

Study Conclusions

Cooperation among water users in the Napa Valley is critical to ensure reliable water supply for the present and the future.

- The acquisition of “dry year supplies” by the municipalities would improve water supply reliability and help to meet existing and future water demands during dry years.
- Unincorporated area and agricultural water users are the primary users of groundwater in the Napa Valley. Only about 1 percent of groundwater is used by cities and towns. If unincorporated and agricultural demands continue to grow, this could result in additional use of groundwater. Cities and towns are also considering very small increases in groundwater use to provide drought and emergency supply reliability.

Study Recommendations

- Municipalities should pursue a number of diversified approaches to meet existing and future water demands. One such project is the acquisition of “dry year supplies” from outside Napa County. This project involves maximizing the use of the existing capacity in the NBA and importing water supplies acquired from other water agencies through supply agreements or options in dry years when deliveries from the State Water Project (SWP) to Napa County and other SWP Contractors are curtailed.
- While municipalities may pursue individual project opportunities to increase the use of local groundwater resources for drought and/or emergency use, it is recommended that the groundwater basin be managed appropriately. As municipalities are considering increases in groundwater use, they should exercise caution as they move forward, so that they do not adversely impact existing groundwater users.
- Groundwater levels throughout the Napa Valley should be monitored more extensively to ensure that the groundwater resources are preserved for generations to come.
- The use of recycled water or other alternative supply sources to meet non-potable water demands should be aggressively pursued, where possible, to offset groundwater and/or potable use.

Next Steps

- Acceptance by the Napa County Food Board of the 2050 Study findings, conclusions and recommendations.
- Individual agency implementation of the recommended water supply options to assist in meeting their individual water demands.
- Evaluation of potentially available dry year supply options by interested multiple agencies, coordinated through the WATRTAC.
- Pursuit of grant funding opportunities related to water recycling projects, and/or other integrated water resource planning projects.

For More Information

For more information on the Napa Valley 2050 Water Resources Study contact Don Ridenhour at the Napa County Flood Control and Water Conservation District at 707/259-8321.



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Napa County Flood Control & Water Conservation District 2050 Napa Valley Water Resources Study

Study Purpose

- To compare available Napa Valley water supplies to existing and future water demands
- To identify water supply options for the future

Study Methodology

Water supply and demand was evaluated for two categories of water users:

- Municipal and Industrial (M&I) users in incorporated areas, including the Cities of American Canyon, Calistoga, Napa, and St. Helena and the Town of Yountville
- Unincorporated area users, including agriculture, wineries, rural residential users, and improved open areas (golf courses)

The Napa County Flood Control and Water Conservation District's Water Resources Technical Advisory Committee, known as WATRTAC, works to coordinate County-wide water supply and system operations. The WATRTAC reviewed the study and provided comments and direction. The WATRTAC includes representatives of the County of Napa, City of Napa, City of American Canyon, Town of Yountville, City of Calistoga, City of St. Helena and the Napa Sanitation District.

Definitions

Acre-foot: One acre-foot of water can fill one acre of land, approximately the size of a football field, one foot deep. An acre-foot contains 325,900 gallons of water, and can supply the annual indoor and outdoor needs of two to three urban households.

NBA: North Bay Aqueduct, a State Water Project (SWP) facility which delivers water supplies from the Delta to SWP Contractors, including the Cities of Napa, American Canyon, and Calistoga and the Town of Yountville.

Main Basin: The Napa Valley's primary source of groundwater supplies. The Main Basin underlies the Cities of Napa, American Canyon, St. Helena, Calistoga and the Town of Yountville.

Multiple Dry Years: The driest, continuous six-year drought period, similar to the 1929-34 or 1987-92 historical periods. Water deliveries from the SWP will be reduced to 40 percent of contractual entitlements and other supplies will also be limited due to drought.



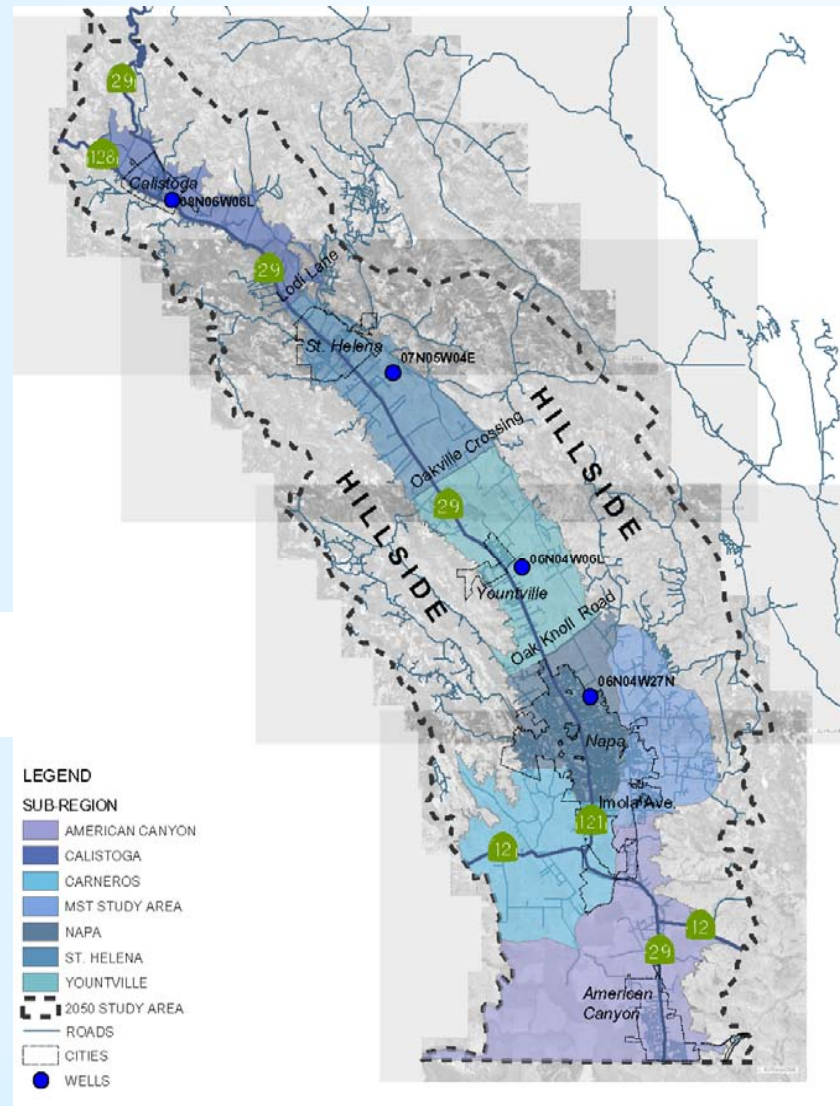
Lake Hennessey

Critical Dry Year: The most severe one-year drought period anticipated, similar to the 1976-77 historic drought. Water deliveries from the SWP will be reduced to 20 percent of contractual entitlements, and other water supplies are also severely limited due to drought conditions.

“Overdraft”: When the annual groundwater extractions exceed the annual recharge, leading to long-term declines in groundwater levels.

Study Findings

- When there is ample rainfall, there is sufficient water supply for all users. However, for some agencies there is not enough water storage capacity to carry-over water in reservoirs from a wet year to a dry year during certain hydrologic periods.
- Water supply projects involving increased diversions from the Napa River or expanding local reservoir capacities are no longer feasible due to increased regulatory and environmental concerns, and high costs.
- A prolonged drought is not the only condition that would create a shortage in water supply. Shortfalls in water supply can occur in single dry years or in multiple dry years.
- Users in cities and towns do not face any shortfall in the present, but may see water supply shortages in future years when there is little rain, depending on the available water resources and demand of each individual jurisdiction.
- Cities and towns are separately and collectively seeking to augment water supplies and increase supply reliability.
- It may not be necessary for the municipalities to expand the capacity of the North Bay Aqueduct (NBA) to import new dry year supplies.
- Unincorporated area users, compared to users in cities and towns, are at greatest risk for a shortage. These users may face water supply shortages in normal or dry years, if demands continue to increase.
- Increasing demand for water in unincorporated areas is a regional concern. The use of recycled water, proposed for portions of the Milliken-Sarco-Tulocay area, is among several options for supplementing water supply that need further evaluation.
- The Main Basin, which is the primary source of groundwater in the Napa Valley, does not appear to be in an “overdraft” condition.

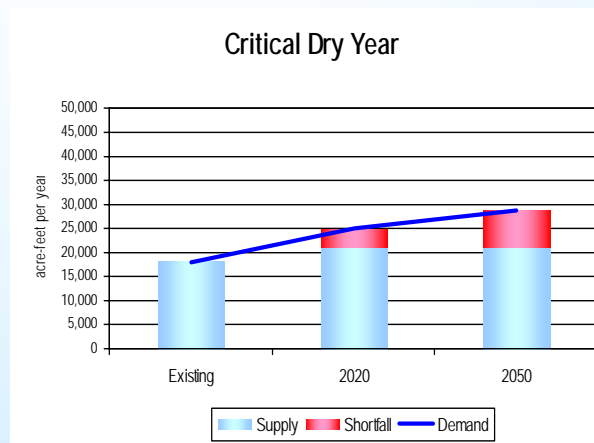
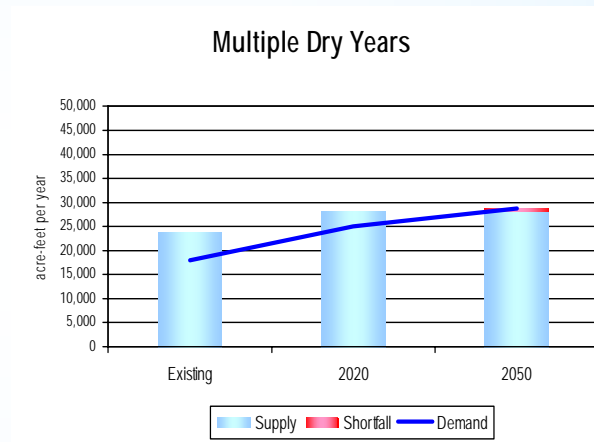
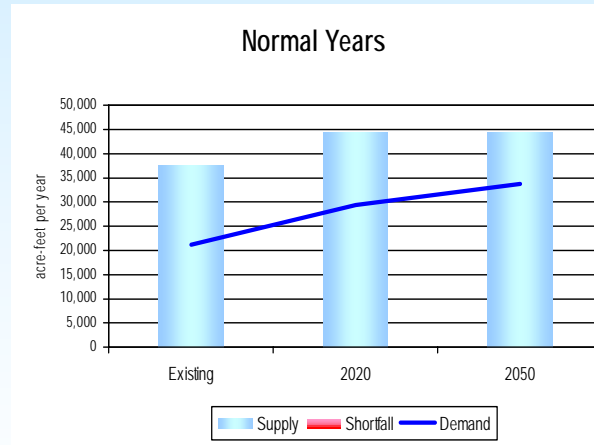


2050 Study Area

M&I Supply & Demand Projections

Includes combined supply & demand for:

- City of Napa
- City of American Canyon
- Town of Yountville
- City of St. Helena
- City of Calistoga



Unincorporated Area Supply & Demand Projections

Includes combined supply & demand for:

- Vineyards & Other Irrigated Agriculture
- Wineries
- Rural Residential
- Improved Open Areas (golf courses)

