

St Helena Infrastructure FAQ

What are the sources of water supply for the City of St. Helena?

The City of St. Helena has three sources of potable water supply. They are Bell Canyon Reservoir, City wells, and water purchased under a long term contract from the City of Napa. The City also has one source of non potable water: the Lower Reservoir on York Creek. This water is sold to a winery and is also used to irrigate the grounds of RLS Middle School. The Upper Reservoir on York Creek was removed from service many years ago, and the City is obligated to dismantle the abandoned dam at that site.

How much water do customers of potable City water use in a year?

The total amount varies to some extent from year-to-year, but a good working number is 2,000 acre feet per year. An acre foot (325,851 gallons) is the amount of water that would cover an acre of land to a height of one foot. Customers of City water include residents both inside and outside the City limits, as well commercial, industrial, and other users inside and outside the City limits. The City has not added new customers outside the City limits in recent years.

How much water on average does a residential customer use, and how does this compare with neighboring towns and cities?

The City estimates that on average each resident uses about 150 gallons per person per day. The City of Calistoga reports that its average use is about 67 gallons per person per day. The number for the Town of Yountville is 116 gallons per person per day. It is estimated that interior home use is about 80 gallons per person per day. Thus, a significant amount of residential water use is for landscaping. By further comparison, Santa Margarita Water District located in Orange County, Southern California, a district with 54,000 connections across multiple cities uses 105 gallons per person per day.

What is the approximate breakdown in usage between residential and non-residential customers on the City's water system?

In the fiscal year ending June 2008, residential use (residential customers both inside and outside City limits) was about 55% of total water use. This does not include water usage by some residences that also have separately metered water for landscape use.



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How much City water is used by wineries in a given year?

In the fiscal year ending June 2008, wineries on City water (both inside and outside City limits) represent about 14% of total usage. Wineries typically have wells, and do not use City water for irrigation.

I have heard about the concept of "safe annual yield." What is the safe annual yield for Bell Canyon, and what does that mean?

Technically, the safe annual yield is that amount of water that can be taken from a water supply over a period of years without depleting that source beyond its ability to replenish itself naturally in "wet years." The issue at Bell Canyon is that we know that it will replenish naturally in normal years, but we also know that it sometimes does not replenish in dry years. The "safe annual yield" (meaning what we can expect will be available in typical dry years) is 1000 acre feet. By contrast, the water volume at Bell Canyon that is available for City use in a normal year is about 1800 acre feet.

Can the City readily increase the storage capacity at Bell Canyon?

The answer is no. The City is allowed to take water from Bell Canyon only in strict compliance under two permits issued by the State Water Resources Control Board. The dam could not be raised without an environmental study proving the watershed can support the additional storage. Further, the State Water Board would require careful evaluation of the effect of raising the dam against its inflow Stream Policy, which is intended to provide water flow to the Napa River to meet the needs of salmonids (salmon and steelhead trout).

What about the Lower Reservoir? Can its water be made potable, and can its capacity be increased?

Again, the answer is no. The capacity of the Lower Reservoir (just 160 acre feet) is low, so not much could be gained by raising the dam. Further, the dam is an old dam, and cannot be raised without proving to the State (Division of Dam Safety) that there is no seismic hazard. The expense of such a study would likely be as great as tearing down the dam, and starting over. Also, the water from Lower Reservoir would need to be treated, a significant capital cost, and the non potable water is needed now for irrigation water, as well as raw water for contractors. It is also an important source for water in case of a major fire.



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Can the City safely draw more water from City wells?

To date, the City is not aware of evidence that the aquifer that supports the City wells is not able to recharge at current rates of withdrawals by the City and by private wells in and around St. Helena. At the same time, there is a general sense that the aquifer is roughly in balance, and that it might not be able to recharge if well withdrawals were to increase substantially. Napa County has monitoring wells at various locations around the County, but the nearest ones to St. Helena are in Rutherford. The current evidence from these wells is that the aquifer is able to recharge from season to season. Incidentally, the City has no control over the drilling of water wells, even within City limits. Well permits are issued by Napa County, not the City.

What is the Napa water contract?

Under the Napa water contract (as amended) the City of St. Helena is obligated to purchase 400 acre feet per year from the City of Napa. Depending upon Napa's State Water Project Allocation, the City of St. Helena can be required to accept an additional 200 acre feet per year. Again, depending upon Napa's State Water Project Allocation, the City of St. Helena can request delivery of an additional 200 acre feet in a given year. The critical point is that the City of Napa guarantees delivery of 400 acre feet, regardless of its State Water Project Allocation. The initial term of the contract expires on December 31, 2035. There is no guarantee that the City of Napa will enter into a contract on the same terms upon expiration of the initial term.

Have conservation measures instituted by the City worked to reduce water demand?

Certainly, there has been a reduction in total demand in the last two years. The largest reduction has been in residential demand. It seems clear that residents are undertaking to conserve water through a variety of measures, including through more efficient use of City water for irrigation. The City continues to urge City residents to acquire from the City a remote meter monitor that enable residents to monitor their daily use of water.

Is recycled water an answer?

Recycled water might provide some relief in a water short year but two factors (apart from the significant capital cost of pipeline distribution) must be kept in mind. First, flows into the sewage treatment plant are low in the driest times of the year. Second, this means that recycled water could not be a meaningful factor in augmenting supply for non-potable use without the addition of substantial storage capacity. Further, the City does not own land at a location suitable for such storage capacity.



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Does the City have the water supply to accommodate modest growth?

This is the issue currently under study by the Water and Sewer Infrastructure Subcommittee of the General Plan Update Steering Committee. This Subcommittee was appointed by the City Council to address this very issue. The Subcommittee has developed a sophisticated computer model (now successfully tested against historical experience) that can account for numerous parameters, including water supply, demand, population growth, reasonable assumptions about the future availability of Napa and well water, and the impact of further conservation by various classes of users. The issue that the Subcommittee seeks to address is the frequency and extent of water restrictions that are likely to be encountered with modest population growth over the period of the new General Plan. The Subcommittee is nearing the end of its work, and its findings will be presented to the City Council.

Does the City have sewage plant capacity to handle modest growth?

Here, the answer is yes. The City has been able to modify its plant in recent years so that it has the capacity to handle population growth.