

Issued June 2010

Based on 2009
Water Quality Data

the water

we drink

Annual Water Quality Report for:
Medford Water Commission

and the cities of:
**Central Point • Eagle Point • Jacksonville
Medford • Phoenix • Talent**

This report contains important information about your water supply.



About This Report

Each of us uses water in numerous ways every day. The quality of our water is very important to the health of local communities. Federal and state standards therefore provide stringent guidelines to help assure that tap water is safe to drink. Your local water providers are pleased to report that the quality of our water continues to be excellent, easily surpassing all health regulations.

This publication is being provided by the Medford Water Commission, along with the cities of Central Point, Eagle Point, Jacksonville, Phoenix and Talent, each of whom distribute water provided by the Commission. This report includes water quality testing results for the year 2009, along with information explaining what the results mean.

Drinking water regulations require that certain water quality information be distributed each year. Some of the specific language is also required. We support our customers' right to know the results of tests conducted on our water. We also realize, however, that this can be somewhat technical. Although much of the content of this report must follow strict reporting guidelines, we attempt to provide the information in a clear and useful format. If you wish to have further explanations, please refer to the back cover of this report for local contacts and other sources of information.

We appreciate the opportunity to serve you and hope that you will find this information to be helpful.

Additional Test Results

In an effort to simplify this document and meet EPA guidelines, tables in this report do not include information on many substances we test for. The vast majority of regulated contaminants tested for are not detected in our water, and most of those undetected substances are not shown in this report. If

you wish to review additional test results, a complete water quality analysis can be viewed on the Commission's website. Much of the test data is also listed on the website for the Oregon Drinking Water Program. Both of these web addresses are shown on the back.

To assist the EPA in assessing possible future regulations for additional contaminants, the Commission occasionally conducts testing for a number of substances that are not regulated. None of these unregulated contaminants were found within our water. Results from these tests are also available upon request.

Additionally, some parameters that we test for may not themselves constitute a health concern, and therefore are not listed in the tables herein. Examples include the pH and hardness of the water.

From Source To Tap

The majority of water used within our water system comes from the Big Butte Springs. This group of springs is located on the lower slopes of Mt. McLoughlin near Butte Falls. The spring water is directed into pipelines while still below ground, and is considered a groundwater supply. Disinfection with chlorine is the only treatment needed for this exceptional water supply.

The Big Butte Springs provide sufficient water to more than meet the needs of our communities in the winter. However, with water use often more than three times higher during the summer, we rely on water from the Rogue River to meet these increased demands.

Although the quality of the Rogue River water is also very good, like most surface water, it requires a full treatment process. After being drawn from the river, the Rogue water is treated with ozonation and a full filtration process, along with chlorination.

Following treatment, water is transported in large pipes to the communities' distribution systems. Within the distribution systems, pipelines vary in size, with some serving as main lines and others serving small neighborhoods. Rather than being independent lines like the branches of a tree, pipes are typically interconnected in a grid-like system. The grid or looped design provides more uniform pressure, lessens the need for large areas to be without water when one section of pipe has to be shut down, and helps assure that water keeps moving and remains fresh. Water in pipelines can flow either downhill under the force of gravity or uphill with pumping.

Our Watersheds

While many cities receive their water from local wells or rivers that flow through town, our local communities do not have reliable aquifers beneath them, nor large rivers flowing by. However, actions taken decades ago enable us to utilize water generated in the large upper Rogue watershed. With snow melt and reservoirs in this watershed, we are also able to receive water throughout the summer. This is very important in our region, which receives very little rain during the summer when water usage soars.

The upper Rogue watershed is largely undeveloped, with the portion in the Big Butte Springs watershed being particularly pristine. Consequently, we don't face many of the water quality challenges associated with urban watersheds. Nonetheless, the Medford Water Commission is actively involved in activities aimed at preserving the quality of our water supplies, and has developed a Source Water Assessment Plan for the Rogue River watershed and a Wellhead Protection Plan for the Big Butte Springs watershed. These reports are available for review at the Commission's office. ■



S L O W T H E F L O W



After a spring that brought us frequent bouts of rain, the dry winter months may seem a distant memory. However, the winter was indeed very dry, with storms that we normally rely on for year 'round water supplies dipping into California instead. A particularly wet spring significantly improved the summer water outlook, but with our typical dry season now being near, it appears that the winter shortfall was likely too large to completely overcome.

While flows at the Big Butte Springs are somewhat below normal this year, a more significant impact of the dry winter is the low water level of Willow Lake. Water from this lake is not actually used for our drinking water, but it provides a supplemental source of water for the Eagle Point Irrigation District, an arrangement that enables the Medford Water Commission to more fully utilize the high quality Big Butte Springs water. Low lake levels can therefore impact the amount of spring water accessible for our use.

During past periods of lower-than-normal availability of spring water, the shortfall has been offset through utilizing more water from the Rogue River, so the impact on customers was minimal. This year, however, a project to replace fish screens on the water intakes at our treatment plant on the Rogue River will at times limit how much water can be withdrawn from the river. Unfortunately, the timing for this project is not flexible, being subject to fisheries protection rules that limit work within the river to specific summer time frames.

Therefore, both of our water sources may be subject to reduced capacity at the same time.

So how might this situation affect you, our customers? If all goes as planned, the fish screen project on the Rogue River will be completed during June, and we may be able to accommodate all typical water demands. However, if June weather is hotter than normal or if the construction project extends longer, demands could exceed what we can supply, and customers would be asked to cut back on their water usage.

Regardless of whether a request for reductions is made, doing your part to use water efficiently is always warranted. During the summer, the vast majority of water usage occurs outdoors, with significant waste often being evident. The greatest potential for improvement is therefore associated with outdoor water usage. Following are some tips and actions each customer can take to help assure that we are all making the most of the water used.

Landscape Sprinkling

- If you sprinkle from hoses, use timers that can be placed on hose bibs. Simple styles will assure that water isn't accidentally left running, and other models can be set for nighttime operation, much like timers for in-ground systems.
- If you have an automatic irrigation system, observe sprinklers operating at least once a month. Make sure components are all working properly, that sprinklers are facing the right direction and that spray patterns are not obstructed by plants.
- Operate automatic sprinklers between sundown and sunrise to reduce evaporation losses. Recognize that evenings are still very warm and often breezy, so like mid-day, the evening is a time to avoid.
- How long and how often you run your sprinklers can make a

big difference. To take some of the guesswork out of irrigation scheduling, you can view and print sample watering schedules from our website:

www.medfordwater.org or call us at 541-774-2435 for copies. Up-to-date watering times and tips are also available throughout the summer from our Lawn Watering Infoline (541-774-2460).

- If you see water running off, it's an indication that sprinkling cycles should be shortened. Instead of one longer cycle, run sprinklers in shorter segments, each separated by about an hour. This will enable water from the first round to soak in before more is applied.
- Running sprinklers at high pressure is not only hard on irrigation system components, but results in a lot of wasted water. If sprinklers are throwing off a fine mist, rather than larger drops, it's a pretty sure sign that pressure regulation should be added.

General Tips

- Cover pools and spas when not in use, and avoid overflowing to minimize splash out.
- When using hoses, attach nozzles that will shut off automatically and provide more effective spray patterns.
- Aerating lawns will help water soak in.
- Monitor kid's water play activities. Install timers on hose bibs used, and place water toys where lawn watering is needed. Consider taking kids to local water parks that recycle the water used.
- Add organic mulches to shrub areas. It helps keep roots cool, reduces evaporation, and enriches the soil as it breaks down.
- Use a broom instead of a hose when cleaning paved surfaces. It's often all that's needed, and the exercise may be beneficial too. ■



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. 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 (800-426-4791).

in 2009, only one taken in Phoenix tested positive for coliform bacteria, but further testing confirmed that it was not a harmful variety.

As with all water quality analyses performed, coliform test results are routinely reported to the state. In May 2009, a clerical error resulted in Medford Water Commission's test reports not being received by the state on time, which is considered a reporting violation. All of the required sampling was done, however, with no associated health risk or coliforms found to be present.

Although not regulated, the Medford Water Commission also conducts occasional testing for *Cryptosporidium*, a microscopic parasite that can cause severe intestinal illness. During 2009, two samples from the Big Butte Springs were tested for *Cryptosporidium*, with none being found.

Checking for Contaminants

Hundreds of tests are run on our drinking water each year to ensure that no substances are present at harmful levels. The

Environmental Protection Agency (EPA) establishes drinking water standards based on the potential for immediate risk of illness, or to exposure to specific contaminants over a lifetime. Bottled water is subject to comparable standards established by the Food and Drug Administration.

The EPA also specifies testing schedules, which range from continual monitoring of those parameters that can change quickly to monitoring every few years for some substances that tend to be very consistent over time. Testing for most contaminants is done at least annually. Although we directly monitor certain water quality parameters, the majority of our water quality analyses are conducted at an independent certified laboratory.

Of the approximately 150 substances we test for, most have never been found in our water. Those that we do detect are found at levels far below health standards, and are identified on the following pages. ■



About Microbes

Microscopic organisms have more potential to show up suddenly and cause immediate illness than most contaminants. Therefore, water samples are taken throughout the water distribution system on a regular basis to check for bacteria. Initial samples are tested for coliform bacteria, which are good indicators of whether other bacteria might be present. Most coliforms do not pose a health threat, but if they are found in a sample, the water is further analyzed for harmful fecal coliforms or *E. coli*.

Microbial sampling is conducted by the Medford Water Commission, as well as by each of the cities served by the Commission. During the year 2009, 1628 samples were collected from 128 sampling points throughout the area covered by this report. Coliform bacteria are seldom found in our water. Of the samples tested



This report shows test results for constituents found within our water. Except where identified otherwise, results shown are from tests conducted during 2009. Any substances found were at very low levels and are well below standards set by the EPA for healthy drinking water.

Although some of the data may appear complex, we hope that the conclusion is clear: that the water you receive meets the highest standards. In fact, with increasing knowledge about various contaminants and enhanced treatment techniques, the water we drink is better than ever.

Explanations below are provided to help you better understand the significance of these test results.

Disinfection By-Products

Disinfection of water plays an extremely important role in preventing disease epidemics. Disinfection is achieved through chemical reactions that inactivate harmful microbes. However, by-products can form from these reactions, some of which can be harmful if they occur at sufficient levels over a long time. Total trihalomethanes and haloacetic acids are compounds that are formed from reactions between chlorine and organic material.

...Continued from page 4

Various measures are taken to keep these by-products to a minimum while insuring that disinfection is achieved.

Bromate is a by-product that can occur with ozonation. However, none was found in our samples tested in 2009.

Chlorine Residual

Although there are different methods by which water can be disinfected, only chlorine will remain in the water to provide protection all the way to customers' taps. For this reason, even when other primary disinfection methods are employed, some chlorine is often utilized. In association with the routine collection of water samples throughout the distribution system, samples are evaluated to confirm that there is some chlorine remaining and that the residuals are not above health standards. Our water is effectively disinfected with far less chlorine than the maximum residual allowed, so our residual levels are well below the allowed amount.

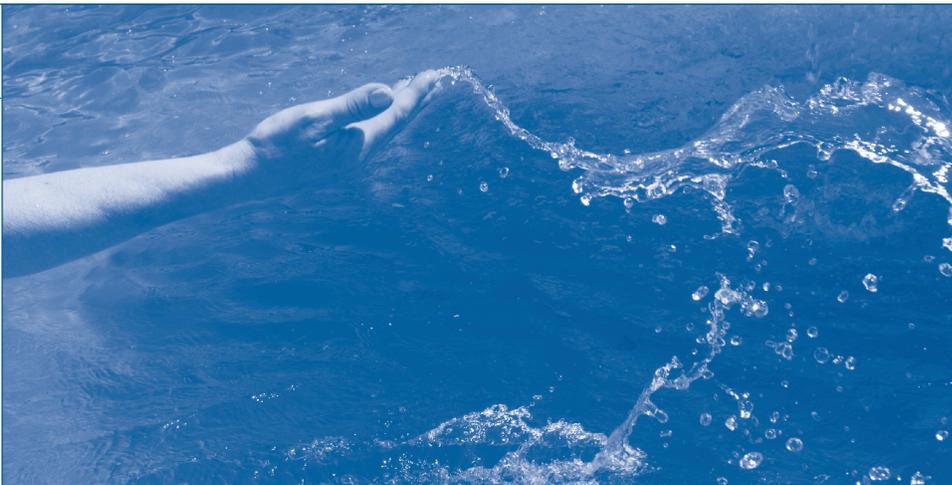
Radioactive Contaminants

As they deteriorate, certain minerals give off radiant energy in various forms. This can be released from the ground, and from water that has been exposed to these substances.

Standards for radon, a carcinogenic gas, are currently under review. While most radon found in indoor air comes through the ground, some can be released from water.

Turbidity

Turbidity is a measure of how clear water is, read in Nephelometric Turbidity Units (NTUs). High turbidity does not necessarily indicate that water is unhealthy, but it can interfere with disinfection. While turbidity measurement is not required of our springs water, it is continuously monitored for our own review. ■



KEY TERMINOLOGY

AL Action Level

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

MCL Maximum Contaminant Level

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.

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 allow for a margin of safety.

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.

ND Non Detect

Not detected at an established minimum reporting level.

ppm/ppb Parts per Million/Parts per Billion

A part per million (ppm) means that one part of a particular substance is present for every million parts of water; this compares with one penny in \$10,000. Similarly, parts per billion (ppb) indicate the amount of a substance in a billion parts of water; this compares with one penny in \$10 million.

TT..... Treatment Technique

A required process intended to reduce the level of a contaminant in drinking water.



REGULATED SUBSTANCES DETECTED

Radioactive Contaminants Analyses

SUBSTANCE	MCL (maximum allowed)	MCLG (ideal goal)	AVERAGE AMOUNT DETECTED	RANGE	COMPLIES?	TYPICAL SOURCE
Gross Alpha (2008 results)	15 pCi/L	0 pCi/L	Rogue River: 1.2pCi/L ±0.7 Big Butte Springs: 1.5pCi/L ±0.8	N/A	YES	Erosion of natural deposit
Radium-226/228 (2008 results)	5 pCi/L	0 pCi/L	Rogue River: ND@0.7 ±0.7 Big Butte Springs: 0.8pCi/L ±0.7	N/A	YES	Erosion of natural deposits
Uranium (2008 results)	30 µg/L	0 µg/L	Rogue River: ND@1µg/L Big Butte Springs: ND@1µg/L	N/A	YES	Erosion of natural deposits
Radon-222 (2006 results)	Not regulated	Not regulated	Rogue River: N/A Big Butte Springs: 161pCi/L	N/A N/A	YES	Naturally occurring

Primary Contaminants Analysis

Asbestos	7MFL	7MFL	Phoenix: 0.2MFL	N/A	YES	Decay of asbestos cement water mains
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Other Analyses

Turbidity	TT = 0.3 NTU	N/A	Rogue River: 0.025NTU	0.018 – 0.095 NTU	YES	Soil erosion and stream sediments
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Secondary Contaminants—Voluntary Guidelines

SUBSTANCE	MAXIMUM SUGGESTED	AVERAGE AMOUNT DETECTED	COMPLIES?	TYPICAL SOURCE
Aluminum	50 - 200 ppb	Rogue River: 11.5ppb Big Butte Springs: 77.8ppb	YES	Erosion of natural deposits
Chloride	250 ppm	Rogue River: 3.52ppm Big Butte Springs: 2.17ppm	YES	Erosion of natural deposits
Iron	300 ppb	Rogue River: ND@15ppb Big Butte Springs: 37.4ppb	YES	Erosion of natural deposits
Sulfate	250 ppm	Rogue River: ND@0.5ppm Big Butte Springs: 1.03ppm	YES	Erosion of natural deposits
Sodium	20 ppm	Rogue River: 5.58ppm Big Butte Springs: 6.47ppm	YES	Erosion of natural deposits

LEAD AND

COPPER



Little to no lead and copper are typically found in our water at the sources. However, these metals can enter the drinking water supply through corrosion from household plumbing or the water distribution system, so supplemental testing is conducted at residences considered to be at greatest risk for high lead and copper levels. Our water does not tend to be prone to high lead and copper levels, but precautions are still worthwhile.

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. Medford Water Commission and each city 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 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 Hotline or at www.epa.gov/safewater/lead.



MORE SUBSTANCES DETECTED

Medford Water Commission and Cities' Disinfection and Disinfection By-Product Analyses

SUBSTANCE	MCL (maximum allowed)	MCLG (ideal goal)	AVERAGE AMOUNT DETECTED	RANGE	COMPLIES?	TYPICAL SOURCE
Total Trihalomethanes	80ppb	0ppb	M.W.C.: 9.72ppb Central Point: 8.3ppb Eagle Point: 9.0ppb Jacksonville: 16.2ppb Phoenix: 1.3ppb Talent: 0.7ppb	0.54 – 19.4ppb 1.4 – 19.4ppb ND – 23.0ppb 16.2 – 16.2ppb 0.5 – 2.8ppb 0.7 – 0.7ppb	YES	By-products of chlorination used in the water treatment process
Haloacetic Acids	60ppb	0ppb	M.W.C.: 7.28ppb Central Point: 6.6ppb Eagle Point: 9.0ppb Jacksonville: 9.6ppb Phoenix: ND Talent: ND	ND – 17.9ppb 1.0 – 16.2ppb ND – 27.0ppb 9.6 – 9.6ppb ND ND	YES	By-products of chlorination used in the water treatment process
Chlorine	4.0ppm (MRDL)	4.0ppm (MRDLG)	M.W.C.: 0.51ppm Central Point: 0.35ppm Eagle Point: 0.45ppm Jacksonville: 0.39ppm Phoenix: 0.35ppm Talent: 0.36ppm	0.12 – 0.83ppm 0.03 – 0.65ppm 0.19 – 0.83ppm 0.21 – 0.56ppm 0.30 – 0.40ppm 0.28 – 0.50ppm	YES	Treatment additive for disinfection

Lead and Copper Sampling from Residential Water Taps

SUBSTANCE	ENTITY	ACTION LEVEL	MCLG (ideal goal)	AMOUNT DETECTED (90th percentile value)	DATE OF MOST RECENT TEST	COMPLIES?	TYPICAL SOURCE
Lead	M.W.C.	90% of homes tested must	0ppb	1.6ppb	2007	YES	Corrosion of household plumbing
	Central Point	have lead levels		3.1ppb	2008	No samples exceeded	
	Eagle Point	less than 15 ppb		5.4ppb	2007	action level	
	Jacksonville			3.6ppb	2007		
	Phoenix			1.8ppb	2009		
Copper	Talent			1.7ppb	2007		Corrosion of household plumbing
	M.W.C.	90% of homes tested must	1.3ppm	0.800ppm	2007	YES	
	Central Point	have copper		0.329ppm	2008	No samples exceeded	
	Eagle Point	levels less than		0.687ppm	2007	action level	
	Jacksonville	1.3 ppm		0.698ppm	2007		
Phoenix			0.677ppm	2009			
Talent			0.480ppm	2007			

INFORMATION FROM THE EPA



As water travels over the land and through the ground, it dissolves naturally occurring minerals and may pick up substances resulting from human activity or the presence of animals. These substances are referred to as contaminants and may include microbial organisms, such as viruses and bacteria, inorganic substances such as minerals and salts, pesticides and herbicides, organic chemicals such as petroleum products and radioactive substances.

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. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).



W A T E R C O N N E C T I O N S

Medford Water Commission

Robert Noelle, Water Quality Superintendent: 541-774-2434
Email: wtrcom@ci.medford.or.us
www.medfordwater.org
Board Meetings: 1st and 3rd Wednesday at 12:30 pm
Lausmann Annex, Room 151

City of Central Point

Max Woody, Public Works Supervisor: 541-664-3321 (ext. 241)
Email: max.woody@centralpointoregon.gov
Council Meetings: 2nd and 4th Thursday at 7:00 pm
City Hall, 140 S. 3rd Street

City of Eagle Point

Gary Shipley, Public Works Supervisor: 541-826-4212 (ext. 136)
Email: garyshipley@cityofeaglepoint.org
Council Meetings: 2nd and 4th Tuesday at 7:00 pm
City Hall, 17 S. Buchanan Street

City of Jacksonville

Jeffrey Alvis, Public Works Director: 541-899-1231
Email: pwdirector@cityofjacksonvilleoregon.com
Council Meetings: 1st and 3rd Wednesday at 7:00 pm
Old City Hall, 215 W. Main Street

City of Phoenix

Fred Snoderly, Public Works Superintendent: 541-535-2226
Email: fred@phoenixoregon.gov
www.phoenixoregon.net
Council Meetings: 1st and 3rd Monday at 6:30 pm
Public Works Office, 1000 South 'B' Street

City of Talent

Lester Naught, Superintendent: 541-535-3828
Email: pubworksles@cityoftalent.org
www.cityoftalent.org
Council Meetings: 1st and 3rd Wednesday at 6:30 pm
City Hall, 110 E. Main Street

Jackson County Health Department, Environmental Health:

541-774-8206

Oregon Department of Human Services, Drinking Water Program:

1-971-673-0405
www.oregon.gov/DHS/ph/dwp

EPA Safe Drinking Water Hotline:

1-800-426-4791
www.epa.gov/safewater

Este documento contiene información muy importante sobre la calidad del agua en su comunidad. Tradúzcalo o hable con alguien que lo entienda bien.



Medford Water Commission
200 South Ivy Street - Room 177
Medford, Oregon 97501

Providing High Quality Drinking Water for Our Customers

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