Well Rehabilitation - Your Dollar at Work!

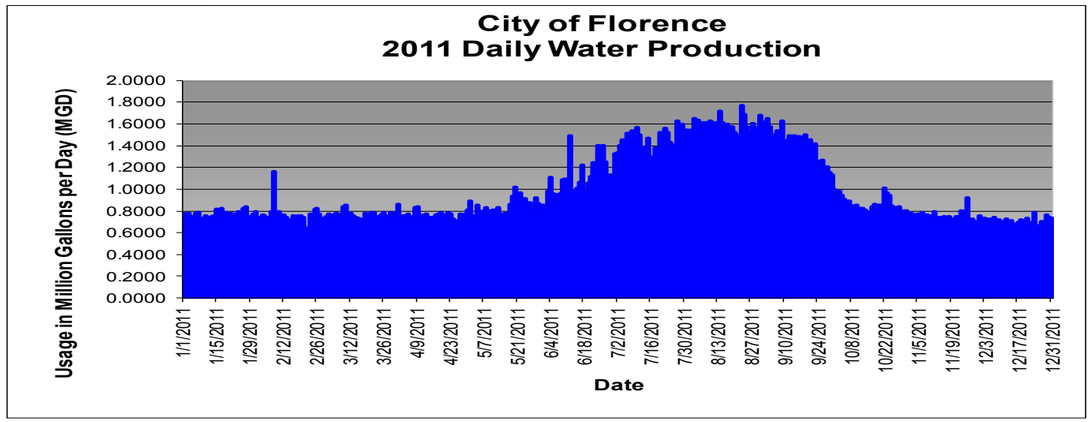
The City of Florence delivers water that is a clean, quality product. However, prior to the groundwater being treated the water is iron rich which requires a great deal of work to maintain the wells and the source water piping. Since the City added the additional $1 per month to the utility bills, we have used these dedicated funds to complete much needed rehabilitation of the wells. Below are photos of the iron build up on the well head piping and photos of the well screens (these screens keep the sand from filling in the well bore) before and after cleaning.

Photo of pipe fittings for well #1. During the fall of 2010, well #1 production rate fell to 40 gallons per minute (gpm). Our well water production goal is 200 gpm per well. The pipe opening is 4-inches in diameter and has been reduced to 1-inch in diameter from the iron deposits. The iron deposits are removed before reassembly of the fittings and placing the well back into service.

In the chart below you may notice a spike in February. That is from a 387,000 gallon main break.

The photo to the left is a well screen before cleaning and hydropulsing. Hydropulsing is an impulse technology that uses a sonic wave to loosen impacted fine sediment, iron deposits and encrustations from the well bore wall and surrounding formations. Iron sediments have severely impacted the well production capability.

The photo to the left is of the well screen after cleaning and hydropulsing. The individual screen openings are now visible and water can now enter the well bore much easier.



Special Health Concerns

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly persons and infants can be particularly at risk from infections. These people should seek advice from their health care providers about their drinking water.

EPA/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. Please call their office if you have questions.

? ? ? Frequently Asked Questions ? ? ?

<u>If water is cloudy when it comes out of the tap but then clears up, is it safe to drink?</u> Yes, it is safe to drink. Cloudiness is usually dissolved air that is being released. The air is under pressure from the water system. When it comes out of the tap, the pressure is removed and bubbles form.

<u>What is the water pressure at my house?</u> Most homes receive water at a pressure of 40-80 pounds per square inch (psi), but the minimum standard is 20 psi. Low water pressure is often a symptom of restricted water flow. This is usually a build-up in older, galvanized, household plumbing.

City of Florence
2012 Water Quality Report

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Letter From the Director

The City of Florence is committed to providing residents and businesses throughout the City with top quality water service. Florence Public Works employees are on-call 24 hours a day, 365 days a year to ensure that you always have access to safe Florence drinking water. The Water Quality Report is distributed annually to inform our customers that we are meeting all water quality guidelines set forth by the Environmental Protection Agency. Once again in 2011, Florence tap water met all state and federal requirements..

As a water supplier, the City is required to provide an annual Consumer Confidence Report (also know as a Water Quality Report) which informs our customers of the location of our water sources, the programs implemented to maintain the quality of the water, and the water analyses undertaken to ensure that the water delivered to you our customers is safe and of the highest quality. This report provides you with water quality data for the calendar year starting from January 1, 2011 to December 31, 2011.

City of Florence Drinking Water—Tap into Quality. Any measure of a successful society (economic diversity, productivity, public safety) is in some way related to the access to safe drinking water. In Florence, safe water is always accessible to drink, wash our clothes, water our landscapes and for a myriad other purposes. In all our activities, we are reminded of the extraordinary value of water.

Beginning July 1, 2012, the City of Florence will be raising it's water, wastewater and street utility fees. For the typical residential customer using 1,000 cubic feet of water, the <u>total</u> utility bill increase is $9.99 per month. Even with the water rate increase, Florence's tap water is an excellent value. While the cost of water varies depending on the amount you use, a reasonable average is less then a half-cent per gallon. Compare this to some other common beverages you may purchase:

Bottled iced tea: 16 oz. for $1.89 = $15.12 per gallon
Premium bottled water: 16 oz. for $1.59 = $12.72 per gallon
Fresh Oregon milk: 64 oz. for $2.49 = $4.98 per gallon
Blended Canadian whiskey: 59.3 oz. for $30 = $64.76 per gallon
Oregon mircobrewed beer: 6 12-oz bottles for $9.59 = $17.05 per gallon
City of Florence tap water (average*): 748 gallons for $3.60 = $0.0048 per gallon

Best of all, unlike the other products listed above, Florence tap water is delivered directly to your home.

The City is committed to providing outreach programs to spread the message regarding the value of water and ways to conserve it. I invite you to read this report and welcome comments. If you have any questions regarding water quality, please call us at 541-997-4106.

Sincerely,

Mike Miller, Public Works Director

***** The average rate for a single-family home using 1,000 cubic feet or 7480 gallons per month: $16.09 base fee, 1,000 units at $0.0189 per unit and $1 well rehab fee. Actual cost varies based on amount of water used.

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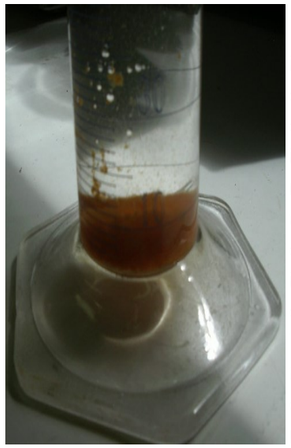
The City of Florence is proud of the high quality of our water supply, which meets or exceeds all state and federal water quality requirements. If you have any questions regarding your water quality or about information presented in this report, please call us at the Water Treatment Plant 541-997-7370 or the Public Works Department 541-997-4106 or visit our website at www.ci.florence.or.us. This report contains important information about your community's water system. Have it translated or speak to a friend that understands it well. Este informe contiene information muy importante. Traduscalo o hable con un amigo quien lo entienda bien.

Issued June 2012

Did You Know.....

In 2011, the City of Florence supplied water to approximately 8,466 consumers within the city's water service area (new population figure from 2010 US Census). The water these customers received came from 12 dunal wells located just north of the City's water treatment plant at 2450 Willow Street. The well field is city owned and consists of approximately 80 acres of carefully managed land as recommended in the City's well head protection plan.



The City of Florence water system uses two filter systems in a series to remove the iron from the raw groundwater. Three biological filters and six greensand filters comprise our filter system and these filters can treat up to three (3) million gallons of water per day (3 mgd). The City's supply of raw groundwater contains dissolved iron in the range of 6-9 parts per million (ppm) before treatment. The water treatment plant, located at 24th and Willow oxidizes and removes all but 0.01 ppm through the treatment process. As water flows through the treatment plant, 90% of the iron is removed through the use of biological oxidation and filtration. Air is injected into the water to increase the level of dissolved oxygen and the naturally occurring iron bacteria assist in oxidation through various metabolic processes. The sand filters then separate the oxidized iron and bacteria from the water. The filtered water is then chlorinated to chemically oxidize the water and kill any residue bacteria, then potassium permanganate is added to the chlorinated water providing additional oxidation before the final filtration with greensand and anthracite coal. The color and odor of the water is removed with the iron and the final product is cool, wet, colorless, odorless and tastes great!

For more information, or to arrange a tour of the facility, please contact Matt Burdett or James Ledbetter at the Water Treatment Plant, phone 541–997-7370.

Lead in Drinking Water

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 Florence 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 drinking 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 Website at http://www.epa.gov/safewater/lead.

Drinking Water Fluoridation

The City of Florence has been adding fluoride to its water service since the early 1960's. The purpose of fluoridating the City's drinking water is to improve dental health for consumers of Florence water. According to the U. S. Center for Disease Control (CDC) and the U.S. Department of Health and Human Services, widespread use of fluoride has been a major factor in the decline in the prevalence and severity of tooth decay in the United States. When used appropriately, fluoride is both safe and effective in preventing tooth decay.[1]

[1] MMWR published by the Epidemiology Program Office, CDC and U.S. Department of Health and Human Services

Water Quality Testing

Ongoing water quality testing continues to be one of the highest priorities for the City's drinking water program in its commitment to provide premium and safe drinking water to residents. The City collects nine microbiological samples per month in addition to samples required by the Oregon Health Department and the Environmental Protection Agency to ensure that the city's drinking water meets state and federal standards.

Our Test Findings

The City of Florence routinely checks, as required by the EPA, 42 Volatile Organic Compounds, 42 Synthetic Organic Chemicals and 16 Inorganic Chemicals. The City also takes nine Bacterial Samples at multiple locations throughout the City every month. The charts below show the results of our most recent testing. In addition, in 2011 the City tested 22 homes in representative areas throughout the City for lead and copper. We are pleased to report that none of the homes exceeded the Action Levels as determined by the EPA. For those citizens concerned about sodium levels, currently the sodium level in our water is 32.1 mg/L.

Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling EPA's Safe Drinking Water Hotline 1-800-426-4791 or by visiting their web site at www.epa.gov/ow.

Inorganics and Bacteria

Parameter	Units	Goal MCLG	Allowed MCL	Detected in the City's Water	Complies with State	Major Sources
Fluoride	ppm	4	4	0.70	Yes	Water additive which promotes strong teeth; erosion of natural deposits
Nitrate	ppm	10	10	0	Yes	Erosion of natural deposits
Nitrite	ppm	1	1	0	Yes	Erosion of natural deposits
Total Coliform	No units	0	0	0	Yes	Naturally present in the environment
By-Products of Drinking Water Chlorination						
Total Trihalomethanes	ppb	n/a	80	25.3	Yes	By-product of Chlorination

Lead and Copper Sampling

Parameter	Units	Goal MCLG	Allowed MCL—or Action Level	90th Percentile	Complies with State	Major Sources
Copper	ppm	1.3	1.3	ND	Yes	Corrosion of household plumbing
Lead	ppb	0	15.0	6	Yes	Corrosion of household plumbing

* Based on 90% of homes tested being at or lower than the reporting limit. For lead and copper, a water supply is in compliance with the drinking water standards if 90% of the samples are less than or equal to the Action Level.

Definitions

ND: None Detected

Action Level: the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level (MCL): 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.

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 allow for a margin of safety.

Parts per Million (ppm) and Parts per Billion (ppb): with increasing technology, contaminants can be detected in extremely small quantities. A part per million (ppm) means that one part of a particular contaminant is present for every million (1,000,000) parts of water. Similarly, parts per billion (ppb) indicate the amount of a contaminant per billion (1,000,000,000) parts of water.