

# 2013 WATER QUALITY

& ANNUAL BUSINESS REPORT



# A message from your Board of Commissioners

Historically, the Lakewood Water District has not experienced many changes in its leadership. This year, however, we saw two significant changes occur, both of which were reported in our quarterly publication, *The Pipeline*, but which warrant some follow-up commentary.



Randy Black, Larry Ghilarducci, Bill Philip, Greg Rediske, and John Korsmo in front of the newly dedicated Philip Tank

First, after having served the District for over 44 years and then retiring from the Board of Commissioners, William W. "Bill" Philip was honored by the dedication to him of our largest water tank (located on Hemlock Street above Fort Steilacoom Park). Appointed to fill his unexpired term was Gregory J. Rediske who, subsequently, won a full six-year term in a hotly uncontested election. As the owner and operator of his own company, Greg has come well-equipped to provide guidance to the business of the District.



Ian Black, Superintendent

Second, Ian Black, our new Superintendent, joined us in October 2012, and has assumed the position enthusiastically, bringing to us his vast experience in the construction industry. His efforts in helping steer the District

through the first steps of the 50-year R&R Program, namely the planning for, bidding, and awarding of a contract for the replacement of over 16,000 water meters, has gotten us off to a good start.

The District just issued its first series of bonds to finance the meter replacement segment of the program. The issue was underwritten by Martin Nelson & Company, Inc., a Seattle-based municipal bond dealer with whom the District previously has done business. With a little luck and a lot of experience, that Company "timed" the issuance to the significant financial benefit of the District, "catching" the market quite literally at an hour when interest rates were momentarily at a historic low.



\* Courtesy of Sensus and Ferguson

With funding now in place, and a contract having been awarded, preparation of your meter "boxes" to receive the new meters is proceeding. If all goes as planned, all meters will be replaced by year-end. The results will be more accurate readings of water usage, electronic reporting of that usage without the necessity of on-site meter readers, early detection of possible leaks on the customer side of the meters evidenced by unusual usage at the expense of the customer, and instant access by the customer to all data relevant to their accounts.

The next step is replacement of our main transmission lines. Since most of them exist under paved streets in the District, a large part of the cost of replacement is the restoration of those streets after being dug up to receive the new lines. In order to defray some of that expense, the District is working with the City of Lakewood to coordinate steps of our program with its street improvement projects. For example, if the City intends to resurface a certain area, the District hopes to be able to time its work in that area to share some of that expense. That sort of timing is not easy given the District's need to finance a project and contract for the work; however, in the past, the City has been receptive to this type of cooperative effort, and we expect that cooperation to continue.

So we begin.  
Only 49 years to go!!

Our water...  
our community...  
our future





## A Technological Revolution to Serve You Better

**50-year R&R Program**

**GIS**

**SCADA**

**AMI Meter Replacement Program**

**Tablets or iPads**

**GIS** Geographic Information Systems consulting and solutions specialists, Critigen, will be able to populate the District's GIS system, making it fully functional throughout the District in 2014, providing digital mapping of all of the components of the District's water system.

**SCADA** SCADA...Supervisory Control and Data Acquisition... simply translated, a means to operate a water system using distributed command and control technologies while receiving real time information, demonstrating what is occurring at every well, booster, tank, and pressure station. The District has completed two of three phases upgrading the individual site computers and communications modems to bring Lakewood Water District well into the 21st century.

**Tablets or iPads** Once the AMI Meter system is running and we see how it "talks" with our SCADA and GIS systems, the District will be moving toward mobile tools such as tablets or iPads for our field

staff to be able to receive and transmit information electronically, making their response time to your needs more expedient and effective.

### **AMI Meter Replacement Program**

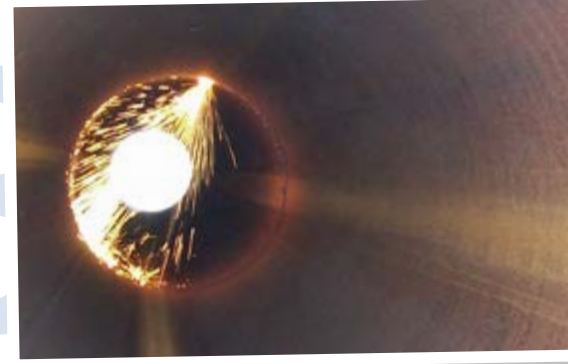
Before summer is over, all residential and retail meters will be replaced with new, more efficient meters complete with new, state-of-the-art technology that can wirelessly communicate meter reads and water usage information to the District daily. This will provide better leak detection, improved customer service, cost savings, and many other efficiencies to the District and, therefore, to you.

**50-year R&R Program** Our 50-year plan to replace approximately 180 miles of our 256-mile system launched early in 2014. Continue to follow our 50-year R&R Program logo on our website to see the progress.

## District Capital and R&R Projects 2013

### Interstate 5 Crossing at Orient Street SW

The District extended its 30-inch steel casing at this I-5 crossing to the freeway right-of-way limits on both sides and replaced the 10-inch main inside with a 24-inch main. The project is needed to provide the required water supply for the new Wholesale Water supply system. Kennedy/Jenks provided the engineering on this project with an Engineer's Estimate of \$570K. The project was awarded to Nordic Construction in March at the lowest-bid price of \$596,820.76. Construction began in September when the water table was most conducive to this type of construction, and it was completed in October, on time and significantly under budget.



Welding the extension on the casing at the crossing at Orient Street



Construction on Langlow Street, off Veterans Drive SW

### Pine, Walnut, Langlow, North Streets R&R Project

This project included the replacement of 2,400 lineal feet of AC main with ductile iron pipe, including new water services. RH2 provided the engineering, and Iversen & Sons of Rochester, Washington completed the project in April 2013, on time and under budget.

### Veterans Drive R&R Project, Phase 3

This phase included the replacement of 2,900 lineal feet of AC main with 12-inch and 8-inch ductile iron pipe along Veterans Drive between Alameda Avenue SW to Dolly Madison and along Vernon Avenue. CHS Engineers provided the engineering, and the project was completed by Pape & Sons Construction, Inc. of Gig Harbor, Washington in June 2013, early and under budget.

## R&R Projects 2014

### Lakeholme Road SW Water Main Replacement Project

Contractor Pape & Sons Construction, Inc. began construction May 19, 2014 to install approximately 2,396 lineal feet of 8-inch diameter and 93 lineal feet of 4-inch diameter ductile iron pipe, fire hydrants, valves, appurtenances, replacement and reconnection of water services, connections to the existing water main, and restoration. Design and engineering on the project was provided by RH2 Engineers, with an Engineer's Estimate of \$373,417. Pape & Sons bid the job at \$356,048.

### Sylvan Park Water Main Replacement Project

This project will run east and west from the District's 88th and Pine Tank Site, to the east to Gayle Street, then to the west, tying in at Lorraine Avenue, then running south on both Lorraine and Carol to 92nd Street. The project will upsize the existing AC main to 8-inch ductile iron pipe or larger, thus increasing the flows and adding additional fire flow capacity to the area. Design and engineering are provided by Parametrix, with an Engineer's Estimate of \$900K. The project was awarded to contractor Pape & Sons Construction, Inc. on May 30, with construction to begin in July of this year and be completed in 90 days thereafter.

### Bridgeport-75th to 83rd-Water Main Replacement Project

This project will install new main along a City of Lakewood project, upsizing the main and realigning it further out on the shoulder. This project is being completed in conjunction with the City, utilizing City designers and limiting the cost to the District on the restorations, as those activities are part of the larger project. The Engineer's Estimate for the District's portion of the project is \$770K. This project is also expected to go to bid in late 2014, with construction beginning in early 2015.

### Sound Transit WSDOT Pt. Defiance Bypass

This project will install new steel casing at or near the edge of the right-of-way through the Sound Transit corridor at three different locations and replace the existing mains with newer, larger mains to meet the future demands of the District. Design and engineering are provided by CHS Engineers, with an Engineer's Estimate of \$300K. The project is scheduled to go to bid in late 2014, with construction to begin in early 2015.

### Seattle Avenue Crossing at I-5

This project will take advantage of an existing Pierce County Pipeline casing, saving the District the cost of boring another. The existing lines will be removed, and then the sewer line will be reinstalled with a welded line. Two 12-inch water mains will be installed. This will increase the flow of water to the Springbrook area after connecting to the Springbrook water main project completed in 2012. Design and engineering on this project are provided by CHS Engineers, with an Engineer's Estimate of \$1.2M. Construction is scheduled to begin in the fall and complete in early 2015.



## Developer Extension Projects Completed in 2013 & 2014:

### Kenworth Northwest

The project, finished and operational in 2013, required the extension of 8-inch main for 350 feet, the installation of a Fire Service connection, and installation of domestic and irrigation services for the facility.



Sam and Shaun install an 8-inch gate valve off Chicago Avenue

### Thorne Lane Main Replacement

This project was adjunct to a City project completed in 2013, where the District took advantage of the opportunity to replace a 708-foot section of AC main as part of a larger project, thus saving the restoration costs.



Dick, Rich, and Sam install a new water service line for a customer on Wildwood Avenue



Jacob and Bob are equipped with LWD reflective gear for safe night work

### Lawndale Avenue Multi-family Project

This project consisted of a developer connecting to the District's main at Lawndale, placing new main for 1,100 lineal feet and connecting to the existing main in 92nd Avenue. The developer had the District install 17 new meters for the development. The work began in 2013 but was not completed until May 2014.

## Monitoring Our Lakes and Streams

Lakewood Water District consistently keeps an eye on the levels of select lakes and streams in our service area. The lake levels are indicators of the water table level in the Steilacoom Gravel deposited by the receding Vashon Glacier. Water in the gravel also leaks through the Vashon till or springs out above the till, adding to the flows of the area's major springs such as Ponce de Leon, Chambers, Garrison, and Sequelichew. The District collects monthly data from gauges on Ponce de Leon and on five lakes (American, Gravelly, Hidden, Louise, and Waughop). This information, together with the data collected from the Pierce County Stream Team, is vital to the District's aquifer management program as well as the Tacoma-Pierce County Health Department's long-term groundwater monitoring program.



Shaun records lake levels at Lake Louise

## Water Use Efficiency Rule

The District again met its goal of saving one-quarter of 1 percent of water this year. The District continues to be compliant with all facets of the Water Use Efficiency Rule except in the area of unaccounted-for water (and that only since 2010). Aggressive leak-detection measures continue to be taken to discover and repair leaks found in the system, beginning with the pro-active launching of a formal Leak Detection Program in 2007. Through the District's extensive leak detection program, 51 leaks were found in 2012, and all were repaired. In 2013, the District's 50-year R&R and AMI Meter Replacement Programs were devised, planned, and budgeted; ready for launching this summer.

The District continues its determined pursuit of any and all leaks in its system. We believe the implementation of our AMI Meter Replacement Program and the commencement of the 50-year R&R Program this year, in conjunction with our Leak Detection Program, will allow us to meet our WUE goals per the State Department of Health sooner than later.



## For Your Health

### Important Information from the Environmental Protection Agency (EPA)

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 the water poses a health risk.

Some may be more vulnerable to contaminants in drinking water than the general population. The following can be particularly at risk of infection:

the immuno-compromised, such as those with cancer undergoing chemotherapy; those having had organ transplants, HIV/AIDS, or other immune system disorders; and some elderly, and infants. These should seek advice about drinking water from their healthcare providers.

More information about contaminants and potential health effects and EPA/CDC guidelines on appropriate means to lessen the risk for infections by cryptosporidium and microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

## Yet Another Clean Audit

We've been telling you the same story for the past 18 years, so now it's "of age" and legal to move out of the house! We hope you haven't grown weary of reading about our clean audits each year. Your Lakewood Water District does work hard each day to deliver the highest level of integrity, accuracy, and regulatory compliance through exceptional financial and compliance practices.

The State Auditor's Office has completed its annual review and again awarded the District a clean audit. The SAO's official Accountability Audit and Financial Statement Audit Reports noted no deficiencies and complimented the District on its strong financial policies, precise accounting internal controls, and competent and cooperative staff.

The District Commissioners and staff are proud of our record of consistently clean audits and are committed to continuing our efforts to maintain our financial stability, so we can serve you most efficiently.

Toasting 18 years of clean audits! ▶



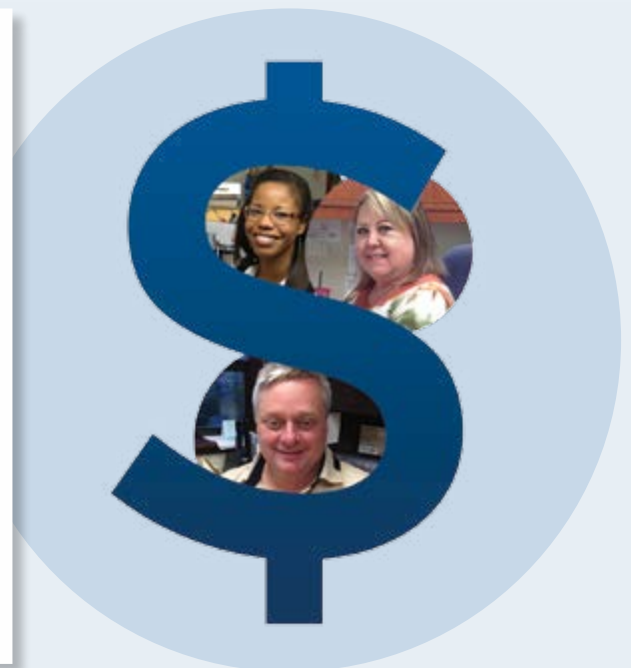
## Lakewood Water District Balance Sheet Year Ended December 31, 2013 (unaudited)

### Assets

<b>Total Net Utility Plant</b>	\$ 54,974,888
Cash	2,554,052
Other Current Accrued Assets	938,585
<b>Total Current Assets</b>	<b>\$ 3,492,637</b>
Deferred Debits	351,138
<b>Total Assets</b>	<b>\$ 58,818,663</b>

### Current Liabilities

Current Liabilities	\$ 614,581
Deferred Credits	4,917
Contributions in Aid of Construction	-
Bonds Payable	\$ 13,044,688
Unappropriated Retained Earnings	\$ 45,154,477
<b>Total Liabilities &amp; Equity</b>	<b>\$ 58,818,663</b>



### Our Accounting Staff to Serve You

Top: Vanessa Buckley and Sharon Ferreira  
Bottom: David Logan, Finance Director

# Water Quality Monitoring Results

Your water meets all federal, state, and local quality standards, ensuring that you enjoy safe, clean, potable water. Not listed are 63 volatile organic chemicals for which we tested, all resulting in either Not Detected (ND) or well below the MCL.

Sample type	Samples Taken per Year	Last Sample Year	Next Sample Year	EPA/DOH MCL (max level allowed)	LWD Highest Level Detected	LWD Lowest Level Detected	Number of Samples Over MCL	MCLG	Typical Sources
<b>Arsenic</b> <sup>1</sup>	22 every 3yrs	2010	TBD	10ppb	<6 ppb	<2 ppb - <6 ppb	0	--	Erosion of natural deposits
<b>Asbestos</b>	3 every 3 yrs	2011	2014	--	--	No structures detected	0	0	Friable fiber
<b>Copper</b>	30 every 3 yrs	2011	2014	1.3 ppm	0.63 ppm	.02 - .63 ppm	0	1.3 ppm	Household plumbing
<b>Fecal Coliform</b>	840 per yr	2013	2014	0	ND	ND	0	0	Human and animal fecal waste
<b>Total Coliform</b>	840 per yr	2013	2014	<5% positive	ND	ND	0	0	Found throughout the environment
<b>Haloacetic Acids</b>	16 per yr <sup>2</sup>	2013	2014	60 ppb	8.3 ppb	0.0ppb	0	0	Byproduct of drinking water disinfection
<b>Lead</b> <sup>3</sup>	30 every 3 yrs	2011	2014	15 ppb	.003 ppb	<.001-003 ppb	0	0	House hold plumbing
<b>Nitrates</b>	22 per yr	2013	2014	10 ppm	2.3 ppm	<0.2 ppm	0	0	Erosion of natural deposits
<b>Total Trihalomethanes</b>	16 per yr <sup>2</sup>	2013	2014	80 ppb	14.0 ppb	0.0 ppb	0	0	Byproduct of drinking water disinfection

## Our Testing Resulted In No Violations

The chart above only reflects a portion of the testing LWD performs. Complete Source Water Assessment (testing result information) is available at the District office.

### Table Definitions:

- MCL** Maximum Contaminant Level. The highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible, using the best treatment technology available.
- 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.
- ND** Not Detected
- ppm** parts per million, or milligrams per liter (mg/L)
- ppb** parts per billion, or micrograms per liter (ug/L)

One part per million corresponds to one minute in two years or a single penny in \$10,000.  
 One part per billion corresponds to one minute in 2,000 years or a single penny in \$10,000,000.

<sup>1</sup> Your drinking water currently meets EPA's revised drinking water standard for arsenic. However, it does contain low levels of arsenic. There is a small chance that some people who drink water containing low levels of arsenic for many years could develop circulatory disease, cancer, or other health problems. Most types of cancer and circulatory diseases are due to factors other than exposure to arsenic. EPA's standard balances the current understanding of arsenic's health effects against the costs of removing arsenic from drinking water.

<sup>2</sup> The Disinfectant Byproduct Rule went into effect September 1, 2012, requiring 4 samples taken per quarter versus 4 per year.

<sup>3</sup> 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. Lakewood Water District 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 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).



Zac hands customer his lead & copper sample bottle for 2014 testing



Our LWD staff here to serve you with a smile!

If you would like to learn more about our water, or have questions regarding water quality or what you can do to help keep our water supply clean and safe, please contact us at Lakewood Water District, or any of the following:

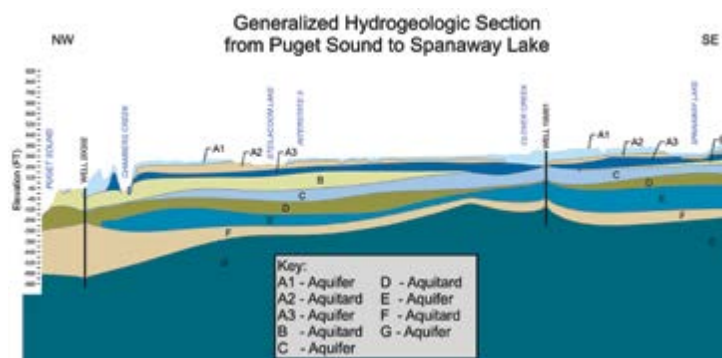
- Lakewood Water District  
11900 Gravelly Lake Drive SW, Lakewood, WA 98499  
www.lakewood-water-dist.org • 253.588.4423
- Randall M. Black, General Manager  
Email: rblack@lakewood-water-dist.org
- Washington State Department of Health (WDOH)  
www.doh.wa.gov/ehp/dw
- Environmental Protection Agency (EPA)  
www.epa.gov/safewater
- Safe Drinking Water Hotline • 800.426.4791  
Email: hotline-sdwa@epa.gov

To request additional copies of this year's Water Quality & Annual Business Report, please contact the District office at 253.588.4423.

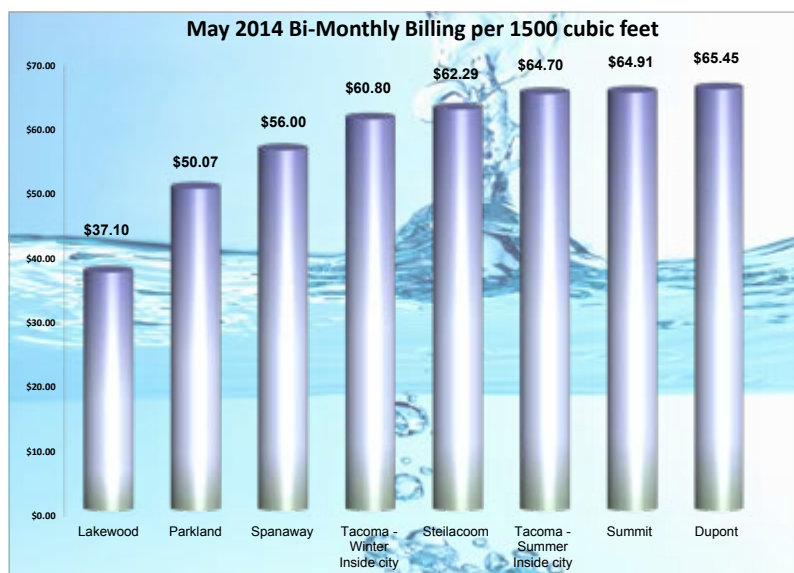


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## Comparisons of Lakewood Water District Rates with Surrounding Utilities



## The Source of Your Water

The District's sole source of water is from underground aquifers. No surface water, desalinated water, or recycled water is used. The District has a total of 30 active wells, which together provide a maximum production capacity of approximately 30 million gallons per day (mgd), with a total water-right capacity to pump up to over 60+ mgd.

Aquifer Zones are designated as layers A, C, E, and G from shallowest to deepest, as displayed on the accompanying chart. Aquifer Zones are generally of glacial origin and tend to be coarse-grained and highly permeable. Aquitards B, D, and F, which are usually of interglacial origin, represent finer-grained and less permeable layers whose sediments were deposited by the ancestral Nisqually and Puyallup rivers. Historical sedimentation is not unlike the alluvium presently being deposited by these rivers today.

Recharge (replenishing) of the aquifers comes from local rainfall or snowmelt in the Clover/Chambers drainage basin. The E and G level aquifers will most likely receive some additional deep underflow ranging from the south Puyallup/Graham area westward to the Puget Sound.