

Drinking Water Treatment Facility: Frequently Asked Questions (FAQs)

Why are we building a new drinking water treatment facility?

The City of Port Townsend is building a new drinking water treatment facility to protect public health and comply with federal Safe Drinking Water Act regulations. In order to ensure adequate treatment for *Cryptosporidium*, a microscopic parasite that may be transmitted from human and animal feces to water and is resistant to chlorine treatment, the City had planned to construct an ultraviolet (UV) treatment facility. However, treatment requirements have recently changed due to the Washington Department of Health (WDOH) expectations for managing public access within our municipal watershed.

Why does our drinking water source require more treatment than other water sources, like wells?

The City of Port Townsend receives drinking water from a 37,361 acre (approximately 60 square mile) watershed in the Olympic National Forest that drains into the Big and Little Quilcene Rivers. Surface water sources are susceptible to contamination by organisms such as bacteria, viruses, and parasites that can cause illness and disease. Public water systems with surface water sources are subject to extensive federal and state requirements to protect public health.

Why did the City decide to switch from UV to membrane filtration for drinking water treatment?

The City, in consultation with the WDOH, decided to switch from the planned UV disinfection to membrane filtration. Though the cost to build a membrane filtration treatment plant is greater than a UV treatment plant, the level of effort for watershed monitoring and protection that would be required in order to remain an unfiltered water system, even with UV treatment, would result in similar overall costs.

What's the difference between UV radiation and membrane filtration treatment?

UV light prevents *Cryptosporidium* from reproducing by altering its DNA. Membrane filtration physically removes micro-organisms from the water. The membrane filtration system produces cleaner water because it physically removes particles from the water.

What are the project costs and how are we paying for this?

The total cost for the City's membrane filtration treatment facility is estimated at \$17 million. This includes site preparation, design and construction costs totaling almost \$14 million. We will pay for this project through a combination of grants, low-interest loans, and local match provided by Water Utility ratepayers.

Why is this type of drinking water treatment so expensive?

Any new treatment facility will have the basic expenses of a building, parking areas, road access, utilities, and site preparation. The biggest difference with the membrane filtration facility (versus UV treatment) is the technology used to treat the water. The filters used to remove *Cryptosporidium* from the water supply are more expensive than ultraviolet lights and the facility will be slightly larger.

What would happen if we did not comply with federal requirements?

If we are not in compliance with federal regulations, it will have a significant economic and public health impact on the City of Port Townsend. If left unresolved, the current situation could lead to:

- Prohibition of new water service hook-ups and the resulting economic impacts
- Declining customer trust in the safety of the water supply
- Limiting City access to federal or state grants or low-interest loans for future water projects
- Potential fines or legal action

What is the schedule for construction of the new treatment facility?

Construction of the new treatment facility will begin in 2015 and be operating by October 31, 2016. The facility will be located on city-owned property near the intersection of 20th Street and Baker Street, near the City's 5 million gallon reservoir.

Will I notice any difference in the taste of my water with this new treatment?

No, you should not notice a significant difference in the taste of your drinking water after filtration.

Will chlorine still be used for disinfection? Why?

Yes, chlorine will still be used for disinfection. The Department of Health requires a certain amount of "contact time" with chlorine to provide disinfection for anything not removed by filtration such as viruses and to prevent contamination of the distribution system pipes. The City is required to monitor chlorine disinfection-by-products, which may be harmful – and levels are well below the standard considered safe by the EPA. Please see the [City's annual water quality report](#) for more information on chlorine disinfection.

Is our tap water safe to drink? How often is it monitored for disease causing organisms?

In three years of monitoring only one *Cryptosporidium* organism was found in the City's source water. Currently - the City's water is safe to drink for most residents – because chlorine is generally adequate for disinfection. However, chlorine does not kill *Cryptosporidium* and therefore, people with severely compromised immune systems, infants and some elderly consumers may want to seek advice about drinking water from their health care provider.

Under our Agreed Notice of Correction with WDOH we are required to monitor water quality and activities within the watershed regularly. For example, our City Lake reservoir is monitored 4 times per week for fecal coliform bacteria, and once per quarter for *Cryptosporidium*. Until the new treatment facility is operating, we are increasing

inspection of roads, trailheads, and parking areas in the watershed and informing users about how to prevent contamination of the water supply.

Why do we have to build this treatment facility if the water is safe to drink?

This facility will reduce the potential public health risks associated with unfiltered surface water sources used for drinking water. Current federal Safe Drinking Water Act regulations (Long-Term 2 Enhanced Surface Water Treatment Rule) mandate treatment for the City's surface water supply. Surface water sources are susceptible to contamination by organisms such as bacteria, viruses, and parasites that can cause illness and disease.

I'm confused about the water system notification - should I use an alternative water source?

In general, the chlorine used to treat our drinking water is adequate for disinfection, and you do not need to use an alternative water source. However, chlorine does not kill *Cryptosporidium* and therefore, people with severely compromised immune systems, infants, and some elderly may want to seek advice about drinking water from their health care provider.

What are the Water Utility rates going to be in the future to pay for this facility?

Water rates are projected to be about \$50 per month for an average resident in 2016. These rates will cover annual Water Utility operations and maintenance costs and include a water capital surcharge that is designed to pay for design and construction of the treatment facility.

Why does a single family resident have to pay the same capital surcharge as a large business?

The capital surcharge for water is a flat fee charged per meter, and is not based on the amount of water used at each connection. The City chose a flat fee to fund the design and construction of the water treatment facility. The other portions of the water bill - the O&M rate, and the volume charge are based on the size of the meter, and the amount of water used. Therefore, commercial customers who have larger meters and use more water will have significantly higher water bills than the average residential customer.

Once the project is completed – will the capital surcharge for water go away or go down?

No, the capital surcharge will be used to repay low-interest loans and will remain in place for the term of the low-interest loans, which will be 20-40 years after the treatment facility is completed in 2016.

Need more information?

For design and construction updates, please visit our "Current Projects" webpage on the City of Port Townsend website at www.cityofpt.us. There will also be regular updates in the City newsletter. Please contact Liz Hoenig with Capital Projects and Engineering for project related questions at 360-390-4039 or lhoenig@cityofpt.us.

For Water Quality information, you can visit the "Water" webpage for a copy of the City's most recent Water Quality report. Please contact Water Resources staff for specific questions related to public health and water quality at 360-379-5001.