

City of Lacey, Washington

Water Quality Report



Mayor's message:

Each year, the Lacey Water Utility conducts a comprehensive analysis of the community's water supply and reports a summary of the test results in Lacey's annual Water Quality Report. You will be pleased to know that Lacey's drinking water met or exceeded all regulations and mandates established by the Environmental Protection Agency for 2010.

It is important to me that Lacey water customers not only receive the highest quality drinking water, but that they also become a part of the community-wide effort to conserve and protect our water resources. With everyone's involvement, we can ensure that Lacey's drinking water will be maintained at the highest level for the present and foreseeable future.

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 drinking water supplies free from pollution. Information contained in this report allows Lacey's water customers, specifically those with special health considerations, to make informed decisions about the water they use every day.

If you have any questions regarding the community's drinking water, or the 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.
- About drinking water safety, call the EPA Safe Drinking Water Hotline at 1-800-426-4791 or visit the EPA Homepage at www.epa.gov/OW.

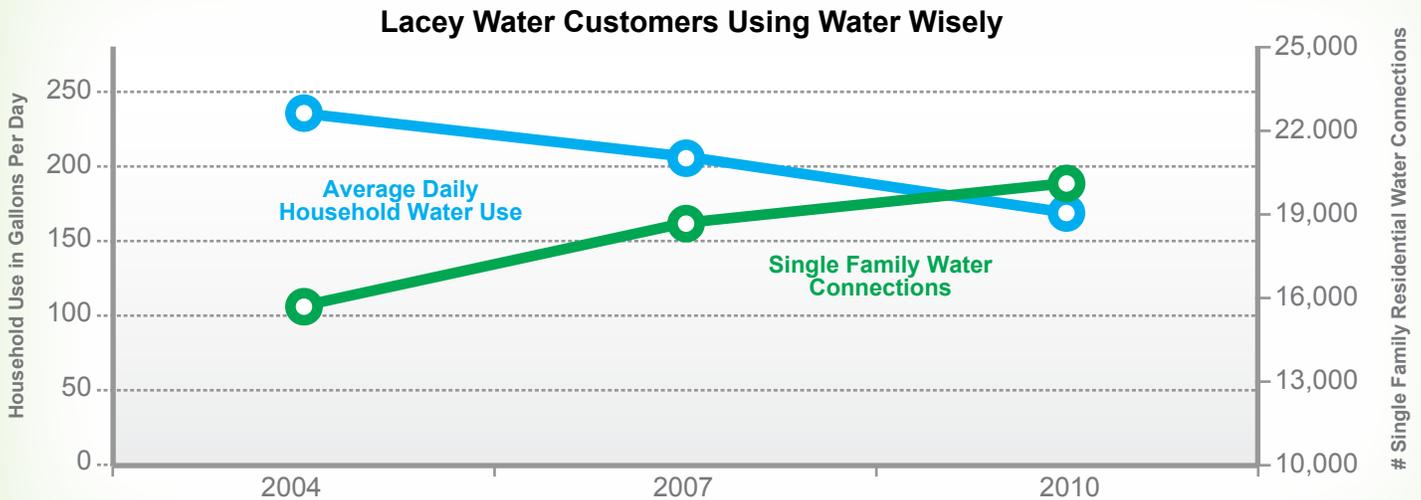
To Get Involved

- Join us for a Utilities Committee meeting on the first Tuesday of each month at 11:00 a.m. at Lacey City Hall, 420 College Street S.E. in Lacey. The committee discusses a variety of issues regarding our stormwater, drinking water, and wastewater utilities.
- Public attendance at City Council meetings is also welcome. The Council generally meets the second & fourth Thursday of the month January through October and the first and third Thursdays for November and December. Meetings begin at 7:00 p.m. at Lacey City Hall.
- Call 360-491-3214 to check the agenda of upcoming meetings or check our web site at www.ci.lacey.wa.us/video. Meetings are now video recorded and available online (*live and archived*).



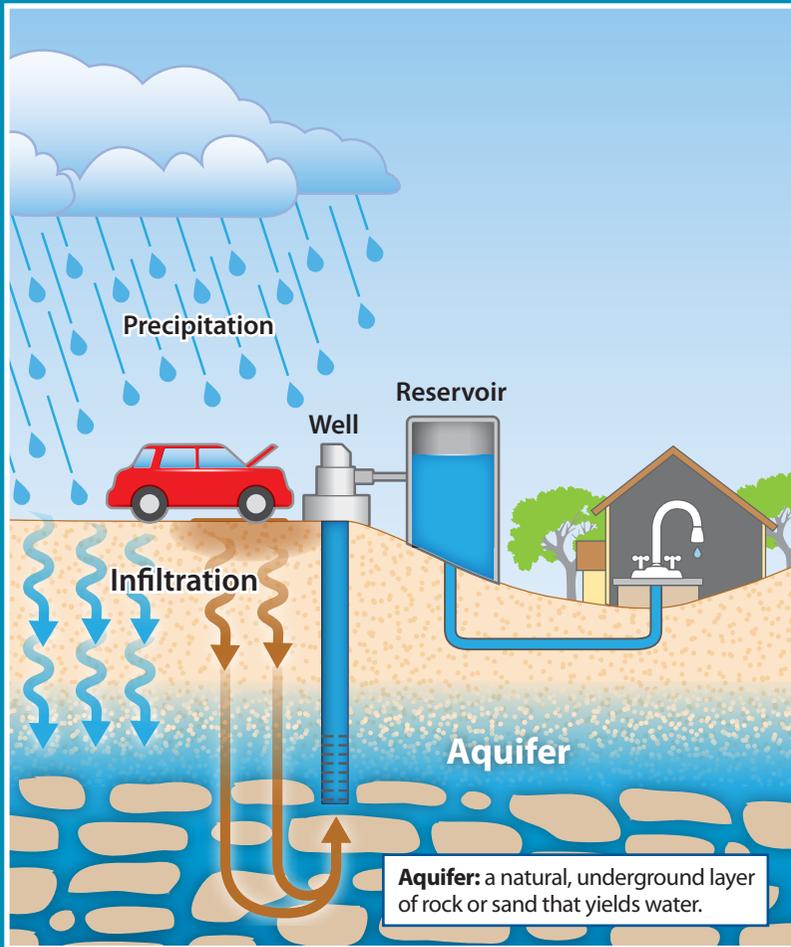
Lacey Water Customers Using Water Wisely

The City of Lacey's Water Use Efficiency Program has seen amazing results over the past 10 years. The City's current Water Use Efficiency Goal is to reduce residential water use by 1% per year through 2014. Our efforts toward that goal over the past three years have put us on the path to surpass that goal.



Lacey water customers are achieving these amazing water savings by using water wisely and taking advantage of all the great water saving programs available to them. To learn more about Lacey's Water Use Efficiency Program and how you can save water in your home, visit www.ci.lacey.wa.us/water-conservation.

Take Action Now to Prevent Water Pollution!



Most of the water that you use in your home comes from 19 different wells that withdraw groundwater from three underground aquifers. Additional water is purchased from the City of Olympia's water system to help meet high demands. The water purchased from Olympia comes from McAllister Springs.

An aquifer is a natural, underground layer of rock or sand that yields water. Groundwater is found in the spaces between the rock and sand.

Groundwater is highly susceptible to pollution from our actions at home and in our neighborhoods. Since all of Lacey's drinking water comes from groundwater, the City relies on its residents to fix oil leaks in their cars, minimize use of chemicals on their yards, keep their septic systems inspected and pumped, and safely dispose of household and yard care chemicals instead of storing them at home.

(See below for more information about disposing of household chemicals)*

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.



In Your Yard: Only use fertilizers that say "slow release" or "natural" on the bag. Dispose of unused yard chemicals at HazoHouse*.



With your Car: Fix oil leaks in your car promptly and in the meantime use cardboard under your car when parked. Periodically dispose of the used cardboard at HazoHouse*.



In your home: Choose natural cleaning products. Also avoid using products that say "Poison" or "Danger". Dispose of unused oil-based paint, motor oil, glue, solvents and cleaning supplies at HazoHouse*.



If you have a septic system, inspect it annually and have it pumped every 3-5 years as necessary. For more information, visit www.co.thurston.wa.us/health/ehoss



***HazoHouse is FREE** for residential residents and open Friday through Tuesday, 8 a.m. - 5 p.m. HazoHouse is located at the Hawks Prairie Waste and Recovery Center, 2418 Hogum Bay Rd NE in Lacey.

To learn more about what types of materials can be disposed of at HazoHouse, visit www.co.thurston.wa.us/solidwaste/hazardous/haz-hazohouse.htm

Taking these small actions will help keep our drinking water supplies cleaner and will also help protect Woodland Creek and Puget Sound from stormwater pollution. To learn more about protecting Woodland Creek and Puget Sound visit www.pugetsoundstartshere.org.

**Puget Sound
Starts Here**

Mandatory Outdoor Watering Schedule for ALL LACEY WATER CUSTOMERS

Addresses ending in EVEN numbers

0 2 4 6 8

water: **Sundays, Tuesdays,
and Thursdays**

Addresses ending in ODD numbers

1 3 5 7 9

water: **Saturdays, Mondays,
and Wednesdays**

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

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/odd-even

Where Does Lacey's Water Go?

93.7%	City customers with water meters	2,061 million gallons
0.9%	Authorized City uses*	20 million gallons
5.4%	Distribution System Leakage**	118 million gallons

Since 2008, the City of Lacey has reduced the Distribution System Leakage** by 8.6% through a continued effort which includes a state-of-the-art leak detection program, city-wide automated meter reading technology, efficient theft elimination processes, dedication to improving the accuracy of its source meters, and a proactive water line replacement program.

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

**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%.

Make Sure to Get Your FREE Conservation Materials!

FREE indoor and outdoor water saving kits*

Indoor kits include: high efficiency shower head, faucet aerators and toilet leak detection tablets. *Limit 3 per household.*

Outdoor kits include: heavy duty adjustable hose nozzle, hose repair kit and a "1-inch-a-week" watering gauge. *Limit 2 per Household.*



FREE Soil Moisture Sensors*

Overwatering 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 ready to be watered to prevent overwatering and wasting money. *Limit 1 per household.*



FREE Smart Watering DVD*

Are you ready to become sprinkler savvy? Beautiful Landscapes Though Smart Watering will walk you through several easy tips for maintaining the beautiful yard you desire, while also keeping your water bill to a minimum. *Limit 1 per household.*



FREE Hose Timers*

Have you ever turned on your sprinkler and forgot about it? For those who water their lawns with a hose and sprinkler, these hose timers will shut off automatically to save you water and money. They are simple to use and connect to any standard outdoor hose bib. *Limit 2 per household.*



FREE Rain Sensors*

If you have an in-ground irrigation system with a programmable irrigation controller and are tired of seeing your sprinklers come on in the rain, these small devices easily connect to your existing controller unit and automatically override your system in the rain to save you water and money. *Limit 1 per household.*

OTHER WATER SAVING PROGRAMS:

WashWise Program:** The City of Lacey and the LOTT Clean Water Alliance are offering a \$50 to qualifying customers rebate for purchasing a qualifying high-efficiency washing machine.

High Efficiency Toilet Program:** The City of Lacey and the LOTT Clean Water Alliance are offering FREE High Efficiency Toilets (HETs) to replace older, water guzzling models (most installed before 1994 qualify).

*Available ONLY to Lacey water or wastewater customers while supplies last. To pick up your water saving supplies, YOU MUST BRING A COPY OF YOUR WATER BILL to Lacey City Hall, 420 College St SE: Monday-Friday 8am – 5pm ** To learn more about these programs and find out if you are eligible, visit www.ci.lacey.wa.us/water-conservation

2010 WATER QUALITY RESULTS FOR THE CITY OF LACEY PWSID #43500Y

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	5	<1	8/3/10	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	23	<0.5	10/13/10	Reaction of chlorine with naturally-occurring organic matter
Total Haloacetic acids (ppb)***	60	NA	8	<0.5	04/13/10	Reaction of chlorine with naturally-occurring organic matter
Chlorine Residual (ppm)*	4	4	1.16	0.14	1/25/10	Added as a disinfectant to the water system

SECONDARY STANDARDS REGULATED BY EPA FOR AESTHETICS

Chloride (ppm)*	250		23	5	8/17/09	Geology, natural weathering
Fluoride ² (ppm)*	4	4	0.3	<0.2	8/17/09	Geology, natural weathering
Iron (ppb)*	300	NA	120	<10	8/13/10	Geology, natural weathering
Lead (ppb)*	N/A	15	4	<2	7/21/10	Plumbing material
Manganese (ppb)*	50	NA	80	<2	8/17/09	Geology, natural weathering
Sulfate (ppm)*	250		12	3	8/17/09	Geology, natural weathering
Conductivity (µmhos/cm)*	700	NA	249	84	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	9/10/08	Corrosion of household plumbing or erosion of natural deposits
Lead † (ppb)*	15	NA	10	0 samples	9/10/08	Corrosion of household plumbing or erosion of natural deposits

UNREGULATED CONTAMINANTS WITH REQUIRED MONITORING BY EPA

Contaminant	State Action Level	Goal Not to Exceed (MCLG)*	Average of Detected Concentrations	Average of Detected Concentrations	Sample Date of Highest Level	Typical Source of Contaminant
N-Nitrosodimethylamine (ppt)*	N/A	N/A	1.5	<2 - 8.2	4/19/10	Disinfection byproduct

Every 5 years, EPA requires public water systems to sample for contaminants to determine if they need to be regulated in the future. Any detected contaminants must be included in this report. The same sites were sampled again in October 2010, and all results were <2ppt.

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 for advice from your health care provider.

² Lacey does not add fluoride

Highest running average in 2010 was 4.3 ppb. * Highest running average in 2010 was 1.6 ppb. †Copper and lead are measured every 3 years. Next routine sampling will be in 2011.

*Important Drinking Water Definitions

ppb (Parts per Billion), **ppm** (Parts per Million), **ppt** (Parts per Thousand) **mg/L** (Milligrams per Liter), **µmhos/cm** (Micromhos per Centimeter), **NA** (Not Applicable)

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)

2010 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	Quarterly	Fecally contaminated water
Giardia Lamblia	99.9% removal		Zero	N/A	Quarterly	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	0-2 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	100% of samples had fewer than 100 bacteria per 100 milliliters of water	0-49 organisms	5 times a week	Naturally occurring in the environment
Turbidity (NTU)*	5	1	0.863	0.020-0.863	Metered continuously	Soil runoff

WATER SUPPLY SYSTEM (OR TAP WATER) AFTER CHLORINATION

Contaminant (units)	MCL*	MCLG*	City of Olympia Water Average Amount Detected	Range of Results (Low - High)	Testing Frequency	Typical Source of Contamination
Total Coliform Bacteria	95% of samples must have zero detections	Zero	Zero	Zero	70 times per month at a minimum	Naturally occurring in the environment
Chlorine residual (ppm)*	4	0.05	0.86	0.13-1.88	Metered continuously	Disinfectant in the water treatment process

DISINFECTION BY-PRODUCTS - RUNNING ANNUAL AVERAGE (RAA)

Haloacetic Acids (HAA) (ppb)*	60	Zero	1.5	<1.0 - 4.6	Quarterly	By-product of drinking water chlorination
Total Trihalomethanes (THM) (ppb)*	80	Zero	5.8	<0.5 - 15.9		

INORGANIC COMPOUNDS

Nitrates (ppm)*	10	5	1.43	<0.1-3.02	Yearly	Naturally occurring and human activities
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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 (AL) 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 (AL) 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, consider having a commercial water laboratory analyze a water sample from your tap. 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.

