



June 2019

2018 WATER QUALITY REPORT

City of Port Angeles, Washington

The City of Port Angeles is pleased to provide you with our Annual Consumer Confidence Water Quality Report for 2018. This report summarizes information about your water source, the facilities that deliver water to your tap, and the quality of your drinking water.

Providing safe drinking water to our customers has always been our top priority. As such, we continually strive to adopt new methods and technologies for delivering exceptional drinking water to your homes and businesses. We remain vigilant in meeting our goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water utility customers. The water maintenance crew has worked diligently in keeping the water clean, safe, and flowing by upgrading service lines, repairing water leaks, installing new meters, and flushing mains. We also upgraded large portions of aging infrastructure through our 2018 capital improvements projects.

If you have any questions about this report or questions concerning your water utility, please contact Jason Hart, Deputy Director of Water, at 360-417- 4855. You can view this 2018 Consumer Confidence Water Quality Report and last year's report online at:

<https://www.cityofpa.us/265/Water-Utility>.

SOURCE WATER

Source water for the City of Port Angeles Water System comes from the City's Ranney Well located adjacent to the Elwha River and is 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 60-foot-deep Ranney Well is capable of producing up to 8 million gallons of water per day. As a secondary option, the City can pump raw surface water directly from the Elwha River through our industrial water facilities near the Elwha River Road Bridge.

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

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

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 began producing clean water for the City in early 2010 and has a net-production capacity of 10.6 million gallons per day, although our typical production is 2-3 million gallons per day. The Plant achieves high-rate clarification through the patented ACTIFLO® process, as well as dual media filtration and chlorine disinfection (sodium hypochlorite). The Washington State Department of Health requires us to maintain a minimum chlorine residual of 0.2 mg/L throughout the distribution system. To meet this requirement, your water is re-chlorinated at several locations throughout the City.

WATER OPERATION & MAINTENANCE STAFF

The City employs five full time water treatment plant operators, who maintain the plant and five reservoirs seven days a week, 365 days a year. We also employ six water distribution maintenance workers to keep the water flowing throughout the almost 200 miles of piping in our water system. 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 tap.

The operation and maintenance crews 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.

NEED TO CONTACT US?

Water Department:
360.417.4855

Backflow:
360.417.4886

Utility Billing:
360.457.0411

Emergency
(After Hours & Holidays):
360.461.9261

City Website:
www.cityofpa.us

WHAT WE TEST FOR IN YOUR DRINKING WATER

In 2018, we routinely sampled source and distribution locations and submitted the samples to state certified labs. These samples included: 416 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. We are happy to report that there were no exceedances for 2018. The results listed on page 3 are a summary of these tests as submitted to the Department of Health 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, flush water through the tap until the water is noticeably cold 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 more 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	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 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	11/8/18 12/19/18	.11 ND	ppm - mg/L	10	NO	Runoff, Septic, Fertilizers
Microbiological Contaminants— Routine Monitoring, New Construction, & Investigative.	Weekly and as needed	ND	N/A	Contaminant Present	NO	Naturally present in the environment
Total Organic Carbons (TOC's)	1 Sample per Quarter	.498 AVG	ppm - mg/L	NE	NO	Quarterly sampling required
Trihalomethane (TTHM)	4 Samples per Quarter	5.719 AVG	ug/L	80 ug/L	NO	Byproduct of Chlorine Disinfections Process
Haloacetic Acid (HAA5)	4 Samples per Quarter	1.894 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
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)	1/31/18 4/11/18	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 Industrial Water System (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).



Water Treatment Plant

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., and replace old fixtures with new low flow fixtures.
- 3) Install water saving devices in faucets, toilets, and appliances.
- 4) Wash only full loads of laundry 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. Only use 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: jcurrie@cityofpa.us
Jason Hart - Deputy Director of Water:	360.417.4855	e-mail: jhart@cityofpa.us
Conservation Webpage:	https://wa-portangeles.civicplus.com/197/Conservation	

WATER USE EFFICIENCY

Under the provisions of the State Department of Health 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 2018 thru December 2018

Total Production from the Elwha Source in Million Gallons:	863 MG
Total Authorized Consumption in Million Gallons:	788 MG
Unaccounted for Distribution System Water in Million Gallons:	75 MG
Distribution System Losses as a Percentage:	8.7 %

Summary for 2018

In 2018, we realized a distribution system loss of 8.7%. Our 5-year loss average (Jan 2014- Dec 2018) is 8.5%. We replaced 126 aging and failing meters with new accurate analog meters thus continuing our efforts to reduce our water losses due to inaccuracies. We also surveyed over 15 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 offered conservation devices and rebates to customers through our conservation programs.

For any questions regarding our Water Use Efficiency plan or our water distribution system, contact Jason Hart at 360.417.4855 or via e-mail jhart@cityofpa.us.

CROSS CONNECTION CONTROL

When drinking water piping connects to various fixtures or equipment, a cross-connection is created. If improperly protected, contamination can result when a backflow event occurs; allowing contaminants to reverse flow from the fixture/equipment back into the drinking water piping. To protect our customers from possible cross connection contamination to the water system, the City of Port Angeles proactively inspects and requires testing of backflow assemblies on an annual basis.

In 2018, we evaluated 532 sites with a total of 894 potential hazards eliminated with backflow assemblies. We added 20 new locations requiring annual inspections and testing to protect the drinking water system. If you have any questions regarding backflow requirements, contact our Backflow Inspector, Tim Wright, at 360.417.4886 or via email twright@cityofpa.us.