley Subbasin are stable in most wells with long-term groundwater level records (see Sections 5.1.1 and 5.1.2).
- Many monitored wells experienced increased groundwater levels in 2017, consistent with very wet water year conditions.
- Groundwater levels recorded in 2017 were above the minimum thresholds established as SGMA sustainability criteria (see Section 5.1.3).
- Overall, the depth to groundwater in the alluvial aquifer of the Subbasin is quite shallow, ranging between 2.5 and 21.2 feet in spring 2017.
- While agricultural land use, especially vineyards, have covered much of the Napa Valley Floor for decades, water requirements for agriculture in the Subbasin (predominantly vineyards) are significantly lower than agricultural commodities grown elsewhere in California.
- Due to the high recharge potential of the Subbasin in most years and relatively low water requirements for agriculture, the Subbasin remains full relative to its storage capacity.
- Cumulative changes in groundwater storage, the difference between annual inflows and outflows to the groundwater system, show a net increase of 13,702 acre-feet from water years 1988 to 2017 (see Section 5.1.4).



- Groundwater use in the Subbasin in water years 2016 and 2017 was 17,039 acre-feet and 15,831 acre-feet, respectively (see Section 6.1.4). These volumes are below the sustainable yield range of 17,000 to 20,000 acre-feet per year identified in the Basin Analysis Report (LSCE, 2016). **These and other findings on groundwater conditions and trends (see Section 5) demonstrate that the Napa Valley Subbasin has continued to be managed sustainably through 2017.**
- The majority of the Milliken-Sarco-Tulucay (MST) Subarea is not part of a groundwater basin as mapped by DWR, though it is a groundwater subarea for local planning purposes. Groundwater level declines observed as early as the 1960s-1970s have stabilized since about 2009 (see Section 5.2). Within the MST Subarea, groundwater level responses differ indicating that localized conditions, whether geologic or anthropogenic, are likely the primary influence on groundwater conditions.

**Some additional key findings from the Northeast Napa Area Special Groundwater Study and Management Area include:**

- Geologic faulting in the model area influences the overall behavior of water levels east of the Napa River. Concealed faults may affect water levels in deeper wells in the Petra Drive area.
- The high density of wells in the Petra Drive area are associated with mutual well interference and local drawdown effects. However, these lowered water levels are not as significant as the regional influence of the eastern boundary and movement of groundwater towards the MST.
- Over the 28-year study period, climate effects have a much greater influence on stream leakage than pumping. Climate-driven variables account for 87 to 92% of the effect on groundwater discharge to Napa River, while pumping contributes to 8 to 13% of the effect on groundwater discharge to the River.
- Annual stream leakage fluxes (in and out of the surface water) were very similar even with no pumping occurring showing minimal stream impacts due to pumping.

**SGMA sustainable groundwater management activities underway or completed in 2017 include:**

- Completion of the Northeast Napa Area Special Groundwater Study.
- Designation of the Northeast Napa Management Area as an Amendment (LSCE, 2018) to the 2016 Basin Analysis Report for the Napa Valley Subbasin (LSCE, 2016) (Sec 355.10 CCR,DWR,GSP).
- Preparation and application of revised conditions of approval requiring additional monitoring and reporting of groundwater conditions and water use for discretionary projects.
- Providing tools and training to Napa County well owners to support monitoring and awareness of groundwater conditions in wells that they own.
- Development of datasets to support the expansion of the groundwater flow model developed for the Northeast Napa Management Area to the entire Napa Valley Subbasin.
- Collaborations and project development to improve best available water use data.
- Ongoing coordination with other local and regional water management and planning programs.

For additional information: <https://www.napawatersheds.org/documents/view/9230>