

## Substances That Could Be in Water

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. Environmental Protection Agency (U.S. EPA) and the State Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department 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 at least 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**, 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 can 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, which are by-products of industrial processes and petroleum production and which can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

**Radioactive Contaminants**, that can be naturally occurring or can be 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.

PR SRT STD  
U.S. Postage  
PAID  
Gemini Group  
22901

South Feather Water and Power Agency  
2310 Oro Quincy Hwy.  
Oroville, CA 95966

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

♻️ Recycled and Recyclable  
Copyright ©2011 Gemini Group LLC  
All rights reserved  
CA000133

# Annual WATER QUALITY REPORT

Reporting Year 2011



Presented By  
**South Feather Water  
and Power Agency**

PWS ID#: 0410006

For more information about this report, or for any questions relating to your drinking water, please call Jim Coffelt or John Shipman at (530) 589-0212.

## QUESTIONS?

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

## Water Conservation

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

Tap water is cheaper than soda pop. (Fact: You can refill an 8 oz. glass of tap water approximately 15,000 times for the same cost as a six-pack of soda pop. And, water has no sugar or caffeine.)

Methods for the treatment and filtration of drinking water were developed only recently. (Fact: Ancient Egyptians treated water by siphoning water out of the top of huge jars after allowing the muddy water from the Nile River to settle. And, Hippocrates, known as the father of medicine, directed people in Greece to boil and strain water before drinking it.)

A typical shower with a non-low-flow showerhead uses more water than a bath. (Fact: A typical shower uses less water than a bath.)

Water freezes at 32 degrees Fahrenheit. (Fact: You can actually chill very pure water past its freezing point (at standard pressure) without it ever becoming solid.)

The Pacific Ocean is the largest ocean on Earth. (Fact: The Atlantic Ocean is the second largest and the Indian Ocean is the third largest.)

A single tree will give off 70 gallons of water per day in evaporation. (Fact)

## Fact or Fiction?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) 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 (800) 426-4791 or <http://www.epa.gov/drink/hotline>.

## Important Health Information

Please share with us your thoughts or concerns about the information in this report. After all, well-informed customers are our best allies.

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2011. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

## Community Participation

We want our customers to be informed about their water utility. If you want to learn more, please call us or attend any of our regularly scheduled board of directors' meetings. They are held on the fourth Tuesday of each month at 2:00 p.m. in the Agency's boardroom, 2310 Oro-Quincy Highway, Oroville, California.

## Source Water Assessment

An assessment has been completed for the water sources serving the Miners Ranch Water Treatment Plant. Our pristine water source is considered most vulnerable to active and historic mining operations but not associated with any detected contaminants. For a copy of the complete assessment, please contact Resce Crenshaw at the DPHS Valley District Office, 415 Knollcrest Drive, Suite 110, Redding, California 96002, or call (530) 224-4861. You may also contact Michael Glaze at South Feather Water and Power Agency, 2310 Oro-Quincy Hwy., Oroville, California 95966, or call (530) 533-4578.

## Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

| REGULATED SUBSTANCES  |              |                             |                           |                 |                |           |   |
|---|--------------|-----------------------------|---------------------------|-----------------|----------------|-----------|---|
| SUBSTANCE (UNIT OF MEASURE)                                 | YEAR SAMPLED | MCL [MRDL]                  | PHG (MCLG) [MRDLG]        | AMOUNT DETECTED | RANGE LOW-HIGH | VIOLATION | TYPICAL SOURCE                                  |
| Chlorine (ppm)  | 2011         | [4.0 (as Cl <sub>2</sub> )] | [4 (as Cl <sub>2</sub> )] | 0.91            | 0.82–1.03      | No        | Drinking water disinfectant added for treatment |
| Control of DBP precursors [TOC] (ppm)                       | 2011         | TT                          | NA                        | 0.8             | 0.5–1.0        | No        | Various natural and man-made sources            |
| Haloacetic Acids (ppb)                                      | 2011         | 60                          | NA                        | 18.5            | 13–23          | No        | By-product of drinking water disinfection       |
| TTHMs [Total Trihalomethanes] (ppb)                         | 2011         | 80                          | NA                        | 16.5            | 14–18          | No        | By-product of drinking water disinfection       |
| Turbidity <sup>1</sup> (NTU)                                | 2011         | TT                          | NA                        | 0.04            | 0.02–0.04      | No        | Soil runoff                                     |
| Turbidity (Lowest monthly percent of samples meeting limit) | 2011         | TT                          | NA                        | 100             | NA             | No        | Soil runoff                                     |

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | AL  | PHG (MCLG) | AMOUNT DETECTED (90TH%TILE) | SITES ABOVE AL/ TOTAL SITES | VIOLATION | TYPICAL SOURCE  |
|-----------------------------|--------------|-----|------------|-----------------------------|-----------------------------|-----------|---|
| Copper (ppm)                | 2011         | 1.3 | 0.3        | 0.49                        | 0/30                        | No        | Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |

| SECONDARY SUBSTANCES         |              |       |            |                 |                |           |   |
|------------------------------|--------------|-------|------------|-----------------|----------------|-----------|---|
| SUBSTANCE (UNIT OF MEASURE)  | YEAR SAMPLED | SMCL  | PHG (MCLG) | AMOUNT DETECTED | RANGE LOW-HIGH | VIOLATION | TYPICAL SOURCE  |
| Chloride (ppm)               | 2011         | 500   | NS         | 3.7             | 3.5–4.2        | No        | Runoff/leaching from natural deposits; seawater influence   |
| Specific Conductance (µS/cm) | 2011         | 1,600 | NS         | 42              | NA             | No        | Substances that form ions when in water; seawater influence |
| Sulfate (ppm)                | 2011         | 500   | NS         | 3.1             | NA             | No        | Runoff/leaching from natural deposits; industrial wastes    |
| Total Dissolved Solids (ppm) | 2011         | 1,000 | NS         | 27              | NA             | No        | Runoff/leaching from natural deposits                       |

| OTHER SUBSTANCES                      |              |                 |                |
|---------------------------------------|--------------|-----------------|----------------|
| SUBSTANCE (UNIT OF MEASURE)           | YEAR SAMPLED | AMOUNT DETECTED | RANGE LOW-HIGH |
| Alkalinity as CaCO <sub>3</sub> (ppm) | 2011         | 17              | NA             |
| Calcium (ppm)                         | 2011         | 3.7             | NA             |
| Magnesium (ppm)                       | 2011         | 1.6             | NA             |
| pH (Units)                            | 2011         | 6.9             | 6.8–7.1        |
| Sodium (ppm)                          | 2011         | 1.8             | NA             |

<sup>1</sup>Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

### How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate, even in a closed container. If that container housed bacteria prior to filling up with the tap water, the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

## Definitions

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

**µS/cm (microsiemens per centimeter):** A unit expressing the amount of electrical conductivity of a solution.

**MCL (Maximum Contaminant Level):** 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 (SMCLs) are set to protect the odor, taste, and appearance of drinking water.

**MCLG (Maximum Contaminant Level Goal):** 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. EPA.

**MRDL (Maximum Residual Disinfectant Level):** 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.

**MRDLG (Maximum Residual Disinfectant Level Goal):** 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.

**mrem/yr (millirems per year):** A measure of radiation absorbed by the body.

**NA:** Not applicable.

**NS:** No standard.

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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

**PHG (Public Health Goal):** 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 EPA.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

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

## What Causes the Pink Stain on Bathroom Fixtures?

The reddish-pink color frequently noted in bathrooms on shower stalls, tubs, tile, toilets, sinks, toothbrush holders, and on pets' water bowls is caused by the growth of the bacterium *Serratia marcescens*. *Serratia* is commonly isolated from soil, water, plants, insects, and vertebrates (including man). The bacteria can be introduced into the house through any of the above mentioned sources. The bathroom provides a perfect environment (moist and warm) for bacteria to thrive.

The best solution to this problem is to continually clean and dry the involved surfaces to keep them free from bacteria. Chlorine-based compounds work best, but keep in mind that abrasive cleaners may scratch fixtures, making them more susceptible to bacterial growth. Chlorine bleach can be used periodically to disinfect the toilet and help to eliminate the occurrence of the pink residue. Keeping bathtubs and sinks wiped down using a solution that contains chlorine will also help to minimize its occurrence.

*Serratia* will not survive in chlorinated drinking water.



### Who uses the most water?

On a global average, most freshwater withdrawals—69 percent—are used for agriculture, while industry accounts for 23 percent and municipal use (drinking water, bathing and cleaning, and watering plants and grass) just 8 percent.

### How much water does a person use every day?

The average person in the U.S. uses 80 to 100 gallons of water each day. During medieval times, a person used only 5 gallons per day.

### Should I be concerned about what I'm pouring down my drain?

If your home is served by a sewage system, your drain is an entrance to your wastewater disposal system and eventually to a drinking water source. Consider purchasing environmentally friendly home products whenever possible, and never pour hazardous materials (e.g., car engine oil) down the drain. Check with your health department for more information on proper disposal methods.

### How long does it take a water supplier to produce one glass of water?

It can take up to 45 minutes to produce a single glass of drinking water.

### How much emergency water should I keep?

Typically, 1 gallon per person per day is recommended. For a family of four, that would be 12 gallons for 3 days. Humans can survive without food for 1 month, but can only survive 1 week without water.

### Where does a water molecule spend most of its time on Earth?

In a 100-year period, a water molecule spends 98 years in the ocean, 20 months as ice, about 2 weeks in lakes and rivers, and less than a week in the atmosphere.

### How many community water systems are there in the U.S.?

About 53,000 public water systems across the United States process 34 billion gallons of water per day for home and commercial use. Eighty-five percent of the population is served by these systems.

## Where Does My Water Come From?

The raw water source for the South Feather Water Power Agency's distribution system is derived from the watershed of the South Fork of the Feather River and the upper portion of the Slate Creek watershed. Through a series of dams, canals, and tunnels, water is delivered to the Miners Ranch Reservoir and is extracted directly for the treatment plant.

## Pressure Regulators

South Feather Water and Power Agency maintains and operates its domestic water distribution system to minimize significant pressure differences throughout the Agency and to provide a sufficient volume of water to each customer. However, for practical purposes and the protection of customers' property, it is the Agency's policy that customers shall be responsible for installing and maintaining water pressure regulators and relief valves on their side of the meter and at their own risk and expense. This policy is designed to protect your water-service-dependent appliances and your property. Please inspect your water service plumbing and confirm that your pressure regulator is installed correctly and is in working condition.

## 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. We are 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).