**Twain Harte**
**Community Services District**
P.O. Box 649
Twain Harte, CA 95383

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Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.


# WATER QUALITY REPORT

# Twain Harte CSD Exceeds Water Quality Standards

**We are proud to report that Twain Harte CSD met or exceeded water quality standards in 2021.** Every year, our staff takes hundreds of water samples to ensure that we deliver the highest quality water to our customers. Samples are tested and compared to water quality standards established for your health and safety by state and federal regulatory agencies. This report is provided each year to reassure our customers that our water is not only delicious, but also safe. The report shows testing results for the period of January 1, 2021 through December 31, 2021 and includes some testing data for constituents not required to be monitored annually.

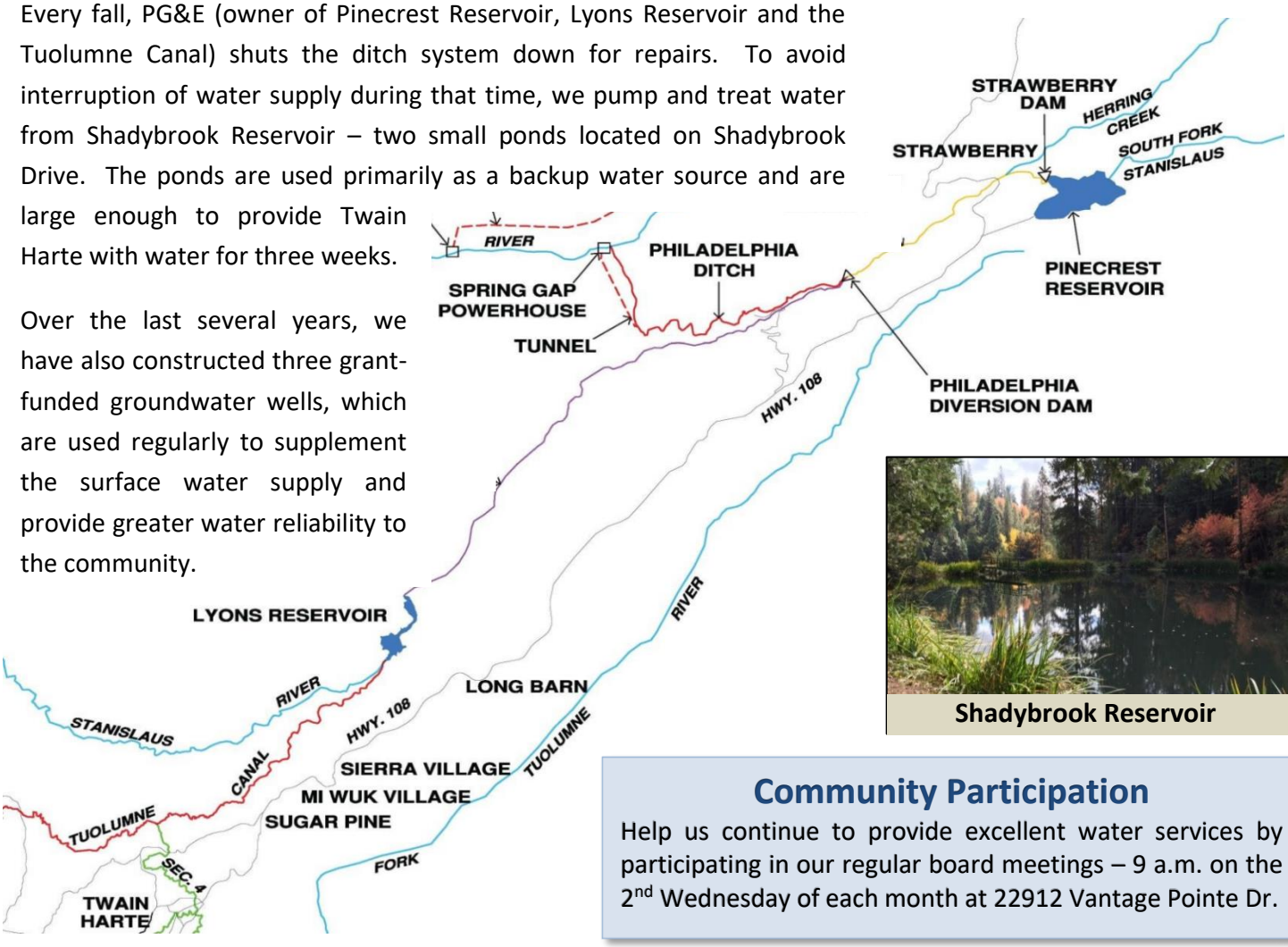
## Where Does My Water Come From?

Assessing water quality begins with understanding the water's source. Our primary water source is surface water that starts as rain and snowfall high up in the Sierra Nevada Mountains. The rain and snowmelt flows into the South Fork of the Stanislaus River, makes its way into Pinecrest Reservoir and then continues its journey in the river down to Lyons Reservoir. From Lyons Reservoir, the water flows through a series of open-channel ditches developed by miners in the 1800's before it finally reaches our water treatment plant and is pushed through our distribution system to your home. Contact TUD for more source information at (209) 532-5536.

**Section 4 Ditch (Twain Harte)**

Every fall, PG&E (owner of Pinecrest Reservoir, Lyons Reservoir and the Tuolumne Canal) shuts the ditch system down for repairs. To avoid interruption of water supply during that time, we pump and treat water from Shadybrook Reservoir – two small ponds located on Shadybrook Drive. The ponds are used primarily as a backup water source and are large enough to provide Twain Harte with water for three weeks.

Over the last several years, we have also constructed three grant-funded groundwater wells, which are used regularly to supplement the surface water supply and provide greater water reliability to the community.





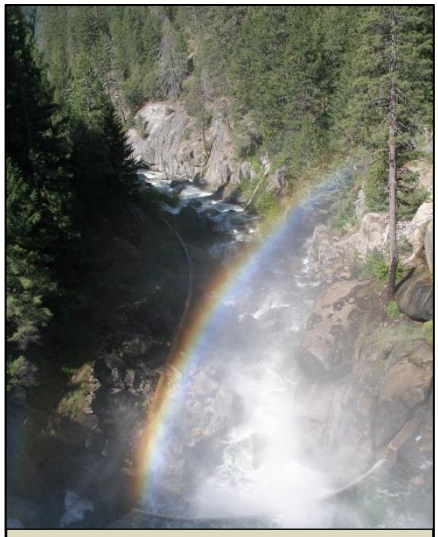

**Shadybrook Reservoir**

## Community Participation

Help us continue to provide excellent water services by participating in our regular board meetings – 9 a.m. on the 2nd Wednesday of each month at 22912 Vantage Pointe Dr.

# Substances Commonly Found in Water

Common sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground it can absorb naturally occurring minerals, radioactive material and other substances resulting from the presence of animal or from human activity.



South Fork Stanislaus River

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

Contaminants that may be present in source water include:

- **Microbial Contaminants –** Viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- **Inorganic Substance –** Salts and metals that can be naturally occurring or can result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- **Pesticides and Herbicides –** From a variety of sources such as agriculture, urban stormwater runoff and residential uses.
- **Organic Chemical Contaminants,** including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and which can also come from gas stations, urban stormwater runoff, agricultural application and septic systems;
- **Radioactive Contaminants –** Naturally occurring or the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

# Is Bottled Water Better than Tap Water?

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier than tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25

percent of bottled water is actually just bottled tap water (40 percent according to government estimates).

The Food and Drug Administration (FDA) is responsible for regulating bottled water. The regulations required by the FDA require less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to $1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion on the NRDC study results, check out their web site at:

www.nrdc.org/water/drinking/bw/exesum.asp.

## Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care providers about drinking water. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at: **(1-800-426-4791)**

## Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Twain Harte CSD is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at:

**http://www.epa.gov/safewater/lead.**

## Need More Information?

**Contact:** Lewis Giambruno (209) 586-3172
**Visit:** www.twainhartecsd.com

## PRIMARY DRINKING WATER STANDARD

| Substance (Units) | Year Sampled (Ditch/Well #1/Well#2/Well#3)) | MCL | PHG (MCLG) | Ditch Amount Detected | Well #1 Amount Detected | Well #1 Range Low-High | Well #2 Amount Detected | Well #2 Range Low-High | Well #3 Amount Detected | Well #3 Range Low-High | Violation | Typical Source |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium (ppb) | 2021/2020/2021/2021 | 1000 | 2000 | ND | 58.6 | NA | ND | NA | 390 | NA | No | Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits |
| Dichloromethane (ppb) | 2019/2017/2018/2018 | 5 | 4 | ND | 1.62 | 1.11-2.12 | ND | NA | ND | NA | No | Discharge from pharmaceutical and chemical factories; insecticide |
| Fluoride (ppm) | 2020/2020/2018/2018 | 2 | 1 | ND | 0.393 | NA | ND | NA | ND | NA | No | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Gross Alpha (pCi/L) | 2014-2015/2014-2015/2021/2018-2019 | 15 | (0) | ND | ND | NA | 4.86 | 3.27-7.02 | 3.99 | 1.01-5.89 | No | Erosion of natural deposits |
| Uranium (pCi/L) | NA/NA/2021/2018-2019 | 20 | 0.43 | ND | ND | NA | 5.42 | 1.42-10.6 | 0.755 | 0.288-1.3 | No | Erosion of natural deposits |

### Treated Water Distribution System (Post-Treatment)

| Substance (Units) | Year Sampled | MCL/ MRDL | PHG (MCLG) (MRDLG) | Well #1 Amount Detected | Well #1 Range Low-High | Well #2 Amount Detected | Well #2 Amount Detected | Well #2 Range Low-High | Well #3 Amount Detected | Violation | Typical Source |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chlorine (ppm) | 2021 | 4.0 (as $Cl_2$) | 4.0 (as $Cl_2$) | 0.69 | 0.45-0.98 | NA | NA | NA | NA | No | Drinking water disinfectant added for treatment |
| HAA5 (Haloacetic Acids) (ppb) | 2021 | 60 | NA | 8.7 | ND-15 | NA | NA | NA | NA | No | Byproduct of drinking water disinfection |
| TTHM (Total Trihalomethanes) (ppb) | 2021 | 80 | NA | 12.9 | ND-27 | NA | NA | NA | NA | No | Byproduct of drinking water disinfection |
| TOC (Total Organic Carbon) (ppm) | 2021 | TT | NA | 1.6 | 1.2-3.9 | NA | NA | NA | NA | No | Various natural and man-made sources |
| Turbidity (After Filtration for Ditch and Well 2) (NTU) | 2021 | 0.3 | NA | 0.040 | 0.016-0.215 | NA | 0.023 | 0.018 – 0.2 | NA | No | Soil runoff/ Erosion of natural deposits |
| Turbidity[1] (Lowest Percentage Meeting Requirements) (NTU) | 2021 | TT | NA | 100% | NA | NA | NA | NA | NA | No | Soil runoff/ Erosion of natural deposits |

### Tap Water (Samples from 10 homes within the District)

| Substance (Units) | Year Sampled | Action Level | PHG (MCLG) | Amount Detected (90th %ILE) | Homes Above Action Level | Violation | Typical Source |
|---|---|---|---|---|---|---|---|
| Copper (ppm)[2] | 2021 | 1.3 | 0.3 | 0.41 | 0 | No | Internal corrosion of household plumbing systems; erosion of natural deposit; leaching from wood preservatives |
| Lead (ppb) | 2021 | 15 | 0.2 | ND | 0 | No | Internal corrosion of household plumbing systems; discharges from industrial manufacturers; erosion of natural deposits |

## SECONDARY DRINKING WATER STANDARD

| Substance (Units) | Year Sampled Ditch/Shadybrook/Well#1/Well#2/Well#3 | SMCL (SDWS) | Ditch Amount Detected | Ditch Range Low-High | Shadybrook Amount Detected | Well #1 Amount Detected | Well #2 Amount Detected | Well #3 Amount Detected | Violation | Typical Source |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum (ppm) | 2021/2015/2020/2021/2021 | 0.2 | 0.13 | NA | ND | ND | ND | 0.032 | No | Erosion of natural deposits; residual from some surface water treatment processes |
| Chloride (ppm) | 2021/2015/2020/2021/2021 | 500 | 2.6 | NA | 3.23 | 6.23 | 1.6 | 2.0 | No | Runoff/leaching from natural deposits; seawater influence |
| Color (Units) | 2021/2015/2020/2021/2021 | 15 | 40 | NA | 8 | ND | ND | ND | No | Naturally occurring organic materials |
| Iron (Pre-Filtration) (ppm) | 2021/2015/2020/2021/2021 | 0.3 | 0.66 | 0.66-1.0 | ND | ND | 0.032 | ND | No | Leaching from natural deposits; industrial wastes |
| Manganese (Pre-Filtration) (ppm) | 2021/2015/2020/2021/2021 | 0.05 | 0.088 | NA | ND | ND | ND | 0.019 | No | Leaching from natural deposits |
| Odor (Units) | 2021/2015/2020/2021/2021 | 3 | 3.0 | NA | 3 | 1 | ND | ND | No | Naturally occurring organic materials |
| Sulfate (ppm) | 2021/2015/2020/2021/2021 | 500 | 1.78 | NA | 1.78 | 4.3 | 1.4 | 3.6 | No | Runoff/leaching from natural deposits; industrial wastes |
| Specific Conductance (umhos/cm) | 2021/2015/2020/2021/2021 | 1600 | 41 | NA | 76 | 212 | 270 | 340 | No | Substances that form ions when in water; seawater influence |
| Total Dissolved Solids [TDS] (ppm) | 2021/2015/2020/2021/2021 | 1000 | 34 | NA | 44 | 130 | 180 | 200 | No | Runoff/leaching from natural deposits |
| Zinc (ppm) | 2021/2015/2020/2021/2021 | 5.0 | ND | NA | ND | ND | ND | 0.17 | No | Runoff/leaching from natural deposits; industrial wastes |

## UNREGULATED AND OTHER SUBSTANCES

| Substance (Units) | Year Sampled Ditch/Shadybrook/Well#1 Well#2/Well#3 | Ditch Amount Detected | Ditch Range Low-High | Shadybrook Amount Detected | Shadybrook Range Low-High | Well #1 Amount Detected | Well #1 Range Low-High | Well #2 Amount Detected | Well #2 Range Low-High | Well #3 Amount Detected | Well #3 Range Low-High |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity (ppm) | 2021/2015/2021/2021/2021 | 43.8 | 14-130 | 43 | NA | 96.8 | 80-120 | 139.7 | 120-173 | 168 | 140-196 |
| Bicarbonate (ppm) | 2021/2015/2020/2021/2021 | 16 | 15-17 | 52 | NA | 95.8 | NA | 150 | NA | 170 | NA |
| Calcium (ppm) | 2021/2015/2020/2021/2021 | 3.1 | NA | 6.8 | NA | 19.6 | NA | 31 | NA | 27 | NA |
| Hardness (ppm) | 2021/2015/2020/2021/2021 | 11 | NA | 17 | NA | 65.4 | NA | 100 | NA | 86 | NA |
| Magnesium (ppm) | 2021/2015/2020/2021/2021 | 0.88 | NA | ND | NA | 3.99 | NA | 5.9 | NA | 4.5 | NA |
| pH (Units) | 2021/2021/2021/2021/2021 | 7.27 | 6.85-7.76 | 7.32 | 7.18-7.56 | 6.6 | 6.29-7.35 | 7.09 | 6.54-7.65 | 7.18 | 6.54-7.78 |
| Potasium (ppm) | 2021/2015/2020/2021/2021 | ND | NA | ND | NA | 1.16 | NA | ND | NA | ND | NA |
| Sodium (ppm) | 2021/2015/2020/2021/2021 | 3.6 | NA | 4.3 | NA | 14.2 | NA | 20 | NA | 42 | NA |

[1] Turbidity is a measure of the cloudiness of the water and is an indicator of the effectiveness of the filtration system.

[2] Copper was detected at the action level at a home during non-routine corrosive potential checks of our well water in 2021. The results are only representative for that home. An increase in corrosion control chemical is now applied.

## Definitions

**Maximum Contaminant Level (MCL)**: The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

**Maximum Contaminant Level Goal (MCLG)**: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (USEPA).

**Public Health Goal (PHG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

**Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**Primary Drinking Water Standards (PDWS):** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**Secondary Drinking Water Standards (SDWS):** MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

**Regulatory Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**Variances and Exemptions:** State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions.

**ND:** not detectable at testing limit

**ppm:** parts per million or milligrams per liter (mg/L)

**ppb:** parts per billion or micrograms per liter (µg/L)

**pCi/L:** picocuries per liter (a measure of radiation)