



City of Florence
Water Quality Report
2013

SUMMER
2014
EDITION



1893—2013
Celebrating 120 years of excellence

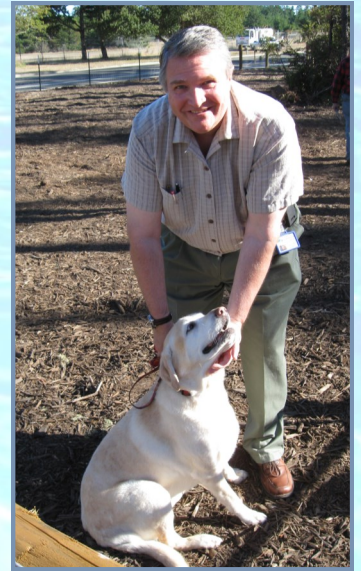
Letter From the Director Mike Miller

Once again the City of Florence is proud to present our annual water quality report. If this information looks familiar, it should. Florence has been mailing similar information to our customers for years. Why every year? It's the law. Drinking water regulations require us to produce and provide this information every year. Most of the language is also required — Congress and the EPA want to be sure every community knows what is in their drinking water.

This edition contains information concerning the City of Florence Water System, Identification (WSID) #4100299, and covers all testing completed from January through December 2013. We are pleased to tell you that our compliance with all state and federal drinking water standards remains exemplary. As always, we are committed to delivering the best quality drinking water. To that end, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education all the while continuing to serve the needs of our water users.

Water plays an integral part in our everyday lives. In Florence, safe water is always accessible to drink, to wash our clothes, used for cooking, water our landscapes and a myriad of other purposes. In all of our activities we are reminded of the extraordinary value of this precious resource. You can rest assured that 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. We invite you to read this report and welcome comments. If you have any questions regarding water quality, please call us at 541-997-4106.

We encourage public interest and participation in decisions affecting our drinking water. City Council meetings usually occur on the first and third Mondays of each month at 7pm at City Hall. City Hall is located at 250 Hwy 101. For information on meeting schedules and agendas contact 541-997-3437 or visit the City's website at www.ci.florence.or.us



Mike Miller

Did You Know...

In 2013, the City of Florence supplied water to approximately 8,480 consumers within the city's water service area. 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.



Matthew Burdett



James Ledbetter

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 deactivate any residue bacteria. Potassium permanganate is added to the chlorinated water providing additional oxidation before 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!

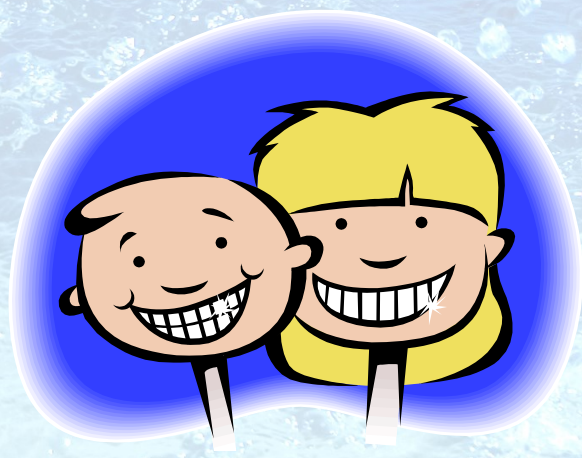
For more information, or to arrange a tour of the facility, please contact Matt Burdett or James Ledbetter at the Water Treatment Plant at 541-997-7370.

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 Authority Drinking Water Program and the Environmental Protection Agency to ensure that the city's drinking water meets state and federal standards.

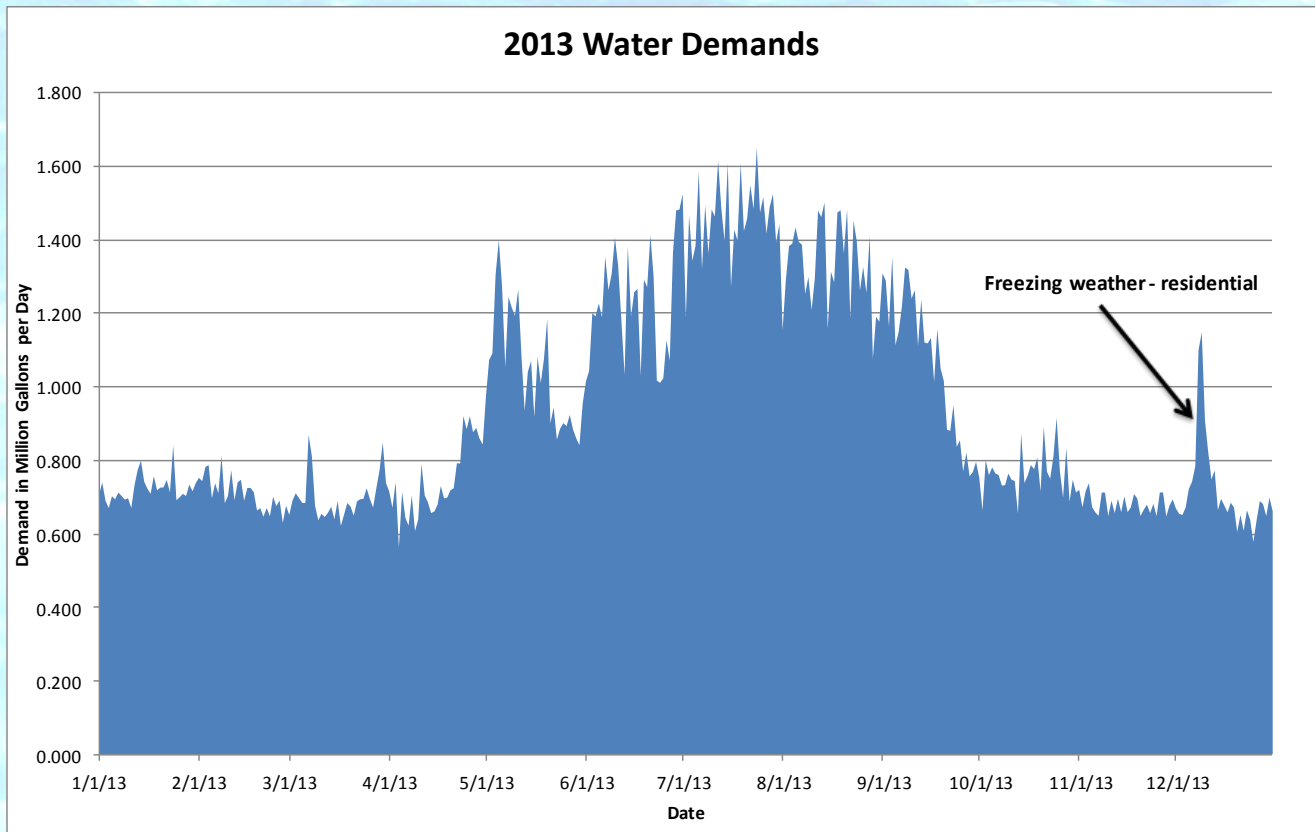
Test Findings

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 on the following page 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 30.5 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](#).

2013 Daily Water Production



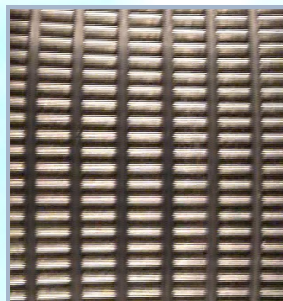
Well Rehabilitation – Your Dollar at Work!

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.



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.

Water Quality Data

Inorganics and Bacteria

Parameter	Units	Goal MCLG	Allowed MCL	Detected in City's Water	Violation? Yes/No	Major Sources
Fluoride	ppm	4	4	0.70	No	Water additive which promotes strong teeth; erosion on natural deposits
Nitrate	ppm	10	10	0	No	Erosion of natural deposits
Nitrite	ppm	1	1	0	No	Erosion of natural deposits
Total Coliform	No units	0	0	0	No	Naturally present in the environment

By-Products of Drinking Water

Total Trihalomethanes	ppb	n/a	80	25.3	No	By-product of Chlorination
Haloacetic Acids	Ppb	n/a	60	5.1	No	By-product of Chlorination

Lead and Copper Sampling

Parameter	Units	Goal MCLG	Allowed MCL — or Action Level	90th Percentile	Violation? Yes/No	Major Sources
Copper	ppm	1.3	1.3	ND	No	Corrosion of household plumbing
Lead	ppb	0	15.0	6	No	Corrosion of household plumbing

Unregulated and Secondary (regulations provide advisory limits only)

Parameter	Units	Goal MCLG	Allowed MCL	Detected in City's Water	Violation? Yes/No	Major Sources
Sodium	ppm	n/a	20	30.5	No	Erosion of natural deposits, water treatment additive

**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.

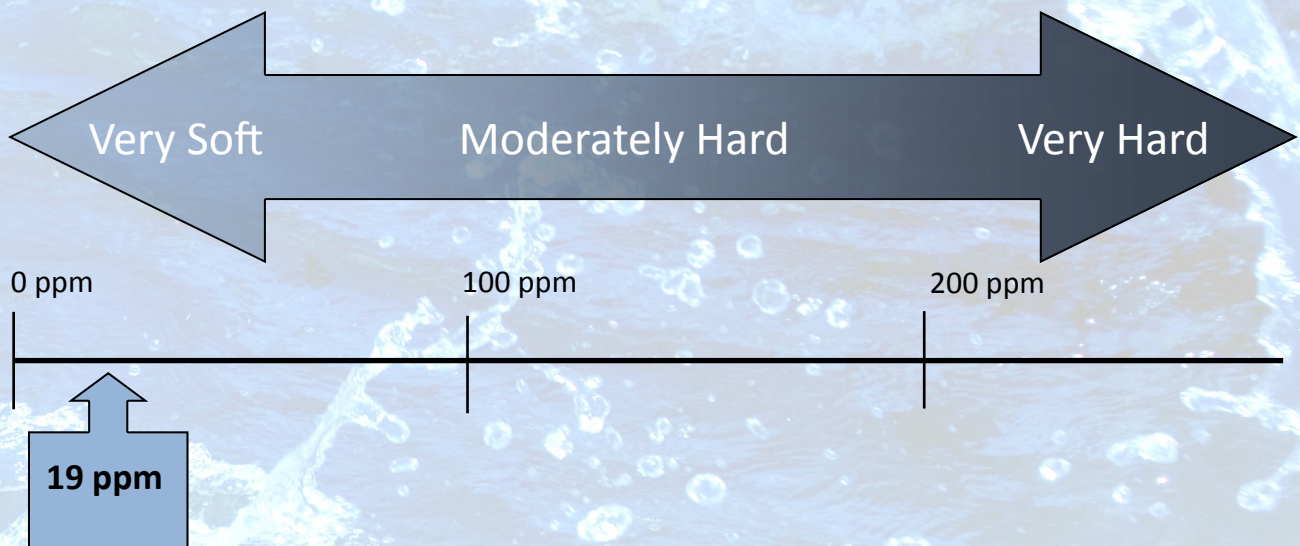
Treatment Technique (TT): a required process intended to reduce the level of contaminant in drinking water.

Action Level (AL): the concentration of a contaminant, which, if exceeded, triggers treatment or other requirements.

Unregulated Contaminants: water quality standards for unregulated contaminants are established as guidelines to assist public water systems in managing drinking water for aesthetic considerations such as taste, color and odor. These contaminants do not present a risk to human health.

Is My Water Hard?

If substantial amounts of Calcium or Magnesium, both nontoxic minerals, are present in drinking water, the water is said to be hard. Hard water does not dissolve soap readily, so making a lather for washing and cleaning is difficult. Conversely, water containing little Calcium or Magnesium is called soft water. At 19 ppm, the City of Florence's water is considered very soft.

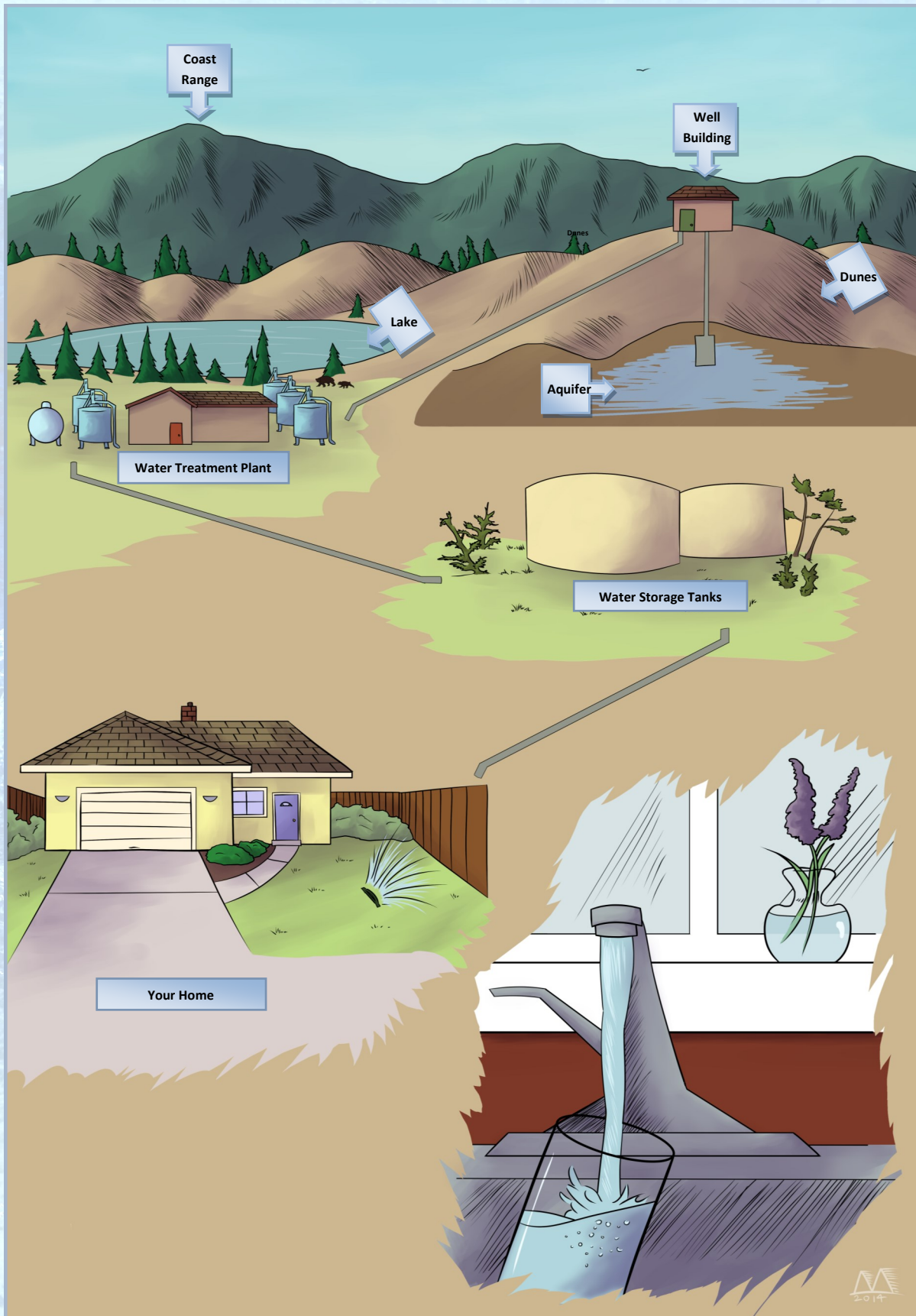


Special Health Concerns

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.

Florence Dunal Aquifer Water System



Aquifer Protection

The City of Florence Aquifer Protection Plan for the North Florence Sole Source Dunal Aquifer was prepared through the work of the Siuslaw Estuary Partnership, a collaborative effort by the City of Florence and its federal, state, local and tribal partners to protect and improve water quality and fish and wildlife habitat in the lower Siuslaw River Watershed. The purpose of the Aquifer Protection Plan is to protect the North Florence Dunal Aquifer, the sole source of drinking water for the Florence community. The aquifer lies within the lower Siuslaw River Watershed, a significant natural area that provides critical habitat for endangered and threatened animal species. The North Florence Dunal



Aquifer encompasses the entire continuous body of sand north of the Siuslaw River and east of the Pacific Ocean. The Siuslaw Estuary Partnership, which concluded in October, 2012, included a Surface- and Groundwater- Monitoring Program to protect the North Florence Dunal Aquifer and to protect water

quality in Munsel and Ackerly Creeks and the Siuslaw River.

In 2012, the City of Florence was awarded an Urban Waters Small Grant to help fund continuation of the monitoring program for another two years. The City monitors water levels, flow and quality in the groundwater and in Munsel and Ackerly Creeks. In addition to continuing the monitoring program, the City will also continue partnering with the Oregon Department of Environmental Quality (DEQ), Oregon Health Authority (OHA), Oregon Department of Fish and Wildlife (ODFW), federal, local and other state agencies to share data and collaborate on solutions to potential contamination incidents. The City is also working to increase awareness among community members about aquifer vulnerability, sources of contamination, and methods for reducing the potential contamination.

PNWS/AWWA EXCELLENCE IN COMMUNICATIONS

The City of Florence is very pleased to announce that we won an Excellence in Communications Award from the Pacific Northwest Section (PNWS) of the American Water Works Association (AWWA) for our 2012 Water Quality Report (published June 2013).

Florence was recognized for producing an effective and informative report that reflected a commitment to informing consumers about their drinking water. The award was handed out during the PNWS's annual conference May 7th, 2013 in Eugene.

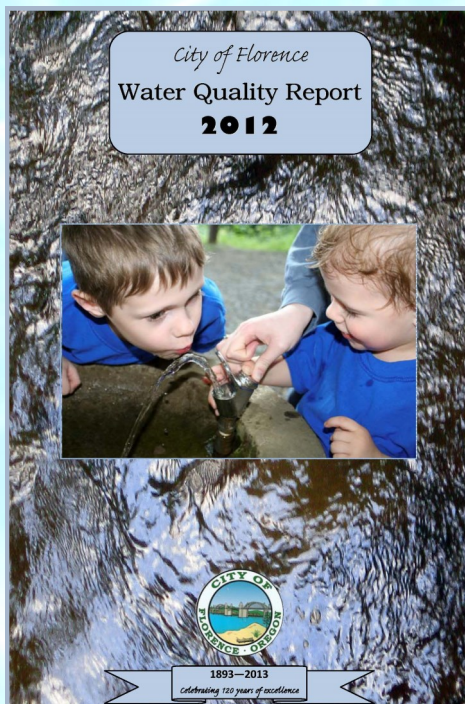
"The City of Florence works hard to ensure that our water not only complies, but exceeds



state and federal drinking water standards," said Public Works Director Mike Miller. "To be selected from other utilities in Idaho, Oregon and Washington as having excellence in communications is a bonus."

The PNWS-AWWA was founded in 1927 and provides leadership to drinking water professionals in Idaho, Oregon, and Washington in the areas of, water quality and distribution, water resource policy, conservation and engineering. PNWS is governed by its 3,000 members and its programs are carried out by hundreds of member volunteers, assisted by staff located in Vancouver,

Washington. Every year, the PNWS recognizes water utilities who go above and beyond in communicating their water's quality to consumers. To learn more about the PNWS-AWWA, visit their website at www.pnws-awwa.org.



Fun Water Facts



American residents use about 100 gallons of water per day. Florence residents use 110 gallons per day.



In one year, the average American residence uses over 100,000 gallons (indoors and outside). In 2013, Florence residents averaged 40,078 gallons during the year.



Approximately 400 billion gallons of water are used in the United States per day. Florence's average for 2013 is 0.931 million gallons per day.



Americans use more water each day by flushing the toilet than they do by showering or any other activity.



The average faucet flows at a rate of 2 gallons per minute. You can save up to four gallons of water every morning by turning off the faucet while you brush your teeth



Taking a bath requires up to 70 gallons of water. A five-minute shower uses only 10 to 25 gallons.



More than 25% of bottled water comes from a municipal water supply, the same place that tap water comes from.



A running toilet can waste up to 200 gallons of water per day.



Frequently Asked Questions

Q: If water is cloudy when it comes out of the tap but then clears up, is it safe to drink?

A: 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.

Q: What is the water pressure at my house?

A: 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.

Contact Information

City of Florence Public Works
989 Spruce St.
Florence, OR 97439
541-997-4106

Water Treatment Plant
2450 Willow St.
Florence, OR 97439
541-997-7370

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 información muy importante. Tradúscalo o hable con un amigo quien lo entienda bien.