ANNUAL WATER QUALITY REPORT

Portland Water District | Published May 2012

Real people.

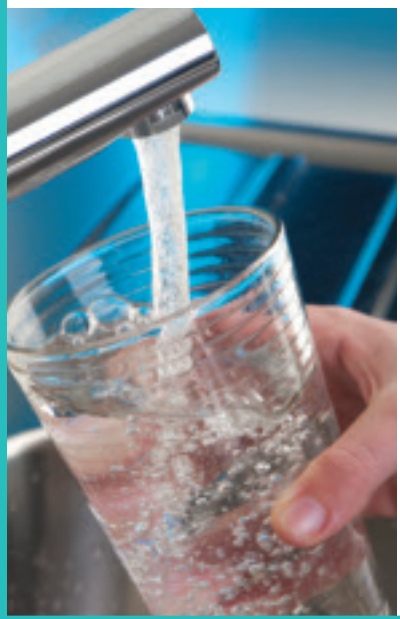
Real good.

Producing and delivering real good water takes good people with real skill and expertise.

It all starts miles north of Portland where our scientists watch over your source of water, Sebago Lake, and the 450 square miles of watershed land that surrounds it. Our water quality experts treat your water around the clock at the nearby treatment facility and closely monitor water quality on its journey to your home.

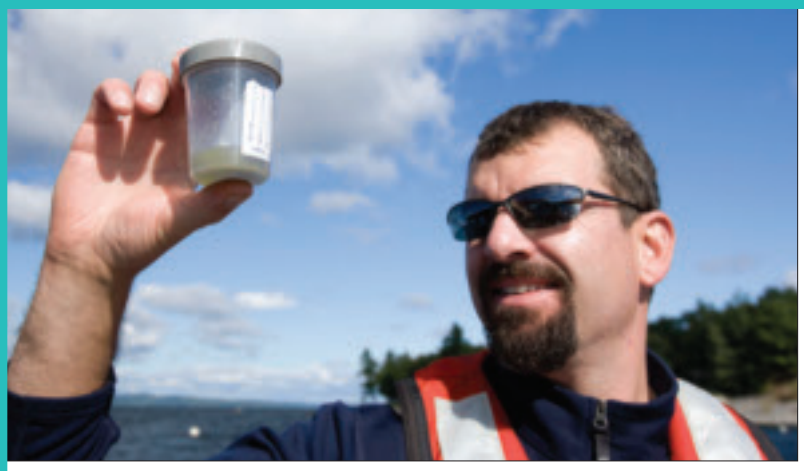
And our operations crews maintain the piping system that safely transports refreshingly clean water to your home in less than 2½ days.

That's not all; behind the scenes engineers, technicians, and support staff all work together to maximize efficiencies, plan system improvements, and deliver friendly customer service.



Rod, our chief security officer, patrols the lake making sure visitors know about the laws that protect against pollution.

TAKE A MOMENT TO READ OUR ANNUAL WATER QUALITY REPORT TO LEARN MORE ABOUT THE WATER FLOWING FROM YOUR TAP AND THE REAL PEOPLE THAT MAKE IT HAPPEN.



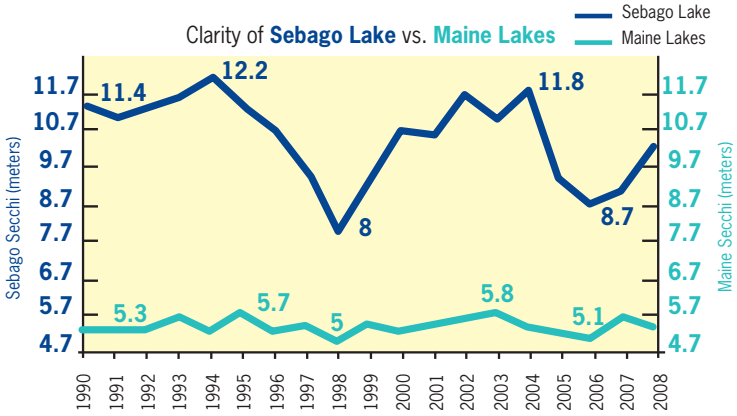
Nate, one of our water resource specialists, examines the lake and nearby streams for evidence of pollution.

Your Source of Drinking Water

Your drinking water comes from Sebago Lake, Maine's deepest and second largest lake. By almost any measure, the quality of water in Sebago Lake is among the highest of any lake in Maine.

For example:

One measure of water quality is transparency – how clear the water is. The average transparency of the typical Maine lake is 5 meters - meaning it is possible to spot an object that is 5 meters below the surface. The average transparency of Sebago Lake is almost 10 meters.



Another measure of lake water quality is fecal coliform bacteria. Federal requirements mandate that 9 out of 10 samples have fewer than 20 colonies. In more than 15 years we have conducted over 3,000 tests and only exceeded the limit twice. Most often we find zero colonies.

The lake is so clean for three main reasons:

1. It is naturally deep and cold and the soil around the lake doesn't easily erode;

2. People have cared for it so well for more than a century and continue to do so; and

3. The land around the lake, known as the watershed, is mostly covered with forest. Forested land naturally cleans the water as it makes its way to the lake.

Keeping the lake clean into the future is the least expensive way to ensure you have clean, safe drinking water for decades to come.

Moderate Risk of Contamination

Though Sebago Lake is very clean today, human activities on and around the lake can pose a risk to water quality. The Maine Drinking Water Program has evaluated all public water supplies as part of their Source Water Assessment Program. Their report on Sebago Lake concludes that the lake is at moderate risk of contamination.

The most significant risks to the long-term protection of Sebago Lake, according to state officials, are boating and ice fishing in Lower Bay and shoreland development. For more information on the Assessment, contact the Drinking Water Program at (207) 287-2070.

Lowering Risk of Contamination

Because the lake is used by so many for different purposes, our efforts to decrease the risk of contamination involve multiple approaches. Our protection program involves: water quality monitoring, security, inspections, direct actions, education, land acquisition and preservation.

Exemplary Source Water Protection

We are honored to receive the American Water Works Association's 2012 Exemplary Source Water Protection Award.

You can find much more information about our activities and the quality of Sebago Lake on our web site, www.pwd.org.

Ensuring Water Quality

Meeting your expectations for high quality water is our first priority. We are confident your water is safe because we regularly monitor and test it. Our water quality experts perform over 15,000 analyses a year. Over 100 inorganic, synthetic organic and volatile organic chemicals, and disinfection by-products are routinely monitored for and not detected.

Primary disinfection: ozonation
Secondary disinfection: chloramines
pH adjustment: sodium hydroxide
Corrosion control: zinc orthophosphate
Dental health additive: fluoride

In 2011, your water met or surpassed every state and federal requirement. Water samples are tested by state-certified testing laboratories. Responsibility for maintaining water quality resides with our staff of certified water quality experts, licensed by the Maine Department of Health and Human Services.

Rebekah and her fellow environmental scientists analyze thousands of water samples to ensure the water you drink is safe.

Water Treatment Upgrades

Design begins on UV treatment and ozone system.

New federal rules require all surface water suppliers to treat for the pathogen, Cryptosporidium. During two years of testing, we found no Cryptosporidium.

Still, we have completed a 7-month study and are designing an ultraviolet light treatment system to meet new drinking water regulations.

Fluoride Proficiency Award

The Maine Drinking Water Program awarded the Portland Water District with the Fluoride Proficiency Award for maintaining optimal levels of the additive.

Water Quality Report

Detected Regulated Substances

Regulated Substance	Violation	Ideal Goal **MCLG**	Highest Level Allowed **MCL**	**Amount Detected in 2011** (unless otherwise noted)	Source
Microbiological					
Total coliform bacteria[1]	No	0% of monthly samples	No more than 5% of monthly samples	(% of monthly samples) Average: 0.10% Range: 0.0% - 0.59%	Naturally present in environment
Radionuclides					
Alpha emitters (pCi/L) 2006	No	0	15	0.117	Erosion of natural deposits
Inorganic Chemicals					
Barium (mg/L)	No	2	2	0.0035	Erosion of natural deposits
Copper (mg/L)[2]	No	1.3	AL = 1.3	0.48	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride (mg/L)	No	4	4	Average: 0.75 Range: 0.64 -1.15	Water additive which promotes strong teeth; erosion of natural deposits
Chloramine (mg/L)	No	MRDL = 4	MRDL = 4	Average: 2.16 Range: 1.81 - 2.41	A water additive used to control microbes
Lead (µg/L)[3]	No	0	AL = 15	4	Corrosion of household plumbing systems
Turbidity (NTU)	No	None	5	Average: 0.26 Range: 0.13 - 0.50	Soil runoff
Nitrate Nitrogen (mg/L)	No	10	10	0.09	Runoff from fertilizer use, leaching from septic tanks, or erosion of natural deposits
Organic Compounds					
Trihalomethanes (µg/L)	No	None	80	Average: 0.73 Range: 0.0 - 1.90	By-product of drinking water chlorination

Footnotes: [1]Microbiological: 2 positive samples out of 1884 tested in 2011.

[2]None of the 50 homes tested in 2011 exceeded the action level for copper.

[3]1 of the 50 homes tested in 2011 exceeded the action level for lead.

Mineral Content and Secondary Standards

Substance	Maine Recommended Limit	PWD Result	Likely Source
Chloride(mg/L)	250	9	Natural mineral, road salt
Color(PCU)	15	< 5	Natural characteristic
Hardness(mg/L)	150	8.78	Natural mineral
Iron(mg/L)	0.3	< 0.05	Natural mineral
Manganese(mg/L)	0.05	0.0026	Natural mineral
Sodium(mg/L)	100	8.5	Natural mineral, road salt
Magnesium(mg/L)	50	0.54	Natural mineral
Calcium(mg/L)	500	2.6	Natural mineral
Zinc(mg/L)	5	0.10	Natural mineral, corrosion control additive

PWD lab achieves near perfect score on annual performance testing.

The PWD lab is certified through the Maine Laboratory Certification Program and required to participate in annual performance testing. Water samples with contaminants of unknown concentration are prepared by an independent third party provider then analyzed by lab staff. Graded reports showed a near perfect score.

Ongoing Research For New Regulations

Unregulated Substance	Violation	Health Advisory, µg/L	Range of Results, µg/L Detected in 2010	Source
*Nitrosamine NDEA N-nitrosodiethylamine(µg/L)	No	No EPA health data	Average: 0.0533 Range: 0.0066 - 0.1	By-product of drinking water chloramination

*Unregulated substances are those that don't yet have a drinking water standard set by the USEPA. The purpose of monitoring for these contaminants is to help EPA decide whether they should have a standard.

Definitions

ND: None Detected.

MCL: Maximum Contaminant Level. The highest level of a contaminant that is allowed in 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.

MRDL: Maximum Residual Disinfectant Level. The highest level of a disinfectant allowed in drinking water.

Variances and Exemptions: State permission not to meet MCL or a treatment technique under certain conditions.

AL = Action Level: The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow. Action Levels for Lead and Copper are measured at the tap of "high risk" homes. Ninety percent of tests must be equal to or below the Action Level.

ppb: one part per billion.

ppm: one part per million.

mg/L: milligrams per liter, or parts per million.

µg/L: micrograms per liter, or parts per billion.

pCi/L: picocuries per liter (a measure of radioactivity)

Turbidity: The measurement of cloudiness or suspended colloidal matter (silt). As you can see from the table, all of the samples taken of our water system were well below 5 ntus.

For a complete listing of water quality data, visit www.pwd.org

About the Regulations

The federal Safe Drinking Water Act directs the state, along with the EPA, to establish and enforce drinking water standards. The standards set limits on certain biological, radioactive, organic and inorganic substances sometimes found in drinking water. Two types of standards have been established. Primary drinking water standards set achievable levels of drinking water quality to protect your health. Secondary drinking water standards provide guidelines regarding the taste, odor, color, and other aesthetic aspects of your drinking water, which do not present a health risk.

Health Advisories

Drinking water, including bottled water, may reasonably be expected to contain impurities or contaminants. However, these contaminants do not necessarily indicate that water poses a health risk and may include microbial, inorganic, or organic substances. Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised people such as individuals with cancer 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 should seek advice about drinking water from their health care providers. Guidelines, jointly developed by the EPA and the CDC, on the appropriate means to lessen the risk of infection by Cryptosporidium, are available from the Safe Drinking Water Hotline or web site.

Greater Portland's water meets strict federal requirements governing lead levels in public drinking water.

Infants and young children are typically more vulnerable to lead exposure than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing system. If you are concerned about elevated lead levels leaching into your water from your home plumbing system, you may wish to have your water tested by a state approved laboratory. Also, you can reduce your exposure by running your cold-water tap for 30 – 60 seconds before using it for drinking or cooking. For more information, visit www.epa.gov/safewater/lead/

Water Safety and Advice

DIY: Before you contact a plumber or the Portland Water District, try these simple steps to solve common complaints.

ODOR: *Are you experiencing an unusual odor coming from your water?*

You may be surprised to know that the smell often originates from the sink drain or garbage disposal and not the water itself. Find out with this easy test. Fill a glass with water and go into another room – or at least away from the sink. If you no longer smell the foul odor, it is likely coming from your drain or garbage disposal. Odors can be eliminated by tossing several orange or lemon peels into the garbage disposal or by treating your drain with baking soda and vinegar.

CLOUDY WATER: *Does your water appear cloudy?*

If so, it may be caused by air. Try this easy test to find out. Fill a glass with water and place it on the counter for a few minutes. If the cloudiness disappears, it was most likely caused by excessive air. Water holds more dissolved oxygen when it's cold. When cold water warms, air is released in the form of the little white bubbles that you see in the glass. The air may be removed from your plumbing by running your bathtub and other taps around the house.

If the problem persists, contact our customer service department at 761-8310 or customerservice@pwd.org.

Craig, a construction forman, reviews system specs before repairing a broken water main.

More Information

The Water Quality Report is produced and distributed to all Portland Water District customers. If you would like more information on the quality of your water or the company that provides it, please contact us.

207.761.8310
(Monday through Friday 8:00 a.m. to 4:30 p.m.)

Portland Water District
225 Douglass Street
PO Box 3553
Portland, Maine 04102

www.pwd.org
Customerservice@pwd.org

Environmental Protection Agency
800.426.4791 | www.epa.gov/safewater/

National Center for Disease Control
404.639.3311 | www.cdc.gov

American Water Works Association
303.794.7711 | www.awwa.org

Maine Drinking Water Program
207.287.2070 | www.maine.gov

Board of Trustees

John Brady
South Portland & Cape Elizabeth

Bradford Cleaves
Portland

Guy Cote
Vice President
Westbrook

Louise Douglas
Windham & Raymond

John Emerson
Gorham

Kenneth Levinsky
Portland

Gary Libby
Portland

William Lunt
Falmouth & Cumberland

Robert McSorley
Scarborough

Public meetings can be viewed on the web at www.pwd.org.

Wayne Ross
President
South Portland & Cape Elizabeth

James Willey
Portland

Win a rain barrel

Faucet Find Contest

You will find a hidden faucet within this annual water quality report, like this one on the left. If you enter our contest and tell us where it is, you could win one of our popular rain barrels. Visit our web site at www.pwd.org to enter. Deadline is June 10. The winner will be announced on our Facebook page the following week. Good luck.

You must live in the Portland Water District's service area to enter. PWD employees are not eligible to participate in the drawing. Only one entry per person. Prizes must be picked up at the District's corporate office in Portland, Maine.

Investments in water mains pay off

Last year, over 2 miles of water mains were replaced, some dating back to the late 1800s. Because of our consistent investments in aging infrastructure, the number of water main breaks is declining.

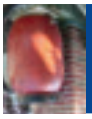
Glissen, a design engineer, reviews plans of a proposed development to ensure water flows are adequate.

Make sure you take along your water on your next trip

The next time you fly out of the Portland Jetport, don't forget to pack your favorite water bottle. Free water bottle filling stations, equipped with sensors that activate flow of tap water for a hands-free, sanitary operation, are now available at the terminal, courtesy of the Portland Water District and the Jetport.

RECYCLED
Paper made from recycled material
FSC® C021556

*Have you been meaning to buy a rain barrel? Now you have a chance to **get one for free**. Turn to page 6 to learn how.*



Can you answer these questions?

Where does your water come from?
How do you know your water is safe?
Is your water treated?
What is in your water?
How do you get rid of cloudy or smelly water?
Where do you go if you have questions?

If you can't answer these questions now, you will be able to after reading this report.

Portland Water District
225 Douglass Street
PO Box 3553
Portland, Maine 04104

PRSRT STD
U.S. POSTAGE
PAID
Permit # 121
Augusta, ME