

TIMBERLAKE COMMUNITY CLUB

ANNUAL WATER QUALITY & EFFICIENCY REPORT

Water System ID# 88370Y

2023 REPORT FOR THE YEAR 2022



Help "Protect" Our Most Precious Resource – Water

The Value of Water

Drinking water is a precious resource, yet we often take it for granted.

Throughout history, civilizations have risen and fallen based on access to a plentiful, safe water supply. That's still the case today. Water is key to healthy people and healthy communities.

Water is also vital to our economy. We need water for manufacturing, agriculture, energy production, and more. One-fifth of the U.S. economy would come to a stop without a reliable and clean source of water.

Systems are in place to provide you with safe drinking water. The State of Washington and local water systems work to protect drinking water sources. For example, we might work to seal an unused well to prevent contamination of the groundwater. We treat water to remove harmful contaminants. And we do extensive testing to ensure the safety of drinking water.

If we detect a problem, we take corrective action and notify the public. Water from a public water system like yours is tested more thoroughly and regulated more closely than water from any other source, including bottled water.

Water quality reports are to inform you, the consumer, about water quality, characteristics, and treatment of the Timberlake Community clubs drinking water. Our goal is to provide you with a safe and dependable supply of drinking water while continually improving the water treatment process and protecting our water resources while improving the system for the future.

This report includes mandatory information regulated by the Washington Department of Health (DOH) as well as the Environmental Protection Agency (EPA) along with facts and details specific to Timberlake Community Club (TCC) water system. This publication complies with Federal law requiring all water utilities to provide water quality information to customers each year and is provided in addition to other notices required by law.

We support the consumer's right to know the results of our water quality monitoring and encourage consumer participation which affects our drinking water.

For **more extensive information** on our water quality testing results, they are available online at

<https://fortress.wa.gov/doh/eh/portal/odw/si/Intro.aspx> and enter 88370 in the system ID field.

Our water is monitored and tested by Certified Water personnel and required to test through certified laboratories. DOH monitors our compliance and testing procedures to ensure safe delivery of water to our customers.

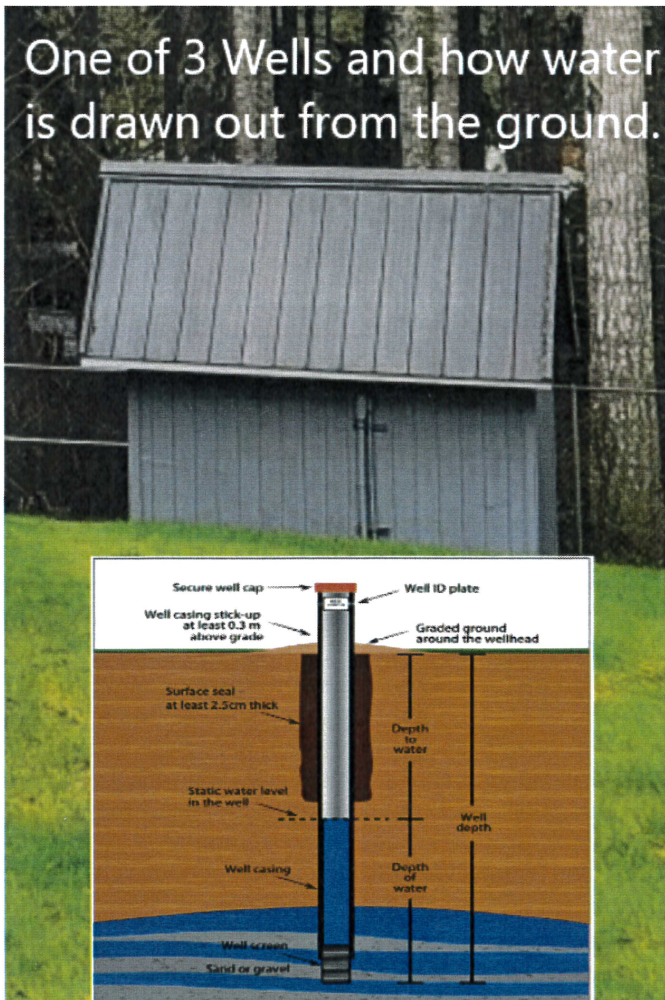
TCC's water meets or exceeds EPA water quality requirements

EFFICIENCY REPORT WATER USAGE INFORMATION

Our total water production for 2022 was 48,215,232 gallons. Of that, customer metered usage was 44,086,192 gallons with the remaining 4,129,040 gallons (8.6%) identified as distribution system leakage (DSL). This DSL currently includes small leaks, theft of water, and other unknown water losses as well as main breaks. The states limit is 10% that is based on a three-year average. Our current average is 6.0% for 2020, 2021, and 2022.



One of 3 Wells and how water is drawn out from the ground.



SOURCE INFORMATION

Timberlake Community Club has three water sources. We currently draw from well #2 and well #3 with well # 1 for emergency use. Our sources draw from the Oakland Bay watershed and all Timberlake water is treated with the least amount of chlorine necessary to provide safe drinking water to everyone, while minimizing taste and odor smell.

Staff collects samples daily to verify if the appropriate residual level of chlorine exists in the system required for public safety.

For further information regarding our water system, please refer to our water system plan available online at www.timberlakecc.com or reach out to our certified operators in the water department. The water system plan includes water system analysis, demand forecasting, water conservation and reliability, and a source water assessment and wellhead protection plan.

To ensure that tap water is safe to drink, the Department of Health and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and the Washington Department of Agriculture regulations established limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health affects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791 or EPA website <http://water.epa.gov/drink/>.

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 or EPA website <http://water.epa.gov/drink/info/>.

BACKFLOW PREVENTION (CROSS CONNECTION CONTROL)

In a continuing effort to ensure that we maintain the highest quality of water, our water system has a Cross Connection Control Program that requires customers with a potential water backflow or cross connections to install a backflow prevention assembly. The cross-connection program also requires (in compliance with state law) customers to have them tested by a certified backflow assembly tester annually. We setup and administer this process. Please see our water system policy available at the office or online as there are additional policies for selling and building requirements regarding DCBA installation. The most common cause of backflow is back-siphonage due to lowered main pressure caused by instances of high-water withdrawal (i.e., during firefighting). When back-siphonage occurs, water can be siphoned from a home or business bringing unwanted materials into the distribution system. For example, typical in-ground sprinkler systems may have stagnant or polluted water in the pipes that could be siphoned back into the water system and forced back into your home. For this reason, the state requires all sprinkler systems to have a backflow prevention assembly installed. A Double Check Valve Assembly (DC) is the minimum assembly allowed for sprinkler systems in our system. If you have any questions regarding this program, or would like more information, please call (360) 427-8928 ext. 4.



Information about irrigation systems and why you may need a backflow preventer on your irrigation system, hot water tank expansion and more, are all available at the MPC or at the Water Department.

CHLORINE INTERACTIONS WITH ORGANIC MATERIALS

Over time, organic materials like algae, bacteria and fungi can grow inside water supply lines. When these materials combine, they form a slimy matter called biofilm.

The free-chlorine that's added to your water is a disinfectant that will merge with these materials, which causes it to release by-products known as Trihalomethanes (THM's). The quantity of organic materials in your water will determine the quantity and type of THMs produced, and how strong the bleach odor is.

If the problem is in your plumbing, running your faucet for a few minutes should get rid of the smell. If the odor lingers, it's likely that the problem is in the pipes leading to your home, and there's nothing we can do.

TASTES AND ODORS

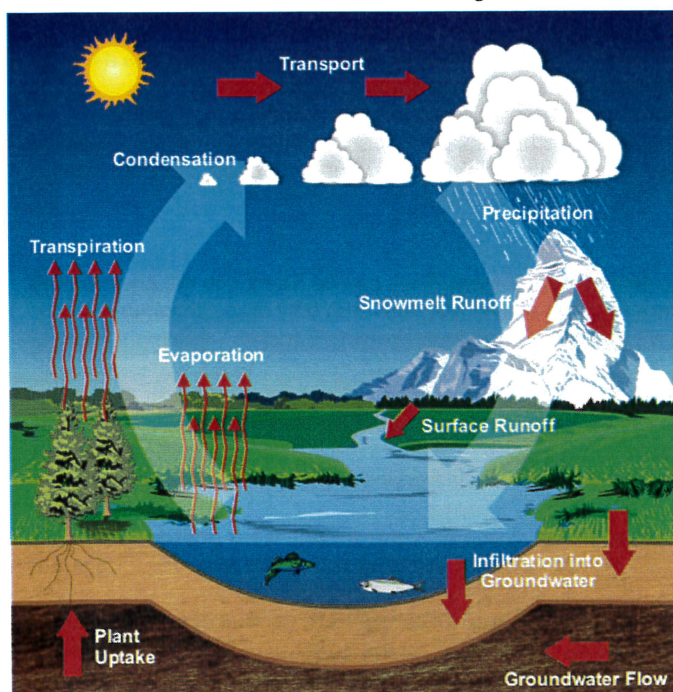
Taste and odor problems within the distribution system are generally caused by pressure surges in the main water system, which causes sediment in the pipes to become suspended in the water. Among the causes of pressure disturbances are watermain breaks, street construction, or the use of firefighting connections. This is why the city flushes its water mains periodically. The most common cause of pressure changes in home plumbing systems is the corrosion of galvanized plumbing systems. This situation is usually indicated by yellow or reddish water and appears in the first water drawn from the faucet each day.

WATER PRESSURES

Standards recommend that normal water pressure should range between 30 and 80 pounds per square inch (psi). If water pressure is greater than 80 psi the customer should consider installing a pressure-reducing valve (PRV) to reduce pressure to a normal level of between 30 and 80 psi. Timberlake Community Club is always working to improve the water systems storage and pumping facilities.



The Water Cycle



Word Search

Find the water-saving words listed below.

E	R	W	S	E	C	E	P	U	M	R	T	S	W	A
L	P	W	O	H	Z	X	J	C	Y	E	H	N	O	X
E	M	A	C	P	G	K	Y	H	C	O	E	L	U	N
I	P	E	C	K	A	E	L	U	W	D	W	H	T	Z
I	V	A	V	S	C	Y	A	E	R	L	Y	B	E	U
L	W	R	R	C	D	F	R	A	T	Q	C	W	L	M
B	N	T	A	C	O	N	G	S	K	A	A	T	I	O
U	S	H	F	F	S	Q	A	Y	X	T	P	X	O	O
V	S	B	R	U	S	H	K	L	E	G	V	H	T	R
V	S	R	A	W	H	P	E	R	F	A	V	S	I	H
R	E	H	S	A	W	H	S	I	D	S	N	C	A	T
E	E	X	C	V	P	Q	L	Q	W	B	I	S	O	A
W	J	Q	I	I	E	U	L	O	Q	X	U	E	C	B
Q	T	H	U	O	D	Q	U	V	H	S	X	B	P	K
E	B	M	U	N	X	N	R	S	X	B	F	U	R	C

bathroom	brush	dishwasher
earth	faucet	garden
shower	leak	scrape
water	tap	toilet

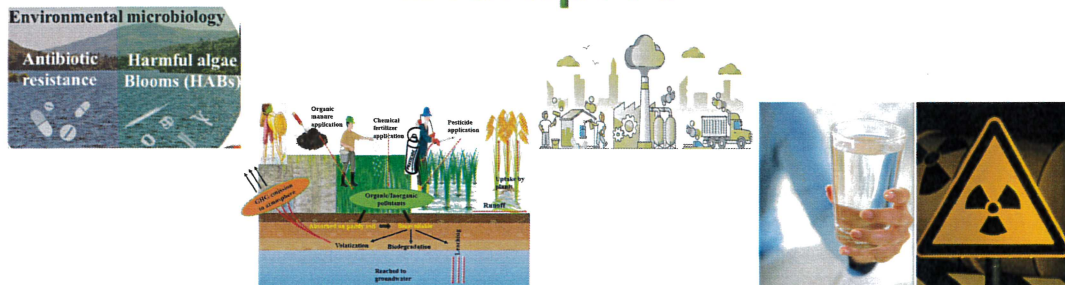
Bonus word: landscape

Learn More About Your Drinking Water

Contaminants can get in drinking water sources from the natural environment and from people's daily activities. There are five main types of contaminants in drinking water sources.

- **Microbial contaminants**, such as viruses, bacteria, and parasites. Sources include sewage treatment plants, septic systems, agricultural livestock operations, pets, and wildlife.
- **Inorganic contaminants** include salts and metals from natural sources (e.g., rock and soil), oil and gas production, mining and farming operations, urban storm water runoff, and wastewater discharges.
- **Pesticides and herbicides** are chemicals used to reduce or kill unwanted plants and pests. Sources include agriculture, urban storm water runoff, and commercial and residential properties.
- **Organic chemical contaminants** include synthetic and volatile organic compounds. Sources include industrial processes and petroleum production, gas stations, urban storm water runoff, and septic systems.
- **Radioactive contaminants** such as radium, thorium, and uranium isotopes come from natural sources (e.g., radon gas from soils and rock), mining operations, and oil and gas production.

Examples



You Can Prevent Pollution

Many of our daily activities contribute to the pollution of Washington States surface water and groundwater. You can help protect these drinking water sources by taking the following actions:

Lawn and property:

- Limit use of herbicides, pesticides, and fertilizers on your property.
- Keep soil in place with plants, grass, or rocks.
- Cover temporary piles of dirt with a tarp or burlap sack.
- Keep leaves and grass off streets and sidewalks.
- Maintain any septic systems, private wells, and storage tanks to prevent leaks. Seal any unused wells.
- Out-of-date medications: Never flush unwanted or out-of-date medications down the toilet or sink. Always take them to a waste disposal or prescription medication drop-off site. More information is available at Managing unwanted medications at <https://www.doh.wa.gov/forpublichealthandhealthcareproviders/healthcareprofessionalsandfacilities/safemedicationreturnprogram>

Hazardous materials: Safety store hazardous materials such as paint, batteries, herbicides, pesticides, and pool chemicals. Dispose of them at a proper waste disposal facility or drop-off event. Do not dump down storm drains, sink or onto your land. Learn more at: [Keep hazardous waste out of the garbage.](#)

- Pet waste: Pick up after your pet and put waste in the trash.
- Trash: Seal trash bags and keep litter out of the street.
- Winter ice removal: Chemicals used to break up the ice are called deicers or anti-icers. They can be harmful to the environment, corrosive to driveways and sidewalks and harmful to plants, pets and humans. Always shovel first, and then only apply deicers/anti-icers lightly if needed. Learn more to protect Washington waters <https://ecology.wa.gov/Issues-and-local-projects/Education-training/What-you-can-do/Washington-Waters-ours-to-protect>

- **Keep an eye out for car and motor fluids: Seal or repair any fluid leaks that could run off onto streets and into storm drains. Take used motor oil or other fluids to a neighborhood drop-off site.**

- Be a water advocate: Spread the word; get involved. There are many groups and individuals working to protect water across Washington.

- **Reduce Backflow at Cross Connections; Bacteria and chemicals can enter the drinking water supply from polluted water sources in a process called backflow. Backflow occurs at connection points between drinking water and non-drinking water supplies (cross connections) due to water pressure differences.**

For example, if a person sprays an herbicide with a garden hose, the herbicide could enter the home's plumbing and then enter the drinking water supply. This could happen if the water pressure in the hose is greater than the water pressure in the home's pipes. Property owners can help prevent backflow. Pay attention to cross connections, such as garden hoses.

The Washington Department of Health and American Water Works Association recommend the following:

1. Do not submerge hoses in buckets, pools, tubs, or sinks.
 - Keep the end of hoses clear of possible contaminants.
 - Do not use spray attachments without a backflow prevention device. Attach these devices to threaded faucets. Such devices are inexpensive and available at hardware stores.
2. Use a licensed plumber to install backflow prevention devices.
3. Maintain air gaps between hose outlets and liquids. An air gap is a vertical space between the water outlet and the flood level of a fixture (e.g., the space between a wall-mounted faucet and the sink rim). It must be at least twice the diameter of the water supply outlet, and at least one inch. **Your sink is considered an AIR GAP and separates the potable water from the contaminants in the sink basin.**

Home Water Treatment

Overview

Whether you drink from a public water supply or a private well, you may have drinking water that does not need treatment for health protection. Water treatment units are best for improving the physical qualities of the water's taste, color, or odor.

No single treatment process can remove all substances in water. If you decide to install a home water treatment unit, choose a unit certified and labeled to reduce or remove the substance of concern. If there is more than one substance you want to remove from your water, you may need to combine several treatment processes into one system.

Even well-designed treatment systems can fail. You should continue to test your drinking water after you install a treatment unit. All home water treatment units need regular maintenance to work correctly.

Regular maintenance may include changing filters, disinfecting the unit, or cleaning scale buildup.

Always install, clean, and maintain a treatment unit according to the manufacturer's recommendations



68.7% of the fresh water on Earth is trapped in glaciers.

About 6,800 gallons of water is required to grow a day's food for a family of four.

70% of the human brain is water

In Washington state alone, glaciers provide 1.8 trillion liters (470 billion gallons) of water each summer.

80% of all illness in the developing world is water related

THE WATER CYCLE

R	I	A	M	T	H	C	N	L	I	A	H	T	N	N	I	A	R
E	W	I	S	A	G	L	A	O	T	D	R	O	P	L	E	T	S
E	S	E	R	C	Y	O	C	L	I	A	I	N	U	S	F	L	C
T	E	R	L	I	Q	U	I	D	N	T	I	E	S	R	E	A	O
S	L	E	R	Z	S	D	O	S	A	C	C	R	E	E	T	R	N
R	N	I	E	A	Z	S	P	T	W	E	D	E	T	L	A	O	D
E	O	C	V	L	E	I	I	F	O	G	Z	H	L	D	E	P	E
F	I	A	I	T	R	P	R	H	E	I	F	P	S	L	H	A	N
I	T	L	R	A	I	R	H	D	N	F	H	S	N	Y	O	V	S
U	A	G	T	C	E	C	M	G	O	S	T	O	A	T	D	C	A
Q	R	I	E	T	Y	A	R	N	R	N	R	M	E	L	S	M	T
A	O	R	A	C	E	A	U	O	L	O	A	T	C	E	O	A	I
N	P	W	L	T	I	R	E	C	I	W	E	A	O	M	L	E	O
O	A	E	S	N	S	E	T	A	R	O	P	A	V	E	I	R	N
G	V	R	E	T	A	W	D	N	U	O	R	G	I	C	D	T	C
Y	E	S	E	K	A	L	C	R	E	H	T	A	E	W	L	S	E

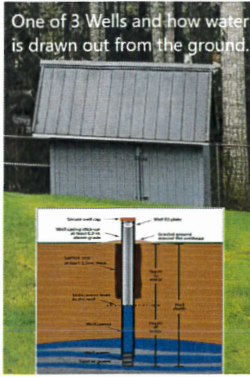
EVAPORATION	CONDENSATION	PRECIPITATION	COLLECTION
SUN HEAT EVAPORATES AIR TRANSPIRATION VAPOR STEAM MIST GAS	CLOUDS DROPLETS ATMOSPHERE DEW FOG LIQUID	RAIN SNOW HAIL SLEET DRIZZLE FREEZING RAIN	LAKES OCEANS RIVER RUNOFF STREAM GROUNDWATER AQUIFERS GLACIER

WATER CYCLE EARTH WEATHER SOLID ICE MELT

Tree Valley Academy

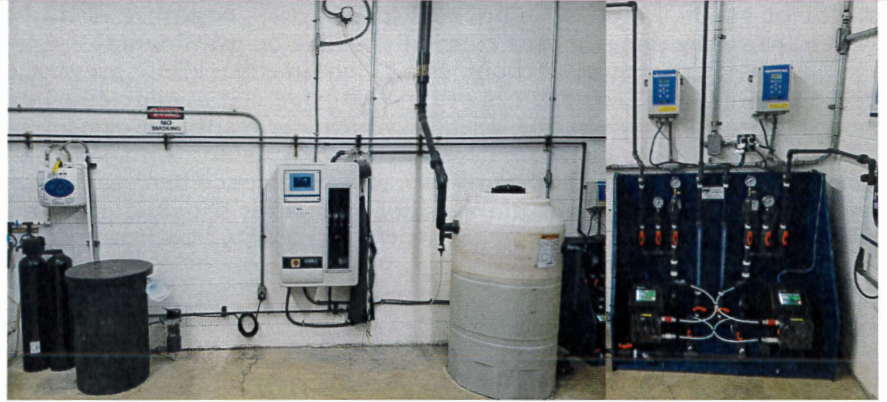
Wells supply water from groundwater

One of 3 Wells and how water is drawn out from the ground.



via a pump and motor. The water is then sent through the filters in below photo and dosed with a specific amount of chlorine to remove Iron and manganese.

Chlorine is produced onsite. Metering pumps dose with chlorine.



F I L T R A T I O N



RESERVOIR CONTROL

This panel controls the transfer of water from the wells to storage.



A N A L Y Z E R S



The analyzers on the left monitor free chlorine residuals at the filters and water entering distribution main that intern goes through various pipes and to your home.



STEEL RESERVOIR

This is where the treated water is stored after it has been filtered and is allowed to have contact time with chlorine and off-gas. Then goes to a 60,000-gallon concrete reservoir prior to it being sucked into the booster pumps on the right.

Below we have 4 booster pumps, each capable of 400 gpm for a total of 1,600 gpm. When you turn on a spigot or a faucet flow increases and thus the booster pump will increase its flow to maintain a specified set pressure.

B O O S T E R P U M P S



Out to distribution

The pressure tank is to dampen surges of pressure from pumps

This is the brains of the pumping system. It controls the operation of the pumps

Lines providing water from reservoirs

CONSERVATION

Conservation is essential. For example, in the Eastern Washington area, groundwater is being used faster than it can be replaced. Some agricultural regions in Washington are vulnerable to drought, which can affect crop yields and municipal water supplies.

We must use our water wisely. Below are some tips to help you and your family conserve - and save money in the process.

- Fix running toilets-they can waste hundreds of gallons of water.
- Turn off the tap while shaving or brushing your teeth.
- Shower instead of bathe. Bathing uses more water than showering, on average.
- Only run full loads of laundry and set the washing machine to the correct water level.
- Only run the dishwasher when it's full.
- Use water-efficient appliances (look for the Water Sense label).
- Use water-friendly landscaping, such as native plants.
- When you do water your yard, water slowly, deeply, and less frequently.
- Water early in the morning and close to the ground.

Learn more

- ❖ Department of Ecology – State of Washington <https://ecology.wa.gov/Issues-and-local-projects/Education-training/What-you-can-do/Water-conservation>
- ❖ U.S. Environmental Protection Agency's Water Sense webpage <https://www.epa.gov/watersense>

Water Conservation helps save money and water. We have available at the Timberlake Community Club MPC or the Water Department "100 tips to help conserve water" among others, stop by for a copy.

Our Operators:

WATER MANAGER
MARCUS VIND,
WDMII, CCS, WTPO1



JOSEPH CASTELLUCCIO JR,
WDMII, CCS



LEVI GIBERSON,
OPERATOR IN TRAINING

WHAT DO THE TABLES MEAN?

Every year the Timberlake Community Club is mandated by the Department of Health to test for contaminant compounds. The tables on the back page display the results for TCC's water source and the compounds tested in 2022. Each table also lists the ideal goals for public health (MCLG), the highest level allowed by regulation (MCL), the amount detected, and the usual sources of such contamination. Below is a key and definitions to terms in the tables.

KEY & DEFINITION TO TABLES

Term	Definition
AL:	Action Level: The concentration of a contaminant, which if exceeded, triggers treatment or other requirements that a water system must follow.
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 contaminants that is allowed in drinking water. MCLs are set as close to the MCLs as feasible using the best available treatment technology.
MFL:	Million Fibers per liter
Mg/L:	Milligrams per liter
ML:	Milliliter
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.
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 (e.g., chlorine, chloramines, chlorine dioxide)
MRL:	Method Reporting Limit
N/A:	Not Applicable
ND:	Not Detected
pCi/L:	Picocuries per liter (a measure of radioactivity)
PPB:	Parts per billion or Micrograms per liter
PPM:	Parts per million or Milligrams per liter (mg/l)
RDL:	Reporting Detection Limits
SRL:	State Reporting Level: Indicates the minimum reporting level required by the Washington Department of Health.
TT:	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
LEAD/COPPER	90th Percentile: Out of every 10 homes sampled, 9 were at or below this level.
Ug/l:	Micrograms per liter

2022 Test Results for Timberlake Community Club Water System

The Timberlake Water Department tests for more than 80 drinking water contaminants as required by the Environmental Protection Agency and the Washington State Department of Health (DOH). The DOH requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Most of the data, though representative of the water quality, is from tests taken during the 2022 calendar year unless otherwise noted. Only those contaminants that have been detected are listed in the table. Complete copies of all contaminants that are tested for are posted in the MPC and available upon request.

EPA Lead Statement: *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. Timberlake Community Club, Inc. 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 your 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 HOT LINE or online at <http://www.epa.gov/safewater/lead>.*

Timberlake Community Club is required to test for **Lead and Copper** every three years. Ten (10) lead and copper samples were taken in 2022 at various residential locations in the community. All the samples tested and reported were below the **Action Level of 1.3 mg/l copper and 0.015 mg/l lead**. The results of the tests were sent to all participating Timberlake Members as required.

Timberlake Community Club started the Disinfection Byproducts **Stage 2** testing requirements in 2014. Timberlake is now required to take one (1) sample in 2022.

Disinfection Byproducts based on the last EPA required test. Sample site # 1

Contaminants	MCL	MCLG	Timberlake Water	Sample Date	Violation Y/N	Typical Source of Contamination
Haloacetic Acids (HAA's)						Byproduct of drinking water disinfection
❖ Monochloroacetic Acid (PPB)	*	2.0	ND	08/11/22	N	
❖ Monobromoacetic Acid (ppb)	*	1.0	ND	08/11/22	N	
❖ Dichloroacetic Acid (ppb)	*	1.0	ND	08/11/22	N	
❖ Dibromoacetic Acid (ppb)	*	1.0	1.66	08/11/22	N	
❖ Trichloroacetic Acid (ppb)	*	1.0	4.54	08/11/22	N	
• Total HAA's	60	6.0	6.2	08/11/22	N	
Trihalomethanes (THHM)						Byproduct of drinking water disinfection
❖ Chloroform (ppb)	*	0.25	31.36	08/11/22	N	
❖ Bromodichlormethane(ppb)	*	0.5	2.46	08/11/22	N	
❖ Dibromochlormethane(ppb)	*	0.5	ND	08/11/22	N	
❖ Bromoform (ppb)	*	0.5	ND	08/11/22	N	
**Total THHM/s (ppb)	80	.40	33.82	08/11/22	N	

*Potential health effects of HAA's from ingestion of Water: Increased risk of cancer.

**Potential Health Effects of TTHM's from Ingestion of Water: Liver, kidney, or central nervous system problems; increased risk of cancer

Complete Timberlake Water System Data is available by entering system ID number 88370 at: <http://www4.doh.wa.gov/SentryInternet/FindWaterSystem.aspx>

For more information: Division of Drinking Water: <http://www.doh.wa.gov/ehp/dw>

EPA Arsenic Information: <http://www.epa.gov/OGWDW/arsenic.html>

Agency for Toxic Substances and Disease Registry (U.S. Centers for Disease Control and Prevention): <http://www.atsdr.cdc.gov/tfacts2.html>