

on a map viewable at City Hall.

**What are the Potential Sources of Contamination to the City of Nehalem's Public Drinking Water Supply?**

The primary intent of this inventory was to identify and locate significant potential sources of contaminants of concern. Managed forest lands exclusively dominate the delineated drinking water protection area. The potential contaminant sources identified in the watershed include large areas of managed forest owned both by the City and by private timber interests. This provides a quick look at the existing potential sources of contamination that could, if improperly managed or released, impact the water quality in the watershed.

**What are the Risks for our System?**

The entire Nehalem drinking water protection area is identified as being sensitive to contamination based on the setbacks from the creek and a large area of high soil erosion potential. The sensitive areas are those where the potential contamination sources, if present, have a greater potential to impact the water supply. The two area-wide potential contaminant sources identified in Nehalem's drinking water protection area extend throughout the protection area and are located in the sensitive areas and pose a high- to moderate-risk to the water supply. The information in this assessment provides a basis for prioritizing areas in and around our community that are most vulnerable to potential impacts and can be used by the Nehalem community to develop a voluntary Drinking Water Protection Plan.

**Need More Information?**

The City of Nehalem's Source Water Assessment Report provides additional details on the methodology and results of this assessment. The full report is available for review at Nehalem City Hall, 35900 8th Street in Nehalem. Contact the City at (503) 368-5627 if you would like additional information on the City's Source Water Assessment Results.

**Conclusion**

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply, we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected in rate structure adjustments.

It is our continuing Commitment to serve you in the most professional, accountable, efficient and effective manner possible to continue to provide the safest, cleanest water available for all of our customers. We ask all to continue to be "water wise" and conserve where possible. Only together can we ensure the safest, cleanest drinking water for our families and our community.

Thank you,

Michael A. Nitzsche,  
City Manager



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**12<sup>TH</sup> ANNUAL  
DRINKING  
WATER QUALITY  
REPORT**

***& SOURCE WATER  
ASSESSMENT SUMMARY***



***JANUARY - DECEMBER,  
2009***

**Tel: (503) 368-5627**

**Introduction**

We're pleased to present to you the 12th Annual Drinking Water Quality Report for the year 2009. This report, which is required by State and Federal Law, is designed to inform you about the quality of our water and the services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water source is Bob's Creek, which is a surface water source north of the City of Nehalem. The City has a Master Water Plan and Ordinances related to the City's water system on file at City Hall that provides more information on the City's overall system and source water. The City's address is 35900 8th Street in Nehalem. The City tests our water for over 84 different types of regulated contaminants which include Microbiological (Coliform, E. Coli, Turbidity, etc.), Radioactive (Alpha emitters, Combined Radium, Uranium, etc.), Inorganic (Arsenic, Cyanide, Fluoride, Lead, Mercury, Nitrate, etc.) Synthetic Organic (2,4-D, PCBs, etc.), Volatile Organic (Benzene, Chlorobenzene, etc.), and Disinfection By-product (Trihalomethanes, Haloacetic Acids) contaminants. In addition, the City also tests for 13 unregulated Synthetic Organic contaminants (Butachlor, Methomyl, etc.) and 33 unregulated Volatile Organic contaminants (Chloroform, Napthalene, etc.). Turbidity is measured daily while Bacteriological testing is done bi-monthly.

**Findings**

We are required to monitor your drinking water for these contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets minimum, mandatory health standards. I'm pleased to report that our drinking water is safe and exceeds federal and state requirements.

If you have any questions about this report or concerning your water utility, or would like to be informed of the results of the latest tests, please contact the City at (503) 368-5627, by mail at PO Box 143, Nehalem, OR 97131, or by email at [nehalemch@nehalem.tel.net](mailto:nehalemch@nehalem.tel.net). We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled Council Meetings, held on the second Monday of each month at 7:30 p.m. at City Hall; or you can just drop by City Hall or call during normal business hours to learn more.

**Overview**

The City of Nehalem routinely monitors for constituents in your drinking water according to Federal and State laws. The table listed herein shows the results of our monitoring for the period of January 1st to December 31st, 2009. As water travels over the land or underground, it can pick up substances or

contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. All drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk. In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

### Definitions

**Action Level** - The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

**Maximum Contaminant Level** - The "Maximum Allowed (MCL) is 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** - The "Goal" (MCLG) is the level of a contaminant in drinking water below that there is no known or expected risk to health. MCLGs allow for a margin of safety.

**Maximum Residual Disinfectant Level (MRDL)** - The highest level of a disinfectant allowed in drinking water.

**Maximum Residual Disinfectant Level Goal (MRDLG)** - The level of drinking water disinfectant below which there is no known or expected risk to health.

**Nephelometric Turbidity Unity (NTU)** - A Measure of the clarity of water. Turbidity in excess of 5 NTUs is just noticeable to the average person.

**Non-Detects (ND)** - Laboratory analysis indicates that the constituent is not present.

**Parts per billion (ppb) or Micrograms per liter** - Corresponds to one minute in 2,000 years, or a single penny in \$10 million.

**Parts per million (ppm) or Milligrams per liter (mg/l)** - Corresponds to one minute in two years or a single penny in \$10,000.

**Parts per quadrillion (ppq) or Picograms per liter (picograms/l)** - Corresponds to one minute in 2 billion years or one penny in \$10 trillion.

**Parts per trillion (ppt) or Nanograms per liter (nanograms/l)** - Corresponds to one minute in 2 million years or a single penny in \$10 billion.

**Picocuries per liter (pCi/L)** - A measure of the radioactivity in water.

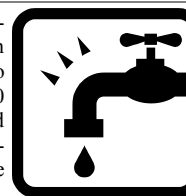
**Treatment Technique (TT)** - A

treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

### What Does This Mean?

While we had a few detects, as listed on the corresponding table, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. While some constituents have been detected, EPA has determined that your water IS SAFE at these levels. MCL's are set at very stringent levels. To understand the possible health effects for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having an adverse health effect. Yet with the continued successful operation of the Filtration Plant, we can ensure that the water we serve always exceeds the Safe Drinking Water Act's MCLs and provide the best quality of water that we possibly can to our customers. Please note: Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses and parasites which can cause symptoms

such as nausea, cramps, diarrhea and associated headaches. However, as shown in the table, our system shows detects (but no violations) of 4 out of a more than 100 tested microbiological constituents and other contaminants. Those that were detected were well below their respective MCLs.



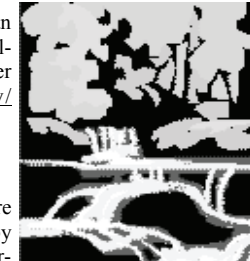
If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City is responsible for providing high quality drinking water, 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 two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water,

### Test Results

Contaminant	Violation?	Level Detected	Unit Measurement	MCLG/MRDLG	MCL/MRDL	Likely Source of Contamination		
<b>Inorganic Contaminants (Test taken 2004. Next scheduled test in Fall of 2013)</b>								
Sodium	No	10.7	ppm	20	20	Natural deposits in soil		
<b>Inorganic Contaminants (Test taken 2009. Next scheduled test for Summer 2010)</b>								
Nitrate	No	0.6	ppm	10	10	Runoff from fertilizer; sewage; erosion of natural deposits		
<b>Disinfection Byproducts (Tested Quarterly - 2009)</b>								
Tri-halomethanes	No	0.0643	mg/L		0.0800	Byproducts from Water Filtration		
Haloacetic Acids	No	0.0468	mg/L		0.0600	Byproducts from Water Filtration		
<b>Microbiological Contaminants (Tested Daily - 2009)</b>								
		MCL	MCLG	Level Found	Range	Sample Date	Violation?	Typical Source
Turbidity		TT=5 NTU	0	0.21 NTU	n/a	Highest level detected in January	No	Soil Runoff
		TT=percentage of samples <0.5 NTU		100%	n/a			
<b>Lead &amp; Copper Testing (Test taken September 19th, 2007 - Next Scheduled Test in Fall 2010)</b>								
Substance	Units	Goal	Action Level (AL)	90th Percentile	Homes Exceeding AL	Complies?	Source of Contaminate	
Copper	ppm	1.3	1.3	0.30	0	Yes	Household Plumbing Corrosion	
Lead	ppm	0	.015	0.002	0	Yes	Household Plumbing Corrosion	

The 90th percentile is the highest result found in 90% of the samples when they are listed in order from the lowest to the highest results. EPA requires testing for lead and copper at customers' taps most likely to contain these substances based on when the house was built. The EPA determined that if the sample results exceeded the Action Level (AL), the City must take action in reducing the risk of leaching of lead and/or copper. As you can see by the table above, your water was well below the Action Level on our last round of testing in 2007. The next scheduled test will be in 2010.

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](http://www.epa.gov/safewater/lead).



### Final Notes

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. These substances can include microbes, inorganic or organic chemicals and radioactive substances. All 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 the water poses a health risk.

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. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791. EPA and CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are also available from the Safe Drinking Water Hotline listed above.

### Source Water Assessment Summary

#### What is a Source Water Assessment?

The Source Water Assessment was completed on May 10th, 2001, by the Oregon Department of Environmental Quality (DEQ) and the Oregon Health Division (OHD) to identify the surface areas (and/or subsurface areas) that supply water to City of Nehalem's public water system intake and to inventory the potential contaminant sources that may impact the water supply.

#### Why was it completed?

The Source Water Assessment was completed to provide information so that City of Nehalem's public water system staff/operator, consumers, and community citizens can begin developing strategies to protect the source of their drinking water, and to minimize future public expenditures for drinking water treatment. The assessment was prepared under the requirements and guidelines of the Federal Safe Drinking Water Act (SDWA).

#### What Areas are Included in City of Nehalem's Drinking Water Protection Area?

The drinking water for the City of Nehalem is supplied by an intake on Bob's Creek. We serve approximately 1,600 total customers on our water system. The intake is located in the Cook Creek/Lower Nehalem River Watershed in the Nehalem Sub-Basin of the Northern Oregon Coastal Basin. The geographic area providing water to Nehalem's intake (the drinking water protection area) extends upstream just over one mile (1.15 miles) and encompass a total area of approximately 0.66 square miles. The boundaries of the Drinking Water Protection Area are illustrated

