

Annual Water Quality Report

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Important Information About Your Drinking Water

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The Smart Choice

Whether you are committed to making healthier choices this year, or looking to trim your budget, or both, tap water is the smart choice.

Made On Demand

While bottled beverages may have a lengthy shelf life at your local supermarket, generally it takes less than two days for water to make its way from Sebago Lake to your home.

What Can You Buy For A Penny?

For less than a penny per gallon, you can enjoy quality tap water any time, on any budget. In fact, if you purchase a bottle of water every day, you could save about \$400 a year by making the switch to tap water.



healthy and safe Does The Body Good

Your tap water meets or exceeds all regulations for drinking water. The source, Sebago Lake, is so clean, it is exempt from filtration requirements. But that is not all, we know it is safe because we conduct over 15,000 water quality tests each year.

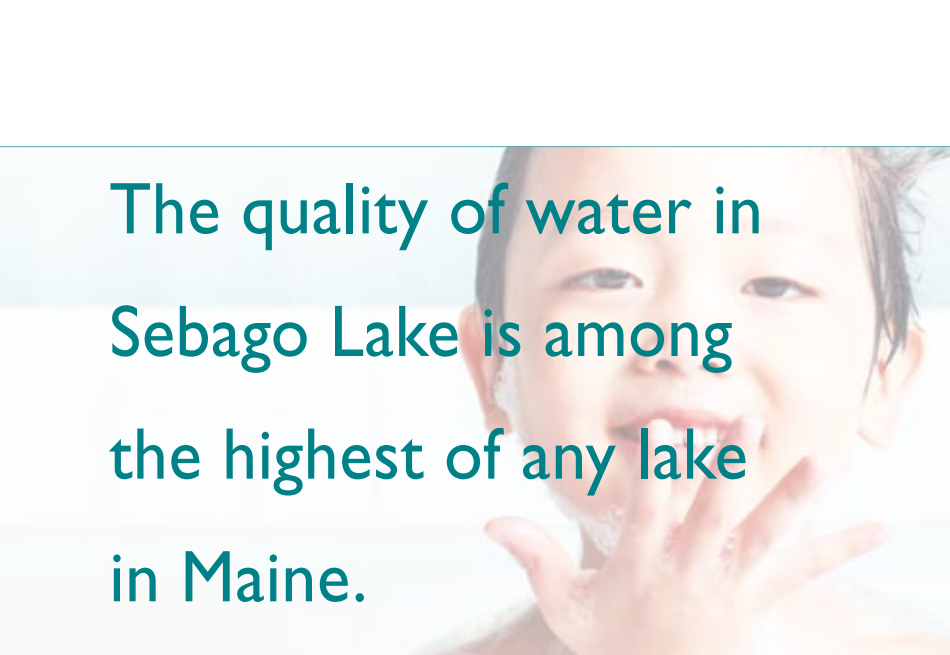
At Your Tap 24/7

A drink of water in the middle of the night, a hot cup of coffee in the morning, or a leisurely bubble bath before bed - tap water is there for you when you need it.



Portland Water District
225 Douglass Street
PO Box 3553
Portland, Maine 04104
www.pwd.org
customerservice@pwd.org

convenient



The quality of water in
Sebago Lake is among
the highest of any lake
in Maine.

Your Source of Drinking Water

Your drinking water is drawn from the Lower Bay of Sebago Lake, Maine's deepest and second largest lake. 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.



The Sebago Lake Watershed is made up of 22 towns.

Risks of Contamination

As water flows either on the surface or through the ground, it dissolves naturally occurring minerals and can also accumulate substances resulting from human and animal activity. The Maine Drinking Water Program (DWP) has evaluated all public water supplies as part of the Source Water Assessment Program. The assessment reviews geology, hydrology, land uses, water testing information, and the extent of land ownership or protection by local ordinance. The report concludes that Sebago 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 DWP at (207) 287-2070.

PWD Lowers Risk of Contamination

In an effort to address these risks, PWD maintains a watershed protection program and works with watershed towns to review and improve proposed development projects. We patrol Lower Bay and surrounding land to ensure that state laws are enforced and are a resource for lake friendly alternatives to recreation and development activities. PWD also purchases land around Lower Bay from willing sellers and supports land trusts to preserve land through conservation easements.

Water Word Find

Find the hidden words - up, down, backwards, frontwards, and diagonally.
The uncircled letters, when written in order from left to right, top to bottom, spell out a phrase.

s	e	b	a	g	o	l	a	k	e	p	s
o	c	r	t	e	c	i	l	a	n	t	t
y	r	a	t	u	b	i	r	t	r	d	n
w	e	a	s	t	e	r	d	e	i	s	e
m	t	t	a	c	r	i	a	c	t	p	m
r	a	o	f	t	o	m	e	p	i	p	t
e	w	i	e	c	t	b	s	p	u	b	a
l	i	c	n	h	e	a	a	l	t	h	e
a	n	n	e	g	o	r	d	y	h	d	r
t	f	r	e	s	h	y	d	r	a	n	t
h	e	y	t	s	a	t	e	n	v	i	r
o	n	m	t	s	r	i	h	t	e	n	t

Submit the correct phrase at www.pwd.org to be entered into a contest to win a rain barrel.

WORDS TO FIND:

sebagai lake
casco bay
tributary
treatment
water
main
hydrant
pipe
safe
fresh
tasty
hydrogen
stream
ice
thirst



For 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.

Portland Water District
225 Douglass Street
PO Box 3553
Portland, Maine 04104
207.761.8310

www.pwd.org | Customerservice@pwd.org
www.twitter.com/MyPortlandWater
www.facebook.com/MyPortlandWater

For Additional Information, Contact:

Maine Drinking Water Program
207.287.2070 | www.state.me.us/dhs/eng/water/index.htm

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



Photo: Denis Morse

Your water meets or surpasses every state and federal requirement.



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 performed over 15,000 analyses last year. Over 100 inorganic, synthetic organic and volatile organic chemicals, and disinfection by-products are routinely monitored for and not detected.

PWD ensures the safety and quality of the water at the tap through disinfection, pH adjustment and corrosion control. Primary disinfection is accomplished by ozonation, a powerful disinfection process, while secondary disinfection is accomplished with chloramines. Chloramines preserve water quality as water flows through the 950 miles of pipe in the distribution system.

Sodium hydroxide is added to raise the pH of Maine's naturally acidic water, and zinc orthophosphate is added to control corrosion of the distribution and home plumbing systems. Also, fluoride is added to the water supply to promote dental health.

In 2009, 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.

Pilot Program To Reduce Chemical Additives Effective. For more information, turn to page 6.



Water Quality Analysis

Mineral Content and Secondary Standards

Substance	Maine Recommended Limit	PWD Result	Likely Source
Chloride(mg/L)	250	9	Natural mineral, road salt
Color(CU)	15	< 5	Natural characteristic
Hardness(mg/L)	150	9.24	Natural mineral
Iron(mg/L)	0.3	< 0.05	Natural mineral
Manganese(mg/L)	0.05	0.0015	Natural mineral
Sodium(mg/L)	100	9.4	Natural mineral, road salt
Magnesium(mg/L)	50	0.56	Natural mineral
Calcium(mg/L)	500	2.8	Natural mineral
Zinc(mg/L)	5	0.12	Natural mineral, corrosion control additive

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.

Detected Regulated Substances

Substance	Ideal Goal MCLG	Highest Level Allowed MCL	Amount Detected in 2009 (unless otherwise noted)	Violation	Source
Inorganic Chemicals					
Barium (mg/l)	2	2	0.0037	No	Erosion of natural deposits
Copper (mg/l) ¹	1.3	AL = 1.3	0.33	No	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride (mg/l)	4	4	Average: 1.19 Range: 0.96 - 1.63	No	Water additive which promotes strong teeth; erosion of natural deposits
Chloramine (mg/l)	MRDL = 4	MRDL = 4	Average: 1.99 Range: 1.84 - 2.20	No	A water additive used to control microbes
Lead (µg/l) ²	0	AL = 15	5	No	Corrosion of household plumbing systems
Turbidity (NTU)	None	5	Average: 0.24 Range: 0.19 - 0.46	No	Soil runoff
Nitrate (mg/l N)	10	10	0.1	No	Runoff from fertilizer use, leaching from septic tanks, or erosion of natural deposits
Nitrite (mg/l N)	10	10	0.01	No	Runoff from fertilizer use, leaching from septic tanks, or erosion of natural deposits
Organic Compounds					
Trihalomethanes (µg/L)	None	80	Average: 0.65 Range: 0.0 - 2.6	No	By-product of drinking water chlorination
Radionuclides					
Alpha emitters (pCi/l)	0	15	0.117	No	Erosion of natural deposits

Footnotes: ¹None of the 51 homes tested in 2008 exceeded the action level for copper.

²None of the 51 homes tested in 2008 exceeded the action level for lead.

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.

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.

Water News Briefs

Mock Chemical Spill Prepares Water Plant For The Worst



The Portland Water District partnered with the Presumpscot Valley HAZMAT team to conduct an exercise of emergency plans, communication protocols, and responses. The exercise was funded by a Homeland Security Grant.

Forest-To-Faucet Study Quantifies Presumpscot Watershed Vulnerabilities

Guided by the principle that clean water depends on a healthy surrounding forest, a study by the USDA Forest Service examined 540 watersheds in the United States and rated the ability to produce clean water, importance as a water supply, percentage of privately owned land, and development pressure. In the Northeast, the study concluded the Presumpscot Watershed is most threatened. Currently, the Presumpscot Watershed supports excellent water quality, but it is at risk due to the developmental pressures on an abundance of privately owned land.



Risks Shrink With Smaller Parking Lot

The last step to reclaim watershed land around the Standish boat launch was accomplished in the spring of 2009. PWD land that had been used as a parking lot was re-vegetated and young plants protected with barriers. Parking at the boat launch has been reduced to about 40 trailers – down from 100.

Pilot Program To Reduce Chemical Additives Effective

In 2009, the amount of pH adjustment and corrosion control chemicals added to the water at the Sebago Lake Water Treatment Facility was reduced. Throughout the year, the dosage changes were carefully monitored to ensure water quality would not be adversely affected. The program was successful at maintaining water quality, reducing the additives in the water by 16 and 50 percent respectively, and avoiding skyrocketing costs.



Two Pharmaceuticals Found In Sebago Lake

The Portland Water District tested for common pharmaceuticals and preliminary tests found trace amounts of three compounds - ibuprofen, triclosan (disinfectant found in hand sanitizer), and perfluoro octanesulfonate- PFOS (stain repellent). Because quantities detected were so minute, a second set of tests were conducted and confirmed the presence of PFOS and ibuprofen. To put the results into perspective, a person would need to drink 32 million, 16-ounce glasses of water to get the equivalent of one ibuprofen tablet. While there are no known health risks associated with low levels of drugs found in our nation's waters, PWD has increased its education efforts aimed at reducing water pollution.

Rule Requires New Treatment

Amendments to the Safe Drinking Water Act - the Long Term 2 Enhanced Surface Water Treatment Rule (LT2) - require all surface water suppliers to treat for the pathogen, *Cryptosporidium*. After completing 24 months of testing with no detection of *Cryptosporidium*, EPA rules require PWD to implement the lowest degree of treatment allowed for unfiltered systems. PWD is researching ultraviolet light treatment, and will conduct a pilot study in 2010 to examine its effectiveness.

Back Up Supply

A well has been developed near Otter Ponds in Standish that could help serve as a back up water supply for Greater Portland. The well can produce 3.5 million gallons of quality water per day, and up to 13 million gallons a day, short term.

Water Main Replacement

American Recovery and Reinvestment funds allowed PWD to double the number of water main projects to replace 4.5 miles of pipe. Of the \$4.5 million received for the projects, \$1.35 million was awarded as a grant, and the other \$3.15 million was an interest-free loan.

Portable Drinking Water

Each year, the Portland Water District provides thousands of water bottles and several water booths for community events. In 2009, the Portland Water District debuted an improved option - a portable drinking water fountain. This water fountain allows PWD to respond to more community requests for



portable drinking water solutions that minimize waste and environmental impacts. The fountain, which can be borrowed for a small refundable deposit, is equipped with 6 bubblers and can easily attach to any spigot.

Lead

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

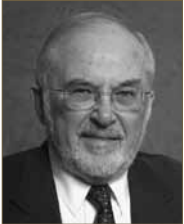
Infants and young children are typically more vulnerable to lead exposure than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing system. If you are concerned about elevated lead 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/.



Board of Trustees

We welcome your interest!

For more information or to view a meeting, visit us online at www.pwd.org/about/trustee_schedule.php.



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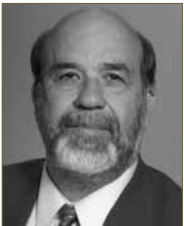
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Water Safety and Advice

Ask the Water Expert

Dear Water Expert:

I see pinkish colored stuff in my sinks, toilet and tub. Is this stuff caused by something in the water from Sebago Lake? What can I do to get rid of it?

- Pink Sink in South Portland

Dear Pink:

What you are describing is 'pink slime' and is not caused by substances in the water. Pink slime is caused by airborne mold or bacteria which grow in moist areas like toilet bowls, pets' water dishes, sink rims, showers, or



other damp areas. These slimes are naturally occurring and generally harmless. The best way to prevent them from developing is by drying and cleaning surfaces regularly. Because many of these microorganisms are resistant to chlorine-based cleaners, I recommend using a Lysol cleaner for best results.

Send your water questions to the Water Expert! Contact 761-8310 or customerservice@pwd.org.