



2018 City of Ripon Water Quality Report

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Interested in learning more about Ripon's water department or water quality? Visit our website at www.cityofripon.org or call us at 209.599.2108.

Public Participation

City of Ripon citizens are encouraged to provide input. City Council Meetings are held at the City Hall Council Chamber at 6:00 pm on the second Tuesday of each month.

Message from the Public Works Director

I am pleased to share the 2018 Water Quality Report with the community. This report is a summary of the quality of water provided to our customers in 2018, including details about where the water comes from, water quality testing, and how these results compare to regulatory standards. The information in this report is for the period Jan. 1—Dec. 31, 2018 and is also submitted formally and routinely to the California State Water Resources Control Board Division of Drinking Water, which monitors our compliance with the many regulatory standards and testing protocols required to assure safe drinking water.

I am proud to report that the water provided to our customers in 2018 met all United States Environmental Protection Agency (U.S. EPA) and State drinking water standards.

We understand the responsibility we have to share information about the water being provided to our residents and businesses in the most transparent way possible. If you have any questions about the information in this report, or the City of Ripon water system, please contact me at 209.599.2108.

Ted Johnston
Public Works Director

Water Conservation: Governor Edmund G. Brown Jr. ended the drought state of emergency in most of California on April 7, 2017, while maintaining water reporting requirements and prohibitions on wasteful practices, such as watering during or right after rainfall. The State released a long-term plan to better prepare the state for future droughts and make conservation a California way of life. Building on the successes and lessons learned from California's 5-year drought, the plan establishes a framework for long-term efficient water use that reflects the State's diverse climate, landscape, and demographic conditions. The City of Ripon thanks everyone for their overwhelming participation in conservation over the past years.



Water Use Guidelines

- No watering between 10 am and 6 pm.
- During the months of March through October, all properties with even addresses are allowed to water Tuesday, Thursday, and Saturday. All properties with odd address are allowed to water Wednesday, Friday, and Sunday.
- During the months of November through February, all properties with an even address are allowed to water on Saturday. All properties with odd addresses are allowed to water on Sunday.
- No excessive watering, which is considered water that leaves the property of origin in a continuous flow for 150 feet from the property, or for more than five minutes in duration.

YOUR WATER SYSTEM



Trichloroethylene (TCE) Information

Ripon's drinking water contains a number of compounds that are regulated—a fact that applies to many public water suppliers in the State. In the last 10 years, one active groundwater well (Municipal Well #3) that supplied drinking water contained measured amounts of trichloroethylene (TCE) and its breakdown product known as cis-1,2-Dichloroethylene (cis-1,2-DCE). In 2018, the concentration of cis-1,2-DCE in Municipal Well #3 increased close enough to the Maximum Contaminant Level (MCL) that the City made the proactive decision to stop supplying drinking water from Municipal Well #3. Municipal Well #3 supplied 4.8% of the City's drinking water in 2018. **Both TCE and cis-1,2-DCE were below the regulatory limit in 2018.**

For more than 30 years, Nestlé has worked under the direction of the Regional Water Quality Control Board (Water Board) to monitor the safety of the drinking water supply and act to protect the health of the people in Ripon. Nestlé has made and continues to make every effort to remediate TCE, which was associated decades ago with decaffeinated coffee production at its long-closed facility. Working closely with the City and other experts in water management, Nestlé has implemented a variety of coordinated cleanup and water protection measures to significantly reduce the chemicals of concern and limit the spread of impacted groundwater. All entities involved are continually working together to ensure the levels of TCE and related compounds in the municipal drinking water supply do not exceed MCLs. Nestlé's TCE cleanup efforts have had a positive impact and we realize the importance to continue to monitor these remediation efforts to ensure the continued safety of the drinking water supply.

Water Sources and System Operation

In 2018, all of Ripon's water originated from five groundwater wells. Two of the wells are located on the west side of Highway 99 and three are located on the east side of the highway. These wells tap aquifers located approximately 125 to 500 feet below the ground's surface. The aquifers are replenished by rainfall, the Stanislaus River and agricultural irrigation water.

Water is pumped from the wells directly into the City's water distribution system. The maximum pumping capacity from all of the wells is approximately 7,200 gallons per minute (gpm). The City also has two elevated storage tanks with a combined storage capacity of 4 million gallons that are capable of providing an additional 10,000 gpm to support peak demand or fire-fighting needs. The Ripon water system is designed to adjust to demand and can be supplied from a single well or any combination of wells, ensuring that water is efficiently supplied to your tap.

Drinking Water Source Assessment

Source water assessments were conducted by the California Department of Health Services (the precursor to the California Department of Public Health) in 2002 for groundwater wells supplying the water system. The City of Ripon has conducted source water assessments for each new well that has come on-line since 2002. The assessments concluded that the City of Ripon wells are subject to possible contamination from the following sources within the wells' sphere of influence: Sewer collection system, high-density septic system (>1/acre), wastewater treatment, and disposal facilities.

Additional activities that increase vulnerability are parks, high density housing (>2/acre), schools, body shops, gas stations (including historic), repair shops, printing shops, research labs, paper processing facilities, parking lots, cemeteries, hardware/part stores, office complexes, RV/mini storages, irrigation wells, farming activities, freeways, railroads, storm detention basins, and medical/dental offices.

For more information about the City of Ripon's source water assessments please stop by our Public Works Department at 259 N. Wilma Avenue, Ripon, CA 95366.

Frequently Asked Questions

- 💧 **What is the pH of Ripon's Water?** The pH of Ripon's water, after treatment, ranges from 6.4 to 7.3 standard units. The average pH is 6.82 units.
- 💧 **Does Ripon add fluoride to the water?** Ripon does not add fluoride to the water. Parents of young children may want to consult their dentist about the need for fluoride treatments to prevent tooth decay.
- 💧 **Why does the water look rusty sometimes?** Rusting galvanized pipe in the plumbing systems is the typical cause of discolored water. Iron causes the discoloration; it is not a health risk. If cold water is discolored, it will clear after running a bit. If hot water is discolored, the water heater may need flushing. When flushing your water heater, please follow the manufacturer's directions. If you need to replace your water heater, contact the Building Department at (209)599-2613 for a permit or visit www.cityofripon.org.

2018 WATER QUALITY INFORMATION

Lead and Copper¹

| Contaminant | MCL | PHG (MCLG) | 90th Percentile | Range | Sample Date | Violation | Typical Source |
|---------------|--------|------------|-----------------|-----------------------------------|-------------------|-----------|---|
| Lead (µg/L) | AL=15 | 0.2 | ND | 31 sites sampled; 0 sites over AL | 2017 ² | No | Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits |
| Copper (mg/L) | AL=1.3 | 0.3 | 0.295 | 31 sites sampled; 0 sites over AL | 2017 ² | No | Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |

¹All water systems are required to comply with the state Lead and Copper Rule (LCR). Water systems are also required to comply with the federal LCR, and its revisions and corrections. The 2007 Short-term Revisions of the LCR included mandatory language requirements that have not yet been adopted by the State Board.

²The City of Ripon is required to monitor for lead and copper every three years. The last monitoring was conducted in 2017. The next round of monitoring is scheduled for 2020.

Contaminants with a Primary Drinking Water Standard

| Contaminant | MCL (MRDL) | PHG (MCLG) | Average | Range | Sample Date | Violation | Typical Source |
|---|------------|------------|---------|-------------|-------------|-----------|--|
| Arsenic (µg/L) | 10 | 0.004 | 5.7 | 4.6 - 6.8 | 2018 | No | Erosion of natural deposits; runoff from orchards; glass and electronics production wastes |
| Barium (mg/L) | 1 | 2 | 0.151 | 0.092-0.209 | 2018 | No | Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits |
| Chlorine (as Cl ₂) (mg/L) | MRDL= 4.0 | MRDLG= 4.0 | 0.63 | 0.27 - 1.34 | 2018 | No | Drinking water disinfectant added for treatment |
| Chromium (Total) (µg/L) | 50 | MCLG = 100 | 1.9 | ND - 3.8 | 2018 | No | Discharge from steel and pulp mills and chrome plating; erosion of natural deposits |
| cis-1,2-Dichloroethylene (µg/L) | 6 | 13 | 1.8 | ND - 5.4 | 2018 | No | Discharge from industrial chemical factories; major biodegradation byproduct of TCE and PCE groundwater contamination |
| Dibromochloropropane (DBCP) (ng/L) | 200 | 1.7 | 2.75 | ND - 11 | 2018 | No | Banned nematocide that may still be present in soils due to runoff/leaching from former use on soybeans, cotton, vineyards, tomatoes, and tree fruit |
| Fluoride (naturally occurring) (mg/L) | 2.0 | 1 | ND | ND - 0.1 | 2018 | No | Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories |
| Gross alpha ¹ (pCi/L) | 15 | MCLG = 0 | 7.7 | ND - 17.6 | 2018 | No | Erosion of natural deposits |
| Nitrate (as N) (mg/L) | 10 | 10 | 5.6 | 3.2 - 7.5 | 2018 | No | Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits |
| Total Trihalomethanes (µg/L) | 80 | N/A | 4.1 | ND - 5.8 | 2018 | No | Byproduct of drinking water disinfection |
| Trichloroethylene (TCE) (µg/L) ² | 5 | 1.7 | 0.53 | ND - 1.6 | 2018 | No | Discharge from metal degreasing sites and other factories |
| Uranium (pCi/L) | 20 | 0.43 | 8 | ND - 17 | 2018 | No | Erosion of natural deposits |

¹ States may subtract the uranium activity from the gross alpha particle activity to determine compliance with the gross alpha MCL, which is referred to as "net alpha" (i.e. gross alpha particle activity minus the uranium activity). Using this approved calculation the City of Ripon was in compliance for both gross alpha and uranium in 2018.

² Trichloroethylene (TCE) was inadvertently left off the City of Ripon's 2017 Water Quality Report, which was later revised to include detections of TCE.

2018 WATER QUALITY INFORMATION

Contaminants with Secondary Drinking Water Standards

| Contaminant | MCL | Average | Range | Sample Date | Violation | Typical Source |
|-------------------------------------|-------|---------|------------|-------------|-----------|---|
| Chloride (mg/L) | 500 | 54.5 | 26 - 83 | 2018 | No | Runoff/leaching from natural deposits; seawater influence |
| Specific Conductance (µS/cm) | 1,600 | 688 | 440 - 880 | 2018 | No | Substances that form ions when in water; seawater influence |
| Sulfate (mg/L) | 500 | 26.5 | 18 - 35 | 2018 | No | Runoff/leaching from natural deposits; industrial wastes |
| Total Dissolved Solids (TDS) (mg/L) | 1,000 | 425 | 300 - 550 | 2018 | No | Runoff/leaching from natural deposits |
| Turbidity (NTU) | 5 | 0.2 | 0.2 - 0.2 | 2018 | No | Soil runoff |
| Zinc (mg/L) | 5.0 | 0.006 | ND - 0.012 | 2018 | No | Runoff/leaching from natural deposits; industrial wastes |

Unregulated Compounds

| Contaminant | MCL | PHG (MCLG) | Average | Range | Sample Date | Typical Source |
|----------------------------|-----|------------|---------|-------------|-------------|---|
| Sodium (mg/L) | N/A | N/A | 40.4 | 25.1 - 55.6 | 2018 | Naturally occurring |
| Hardness (mg/L) | N/A | N/A | 226 | 149-302 | 2018 | The sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally occurring. |
| Hexavalent Chromium (µg/L) | N/A | 0.02 | 7.6 | 6.3 - 8.8 | 2015 | Sources are from natural erosion of mineral deposits and from human made sources such as dyes, paints, metal alloys, chrome-plating liquid wastes |

"Sodium" refers to the salt present in the water and is generally naturally occurring.

Hexavalent Chromium is not currently a regulated contaminant however the State of California is evaluating a potential MCL. Most recent required sampling was in 2015.

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 (U.S. EPA).

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.

| | |
|--|--|
| ND: not detectable at testing limit | ppq: parts per quadrillion or picogram per liter (pg/L) |
| ppm: parts per million or milligrams per liter (mg/L) | pCi/L: picocuries per liter (a measure of radiation) |
| ppb: parts per billion or micrograms per liter (µg/L) | NTU: Nephelometric Turbidity Units (measure of particles in water) |
| ppt: parts per trillion or nanograms per liter (ng/L) | µS/cm: Micro Siemens per centimeter (measure of ability to conduct electricity) |

Measurement Comparisons

Part per million (ppm) = 1 second in 12 days
 Part per billion (ppb) = 1 second in 32 years
 Part per trillion (ppt) = 1 second in 32,000 years

ADDITIONAL INFORMATION ON DRINKING WATER QUALITY

The City of Ripon tests your water for more than 120 regulated and unregulated contaminants. The tables provided only lists those contaminants that were detected.

The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Some of the data, though representative of the water quality, are more than one year old. The State Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

The 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 dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, the U.S. EPA and the State Board prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline (1-800-426-4791).

People with Sensitive Immune Systems: 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 about drinking water from their health care providers. U.S. EPA/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 (1-800-426-4791).

Arsenic: While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Lead: 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. The City of Ripon 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 (1-800-426-4791) or at <http://www.epa.gov/lead>.



Nitrate: Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity.

Trichloroethylene (TCE): Some people who use water containing trichloroethylene in excess of the MCL over many years may experience liver problems and may have an increased risk of getting cancer. The numerical health risk of ingesting drinking water with TCE above the PHG is 1×10^{-6} , or one additional theoretical cancer case in one million people drinking two liters of water a day for 70 years. The health risk of ingesting water with TCE above the MCL is six additional theoretical cancer cases in one million people.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- Radioactive contaminants, that can be naturally-occurring or be the result of oil and gas production and mining activities.

City of Ripon
Public Works Department
259 N. Wilma Avenue
Ripon, CA 95366

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2018 City of Ripon Water Quality Report



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