



# 2017 WATER QUALITY REPORT

## *City of Port Angeles, Washington*

### **WE PROVIDE EXCEPTIONAL DRINKING WATER FOR YOU!**

The City of Port Angeles is pleased to provide you with our Annual Consumer Confidence Water Quality Report for 2017. The purpose of this report is to share information with our customers about the quality of your drinking water and to convey a basic knowledge of our water system. Using data collected in 2017, this report summarizes information about your supply source, the water system facilities that deliver water to your tap, and the quality of your drinking water.

Providing safe, high quality drinking water is our top priority. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water customers. To ensure our customers receive safe, high quality drinking water, efforts continued in 2017 to replace aging mains and smaller distribution lines through capital improvement projects. The water distribution crew continued to improve the water quality of our community by upgrading service lines and mains, meters, fire hydrants, and water quality sampling stations. Additionally, the City has been proactively monitoring for leak detection throughout the City.

If you have any questions about this report or questions concerning your water utility, please contact James Burke, Deputy Director of Public Works at 360-417-4802. The 2017 City of Port Angeles Annual Water Quality Report is available online at <http://wa-portangeles.civicplus.com/265/Water-Utility>.

### **NEED TO CONTACT US?**

Water Department:  
360 - 417 - 4855

Backflow:  
360 - 417 - 4886

Utility Billing (Finance):  
360 - 457 - 0411

Emergency (After Hours/Holidays):  
360 - 461 - 9261

City Website:  
[www.cityofpa.us](http://www.cityofpa.us)

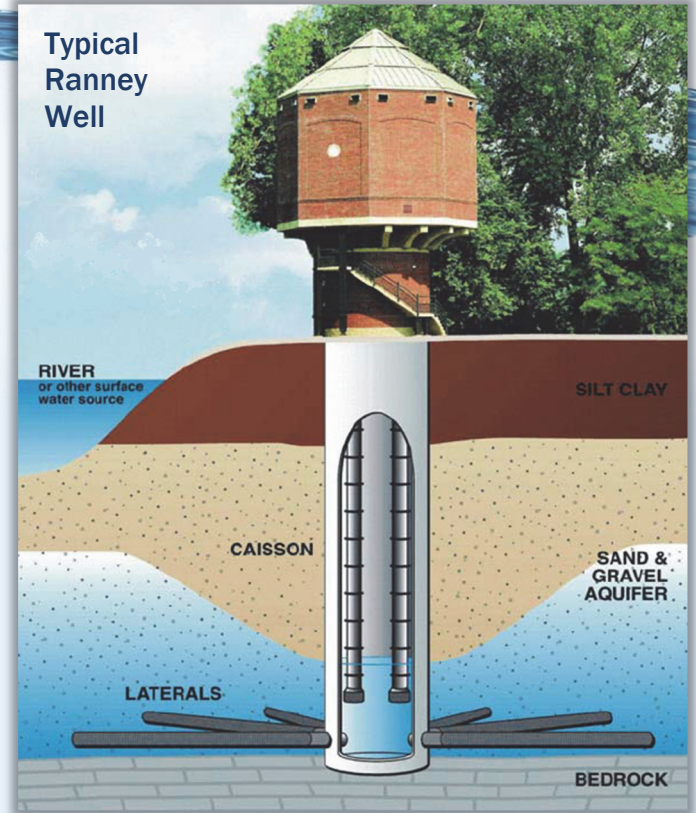
## WHERE DOES YOUR WATER COME FROM?

Source water for the City of Port Angeles Water System comes from the City's Ranney Well, which has been classified as Groundwater Under the Influence (GWI) of surface water. This designation requires the City to meet the strict requirements of the Surface Water Treatment Rule (SWTR) for our drinking water.

The City of Port Angeles is in full compliance with the SWTR through the filtration processes provided by the Port Angeles Water Treatment Plant (PAWTP). As an alternative option, the City has the ability to receive and treat water from the Lower Elwha Treatment Plant which draws directly from the Elwha River.

The City's Department of Health system identification number is 68550M. More data on Source Water is available through the Source Water Assessment Program (SWAP) online at:

<http://www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/SourceWater/SourceWaterProtection>

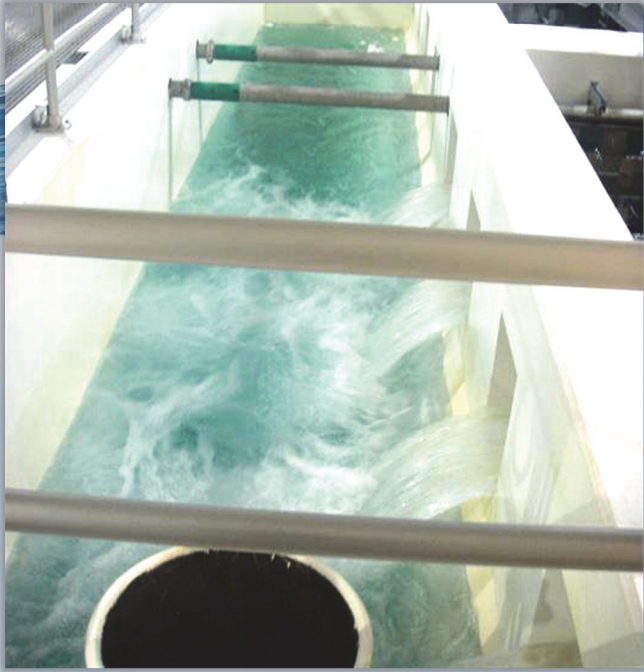


## YOUR WATER TREATMENT PLANT



The Port Angeles Water Treatment Plant (PAWTP) is one of the facilities that was designed and constructed by the Federal Government as part of the Elwha dams removal project. It was placed into service in early 2010 and has a net-production capacity of approximately 10.6 MGD. The Plant is comprised of high-rate clarification using the proprietary ACTIFLO process, flocculation, dual media filtration, and chlorine disinfection (sodium hypochlorite). The sodium hypochlorite system feeds enough chlorine to maintain a chlorine residual of approximately 0.5 mg/L in the distribution system downstream of the PAWTP. The chlorine dissipates gradually in the system, but is re-chlorinated at several locations within the system. Waste stream water from the filter backwash process is recycled to the head of the treatment plant and retreated.

## WATER OPERATIONS STAFF

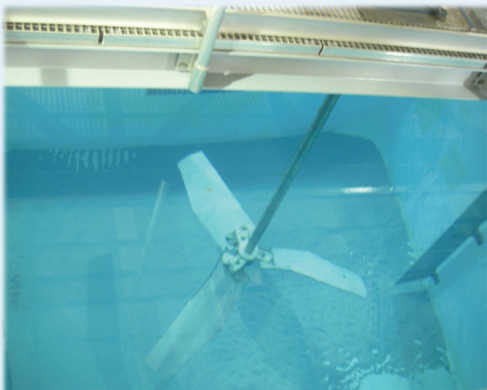


The Water Operations staff has the responsibility of producing and delivering high quality drinking water to your door. Our goal is to ensure that we meet all regulatory agency standards and retain your confidence in us to provide you with safe and reliable drinking water every time you turn on your water tap.

They take great pride in serving the community with expertise and professionalism. Continuing education is mandatory for our employees to meet the high standards that you have come to expect. Current certifications held by staff and issued by the Washington State Department of Health include: Water Distribution Manager, Water Distribution Specialist, Water Treatment Plant Operator, Cross Connection Control Specialist, and Backflow Assembly Tester.

## CROSS CONNECTION CONTROL

To protect our customers from possible cross connection contamination to the drinking water distribution system, the City of Port Angeles proactively inspects and requires testing of backflow devices on an annual basis. In the year 2017, we evaluated 472 sites with a total of 886 potential hazards eliminated with backflow devices. We added 27 new locations requiring annual inspections and testing to protect the drinking water system. If you have any questions regarding backflow requirements, you may contact the Backflow Inspector at 360.417.4886.



ACTIFLO Basin



Chemical Storage & Pumps



Conventional Filter Basins

## WHAT WE TEST FOR IN YOUR DRINKING WATER

In 2017, we routinely sampled source and distribution locations and submitted the samples to state certified labs. These samples included: 462 routine Coliform samples; one sample for Nitrate-N from each source, 16 (four per quarter) samples each for total trihalomethane (TTHM), haloacetic acid (HAA5), and quarterly total organic carbon (TOC's) pre and post filtration. Fluoride is no longer routinely tested as the City Council temporarily suspended fluoridation of the City's drinking water on August 2, 2016 until an advisory vote conducted during the 2017 Municipal Elections essentially made the suspension permanent. We are happy to report that there were no exceedances for 2017. The results listed on page 6 are a summary of these tests as submitted to the DOH/Office of Drinking Water and U.S. Environmental Protection Agency.

### Lead in Drinking Water

In Washington State, lead in drinking water comes primarily from materials and components used in household plumbing. The more time water has been sitting in pipes, the more dissolved metals it may contain, such as lead. Elevated levels of lead can cause serious health problems especially in pregnant women and young children.

To help reduce potential exposure to lead: For any drinking water tap that has not been used for 6 hours or more, flush water through the tap until the water is noticeably colder before using for drinking or cooking. You can use the flushed water for watering plants, washing dishes, or general cleaning. Only use water from the cold tap for drinking, cooking, and especially for making baby formula. Hot water is likely to contain higher levels of lead. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water is available from EPA's Safe Drinking Water Hotline at 1.800.426.4791 or online at: <http://www.epa.gov/safewater/lead>



## WATER SAMPLING DEFINITIONS

Term	Definition	Term	Definition
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.	ND	Not Detected
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.	NE	Not Evaluated
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.	HAA5	Haloacetic Acid
MRDL	Maximum Residual Disinfectant Level: The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.	D/DBP	Disinfectant/Disinfection By-Products
MRDLG	The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefit of the use of disinfectants to control microbial contaminants.	pCi/L	Picocuries per Liter
		ppm or mg/L	Parts per million, or milligrams per liter (mg/L)
		SRL	State reporting Level
		TOC	Total Organic Carbon
		TTHM	Total Trihalomethane
		ug/L	Micrograms per Liter
		MF/L	Million Fibers per Liter

# WATER QUALITY MONITORING RESULTS

Sampling Conducted	Sample Date/ Freq	Detected level	Unit	MCL MRDLG	Violation	Major Sources
Nitrates at source— Ranney Well Surface	10/11/17 10/11/17	ND ND	ppm - mg/L	10	NO	Runoff, Septic, Fertilizers
Microbiological Contaminants- (38) Monthly Samples, 6 New Construction & Investigative.	Monthly and as Needed	ND	N/A	Contaminant Present	NO	Naturally present in the environment
Total Organic Carbons (TOC's)	1 Sample per Quarter	.295 AVG	ppm - mg/L	NE	NO	Quarterly sampling required
Trihalomethane (TTHM)	4 Samples per Quarter	6.144 AVG	ug/L	80 ug/L	NO	Byproduct of Chlorine Disinfections Process
Haloacetic Acid (HAA5)	4 Samples per Quarter	1.688 AVG	ug/L	60 ug/L	NO	Byproduct of Chlorine Disinfection Process
Lead (90th percentile of 30 houses tested)	8/17	.003	mg/L	AL 0.015	NO	From specific plumbing in certain year homes
Copper (90th percentile of 30 houses tested)	8/17	.792	mg/L	AL 1.3	NO	From specific plumbing in certain year homes
Fluoride (Suspended on August 2, 2016)	Monthly	ND	mg/L	MCL 4.0 Secondary MCL 2.0	NO	Chemical is regulated by State
Asbestos	9/01/09  Next sample 9/19	ND	MFL>10 um		NO	Naturally occurring. Transmission mains
Complete Volatile Organic Compounds (VOC's) (surface water)	2/15/17 5/10/17 8/2/17 10/11/17	ND	ug/l	Various	NO	Fuels and solvents that may enter source water
Complete Inorganic Compounds (IOC's) (surface water)	8/2/17	Below MCL	mg/l	Various	NO	Naturally occurring or manmade non carbon compounds. Copper, Lead, Iron, etc.
Complete Synthetic Organic Compounds (SOC's)	7/17/14 9/15/14 11/20/14 Next 2019	ND ND ND	Various	Various	NO	Synthesized compounds such as insecticides and pesticides
Cryptosporidium/ Giardia- at source for RAW surface water	3/13/17	ND giardia  ND Crypto	cyst count	Log removal	NO	Microorganisms found in raw water that can cause gastrointestinal illness
Gross Alpha-Beta/ Radium 228	7/17/14 10/31/14 Next 2019	ND ND	pCi/L	15/50/5	NO	Radionuclides in water

**“One part per million (PPM) is like: one inch in 16 miles, one second in 11.5 days, one minute in 2 years, or one car stuck in bumper to bumper traffic from Cleveland to San Francisco.”**

(Source: <http://www.nesc.wvu.edu/ndwc/articles/ot/fa04/q&a.pdf>)

# WATER INFORMATION

## Source water assessment and its availability

Water from the City's Ranney Collector (primary) and from the Elwha Water Facility (backup) is tested following the guidelines established by the DOH to detect potential contaminants that could reasonably be expected to be found in drinking water. Because most of the land through which the Elwha River flows is inside the Olympic National Park, there is limited opportunity for human contamination of the water. Contaminants that might be found in untreated water include: biological contaminants, such as viruses and bacteria; inorganic contaminants, such as salts and metals; pesticides and herbicides; organic chemicals from industrial or petroleum use; and radioactive materials.

## Why are there contaminants in drinking water?

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 (800.426.4791). This information can also be accessed at the EPA's website: <http://www.epa.gov/safewater/hotline/index.html>. The source of drinking water (both tap and bottled water) includes 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. Contaminants that may be present in source water include:

- A) **Microbial contaminants**, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;
- B) **Inorganic contaminants**, such as salts and metals, which can be natu-



Elwha Surface Water Intake Screens

rally occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining or farming;

- C) **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses;
- D) **Organic chemical contaminants**, including synthetic and volatile organic chemicals, are by-products of industrial processes and petroleum production, which can also come from gas stations, urban storm water runoff, and septic systems;
- E) **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order 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 the water provided by public water systems. The Food and Drug Administration (FDA) and the Washington Department of Agriculture regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

## 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/Centers for Disease Control (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 (800.426.4791).



Port Angeles Waterfront

## WATER CONSERVATION

Water conservation measures are an important first step in protecting our water supply. Such measures not only save the supply of water, but can also cut the cost of water treatment. Here are a few suggestions:

### INSIDE THE HOUSE:

- 1) Install low flow showerhead and thermostatic shutoff (TSU) on each shower.
- 2) Fix leaking faucets, pipes, toilets, etc.
- 3) Install water saving devices in faucets, toilets, and appliances.
- 4) Replace old fixtures with new ones.
- 5) Wash only full loads of laundry.
- 6) Soak dishes before washing and run the dishwasher only when full.

### OUTSIDE THE HOUSE:

- 1) Water the lawn and garden in the early morning or evening and use mulch around plants and shrubs.
- 2) Repair leaks in faucets and hoses. Use water-saving nozzles.
- 3) Use water from a bucket to wash your vehicle. Save the hose for rinsing.
- 4) During winter months, remove hoses from faucets and insulate all exposed fixtures and pipes.

### FOR MORE INFORMATION PLEASE CONTACT:

Joey Currie - Energy and Water Conservation:	360.417.4715	e-mail: <a href="mailto:jcurrie@cityofpa.us">jcurrie@cityofpa.us</a>
James Burke - Deputy Director of Public Works:	360.417.4802	e-mail: <a href="mailto:jburke@cityofpa.us">jburke@cityofpa.us</a>
Conservation Webpage:	<a href="https://wa-portangeles.civicplus.com/197/Conservation">https://wa-portangeles.civicplus.com/197/Conservation</a>	

## WATER USE EFFICIENCY

Under the provisions of the Water Use Efficiency Program, we are required to report to you annually by July 1st our progress in reducing water losses, and to share information about our Water Use Efficiency Plan.

### **LEAKAGE INFORMATION**

For the 12-month reporting period from January 2017 thru December 2017

Total Production from the Elwha Source in Million Gallons:	857 MG
Total Authorized Consumption in Million Gallons:	809 MG
Unaccounted for Distribution System Water in Million Gallons:	48 MG
Distribution System Losses as a Percentage:	5.6 %

### **Summary for 2017**

In 2017, we realized a distribution system loss of 5.6%. Our 5-year loss average (Jan 2013- Dec 2017) is 8.5%. We replaced a number of aging and failing meters with new accurate analog meters thus continuing our efforts to reduce our water losses due to inaccuracies. We also surveyed almost 20 miles of water mains using state of the art leak detection technology. As a result, we located and fixed a number of water system leaks that were previously unknown, having showed no visible signs typical of most system leaks.

In addition, we continued our leak education program at community fairs and in classrooms and offered conservation devices and rebates to customers through our conservation programs.

For any questions regarding our water distribution system, contact Jason Hart at 360.417.4855 or via e-mail [jhart@cityofpa.us](mailto:jhart@cityofpa.us).