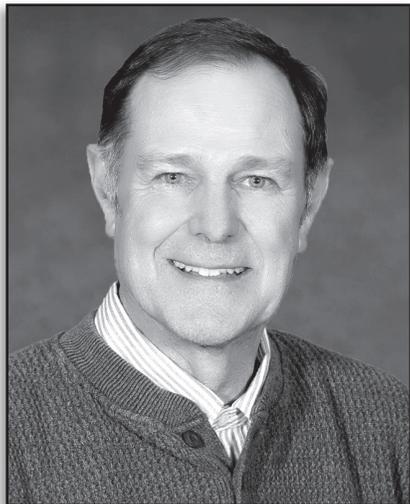


The Pipeline



Summer 2023

Commissioner's Corner



Commissioner Tim Schriever

Earthquake Hazards

Water and wastewater utilities are particularly vulnerable to earthquakes due to their extensive networks of above and below ground pipelines, and other facilities like water pumps and storage reservoir tanks.

The USGS Seismic Hazards Map indicates that the Bothell, Woodinville, Kirkland and Redmond area is an earthquake high hazard area. The only area listed with a higher earthquake hazard in Washington State is on the Olympic peninsula.

In addition to the USGS Seismic Hazards Map, the District has a wealth of GIS data available from a variety of sources which can be used to assess risk to District assets and facilities due to seismic hazards.

Woodinville Water District, like many other water providers in our region, recognizes this unique risk, and is proactively improving our systems with respect to earthquake resiliency. The District has been implementing seismic upgrades to reservoir sites for over the past 13 years and considers current earthquake codes in all of our designs for facilities upgrades. Building upon the work done by our regional water provider SPU, the District seeks to better understand the risks posed by earthquakes. The District has completed prior risk assessments and has implemented system improvements based on these studies. The District continues this commitment to better our system, and further our understanding of any seismic vulnerabilities that could interfere with our mission to provide safe and reliable water and sewer service.

The most recent earthquakes recorded near us were in April and May of 2023 with magnitudes of 2.6 and 2.8 that were centered near Hoodspport on the Olympic peninsula, and in the Cascade Mountains westerly of Tacoma.

Most of the land in our area is a thick layer of dense soil compacted by glacial activity that is relatively stable. However, many of the stream and river valley areas where groundwater and loose soils exist have potential of soil liquefaction where significant settlement of the ground surface can occur.

In May of 2021 the Woodinville Water District completed an assessment of the risks and resilience of its water mains and storage reservoirs and the tasks necessary to provide water service to customers during earthquake emergencies.

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Woodinville Water District

Providing safe and reliable service with responsible rates since 1959.

Commissioner's Corner

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As a continuation of the assessment the District is currently working with a consultant to conduct a Water and Sewer System Seismic Vulnerability Study. The purpose of this study is to provide a comprehensive analysis of the condition of the District's most important assets and to identify if there are cost-effective projects that would reduce the vulnerability to seismic events and provide a positive return on investment. Some of the phases of the study will include:

Geotechnical investigation – Develop seismic hazard maps that encompass the critical elements of the District's water and wastewater system.

Structural Investigation – Evaluate the critical components listed and identify any unique or relevant vulnerabilities, or potential seismic -induced deficiencies that would compromise the ability to provide services following seismic events.

Seismic Risk and Mitigation planning requirements – Compile the geological hazards, the Structural resiliency of the District's critical facilities and compare them with the hazards and resiliency of the Districts' linear assets (pipelines).

The consultant will develop a comprehensive matrix identifying the hazards and the damage expected from earthquake scenarios for each District facility. Using the recommended mitigations from the study for each damage assessment item in the matrix a cost will be assigned and a relative ranking of urgency. A comprehensive ranked list of improvements will be sorted from the most cost-effective to the least cost-effective. A preferred budget and funding schedule from the District Comprehensive Improvement plan will be compiled for a final report.

Providing safe drinking water to our customers is a top priority of the District. Preparing for Emergencies and Disasters is essential in minimizing the loss of water service to our customers. You can also be prepared and make a plan for Disasters and Emergencies. Visit www.ready.gov or download the FEMA App.

The Board of Commissioners meet on the first and third Tuesday of each month at 5:00pm. The public is welcome to join the meeting in-person at the District Meeting Room or attend by phone via Microsoft Teams. Meeting call-in information is posted on the agenda that can be found on our webpage the Friday prior to each meeting at woodinvillewater.com.

General Manager Patrick Sorensen Retirement

General Manager Patrick Sorensen retired from the Woodinville Water District on May 31, 2023.

Patrick Sorensen was hired as the District's General Manager in May 2018. Mr. Sorensen has worked in local government for over 35 years serving Oregon, Nevada, and Utah, including 26 years in Washington State. This includes 27 years in various management roles including that of Deputy City Manager, City Manager, Deputy General Manager and General Manager for public water and sewer utilities.

Mr. Sorensen is recognized for his unwavering dedication to the District for the past 5 years with his leadership. He continued to work onsite at the District office throughout the pandemic to ensure District customers received the high-quality service delivery and management of the District's utility systems that our customers expect.

Mr. Sorensen has prioritized protecting the District's interest in ongoing contract negotiations with Seattle Public Utilities for water supply, and with the King County Wastewater Division for sewage treatment and reclaimed water policies He also enhanced coordination

with the City of Woodinville to ensure that planning for water and wastewater facilities is an integral step early in review of development proposals.

With his leadership the District was able to implement several successful programs which included the Engineering Department implementing an aggressive and successful Capital Improvement Program. During his 5-year tenure at the District he conducted a Risk and Resiliency Study to identify water system vulnerabilities related to seismic issues. The assessment will be used to create an emergency plan for the District's infrastructure and working with Seattle Public Utilities and their infrastructure that supplies our system.

The Board of Commissioners and the entire District staff wish him the best and appreciate his 5-year tenure at WWD.

The District started the recruitment process for a new General Manager in May. We look forward to introducing the new General Manager in the Fall Issue of the Newsletter.

2022 Drinking Water Quality Annual Report

Published in June, 2023

Woodinville Water District takes pride in supplying you and your family with safe and reliable drinking water.

Our annual Water Quality Report provides information about water testing completed in 2022. It explains what is in our water and how the supply is protected and treated. Thank you for being our customer and for taking the time to learn about your drinking water.

Where Does Our Water Come From?

The Cascade Mountains supply our drinking water. Two very large, protected watersheds, the Cedar River Watershed and the South Fork Tolt River Watershed, supply almost all of Seattle's metropolitan area with drinking water. We purchase all our water from Seattle. Most of our water comes from the Tolt River Watershed, but occasionally we receive water from the Cedar River Watershed. In 2022, all of Woodinville's supply came from the Tolt.



Are Contaminants a Risk?

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.



Who Is Making Sure Our Water Is Safe To Drink?

In order to ensure that tap water is safe to drink, the Environmental Protection Agency and/or the Washington state board of health prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration and/or the Washington state department of agriculture regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

As part of this process, Washington's Source Water Assessment Program is conducted by the Department of Health (DOH) Office of Drinking Water. According to DOH, all surface waters in Washington are given a susceptibility rating of "high", regardless of whether contaminants have

been detected or whether there are any sources of contaminants in the watershed. Information on the source water assessments is available from the DOH website at <https://fortress.wa.gov/doh/eh/dw/swap/maps>.

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 Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

In Seattle's surface water supplies, the potential sources of contamination include:

- » microbial contaminants, such as viruses, bacteria, and protozoa from wildlife;
- » inorganic contaminants, such as salts and metals, which are naturally occurring; and
- » organic contaminants, which result from chlorine combining with the naturally occurring organic matter.



Lead And Copper And Your Drinking Water – Are You At Risk?

Although there is no detectable lead in our source water, some homes, especially those built before 1985, have some risk of lead contamination from water that sits in pipes longer than several hours. When your plumbing was installed and what type of plumbing you have all play a part in determining your potential exposure level. Seattle treats the water to minimize the tendency for lead to enter the water, and results show this has been very successful. 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. Woodinville 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 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 <http://www.epa.gov/safewater/lead>.

LEAD AND COPPER MONITORING RESULTS (TOLT WSA)

Parameter and Units	MCLG	Action Level +	Combined Regional Monitoring		WWD's Customers	Source
			2020 Results*	# Homes Exceeding Action Level	# Homes Exceeding Action Level	
Lead, ppb	0	15.0	3.8	0 of 55	0 of 10	Corrosion of household plumbing systems
Copper, ppm	1.3	1.3	0.19	0 of 55	0 of 10	

* 90th Percentile: i.e. 90 percent of the samples were less than the values shown.

+ The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MCLG = Maximum Contaminant Level Goal; ppb = parts per billion; ppm = parts per million

Results from summer of 2020 sampling. Per requirements, the next round of sampling will be done in summer 2023 and results will be reported in the Water Quality Report distributed in 2024.



2022 WATER QUALITY MONITORING RESULTS

Detected Compounds	Units	EPA's Allowable Limits		Levels in Tolt Water		Levels in Cedar Water		Meet USEPA Standards?	Typical Sources
		MCLG	MCL	Average	Range	Average	Range	Compliance	
RAW WATER									
Total Organic Carbon	ppm	NA	TT	1.24	1.10 – 1.41	0.72	0.39 – 0.97	✓ YES	Naturally present in environment
FINISHED WATER									
Turbidity	NTU	NA	TT	0.04	0.02 – 0.24	0.35	0.19 – 1.93	✓ YES	Soil runoff
Arsenic	ppb	0	10	0.28	0.22 – 0.38	0.43	0.34 – 0.52	✓ YES	Erosion of natural deposits
Barium	ppb	2000	2000	1.21	1.14 – 1.30	1.26	1.02 – 1.43	✓ YES	Erosion of natural deposits
Bromate	ppb	0	10	ND	ND	0.4	ND – 5	✓ YES	By-product of drinking water chlorination
Fluoride	ppm	4	4	0.7	0.6 – 0.8	0.7	0.6 – 0.8	✓ YES	Water additive which promotes strong teeth
Nitrate	ppm	10	10	0.1	One Sample	0.1	One Sample	✓ YES	Erosion of natural deposits
Coliform, Total	%	0	5%	(No Positive Total Coliform Samples in WWD Distribution System in 2022)			✓ YES	Naturally present in environment	
DISINFECTION BY-PRODUCTS (Measured in the Woodinville Water District Distribution Area)									
Total Trihalomethanes	ppb	NA	80	40	20 – 45	NA	NA	✓ YES	By-product of drinking water chlorination
Haloacetic Acids (5) (HAA5)	ppb	NA	60	31	16 – 31	NA	NA	✓ YES	By-product of drinking water chlorination
CL2 RESIDUAL (Measured in the Woodinville Water Distribution Area)									
Chlorine	ppm	MRDLG = 4.0	MRDL = 4.0	Average = 1.15 mg/L Range = 0.16 – 1.56 mg/L			✓ YES	Water additive used to control microbes	

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.

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.

MRDLG: Maximum Residual Disinfectant 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.

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

NTU: Nephelometric Turbidity Unit - Turbidity is a measure of how clear the water looks. The turbidity MCL that applied to the Cedar supply in 2021 is 5 NTU, and for the Tolt supply it was 0.3 NTU for at least 95% of the samples in a month. 100% of Tolt samples in 2022 were below 0.3 NTU.

NA: Not Applicable

ND: Not Detected

ppm: 1 part per million = 1 mg/L = 1 milligram per liter

ppb: 1 part per billion = 1 ug/L = 1 microgram per liter

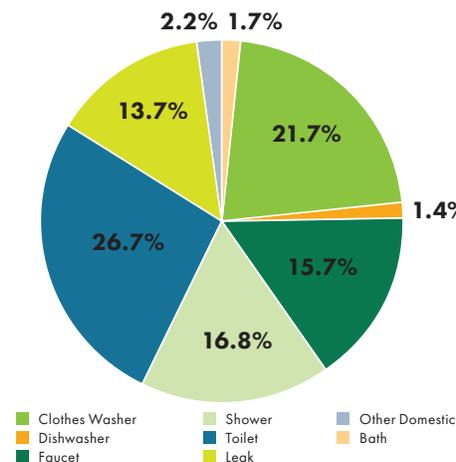
1 ppm = 1000 ppb

Conservation Program Goals and Results

The Saving Water Partnership (SWP) – which is made up of Woodinville Water District and 18 water utility partners – has set a ten-year conservation goal: keep the total average annual retail water use of SWP members under 110 mgd through 2028, despite forecasted population growth, by reducing per capita water use. For 2022, the Saving Water Partnership met the goal, using 94.3 mgd.

Residential Water Use

Sources: Residential End Uses of Water, AWWA Research Foundation



Do You Have Health Concerns?

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. Environmental Protection Agency/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

How Can I Get More Info?

WWD Water Quality Office

425-487-4125

waterquality@woodinvillewater.com

www.woodinvillewater.com

(Click on the Water Quality Tab in the Quick Links Menu)

Seattle Public Utilities, Water Quality Lab

206-684-7834

drinkingwater.quality@seattle.gov

www.seattle.gov

Washington State Department of Health

www.doh.wa.gov/ehb/dw

Environmental Protection Agency (EPA)

www.epa.gov/safewater

EPA Safe Drinking Water Hotline

1-800-426-4791



Know what's below.
Call before you dig.

Call (811) Before You Dig!
callbeforeyoudig.org

Woodinville Water District reminds you to make sure you prevent accidentally hitting an underground utility line when digging. Use the free "Call Before You Dig" hotline at 811 at least two working days before starting a digging project of more than 12 inches deep. The 811 hotline staff will provide you with the locations of lines that serve power, gas, water, sewer and/or telephone utilities that are located along the right-of-way of your property. If you accidentally dig into an underground utility line, not only do you risk injury, you are also responsible for all repairs by state law.

Let Us Know
About Life Support
Issues Requiring
Non-Interrupted
Water Service

A reminder to all – please be sure to let us know if anyone in your household has a serious health condition requiring water to be available at all times, such as kidney dialysis. We make a note of this on your customer account screen.

Please contact Customer Service at 425-487-4100 or email customerservice@woodinvillewater.com.

Application for 2023 Low-Income Discount Rates

The District is accepting applications in June for our 2023-2024 Low-Income Discount Program which provides reduced water and sewer rates for customers meeting specific income guidelines. To qualify, a ratepayer must apply annually, during the month of June, and have a maximum income level no greater than the "Very Low-Income" status by household size for the "King County Seattle/Bellevue" area as published annually by the Federal Department of Housing and Urban Development (HUD).

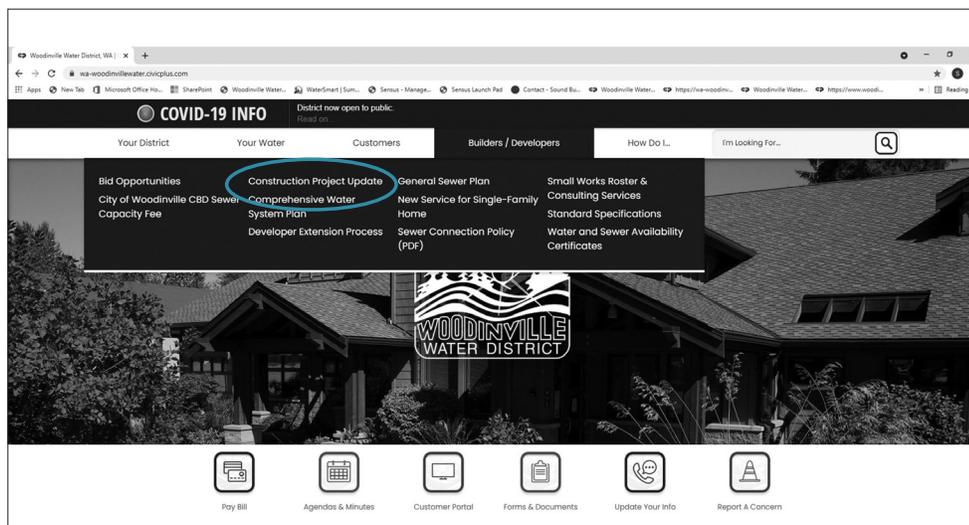
The program provides for a discounted base charge for both water and District sewer periodic charges and a discounted water consumption charge for the first 10 CCFs/7,480 gallons used each billing cycle.

Customers currently receiving the discount rate will be mailed an application for the 2023-2024 cycle. New applicants for the program can obtain the Low-Income Application Form, including the 2023-2024 income levels, by visiting our webpage at woodinvillewater.com. If you do not have access to the internet, please contact our office at 425-487-4100 and we will be happy to send you one.

Household Size	Maximum Combined Household Income	Household Size	Maximum Combined Household Income
1 person	\$47,950	5 person	\$74,000
2 person	\$54,800	6 person	\$79,500
3 person	\$61,650	7 person	\$84,950
4 person	\$68,500	8 person	\$90,450

INVESTING In Our Future

Visit www.woodinvillewater.com for the latest Construction Project Updates. If you have any questions for Woodinville Water District regarding any of these projects, please email Project Engineer, Christian Hoffman at choffman@woodinvillewater.com or call him at 425-487-4142.



Weekly Lawn Watering Schedules

If you want to keep your lawn green all summer long, the amount of water your lawn needs changes every week according to the weather and length of day. Regularly adjusting the watering schedule of your automatic irrigation system (unless you have a smart timer) will help you maintain a healthy, beautiful lawn and avoid wasting water.

In the Pacific Northwest the lawn watering season usually lasts from June to September. Check this <https://www.savingwater.org/lawn-garden/watering-irrigation/weekly-lawn-watering-schedules/> page every Saturday for advice on how to program your sprinkler timer for the upcoming week.

Choosing the Right Run Time for Your System

Each watering should apply a ½ inch of water. The application rate of a sprinkler system depends on the water pressure, system design, and system efficiency. Below are some general ranges of typical run times based on the precipitation rate of your sprinkler heads:



SPRAY HEAD

Nozzle Description: sprays like a fan

Run Time* for a 1/2": 15-23 minutes

If Using Cycles:** 3 cycles of 5-8 minutes



ROTATOR HEAD

Nozzle Description: single spray that rotates

Run Time* for a 1/2": 30-75 minutes

If Using Cycles:** 3 cycles of 10-25 minutes



HSMT HEAD

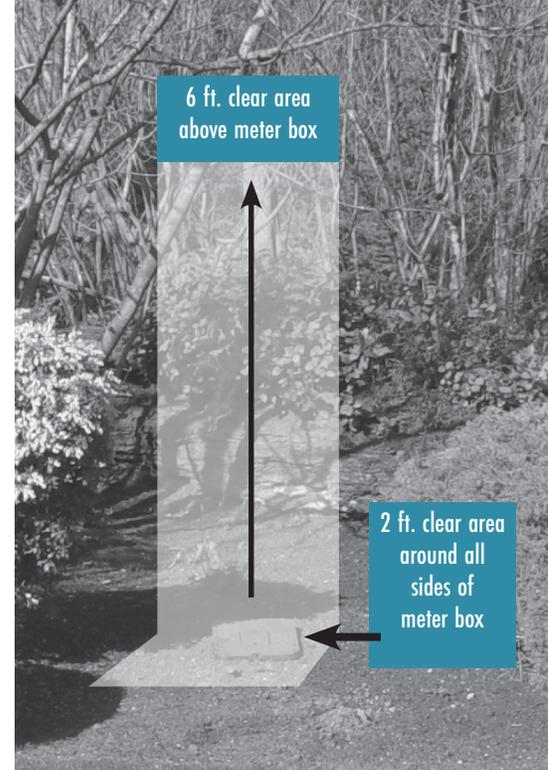
Nozzle Description: multiple single sprays that rotates

Run Time* for a 1/2": 50-75 minutes

If Using Cycles:** 3 cycles of 17-25 minutes

***Runtimes calculations:** Each sprinkler nozzle type has a specific precipitation rate measured in inches per hour. Spray nozzles operate between 1.3 and 2 inches per hour. Rotor nozzles operate between 0.4 and 1.0 inches per hour. MSMT nozzles, or multi-stream multi-trajectory nozzles, operate between 0.4 and 0.6 inches per hour. From these ranges the runtimes were calculated to water a ½ inch.

****Cycling Recommendation:** To prevent runoff and ponding in areas with clay soils and/or slopes, divide the run times into three cycles to allow the ground to absorb the water. Additional cycles are created by utilizing more than one start time combined with shorter runtimes.

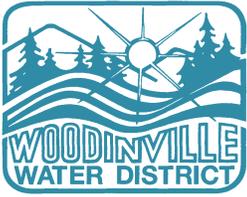


Utility Access – Please Keep Clear Access to Your Meter

Most water meter boxes are located in a utility easement along the front of the property. Property owners are responsible for maintaining a clear pathway to and around the water meter. District policy provides guidelines for customers to follow that will allow our staff to quickly find and perform any necessary repairs on your meter.

Take time to check the area around the water meter box. Please keep a two-foot area around all sides of the meter box and the space six-feet above the meter box clear. The path from the road to the meter box should also be cleared to a minimum of two-feet wide and six-feet high.

Please do not park cars or place any debris on top of the meter box. If your meter does not meet the minimum clearance requirements, you will be notified in writing. Failure to meet the minimum requirements after written communication has been sent may result in fines to your account. If you have any questions, please call our Customer Service Department at 425-487-4100.



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The Pipeline is designed to keep Woodinville Water District customers up-to-date on water related issues, projects, and conservation education. The District welcomes your feedback and your suggestions for future stories.

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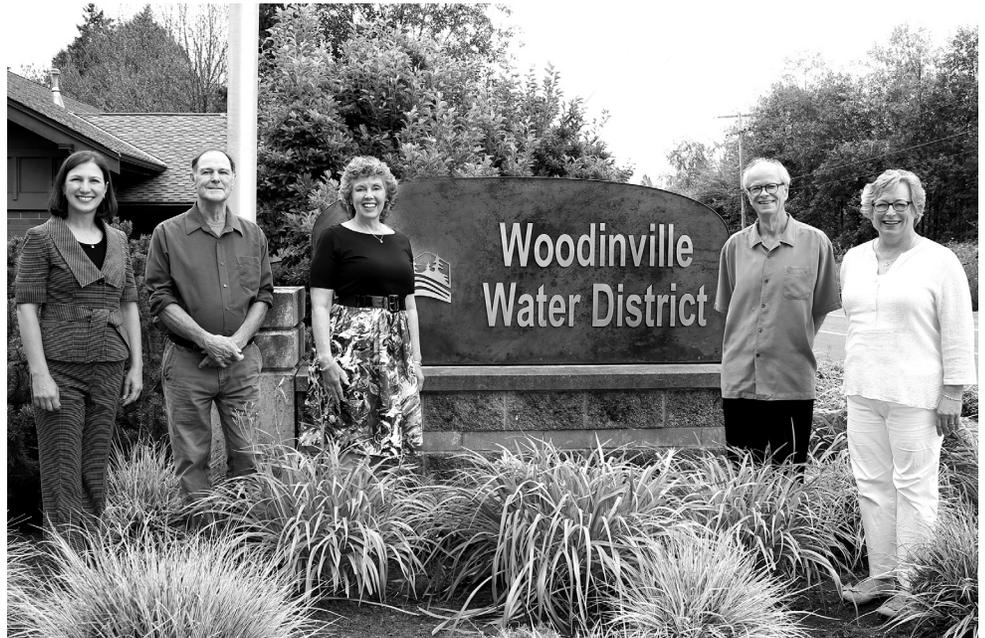
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WWD Board of Commissioners



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Do your part,
be water smart



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