

Fallon Paiute- Shoshone Tribe



2010 Annual Drinking Water Quality Report



Message From The Public Works Manager

It's our mission to provide you with safe, reliable drinking water. We are committed to ensuring the water quality of your drinking water by monitoring quality according to EPA standards. We work hard to provide you with safe drinking water with a minimum cost to the Tribe through doing a majority of the work in-house. Our staff are on-call 7 days a week, 24 hours a day

to address issues that arise. We maintain an ongoing program to monitor the drinking water for specific contaminants on a regular basis according to an EPA defined schedule in order to ensure that your drinking water is safe. We are committed to providing educational information about the drinking water and are happy to answer any questions you may have about your drinking water system.

About This Report

This report is a snapshot of your water quality. Included are details about where your water comes from, what's in your water, how it compares to drinking water standards, and what you can do to protect it. We're committed to providing you with information because informed customers are

our best allies. This report is based on water quality data for the 2010 calendar year.

The U.S. Environmental Protection Agency requires that all water utilities produce an annual report to inform customers about the quality of their drinking water.

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Your Water Supply

The source water for the FPST water system is a groundwater aquifer. The water is drawn from a basalt aquifer that is approximately 4 miles wide by 15 miles in length. This groundwater aquifer is the sole source of drinking water for the Tribe. The City of Fallon and Naval Air Station also draw their

water from the basalt aquifer. Groundwater from the basalt aquifer is pumped by wells that are 95 and 130 feet deep. After water is pumped from the groundwater aquifer source, it is treated at the Arsenic Treatment Plant prior to being delivered to your home.

How Does Water Get To My Faucet?

In a typical community water supply system, water is transported under pressure through a distribution network of buried pipes. Smaller pipes, called house service lines, are attached to the main water lines to bring water from the distribution network to your house. In our community water supply system, water pressure is provided by

pumping water into storage tanks that store water at higher elevations than the houses they serve. After the water is treated, it travels through up to 13 miles of piping and is fed by gravity to every customer, including the distance across the desert from the colony to the reservation.

Our Water Treatment Process

The FPST water system uses a treatment process on raw water that's pumped from the groundwater aquifer source to ensure that our water meets federal water quality standards. The treatment process includes coagulation, microfiltration, and disinfection.

The coagulation process uses an iron based solution (ferric chloride) to neutralize particles in the water. Carbon dioxide is added to the water to lower the pH in order to enhance the treatment process. Arsenic binds to the solution to form larger clumps of particles. The larger clumps of particles precipitate out of the treated water system. After the water has gone through the coagulation process, the particles are

removed from the water during the filtration process. The water passes through 0.1 micron thick filters that remove the remaining coagulated particles from the water. The treated water is aerated to strip the carbon dioxide and raise the pH again. During the disinfection process chlorine is added to the water as a disinfectant to prevent illness due to water-borne pathogens.

The arsenic treatment plant is an "on-demand" system, meaning it only needs to run when there is a demand for water, often only six hours per day. The arsenic treatment plant is capable of producing up to 500,000 gallons of treated water per day.

Drinking Water Contaminants

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.

Sources of drinking water (both tap 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. The water can also pick

up substances resulting from the presence of animal or human activity.

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 storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- ◆ Pesticides and herbicides that may come from sources such as agriculture, urban storm water 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 storm water runoff, and septic systems.
- ◆ Radioactive contaminants that can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Monitored Contaminants in 2010

Information about the contaminants monitored for in the 2010 year is included in this report. For additional information about contaminants monitored for in previous years call the EPA's Safe Drinking Water Hotline (800-426-4701).

Arsenic

Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with the circulatory system. There is also an increased risk of bladder, lung, and skin cancer and may cause other types of cancer.

Dioxin

Some people who drink water containing dioxin well in excess of the maximum contaminant level (MCL) for many years could experience reproductive difficulties and may have an

increased risk of getting cancer.

Haloacetic Acids

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Nitrate

Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill, and if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

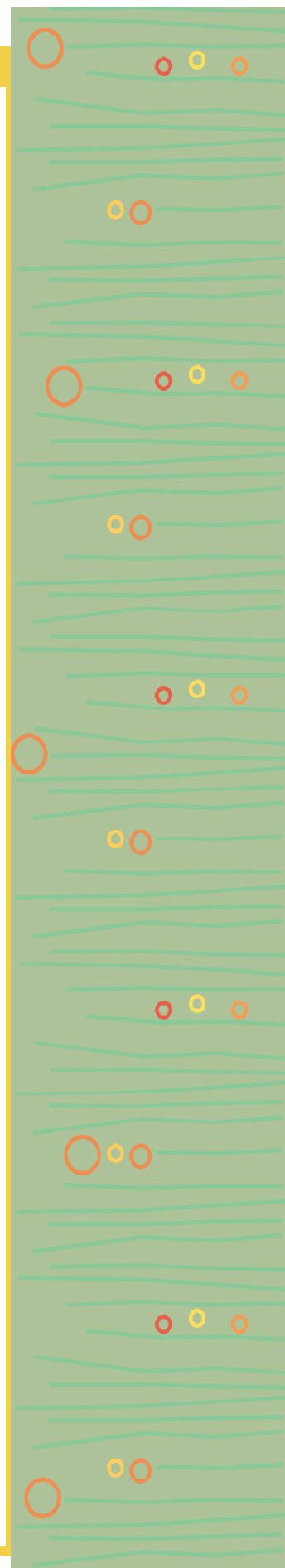
Fecal Coliform/E. Coli & Total Coliform

Coliforms are bacteria that are naturally present in the environment and used as an indicator that other, potentially harmful, bacteria may be present. Coliforms found in more samples than allowed is a warning of potential problems.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people such as people undergoing chemotherapy, people 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 and/or their

care givers should seek advice about drinking water from their health care providers. 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 (800-426-4791).



Understanding the Water Quality Chart

The Water Quality Report compares the quality of your tap water to EPA drinking water standards. The report includes information on all regulated drinking water contaminants that were monitored during the calendar year of 2010. A number of regulated chemicals and other compounds do not require annual monitoring and are tested for on a schedule provided by the US EPA.

The presence of these contaminants in the drinking water 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 US EPA's Safe Drinking Water Hotline (800) 426-4791 or by visiting the EPA's website at:

www.epa.gov/safewater/hfacts.html



Glossary of Terms

Action Level (AL)	The concentration of a contaminant which if exceeded, trigger treatment or other requirements which a water system must follow.
Maximum Contaminant Level (MCL)-	Contaminant Level is the "Maximum Allowed" is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect All quantities in the MCL/AL column of this table are MCLs unless otherwise noted.
Maximum Contaminant Level Goal (MCLG)	The "Goal" is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.
National Primary Drinking Water Standards	The National Primary Drinking Water Standards are legally enforceable standards set by the EPA that apply to public water systems. Primary standards protect public health by limiting the levels of contaminants in drinking water.
Not Detected (ND)	Contaminant was not detected in sample.
Parts per Billion (ppb)	One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
Parts per Million (ppm)	One ppm corresponds to one minute in two years or a single penny in \$10,000.
Parts per Quadrillion (ppq)	One part per quadrillion corresponds to one minute in 2,000,000,000 years, or a single penny in \$10,000,000,000,000.
Picocuries per Liter (pCi/L)	Picocuries per liter is a measure of the radioactivity in water.

2010 Water Quality Data

Contaminant	MCL Violation	Units	MCL/AL	MCLG	Your Water	Range	Year Sampled	Typical Source of Contaminant
National Primary Drinking Water Standards (Monitored for health concerns)								
Adjusted Alpha Radiation (excluding Radon and Uranium)	No	pCi/L	15	0	1.9556	1.5-2.33	2007	Erosion of natural deposits
Arsenic	Yes	ppb	10	n/a	15.1	4-120	2010	Erosion of natural deposits; runoff from orchards, runoff from glass & electronics production wastes.
Chromium	No	ppb	100	100	2	n/a	2009	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Copper	No	ppm	AL 1.3	1.3	0.13	n/a	2009	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Dioxin (2, 3, 7, 8-TCDD)	No	ppq	30	0	ND	n/a	2010	Emissions from waste incineration and other combustion; discharge from chemical factories
Fecal Coliform/ E. Coli	No	n/a	*	0	Negative*	n/a	2010	Human and animal waste
Five Haloacetic Acids— Stage I	No	ppb	60	60	7.9	n/a	2010	By-products of drinking water disinfection
Fluoride	No	ppm	4	4	0.8	n/a	2009	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead	No	ppm	AL 15	0	1	n/a	2009	Corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Nitrate (as Nitrogen)	No	ppm	10	10	ND	n/a	2010	Runoff from fertilizer use; leaking from septic tanks, sewage; erosion of natural deposits
Selenium	No	ppb	50	50	3	n/a	2009	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from mines
Sodium	n/a	ppm	n/a	n/a	220	n/a	2006	Erosion from natural deposits; salt water intrusion
Total Coliform	No	n/a	*	0	Negative*	n/a	2010	Naturally present in the environment
Total Trihalomethanes— Stage I	No	ppb	80	0	29	ND-29	2007	By-products of drinking water disinfection

* All results for samples taken during the 2010 calendar year were negative

Additional Information About 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 Fallon Paiute-Shoshone Tribe Public Works Department 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 at 1-800-426-4791 or at : <http://www.epa.gov/safewater/lead/leadfactsheet.html>.



Arsenic Standard Compliance

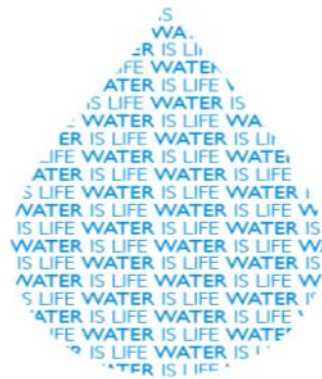
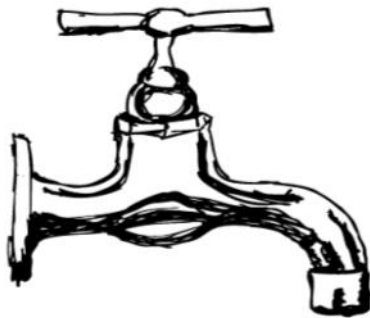
For many years, the drinking water served by the FPST's public water system contained arsenic in concentrations of approximately 100 parts per billion (ppb).

In March 2000, The Environmental Protection Department issued the Recommendation to Use Alternative Water For Drinking due to a high level of arsenic. On January 22, 2001, the EPA adopted a new MCL for arsenic in drinking water at 10 ppb, replacing the old standard of 50ppb. Public water supply systems were required to comply with the new MCL by January 23, 2006.

In 2003, the Tribe applied for and was awarded EPA Drinking Water Tribal Set-Aside Grant funding to supplement Indian

Health Service funds for the arsenic treatment facilities. In January of 2005 the Arsenic Treatment Plant was placed into service and is successfully reduced arsenic levels from the range of 90 to 120 ppb to less than 10 ppb. The total construction cost was just under \$1.8 million dollars, including design and start-up.

Currently, the Tribe's drinking water exceeds the MCL for Arsenic on average over a twelve month period. During the 2010 calendar year a one-time short period occurrence caused by an equipment malfunction that took place at the Arsenic Treatment Plant. The problem at the plant was corrected and the running annual average has been in compliance since April of 2011.




Hydrant Flushing

The Public Works Department regularly flushes fire hydrants on the reservation for several reasons. The Volunteer Fire Department requires flow tests to make sure hydrants are ready to be used in case of an emergency. The Public Works Department conducts system flushing to prevent a deterioration in water quality due to excessive nitrites, or the presence of coliform bacteria because of the presence of stagnant water in the system. During water system flushing events it is not uncommon to see an increase in sediment and iron for a short time after the flushing event. This is done to ensure safe drinking water in the system. If you are experiencing discolored water and are wondering if the hydrants were flushed recently, please contact the Public Works Department.

Water Shortage


During the hot summer months here in Nevada, it's normal for water usage to increase as we use more water to stay hydrated and cool. Every year the water demand increases and we have come close to suffering water shortages that would affect how much water is available at your tap. Please remember to conserve water every day (and especially during the hot summer months.)



Wash only full loads of laundry and dishes



Fix broken toilets and leaky faucets



Turn off faucet when brushing your teeth

Less Than 1%...

We as a community are responsible for protecting our precious sources of drinking water for future generations. Things we do every day can help ensure that our children and grandchildren have safe drinking water. Of all the water on the Earth, only 1% is available as fresh drinkable water. Over the years we have done many things to degrade our fresh water resources. It is estimated today that we have polluted half of the fresh water on the planet. That means that we only have one-half of a percent of the water on the planet to sustain our lives.

If you're interested in what you can do to protect our precious water resources give us a call at the Environmental Department. We can give you ideas about what to do in your own yard to make a big difference for yourself and the planet.

Here are a few ideas:

- Plant some lovely trees around your home
- Consider installing a laundry-to-landscape grey-water system
- Turn low areas in your yard into rain gardens and grow some nice native berry shrubs

Report Problems

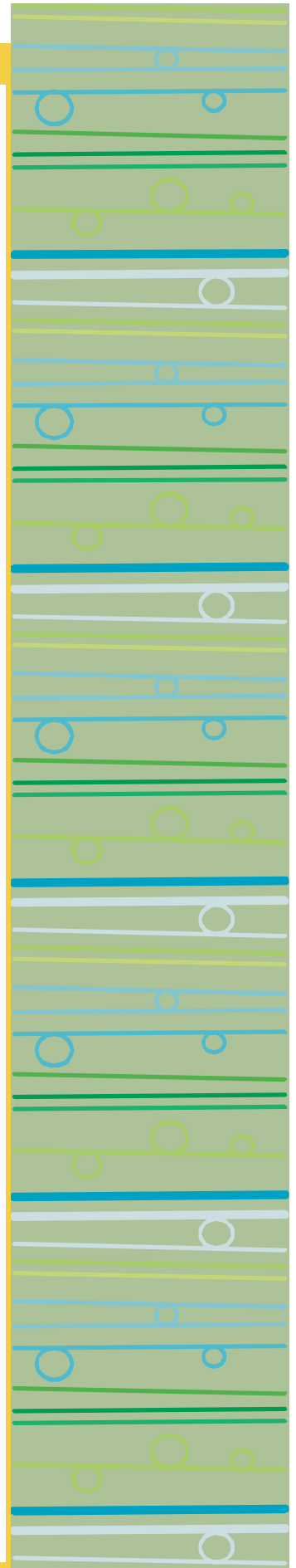
We rely on information from the community about problems with the water system. If you notice a water break, or any other problem with the water supply system please call to let us know.

Your help is appreciated!

Kevin Snodgrass
Public Works Manager
Phone: (775) 427-9954



0.5% of the water on the planet is clean and drinkable



Fallon Paiute-Shoshone Tribe



Environmental Protection Department
1011 Rio Vista Drive
Fallon, NV 89406

Phone (775) 423-0590
Fax (775) 423-0593

How Can I Get Involved?

We value your comments and feedback about the Tribal water system. The water system is governed by the Fallon Business Council which meets on the second and fourth Tuesday of every month beginning at 5:30 pm at the FPST Administrative Conference Room.

We Want To Hear From You

For more information about the information contained in this report or about your water system contact:

Kevin Snodgrass, Public Works Manager 565 Rio Vista Drive Fallon, NV 89406 Phone: (775) 427-9954 Fax: (775) 423-5202	Richard Black Environmental Protection Director 1011 Rio Vista Drive Fallon, NV 89406 Phone: (775) 423-0590 Fax: (775) 423-0593
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