

City of Lacey, Washington

Water Quality Report



*Shaping
our community
together*

CITY
OF **LACEY**

Mayor's message:

The City of Lacey works every day of the year to ensure its customers receive the highest quality drinking water possible. To maintain this standard, the Lacey Water Utility conducts a comprehensive analysis of our community's water supply each year and reports a summary of the test results in Lacey's Annual Water Quality Report. For 2009, Lacey's drinking water met or exceeded all regulations and mandates established by the Environmental Protection Agency.

Please take the opportunity to read and learn about the quality of our community's drinking water, the importance of conserving water, and some tips for how you can help keep our water supply free from contaminants. Information contained in this report will also allow Lacey water customers, specifically those with special health considerations, to make informed decisions regarding the water we use every day.

If you have questions regarding the community's drinking water or with information contained in this report, please contact your Lacey Water Utility at (360) 491-5600.

Sincerely,

Tom Nelson

Mayor Tom Nelson



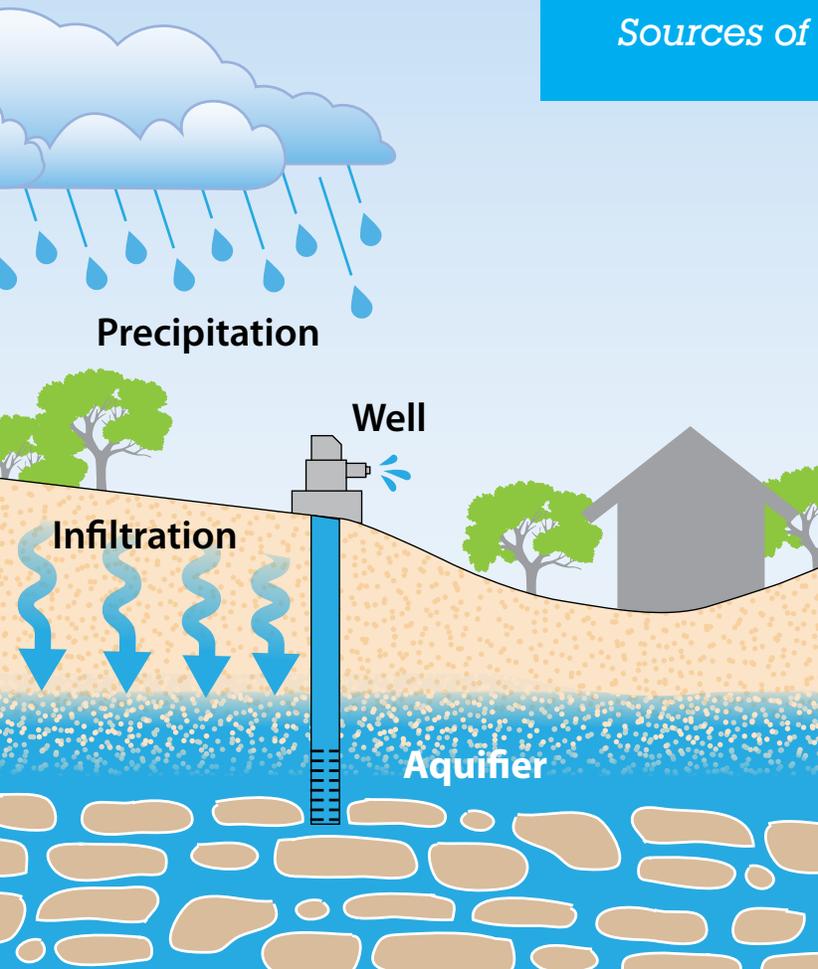
For More Information

- About Lacey's distribution system or to report problems, call the Lacey Maintenance Service Center at 360-491-5644.
- About your utility bill, call Lacey Utility Billing at 360-491-5616.
- Attend a Utilities Committee meeting or City Council meeting and discuss important community issues. Meeting dates, location and agendas are available at www.ci.lacey.wa.us or call 360-491-3214

Is Your Sprinkler System up to Code?

If you have an in-ground sprinkler system or private irrigation well, Washington State law requires you to install, maintain and schedule yearly inspections of the backflow prevention assembly. Backflow occurs when water flows in the opposite direction than intended, resulting in potential contamination of the drinking water supply. Under the law, annual inspection and testing of the backflow assembly must be performed by a licensed tester. Properly installed and maintained backflow prevention assemblies will stop the backflow of contaminated water into the drinking water supply. If you have questions about backflow or the City of Lacey's Cross Connection Control Program, please call Lacey Water Resources at 360-491-5600.

Sources of Lacey's Drinking Water



The majority of Lacey's water supply comes from 19 wells that withdraw groundwater from three aquifers. Additional water is purchased from the Olympia water system. The water purchased from Olympia comes from McAllister Springs. The water quality data collected in 2009 from all of Lacey's drinking water sources, including Olympia's McAllister Springs source, can be found within this report.

An aquifer is an underground layer of rock or sand that is filled with water. Aquifers must be refilled or "recharged" with non-polluted water to remain healthy and available for use. Since most of Lacey's drinking water is withdrawn from aquifers, it is important to keep recharge areas as free from pollutants as possible. Lacey relies on its residents to keep our drinking water sources clean by fixing oil leaks in their cars, minimizing the use of chemicals on their yards, keeping their septic systems pumped and inspected, and their pet waste bagged and placed in the garbage.

FREE indoor and outdoor water saving kits*

Indoor kits include: water efficient showerhead, faucet aerators, and toilet leak detection tablets

Outdoor kits include: heavy duty adjustable hose nozzle, hose repair kit, and a "1-inch-a-week" watering gauge



FREE Soil Moisture Sensors*

Over watering your lawn not only wastes water, it can also cause disease. A soil moisture sensor is a device that will show you when the soil is dry to prevent over watering your lawn.



FREE Hose Timers*

Have you ever turned on your sprinkler and forgot about it? A hose timer is an automatic shut off device for those who water their lawns with a hose and sprinkler. These hose timers are simple to use and connect to any standard hose and outdoor hose bib.



FREE Rain Sensors*

If you have an in-ground irrigation system and are tired of seeing your sprinklers come on in the rain, these small devices easily connect to your existing programmable irrigation controller and automatically overrides your system to save you water and money!

FREE High Efficiency Toilet!



Replace your old, water-guzzling toilet (most toilets installed BEFORE 1993 qualify) with a high efficiency toilet for FREE.

Supplies are limited. Wastewater customers: visit www.lottonline.org and click on "offers and rebates" for app or call 360-664-2333 x1107. Water customers on septic visit www.ci.lacey.wa.us and click on "Lacey Water Resources" for app or call 360-491-5600

*Available ONLY to Lacey Water or Wastewater Customers. Visit Lacey City Hall, 420 College St SE: Monday – Friday 8am-5pm to start saving water today.



Which days will you be watering your yard this summer?

Mandatory Outdoor Watering Schedule begins June 1, 2010 for all Lacey Water Customers.

If you have a newly seeded lawn or landscaped area, you can request a temporary exemption from the City. Potted plants and plants inside greenhouses are also exempt from this policy. For more information on the outdoor watering policy, or to request a variance or exemption, call Lacey Water Resources at 360 491-5600 or visit www.ci.lacey.wa.us and click on "Lacey Water Resources".

Did you know that Lacey water customers use **THREE TIMES** as much water in the summer than in the winter? In order to meet the high demand during these peak months, the Lacey Water Utility enforces a mandatory outdoor watering schedule between June and September. The watering schedule for your outdoor watering needs will depend on your address:

0 2 4 6 8

Addresses ending in **EVEN** numbers water: **Sundays, Tuesdays, and Thursdays**

1 3 5 7 9

Addresses ending in **ODD** numbers water: **Saturdays, Mondays, and Wednesdays**

FRIDAY is a non-watering day for ALL Lacey water customers!

Where Does Lacey's Water Go?

90%	City customers with water meters	2.3 billion gallons
0.7%	Non-metered authorized uses*	18.9 million gallons
9.3%	Distribution System Leakage**	240 million gallons

Last year, the City reduced the distribution system leakage by 4.7% from 2008 through a continued effort which includes a state-of-the-art leak detection program, city-wide automated meter reading technology, efficient theft elimination processes and dedication to improving the accuracy of its source meters.

** Authorized uses include: street sweeping, water line flushing, treatment facility maintenance, and other activities related to new construction.*

*** Distribution system leakage (DSL) refers to all water that could not be accounted for, and is attributed to water main breaks, theft of water and other unknown water losses. The state requires that utilities of Lacey's size maintain a DSL of less than 10%.*

Three EASY steps to a healthy yard:

Our yards often become an extension of our home, a shady retreat after a warm sunny day, a place to relax with our families, or a place to throw a ball for our dog. Our desires to have the "perfect" yard can sometimes lead us down an un-healthy path of harsh chemicals and water-guzzling landscapes. As the ground begins to warm back up this year and our landscapes begin to green, we want to share some really easy tips for maintaining the perfect yard, without wasting water or using a ton of chemicals that can harm our families and poison our streams and water supplies.



1 Water deep... and less often

Watering your lawn everyday not only puts your lawn at risk for disease, but it also wastes water—costing YOU money! Most lawns here in Lacey only need about an inch of water a week (including rain) to stay green. So how much water is an inch? To find out, place a few tuna cans around your yard, once they are filled, you have

your one inch for the week. It's that simple!

Watering deeply (only once or twice a week), instead of every day, encourages your lawn's roots to grow deeper, creating a large, sturdy root system—which helps crowd out the weeds. On the flip side, when your lawn receives only a small amount of water every day, the roots never have to grow deep. This will cause the roots to become weak and more susceptible to the effects of drought and also more welcoming to weeds.

2 Mow high and let it lie!

It is very important to: (1) adjust your lawn mower to mow your grass high (2 inches), (2) mow often, and (3) remove and sharpen the blade a few times this summer for a nice clean cut. Mowing high also encourages your lawn's roots to grow stronger making for lush, green lawns that help to shade out weeds.

"Grass-cycling" is the FREE way to provide nutrients to your lawn. Simply leave the grass clippings on your lawn when you mow. The grass clippings serve as nutrients as well as a means for storing water and keeping your soil nice and cool.

Fertilizers? Use natural or slow-release!

3 Fertilizers can provide your lawn with the nutrients it needs to be healthy. If you plan to fertilize your lawn, make sure to purchase a fertilizer that says "slow-release" or "natural" on the bag. Slow release and natural fertilizers allow the nutrients to feed your lawn over long periods of time, just as nature intended. The "quick-greening" formula fertilizers force feed your lawn all at once, but do not address the problems that are causing poor lawn health.

Contaminant	Highest Level Allowed (MCL)*	Goal Not to Exceed (MCLG)*	Highest Level Detected	Lowest Level Detected	Date of Highest Level Detected	Typical Source of Contaminant
Nitrate ¹ (ppm)*	10	10	7	<1	5/26/2009	septic systems, fertilizer, animal wastes
Total Coliform Bacteria	5% samples/ month	0% samples/ month	0% of samples	0% of samples	--	naturally present in environment
Total Trihalomethanes (ppb)**	80	NA	20	<0.5	10/7/2009	reaction of chlorine with naturally-occurring organic matter
Total Haloacetic acids (ppb)***	60	NA	9	<0.5	4/20/2009	reaction of chlorine with naturally-occurring organic matter
Chlorine Residual (ppm)*	4	4	1.04	0.2	12/17/2009	Added as a disinfectant to the water system

SECONDARY STANDARDS REGULATED BY EPA FOR AESTHETICS

Chloride (ppm)*	250		23	3	8/17/2009	geology, natural weathering
Fluoride (ppm)*	4	4	0.3	<0.2	8/17/2009	geology, natural weathering
Iron (ppb)*	300	NA	20	<10	9/9/2009	geology, natural weathering
Lead (ppb)*	N/A	15	9	< 2	10/23/2007	plumbing material
Manganese (ppb)*	50	NA	80	<2	8/17/2009	geology, natural weathering
Sulfate (ppm)*	250		12	3	8/17/2009	geology, natural weathering
Conductivity (µmhos/cm)*	700	NA	249 µmhos/cm	84 µmhos/cm	8/17/2009	geology, natural weathering

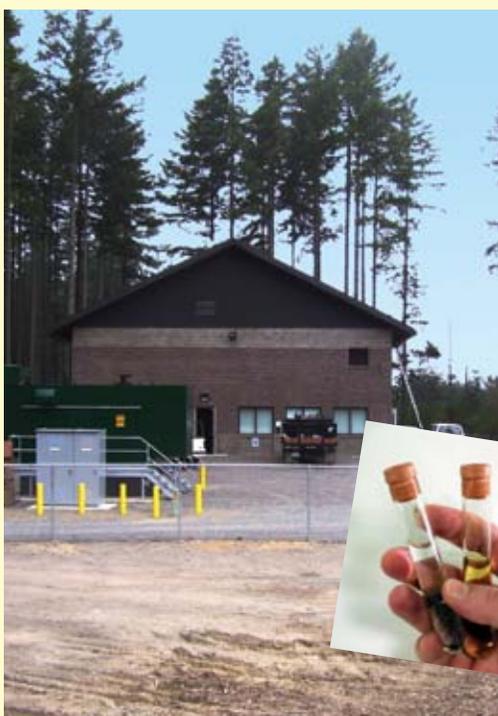
REGULATED BY THE STATE AT THE CONSUMER'S TAP

Contaminant	State Action Level	Goal Not to Exceed (MCLG)*	90% percentile	# samples over state action level	Sample Date of Highest Level	Typical Source of Contaminant
Copper † (ppb)*	1300	N/A	960	1 sample	9/10/2008	Corrosion of household plumbing or erosion of natural deposits
Lead † (ppb)*	15	NA	10	0 samples	9/10/2008	Corrosion of household plumbing or erosion of natural deposits

¹ Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

Highest running average in 2009 was 4.4 ppb. * Highest running average in 2009 was 2.4 ppb. †Copper and lead are measured every 3 years. Next routine sampling will be in 2011.

Lacey does not add fluoride



*Important Drinking Water Definitions

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.

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.

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

AL Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MRDLG Maximum residual disinfection 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.

MRDL 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.

MNR MNR: Monitored Not Regulated

MPL MPL: State Assigned Maximum Permissible Level

pCi/L Picocuries per liter (a measure of radioactivity)

* ppm (Parts per Million), ppb (Parts per Billion), mg/L (Milligrams per Liter), NA (Not Applicable), ND (Not Detected), NR (Monitoring not required)

2009 WATER QUALITY RESULTS FOR THE CITY OF OLYMPIA WATER SOURCE, MCALLISTER SPRINGS

Contaminant (units)	MCL*	MCLG*	McAllister Springs Water Amount Detected	Range of Results (Low - High)	Testing Frequency	Typical Source of Contamination
Cryptosporidium	N/A		Zero	N/A	Once a month	Fecally contaminated water
Giardia Lamblia	99.9% removal		Zero	N/A	Once a month	Fecally contaminated water
Fecal Coliform Bacteria (# of bacteria per 100 milliliter of water)	90% of samples had fewer than 20 bacteria per 100 milliliters of water	Zero	100% of samples had fewer than 20 bacteria per 100 milliliters of water	0-4 organisms	5 times a week	Fecally contaminated water
Total Coliform Bacteria (# of bacteria per 100 milliliter of water)	90% of samples must have fewer than 100 bacteria per 100 milliliters of water	Zero	99.6% of samples had fewer than 100 bacteria per 100 milliliters of water	0-276 organisms	5 times a week	Soil bacteria and fecally contaminated water
Turbidity (NTU)*	5	1	0.014-2.63	0.014-2.63	Metered continuously	Soil runoff

WATER SUPPLY SYSTEM (OR TAP WATER) AFTER CHLORINATION

Contaminant (units)	MCL*	MCLG*	City of Olympia Water Amount Detected	Range of Results (Low - High)	Testing Frequency	Typical Source of Contamination
Total Coliform Bacteria	95% of samples must have zero detections	Zero	No samples had confirmed detections	Zero	60 times per month at a minimum	Soil bacteria and fecally contaminated water
Chlorine residual (ppm)*	4.0	Detectable amount of 0.05	0.08-1.92	0.08-1.92	Metered continuously	Chlorine is used as a disinfectant in the water treatment process

DISINFECTION BY-PRODUCTS

Haloacetic Acids (HAA) (ppb)*	60	Zero	7.2	<1.0 - 7.2	Quarterly	Disinfection by-products are caused by a chemical reaction between chlorine and naturally occurring organic matter in water
Total Trihalomethanes (THM) (ppb)*	80	Zero	8.0	<0.5 - 8.0		

INORGANIC COMPOUNDS

Radium 228 (pCi/L)*	5	Zero	1.21	0-1.21	Once every 3 years	Naturally occurs in some drinking water sources. May occur due to contamination from facilities using or producing radioactive materials.
Gross Beta (pCi/L)*	50	Zero	1.57	0-1.57		

LEAD & COPPER (TAKEN AT CUSTOMER TAP) RESULTS FROM 2009

Contaminant (unit)	MCL*	City of Olympia Water Amount Detected	Number of sites found above the AL	Range of Results (Low - High)	Testing Frequency	Typical Source of Contamination
Copper (ppm)*	Action Level 1.3	90% of the homes tested had copper levels less than 0.907 ppm	Zero sites above AL out of 35 sites sampled	0.027-1.005	Once every 3 years	Corrosion of household plumbing
Lead (ppb)*	Action Level 15	90% of the homes tested had lead levels less than 6 ppb	Zero sites above AL out of 35 sites sampled	0 - 25	Once every 3 years	Corrosion of household plumbing

Action Level for Copper: 90% of the homes tested must have levels less than 1.3 ppm detected. **Action Level for Lead:** 90% of the homes tested must have levels less than 15 ppb detected.

Health information about your water. What you should know.

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 (1-800-426-4791).

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 (1-800-426- 4791).

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 Lacey 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 Hotline or at <http://www.epa.gov/safewater/lead>.

More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791), or by visiting the EPA's Safe Drinking Water Hotline Page online at: www.epa.gov/safewater/hotline.