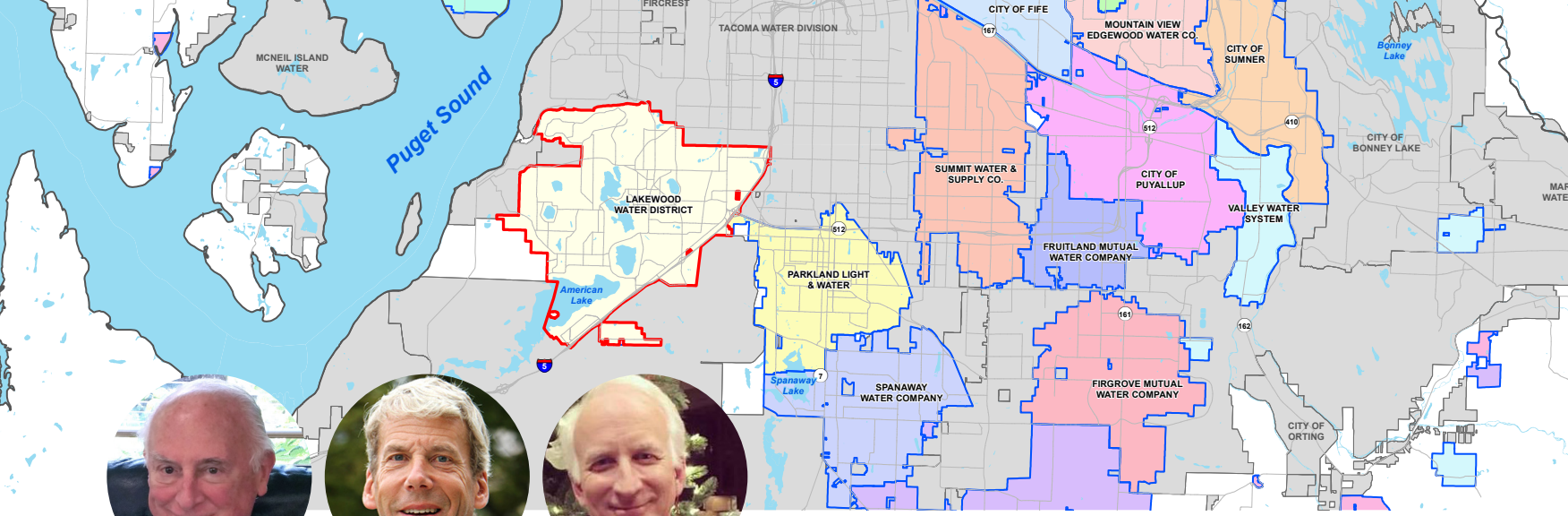


2018

Water Quality & Annual Business Report

Our Water. Our Community. Our Future.

www.lakewoodwater.org



(Left to right) Larry Ghilarducci, President; John Korsmo, Vice President; Greg Rediske, Secretary

Dear Lakewood Water District Customers

Preparing for the Commissioner letter for our Annual Report, it's worth revisiting our mission statement and our goals and objectives for the District. **"LWD will provide its customers with Water that meets or exceeds all water quality standards, maintaining policies that benefit the health and welfare of the community."** To do so keeps our focus and direction consistent as we align our short-term and long-term priorities with the changes and growth of our District and our Community. In our most recent letters to you, we have reported our planning efforts for many upcoming major projects. Well, after much planning, those projects are now beginning or are already in progress. These construction projects are making this year our busiest capital improvement year on record.

The District continued with it's 50-year R&R Program with the following projects in 2018: Silcox/Rose, Sylvan Park Phase 3, Lake Steilacoom Drive/Tower Road, and Pacific Highway main improvements/110th Street Pressure Reducing Valve. In addition, we have mobilized for the construction of our Wholesale Transmission Main Extension with our Wholesale Water Partners.

As we have discussed in previous communications, we have also begun upgrading and renovating the existing treatment plant facilities at our Ponders Well Site with funding from a State of Washington grant to the Department of Ecology, while also adding a Granular Activated Carbon Treatment component in order to remove the PFOA and PFOS we have been discussing over the past few years with a hope to recover this cost from the responsible parties at some later date. In keeping with our commitment to meet future demands, we are drilling a new well (G-3) at our Scott's Wellfield, and building a new 2-million-gallon steel tank at our Nyanza site. And, we continue to work collaboratively with the City of Lakewood on current and future developments including improving roads and utilities across our City. These projects define our mission statement and ensure

that "you," our customers, are supplied with the highest quality, safe, reliable drinking water at the most affordable rates possible.

Along with these many "Physical Construction Projects," we continue to make effective and efficient improvements to serve you better throughout our systems, policies, and operations. These include improvements to our existing GIS mapping system and workorder management systems, as well as moving all other on-site systems and data storage to the cloud to eliminate the need to purchase traditional new hardware and expensive servers. We are currently planning for the implementation of a new utility billing software to replace our outdated billing and accounting platform as well as transitioning software to Office 365 to improve internal and external communications. In addition to these changes, we are also planning to migrate our existing phone service to a cloud-based PBX solution to reduce costs and add additional features and improve the redundancy of the system overall.

These planned improvements will help illustrate and implement our theme for our 2019 Budget to, "Embark on a New Era of Service to Customers, Locally and Regionally."

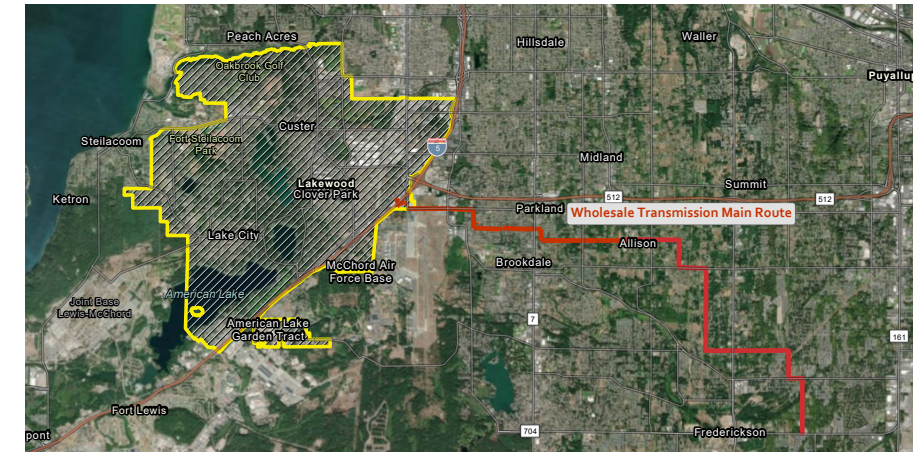
We are fully engaged in these monumental investments and improvements, and we would like to thank you, our customers, for your continued interest, involvement, and support. We also want to take this opportunity to thank our staff for taking on these projects with dedication and enthusiasm to implement and complete these projects, as they have planned for the work and are now implementing the plans to generate high-quality, timely, and safe projects that will improve our systems and continue to deliver your water for many more years to come.

Respectfully, Your Board of Commissioners

Wholesale Transmission Main Extension Project

This project is the largest in the District's history. This 6.8-mile-long main will be an extension of our 4.9-mile existing water line built in 2009 out to our Wholesale Partners. This will provide a physical connection with all our Wholesale Partners except Spanaway Water Company who has not decided to connect at this point but remains a Wholesale Partner. The combination of the existing main and the new main will connect Lakewood with 176th and 74th Avenue in Fredrickson.

This 36,000+ foot, 20-inch main, in conjunction with upgrading the existing booster station and building a new booster station on property that the Partnership has purchased off 120th Street next to Tacoma Rail, will have the capacity to serve up to 10 mgd (million gallons a day) of clean, safe, reliable drinking water to our Wholesale Partners and their patrons in south eastern Pierce County. These additional sales volumes will allow Lakewood to maximize its water rights and help us sell what was a surplus of water within our District prior to the main extension. By doing so, this will allow for additional revenue streams to the District and place us in an overall better position to maintain and redevelop the aging infrastructure that we rely on every day. This huge effort not only helps the Wholesale Partners by supplying them much needed water and LWD by providing additional revenues, it also helps the environment and our watershed as well. We are



extracting water from the end of the aquifer just prior to it entering the saltwater and being lost for drinking purposes and transporting this up into our own basin. By selling this water to purveyors higher up in the basin, this water never leaves the basin and is effectively recycled. Every lawn that is watered in Fredrickson with Lakewood Water simply recharges the aquifer that we draw the water from to send back to them. This benefit is priceless and reinforces our dedication to good stewardship of the resources we have been entrusted with by you, the rate payers.

Backflow Protection and Annual Testing

The District ensures that the water delivered to their customers meets or exceeds all drinking water requirements. However, once the water flows past the customer's meter, it becomes used water, and the water purveyor typically no longer has control over the use and subsequently the quality of the water. The District knows there can be many hazards after the meter and must actively monitor, survey, and educate its customers about the importance of identifying hazardous cross-connections, installing proper backflow preventers, and having those devices tested annually by State-certified testers. A cross-connection is any actual or potential physical connection between potable water supply and any pipe, tank, equipment, or device containing pollutants or contaminants. If a cross-connection exists or is created, non-potable water may be introduced into the District's water system.

Here are some helpful tips:

- 💧 ALL irrigation systems—new or existing—must be equipped with an approved backflow prevention assembly.
- 💧 If you're not sure if you already have or need a backflow assembly, please visit our website at: www.lakewoodwater.org or contact our Cross-Connection Control Specialist at: (253) 588-4423
- 💧 Ask about our:
 - 💧 WATER DISTRICT ANNUAL TESTING PROGRAM. SIGN UP FOR CONVENIENCE & SAVINGS
 - 💧 CROSS-CONNECTION PACKET WHICH DETAILS PERMITTING
 - 💧 LOCAL CERTIFIED TESTERS LIST, IF YOU NEED HELP FINDING TESTERS

The District is actively surveying residential properties and commercial businesses for backflow hazards. If a violation is found, the District will inform the property or business owner of the potential hazards that exist and require the appropriate backflow device to be installed, inspected, and tested. Failure to comply may result in termination of water service.



Lakewood Water District Projects

PROJECTS COMPLETED IN 2018

Silcox/Rose:

The project involved the replacement of approximately 3,500 lineal feet (LF) of old 2-inch galvanized steel and 4-inch asbestos cement pipe in the Tillicum area with new 8-inch ductile iron pipe including new water services, fire hydrants, valves, and other appurtenances. Pape & Sons Construction from Gig Harbor began installation of the water mains in January 2018 and was complete by March. The total project cost was a little over \$700,000.

Sylvan Park Phase 3:

This project, an extension of the Sylvan Park Phase 2 Project, upsized water mains on the easterly side of the Sylvan Park area which included 25th & 26th Ave. S. and 90th & 91st St. S. About 3,900 LF of old 6-inch and 8-inch asbestos cement pipe in the NE part of the District's water system was replaced with new 8-inch PVC pipe including new water services, fire hydrants, valves, and other appurtenances. Fenix Earthworks from Buckley began construction in April 2018 and was complete by June 2018. The final cost to complete was about \$750,000.

Lake Steilacoom Drive/Tower Road:

The project involved replacement of approximately 4,900 LF of old 1¼ inch galvanized steel, and 4-inch and 6-inch asbestos cement pipe along Lake Steilacoom with new 8-inch and 12-inch ductile iron pipe including new water services, fire hydrants, valves, and other appurtenances. Pape & Sons Construction began construction in July 2018 and was complete by October. The cost to complete this project was about \$1 million.

Pacific Highway/PRV/110th Street:

The project replaced approximately 2,200 LF of old 6-inch and 8-inch asbestos cement pipe with new 16-inch and 20-inch ductile iron pipe including new water services, fire hydrants, valves, and other appurtenances. It also includes installation of a new pressure sustaining/reducing valve station between the 455 and 404 pressure zones. The project will increase the flow capacity in the area to help meet the wholesale customer demands. Miles Resources from Puyallup began construction in October 2018 and will be complete near the end of the year. The total cost for this project will be about \$900,000.

PROJECT DESIGNS COMPLETED IN 2018 FOR FUTURE CONSTRUCTION

Naomilawn, Newgrove, Highland:

The design for replacement of approximately 4,600 LF of old 4-inch and 6-inch asbestos cement pipe along the north end of American Lake with new 8-inch ductile iron pipe including new water services, fire hydrants, valves, and other appurtenances. Construction is anticipated to begin in January 2020 and be complete by spring.

PROPOSED PROJECTS FOR 2019

There will be a very limited amount of activity with annual capital and R&R projects in 2019 because of the commitments to the planned large Wholesale Transmission Main Extension Project and reservoir, well, and water treatment improvements. Those annual R&R projects displaced in 2019 will go forward for construction between 2020 and 2022 together with other R&R projects already planned for those years. This will provide for staying on schedule with the Water Main Replacement Program.

Wholesale Transmission Main Extension (WTME):

This project will extend our existing wholesale main from 120th to Vickery, down Vickery to 128th eastward to Bingham, down Bingham which changes to 152nd east, then south on Woodlawn, then east on 160th to 74th Ave, then south to 74th and 176th. This will extend the main nearly seven miles (35680 LF) and will allow the sale of water to not only Summit Water & Supply Co. but also Spanaway, Firgrove Mutual, and Rainier View Water Companies. This will be a 20-inch main capable of moving up to ten million gallons a day to these and future wholesale customers.



Existing Wholesale Booster Station

Existing Booster Station Upgrades:

This project in conjunction with the WTME will upgrade the existing pumps and motors in the existing booster station to allow for the higher capacity and increased volume of sales. This will install new pumps and motors, new SCADA controls, and new electrical services to handle the new electrical loads.

New Wholesale Booster Station:

This project is also in conjunction with the WTME, but this will be a new booster station to be built on property that the Wholesale Partners have purchased near the Tacoma Rail crossing on 120th in Parkland. This will be a sister station to the existing station, and when completed, will allow for us to boost the pressure high enough to move all ten million gallons of water all the way out to the furthest connection point at 74th and 176th in Fredrickson. Design is underway for this, and construction will start late in 2019 and be completed in the first quarter of 2020.

Arrowhead Phase 2:

The project involves replacement of approximately 6,200 LF of old 6-inch and 8-inch asbestos cement pipe with new 8-inch and 12-inch ductile iron pipe including new water services, fire hydrants, valves, and other appurtenances. Design will be complete by January 2019. Construction is expected to begin by April 2019 and be complete by August. The total cost to complete this project will be about \$1.3 million.

Ponders Well Site Treatment Upgrades:

This project is being built in conjunction with funding from the State of Washington. This project will replace the existing air-stripping towers that have been in service there for nearly 30 years with new stainless-steel air-stripping towers that will last in excess of 60 years. In conjunction with this project, LWD is installing two Granular Activated Carbon treatment systems (GAC). This is to treat the water that has elevated levels of perfluorinated compounds that we suspect are residual from firefighting foam used on the joint base. The project was started in March of 2019 and is anticipated to be complete by October of 2019.



Arrowhead Phase 2 old pipe replacement

Another Clean Audit... now 23 Years and Counting

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

For more information on our audit history, please consult our website at www.lakewoodwater.org.

PROJECTS TO BE DESIGNED IN 2019 FOR 2020 CONSTRUCTION

Sylvan Park Phase 4

112th Street/I-5 to South Tacoma Way

Lake Steilacoom Drive Phase 2

Naomilawn, Dolly Madison, Frances Folsom

Arrowhead Phase 3



Lake Steilacoom Drive project

Lakewood Water District Balance Sheet Year Ended December 31, 2018

Unaudited

Assets	(\$) Dollar amounts
Total Net Utility Plant	78,535,145
Cash and Investments	10,178,986
Other Current Assets	2,631,989
Total Current Assets	12,810,975
Deferred Outflows	426,208
TOTAL ASSETS	91,772,328
Current Liabilities	
Current Liabilities	1,605,093
Other Liabilities	1,743,661
Bonds Payable	26,470,523
Unappropriated Retained Earnings	61,318,376
Deferred Inflows	634,675
TOTAL LIABILITIES & EQUITY	91,772,328

The Source of Your Water

The District's sole source of water is from underground aquifers—water-bearing strata of permeable rock, sand, or gravel. 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 34 million gallons per day (mgd), with a total water right capacity to pump up to over 60+ mgd.

The District's 30 active wells are in four aquifers—A, C, E, and G—with A being the shallowest and G being the deepest. Aquifers are generally of glacial origin and tend to be coarse-grained and highly permeable. There are three Aquitards—B, D, and F—layered between the four aquifers. Aquitards are strata of finer-grained and less permeable layers and usually of interglacial origin. The District's aquitards are made up of sediments 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 in the Clover/Chambers drainage basin. The District's deepest aquifers—E and G—will most likely receive some additional, deep underflow recharge from the south Puyallup/Graham area westward to the Puget Sound, including snowpack from Mt. Rainier.

NOTE: To see a graphic depiction of the District's water source as referenced above, please visit the District website at www.lakewoodwater.org, under "Your Water."



WATER USE EFFICIENCY RULE

The District is compliant with all facets of the Water Use Efficiency Rule. In 2017, the District's lost water was at 6.9 percent, bringing its three-year average to 9.4 percent. The continued success of our AMI System, 50-year R&R, and ever-expanded Leak Detection programs have assisted the District in meeting its WUE goals as set by the State Department of Health.

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, is available from the Safe Drinking Water Hotline at 1.800.426.4791.



Monitoring Our Lakes and Streams

We consistently keep 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.

2018 Water Quality Sampling/Monitoring Report

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 Maximum Contaminant Level (MCL). The number and frequency of non-bacteriological samples are determined by the Water Quality Monitoring Schedule (WQMS) issued by the Washington State Department of Health (DOH).

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	AL (action level)	Typical Sources
Arsenic ¹	DOH WQMS List	2016	2019	10 ppb	5 ppb	<1 ppm	0		Erosion of natural deposits
Asbestos	1 every 9 yrs	2011	2019	--	--	--	--	--	Friable fiber
Copper	30 every 3 yrs	2017	2020	N/A	0.35 ppm	<.05 ppm	0	1.3 ppm	Household plumbing
Fecal Coliform	840 per yr	2018	2019	0	ND	ND	0	0	Human and animal fecal waste
Total Coliform	840 per yr	2018	2019	<5% positive	ND	ND	0	0	Found throughout the environment
Haloacetic Acids	2 per yr	2018	2019	60 ppb	ND	ND	0	0	Disinfection by-product
Lead ²	30 every 3 yrs	2017	2020	N/A	8 ppb	<1 ppb	0	15 ppb	Household plumbing
Nitrates	22 per yr	2018	2019	10 ppm	1.76 ppm	<0.2 ppm	0	0	Erosion of natural deposits
Total Trihalomethanes	2 per yr	2018	2019	80 ppb	6.58 ppb	1.68 ppb	0	0	Disinfection by-product

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 Term Definitions:

- AL:** Federal Action Level. Must take action to minimize levels if concentrations exceed these numbers.
- MCL:** Maximum Contaminant Level. The highest level of a contaminant allowed in drinking water.
- ND:** Not Detected
- ppb:** parts per billion, or micrograms per liter (ug/L)
- ppm:** parts per million, or milligrams per liter (mg/L)
- WQMS:** Water Quality Monitoring Schedule

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.

¹ Your drinking water currently meets the 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. The EPA's standard balances the current understanding of arsenic's health effects against the costs of removing arsenic from drinking water.

² 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 at 800.426.4791 or at www.epa.gov/safewater/lead.

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.lakewoodwater.org, 253.588.4423

Randall M. Black, General Manager
 Email: rblack@lakewoodwater.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 or csweb@lakewoodwater.org

You can also access this report on our website at www.lakewoodwater.org



PRSR STD
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 Seattle, WA

Lakewood Water District
 11900 Gravelly Lake Drive SW
 Lakewood, WA 98499



LAKWOOD WATER DISTRICT ACCOUNTING/IT/GIS TEAM

LAKWOOD WATER DISTRICT CUSTOMER SERVICE TEAM

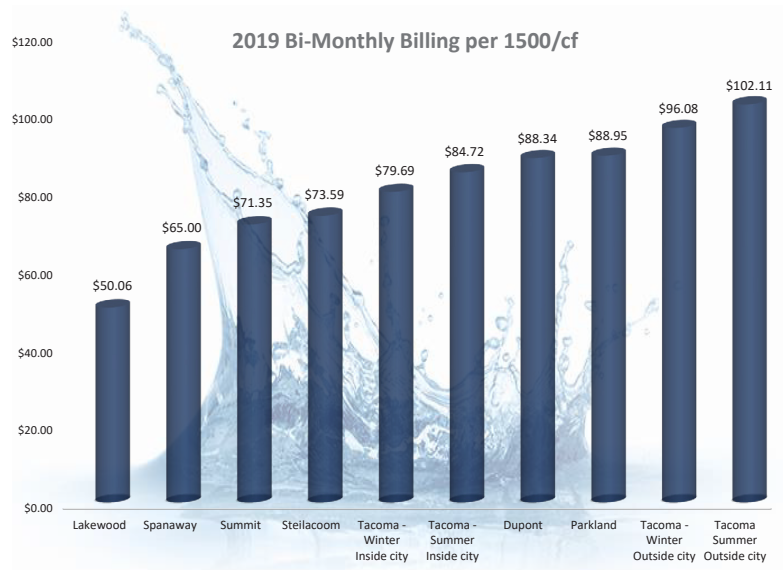


LAKWOOD WATER DISTRICT MANAGEMENT TEAM

LAKWOOD WATER DISTRICT PUMPING DEPARTMENT



LAKWOOD WATER DISTRICT SERVICE CREW



Comparisons of Lakewood Water District Rates with Surrounding Utilities

May 20, 2019, Bi-Monthly Billing per 1500/cf

