2023 Water Use Efficiency

In 2003 the State legislature passed the Municipal Water Law directing the State Department of Health to adopt a rule establishing water use efficiency requirements for all municipal water suppliers. The goal of the rule is to conserve water for future generations and the environment. This will help ensure enough water remains available regionally to meet your needs and the needs of our community as well as those of wildlife and the environment.

The Washington State Department of Health requires municipal water suppliers to establish a water conservation goal and report on its progress annually. The City of Fircrest believes water conservation should be an everyday practice and the prevention of unnecessary leakage as well as the minimization of wasteful, inefficient water usage or practices are goals that all water users should be aware of and should improve upon whenever possible.

Washington State Department of Health

THE CITY OF FIRCREST

Where can I learn more about:

- The quality of my water?
- Getting answers to my questions?
- Additional conservation tips?
- Volunteering with the Pierce County Conservation District?

Fircrest Public Works Dept.

Vicky Walston
Public Works Office Coordinator

Tyler Bemis
Public Works Director

Jeff Davis
Utility Manager

120 Ramsdell St, Fircrest, WA

253.564.8900
vwalston@cityoffircrest.net
www.cityoffircrest.net

Pierce Conservation Dist.

Levi Love
AmeriCorps Outreach Specialist
levil@piercecd.org

253.845.9770
PierceCD.org/35/Get-Involved

US Environmental Protection Agency Safe Drinking Water Hotline

800.426.4791
www.epa.gov/safewater

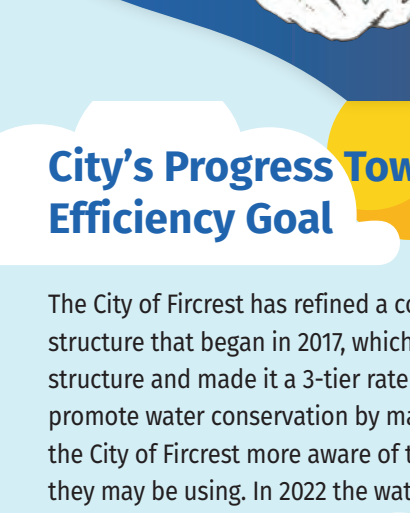
WA State Department of Health Northwest Regional Office

253.395.6750
www.doh.wa.gov/ehp/dw

2023
ANNUAL WATER QUALITY & WATER USE EFFICIENCY REPORT

THE CITY OF FIRCREST

Providing our customers with safe and reliable drinking water as well as educating and informing you on the importance of using water efficiently for future generations and the environment is a primary mission of the City of Fircrest Water Utility.



These annual reports are intended to provide current, factual and educational information about your drinking water and the importance of conserving it. This report also includes details about where your water comes from, what it contains and how it compares to the stringent standards set by regulatory agencies and information on why we should conserve and how the city promotes conservation and our efforts to minimize water loss.

All public water systems are required by the Environmental Protection Agency (EPA), the State of Washington and the Department of Health (DOH) to provide all of their water customers with annual reports on the quality of the drinking water provided and the City's efforts on promoting and educating our water conservation and pollution prevention efforts.

City's Progress Towards Water Efficiency Goal

The City of Fircrest has refined a conservation rate structure that began in 2017, which took our 2-tier rate structure and made it a 3-tier rate structure to further promote water conservation by making the residents of the City of Fircrest more aware of the amount of water they may be using. In 2022 the water tier's were each raised by 2% to continue our efforts of helping our consumers become more aware of the amount of water they are consuming/using.

Total Water Produced ..... 231,040,196 gal.
Authorized Consumption ..... 224,673,514 gal.
Distribution System Leakage .....6,366,682 gal.

The City also promotes water conservation, which was established in the Water System Plan's conservation plan in 2014, as well as our current water system plan which is currently being updated, by offering customers free low flow/water efficiency items and educational materials at the Public Works Building as well as at the City's Fircrest Fun Days event.

Our focus on efficient use of water in homes, schools, and businesses is helping us maintain and exceed our progress toward the goal set on the demand side at 0.2% average annual consumption.

2022 Annual Water Use Efficiency Performance

Distribution System Leakage 2.8%
3 Year Annual Average 3.8%
(2020, 2021 & 2022)

Additional Conservation Efforts

The City is in the process of changing out all of our single-family residential meters, once completed we will continue with changing out the rest of our meters, from manually read meters to AMI/automatic reads. This meter exchange program will not only ensure accurate meter readings each billing cycle but will also replace old malfunctioning meters. We have found that our manually read meters are beginning to die and not registering accurate water consumed. The new meter will also allow us to notify you, our customers, of potential leaks in your water service line quicker and with more accuracy assisting our efforts in minimizing water loss, it will also allow us to offer real time analysis that will be available for our water consumers. Beginning in 2017 we adopted a 3-year water rate structure, which took our 2-tier rate structure and replaced it with a 3-tier rate structure removing all water consumed from the water base (ready to serve) rate, as a means of educating on the importance of water conservation and water use efficiency, and to be in compliance with the Revised Code of Washington (RCW) 70.199A.180 Water Use Efficiency Requirements.

Other methods we are using, and have been for a number of years, is through education. We offer free water conservation items as well as educational and informational brochures, we include water conservation ideas on our website and occasionally in the Fircrest Town Topics and we offer free water audits where a member of our crew will come out to help determine if and/or to assist you in locating a potential leak.

We also partner with the Pierce County Conservation District who assist us in restoration projects, workshops, they created a "Stream Team", Water Quality monitoring team along Leach Creek, amongst other important water quality and water conservation efforts. Pierce County Conservation District relies on volunteers to help in their efforts.

How can I be WATER SMART in the summer and still have green grass?

Water consumption in the average American home, on summer days, can spike causing significantly higher water usage bills, compared to their "off peak" season.

Water your lawn, garden and shrubs only when it needs it *(If it's still moist 1-2 inches under the soil surface, you still have enough water).*

How can I tell if my lawn needs water?

- Walk across the grass. If the lawn springs back you don't need to water, but if you leave footprints, water may be needed.
- Use a Moisture Meter
- Use a Rain Gauge

How often/much should I water?

Most lawns need about 1" (one inch) of water – including rain fall – to stay healthy. We recommend watering every other day, during the hottest summer weather, for 10-15 minutes per area/zone. During cooler days you could be able to water one day a week for 10-15 minutes per area/zone and still maintain a healthy lawn ***(Stop by Public Works and pick up a free Moisture Meter)***.

Where does the water come from?

The City owns and operates the water system which is fluoridated as well as chlorinated and consists of approximately fifty miles of water mains, five groundwater wells and three water storage reservoirs with a capacity of 1.8 million gallons. Fircrest is within the Chambers & Clover watersheds, the Vashon Outwash as well as the Colvos Sand aquifer.

Wellhead Protection Plan

Preventing pollution is the first priority in protecting our groundwater supply. The objective is to reduce the risks of water supply contaminations by chemicals or other materials that might make the water supply unusable. Fircrest is completely dependent on groundwater. To protect the City's many wellheads, the focus is on human activity on the land above the water-bearing zones called aquifers. The City has developed a Wellhead Protection Plan that has been approved by the State Department of Health.

Do I need to take special precautions?

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.**

Why are there contaminants in my water?

The sources of drinking water (both tap 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.

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 at **1-800-426-4791** or from the EPA's Office of Ground Water website at: **www.epa.gov/OGWDW.**

In order to ensure the water system remains free of coliform bacteria, the City has implemented a disinfection system to the water system. This will provide an extra layer of protection to the miles of pipes that we have in our system and our storage facilities.

Contaminants that may be present in source water include:

Microbial Contaminants, such as viruses, parasites, and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic Contaminants, such as salts and metals, can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and farming.

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production. They can also come from gas stations, urban stormwater runoff, and septic systems.

Radioactive Contaminants, which can occur naturally or be the result of oil and gas production and mining activities.

Lead, 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 Fircrest 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.**

2022 Monitoring Results

Substance	Highest Level Allowed (MCL)	Highest Level Detected	Ideal Goals (MCLG)	Range of Level Detected	Meets Standards	Potential Source
Chemistry Analytical Results						
Fluoride	4 ppm	1.00 ppm	<2 ppm	<0.20 – 0.89	Yes	Treatment additive
Nitrites	10 mg/L	4.32 mg/L	<5 mg/L	1.87 – 4.32 mg/L	Yes	Erosion of natural deposits
Asbestos	7 MFL	0.116	<0.2	0.116	Yes	Naturally occurring fibrous silicate mineral
Microbiologic Contaminants						
Coliform	5%	None	0	None	Yes	Naturally present in the environment
Chlorine	4 ppm	1.34 ppm	4 ppm	0.02 – 1.34	Yes	Additive to control microbes
Samples tested every 3 years — Last sample: 2019			**Lead & Copper**			
Lead	0.015 mg/L	0.0075 mg/L	0	<0.0010 – 0.075 mg/L	Yes	Household plumbing
Copper	1.3 mg/L	0.686 mg/L	1.3 ppm	<0.020 – 0.686 mg/L	Yes	Household plumbing
Haloacetic Acid: ND (None Detected) **Trihalomethane Test Panel:** ND (None Detected)						

Substance	Tests Performed	Number of Times	Results
Herbicides	2021	on 14 different Herbicides	for which none were detected
Inorganic Chemicals (IOC's)	2019	on 27 inorganic chemicals	for which none exceeded the MCL
Synthetic Organic Chemicals (SOC's)	Sept 2022	on 28 synthetic organic chemicals	for which none exceeded the MCL
Volatile Organic Chemicals (VOC's)	Aug 2022	on 59 volatile organic chemicals	for which none exceeded the MCL
Water Hardness: Tested January 2021 **Analytical Results:** Range 120 – 136 ppm			

Definitions:

Maximum Contaminant Level of MCL: 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.

Maximum Contaminant Level Goal or MCLG: The level of a contaminant in drinking water below which there is no known or expected risk of health. MCLGs allow for a margin of safety.

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

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

Maximum Residual Disinfectant Level or MRDL: 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.

Maximum Residual Disinfectant Level Goal or MRDLG: 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.

ppm: parts per million **ppb:** parts per billion
mg/L: miligrams per liter

Did you know?

Ways to Conserve Water

The average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day. Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference. Try one today and soon it will become second nature:

- **Take short showers.** A 5-minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- **Shut off water** while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- **Use a water-efficient showerhead.** They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher **only when they are full.** You can save up to 1,000 gallons a month.
- Water plants **only when necessary.**
- **Fix leaky toilets and faucets.** Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so **only your lawn is watered.** Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- **Teach your kids about water conservation** to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit **www.epa.gov/watersense** for more information.