GALES ADDITION WATER DISTRICT
INCLUDING MT. ANGELES AND MONROE
A PORTION OF PORT ANGELES COMPOSITE
WATER QUALITY REPORT FOR 2023
(DOH#432960)

Dear Water Customer:

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). We want to keep you informed about the excellent water and services you have been receiving over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water. *Informed customers are our best allies in maintaining safe drinking water!*

How can I get involved?

We encourage public interest and participation in our community's decisions affecting drinking water. Regular meetings with the District's Board of Commissioners are held every other Monday at our Main Office (104 Hooker Rd. Sequim WA) at 1:30 p.m. The public is welcome. You may also learn more about PUD #1 of Clallam County by accessing our website at www.clallampud.net, or by calling 360-452-9771 or toll free at 1-800-542-7859.

Water Source and Treatment

This system's primary water source is purchased water from the City of Port Angeles (S04/S06) The City's water source is surface water from the Elwha River. Their DOH system identification number is 68550M. **A copy of the City's water quality table is included at the end of this report.**

Potable water produced by the City is chlorinated at the source. Fluoridation was ceased by the City on 8/2/16, water prior to this date was fluoridated. Water purchased from the City (S06) is rechlorinated and stored at the District's 525,000-gallon Gales Addition Reservoir. From this reservoir, potable water flows back to the eastern portion of Gales Addition, Morse Creek Canyon, Lower Monroe Road, and Mt. Pleasant Road areas. Under emergency or abnormal operating conditions, water may also be diverted from the Fairview portion of Port Angeles Composite to provide water to these areas. This interconnection with Fairview was utilized in 2023 during periods when the District's intertie with the City of Port Angeles was unavailable due to repair activities on the City's side. **A copy of the Fairview water quality table is included in this report.**

The western portion of Gales Addition (west of Lees Creek) is provided water directly from a connection with the City's water main (S04). If necessary, this area could also receive water from the Gales Addition Reservoir (S06).

From the Gales Addition Reservoir, water is pumped to a 130,000-gallon reservoir for service to the Monroe Road / L.U.D. #2 area. In addition, water is also pumped from the Gales Addition Reservoir to two 60,000-gallon reservoirs to serve the Mt. Angeles Road / L.U.D. #3 area.

Water quality testing and monitoring of this water system is completed daily by certified District personnel. We are pleased to report that the water provided by the District meets or exceeds established water quality standards.

Monitoring results

Chlorine Residual: Chlorine is used as a disinfectant in the water treatment process and should be detectable in at least 95% of the samples taken each month. Chlorine residual was detectable in over 95% of samples each month.

Total Coliform Bacteria: Zero Coliform Bacteria were detected in the monthly samples collected. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.

Hardness: Hardness is a natural characteristic of water caused by dissolved calcium and magnesium, which can interfere with the sudsing action of soap. The US Geological Society classifications show 0-60 mg/L as soft, while anything greater than 200 mg/L is very hard. A sample taken in 2017 showed 44.1 mg/L or 2.58 grains/gallon.

Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Disinfectants & Disinfection By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Haloacetic Acids (HAA5) (ppb)	NA	60	2.69	2.1	4	2023	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	5.65	6.4	8.8	2023	No	By-product of drinking water disinfection

Contaminants	MCLG	AL	90th percentile (10 Samples)	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source
Inorganic Contaminants							
Copper - action level at consumer taps (ppm)	1.3	1.3	0.792	2023	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps (ppb)	0	15	1.6	2023	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Unit Descriptions	
Term	**Definition**
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)

Unit Descriptions	
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	**Definition**
MCLG	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	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.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection 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	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.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

Why are there contaminants in my 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 (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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).

Partners in Conservation

Water is essential to every dimension of life, yet less than 1 percent of the Earth's water supply is fit and available for human consumption. As demand for water continues to increase, every drop of water is becoming more important than ever before.

The DOH has adopted a rule that establishes water use efficiency (WUE) requirements for all municipal water suppliers. Water use efficiency will help us conserve water for the environment and future generations. It will also enhance public health by improving water system efficiency and reliability.

A few primary elements of this rule include improving operational efficiency; evaluating and reporting water production and usage; and reducing water leaks both on the distribution side and the customer side of the water

system. The table below lists production amounts vs. purchased/authorized usage and the percentage of the unaccounted-for or probable system leakage. The goal is to reduce unaccounted-for water to 10% or less of the total water produced.

Distribution System Leakage Summary for Port Angeles Composite 2023 (in millions of gallons: 1 cubic foot = 7.48 gallons)	
Total Water Produced – Annual Volume	266.93
Total Water Purchased and Authorized Usage – Annual Volume	207.3
Distribution Unaccounted-for or System Leakage – Percent	22

Together we can keep the percentage to 10% or less, and save water and money in the process! Here are some tips to work towards this goal *and* to be more water efficient:

- If you see an odd wet spot in a normally dry area, call the PUD.
- Someone other than the Fire Dept. or PUD using a fire hydrant, call the PUD.
- Run your washing machine and dishwasher only when they are full.
- Turn off the tap when brushing your teeth, washing, shaving, or cleaning fruits and vegetables.
- Check every faucet inside and outside your home for leaks; a slow drip can waste 15 to 20 gallons a day. Fix it and you could save up to 6,000 gallons a year.
- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Write down the numbers across the face of the meter. Then check the water meter after 30 minutes. If the numbers increased at all, you have a leak.
- 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!
- Ask your local nursery about landscaping with native plants.
- For deep root and drought tolerance, water your plants deeply, but less often.
- Water wasted is water lost. For more information, go to these web-sites:
  www.wateruseitwisely.com www.h2ouse.org www.epa.gov/watersense

Variance and Exemptions

The Port Angeles Composite water system has received waivers for reduced monitoring either at certain sources or in the distribution system of the following contaminants:

Complete Inorganics (IOC)
Volatile Organics (VOC)
Herbicides
Pesticides
Soil Fumigants

Previous background test results indicated that these substances were either not detected or below MCL in this water source. The EPA and/or DOH grant a variance or exemption only upon finding that the variance or exemption will not result in an unreasonable risk to health.

Additional Information for 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 District 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. Always use cold water for cooking, drinking and especially 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, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

Additional Information for Disinfection Byproducts

Haloacetic Acids (HAA)- Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

TTHMs [Total Trihalomethanes]- Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Source Water Assessment

The sources of drinking water (both tap water 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.

The DOH has completed a source water assessment for this system. All surface waters and/or groundwater under the influence of surface water in Washington are given a susceptibility rating of high, regardless of whether contaminants have been detected or whether there are any sources of contaminants in the watershed or runoff areas to the river or creek. More information can be found on the DOH website: https://fortress.wa.gov/doh/eh/dw/swap/maps/.

For more information please contact:

Public Utility District No. 1 of Clallam County
PO BOX 1000
Carlsborg, WA 98324
360.452.9771

FAIRVIEW WATER DISTRICT
A PORTION OF PORT ANGELES COMPOSITE
WATER QUALITY REPORT FOR 2023
(DOH #432960)

Dear Water Customer:

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). We want to keep you informed about the excellent water and services you have been receiving over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water. *Informed customers are our best allies in maintaining safe drinking water!*

How can I get involved?

We encourage public interest and participation in our community's decisions affecting drinking water. Regular meetings with the District's Board of Commissioners are held every other Monday at our Main Office (104 Hooker Rd. Sequim WA) at 1:30 p.m. The public is welcome. You may also learn more about PUD #1 of Clallam County by accessing our website at www.clallampud.net, or by calling 360-452-9771 or toll free at 1-800-542-7859.

Where does my water come from and how is it treated?

This water system is primarily supplied surface water from the Morse Creek Treatment Plant (S01). Your drinking water is treated with advanced membrane-filtration technology and disinfection. Water passes through 0.1 micron membrane filters that remove any particles. These particles can include sediment and natural materials as well as viruses, bacteria and other disease-causing organisms.

During the treatment process aluminum sulfate is added to aid in the filtration process. Citric acid and sodium hydroxide are added to adjust the pH level of the water which aids in filtration and makes the water less corrosive on pipe and plumbing fixtures. These additives are carefully monitored and the water is continually tested to make sure it is safe to drink. Finally, chlorine is added to provide disinfection to the water throughout the distribution system.

The lower Fairview and Bluffs area (below 410-foot elevation) may be supplied water service from the Morse Creek Treatment Plant or from the Bluffs Well (S02), Bobcat Hollow Well (S07) or Old Olympic Highway Well (S08). These wells may be used as a back-up source during the winter months when turbidity is high in Morse Creek and for peak demand periods during summer months. In 2019 construction was completed on three pump stations on Deer Park Rd. which allow the District to supply water to the upper Fairview service area from the lower Fairview Service Area if Morse Creek flows drop below 25 cubic feet per second and withdrawals from the Morse Creek Treatment Plant must cease.

Finished water is pumped to a 300,000-gallon reservoir and a 200,000-gallon reservoir. From each of these reservoirs, potable water and fire flow is available based on system demand. Water quality testing and monitoring of this water system(s) is completed daily by certified District personnel.

Monitoring results

Chlorine Residual: Chlorine is used as a disinfectant in the water treatment process, and should be detectable in at least 95% of the samples taken each month. Chlorine residual was detectable in over 95% of samples taken each month.

Total Coliform Bacteria: Zero Coliform Bacteria were detected in the monthly samples collected. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.

Hardness: Hardness is a natural characteristic of water caused by dissolved calcium and magnesium, which can interfere with the sudsing action of soap. The US Geological Society classifications show 0-60 mg/L as soft, while anything greater than 200 mg/L is considered very hard. Samples taken for the Bluffs Well showed 164 mg/L or 9.58 grains/gallon, the Old Olympic Well 149.3 mg/L or 8.7 grains/gallon, Bobcat Hollow Well 167.4 mg/L or 9.8 grains/gallon and the Morse Creek Treatment plant 52.4 mg/L or 3 grains/gallon. An average of these source samples would be 133.25 mg/L or 7.77 grains/gallon.

Fluoride: The District does not add fluoride to this water system. Fluoride is a natural substance found in varying degrees in almost all water supplies.

Fairview

Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Disinfectants & Disinfection By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Haloacetic Acids (HAA5) (ppb)	NA	60	16.55	3.9	37.1	2023	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	30.12	14.9	58.1	2023	No	By-product of drinking water disinfection
Inorganic Contaminants								
Arsenic (ppb)	0	10	1.0	ND	.0010	2022	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	.0075	ND	.0075	2023	No	Erosion of natural deposits
Gross Beta (pCi/L)	50	50	1.64	NA	NA	2023	No	Decay of natural and man-made deposits Note: The gross beta particle activity MCL is 4 millirems/year annual dose equivalent to the total body or any internal organ. 50 pCi/L is used as a screening level.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Chromium (ppb)	100	100	0.0010	ND	0.0010	2023	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	4	4	.11	ND	0.11	2023	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate [measured as Nitrogen] (ppm)	10	10	1.12	ND	1.12	2023	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nickel (ppm)	NA	NA	0.0012	ND	0.001	2022	No	Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products.
	Microbiological Contaminants							
Turbidity (NTU)	NA	1	.02	NA	NA	2023	No	Soil runoff
	*100% of the samples were below the TT value of .3. A value less than 95% constitutes a TT violation. The highest single measurement was 0.02. Any measurement in excess of 1 is a violation unless otherwise approved by the state.							

Contaminants	MCLG	AL	90th Percentile (10 Samples)	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source
Inorganic Contaminants							
Copper - action level at consumer taps (ppm)	1.3	1.3	.0562	2023	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps (ppb)	0	15	1.3	2023	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Secondary Regulated Water Quality Data Table (These standards are developed to protect the aesthetic qualities of drinking water and are not health based.)

Contaminant (Units)	Sample Date	SMCL	Highest Level Detected	Range	Violation	Typical Sources
Chloride (ppm)						
Bluffs	2023		13.6			
Bobcat Hollow	2022	250	17.6	1.6 – 17.6	No	Erosion of natural deposits
Old Olympic	2021		8.9			
Morse Creek WTP	2022		1.6			
Iron (ppm)						
Bobcat Hollow	2019	.3	ND	10	No	Erosion of natural deposits
Old Olympic	2021		.10			
Manganese (ppm)						
Bluffs	2023	0.05	0.928	.0016 -0.0928	No	Erosion of natural deposits
Old Olympic	2023					
Sulfate (ppm)						
Bluffs	2023		10.2			
Bobcat Hollow	2022	250	7.5	5.3 – 10.2	No	Erosion of natural deposits
Old Olympic	2021		9.9			
Morse Creek WTP	2022		5.3			

Contaminant (Units)	Sample Date	SMCL	Highest Level Detected	Range	Violation	Typical Sources
Sodium (ppm) **Bluffs** **Bobcat Hollow** **Old Olympic** **Morse Creek WTP**	 2023 2022 2021 2022	NA	 13.4 15.8 15.1 3.6	3.6-15.8	No	Erosion of natural deposits; seawater
Hardness (ppm) **Bluffs** **Old Olympic** **Bobcat Hollow** **Morse Creek WTP**	 2023 2021 2022 2022	NA	 164 149.3 3.6 52.4	3.6 – 164	No	Weathering of various rocks and soil
Electrical Conductivity (uS/cm) **Bluffs** **Bobcat Hollow** **Old Olympic** **Morse Creek WTP**	 2023 2022 2021 2022	700	 365 386 339 117	117 – 386	No	Measure ability of material or dissolved solids to convey an electric current
Hydrogen Ion (pH) **Bluffs**	 2019	NA	 7.48	7.48	No	Erosion of natural deposits
Total Dissolved Solids (ppm) **Bluffs** **Bobcat Hollow** **Old Olympic**	 2023 2019 2021	500	 213 214 200	200 - 214	No	Erosion of natural deposits
Zinc (ppm) **Bluffs** **Old Olympic** **Morse Creek WTP**	 2023 2021 2022	5	 0.0076 .0050 .0062	.0050-.0076	No	Erosion of natural deposits

Unit Descriptions	
Term	**Definition**
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
pCi/L	pCi/L: picocuries per liter (measure of radioactivity)
pH	pH: measure of acidity/alkalinity
uS/cm	uS/cm: Microsiemens per centimeter
NTU	Nephelometric Turbidity Units
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.
Important Drinking Water Definitions	
Term	**Definition**
MCLG	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.
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TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Unit Descriptions	
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection 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	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.
MNR	MNR: Monitored Not Regulated
SMCL	SMCL: Secondary Maximum Contaminant Level

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Distribution System Leakage Summary for Port Angeles Composite 2023 (in millions of gallons: 1 cubic foot = 7.48 gallons)	
Total Water Produced – Annual Volume	266.93
Total Water Purchased and Authorized Usage – Annual Volume	207.30
Distribution Unaccounted-for or System Leakage – Percent	22

Together we can keep the percentage to 10% or less, and save water and money in the process! Here are some tips to work towards this goal *and* to be more water efficient:

- If you see an odd wet spot in a normally dry area, call the PUD.
- Someone other than the Fire Dept. or PUD using a fire hydrant, call the PUD.

- Run your washing machine and dishwasher only when they are full.
- Turn off the tap when brushing your teeth, washing, shaving, or cleaning fruits and vegetables.
- Check every faucet inside and outside your home for leaks; a slow drip can waste 15 to 20 gallons a day. Fix it and you could save up to 6,000 gallons a year.
- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Write down the numbers across the face of the meter. Then check the water meter after 30 minutes. If the numbers increased at all, you have a leak.
- Ask your local nursery about landscaping with native plants.
- For deep root and drought tolerance, water your plants deeply, but less often.
- Water wasted is water lost. For more information, go to these web-sites: www.wateruseitwisely.com
  www.h2ouse.org
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Variance and Exemptions

The Port Angeles Composite water system has received waivers for reduced monitoring either at certain sources or in the distribution system of the following contaminants:
Complete Inorganics (IOC)
Volatile Organics (VOC)
Herbicides
Pesticides
Soil Fumigants
Previous background test results indicated that these substances were either not detected or below MCL in this water source. The EPA and/or DOH grant a variance or exemption only upon finding that the variance or exemption will not result in an unreasonable risk to health.

Additional Information for 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 District 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. Always use cold water for cooking, drinking and especially 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, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

Additional Information for Disinfection Byproducts

Haloacetic Acids (HAA)- Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
TTHMs [Total Trihalomethanes]- Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Additional Information for Nitrate

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

Additional Information for Arsenic

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems

Source water assessment and its availability

The sources of drinking water (both tap water 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.

The DOH has completed a source water assessment for this system. All surface waters in Washington, as with Morse Creek, are given a susceptibility rating of high, regardless of whether contaminants have been detected or whether there are any sources of contaminants in the watershed or runoff areas to the river or creek.

The susceptibility rating for wells largely depends on the amount or depth of the confining layer over the well. More information can be found on the DOH website: https://fortress.wa.gov/doh/eh/dw/swap/maps/.

Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides - they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.

For more information please contact:

Public Utility District No. 1 of Clallam County
PO BOX 1000
Carlsborg, WA 98324
360.452.9771

2023 WATER QUALITY REPORT

City of Port Angeles, Washington

June 2023

The City of Port Angeles is pleased to provide you with our Annual Consumer Confidence Water Quality Report for 2023. 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 continue to develop plans to upgrade aging infrastructure identified in our Capital Facilities Plan.

If you have any questions about this report or questions concerning your water utility, please contact Mike Healy, Director of Public Works, at 360-417–4800. You can view this 2023 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 10.2 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.

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 10.2 million gallons per day, although our typical production is 2-4 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 6 full time water treatment plant operators, who maintain the plant and four active reservoirs seven days a week, 365 days a year. The City's budget supports 6 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, and Cross Connection Control Specialist.

NEED TO CONTACT US?

Water Department:
360.417.4800

Backflow:
360.417.4886

Utility Billing:
360.457.0411

Emergency
(After Hours & Holidays):
360.797.0222

City Website:
www.cityofpa.us

WHAT WE TEST FOR IN YOUR DRINKING WATER

In 2023, we routinely sampled source and distribution locations and submitted the samples to state certified labs. These samples included: 372 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 2023. 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
		NE	Not Evaluated
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.	HAA5	Haloacetic Acid
		D/DBP	Disinfectant/Disinfection By-Products
		pCi/L	Picocuries per Liter
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.	ppm or mg/L	Parts per million, or milligrams per liter (mg/L)
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.	SRL	State Reporting Level
		TOC	Total Organic Carbon
		TTHM	Total Trihalomethane
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.	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	10/23 8/23	ND ND	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	.18 AVG	ppm - mg/L	NE	NO	Quarterly sampling required
Trihalomethane (TTHM)	4 Samples per Quarter	6.08 AVG	ug/L	80 ug/L	NO	Byproduct of Chlorine Disinfections Process
Haloacetic Acid (HAA5)	4 Samples per Quarter	1.24 AVG	ug/L	60 ug/L	NO	Byproduct of Chlorine Disinfection Process
Lead (90th percentile of 30 houses tested)	9/20 Next Sample: 9/23	.002	mg/L	AL 0.015	NO	From specific plumbing in certain year homes
Copper (90th percentile of 30 houses tested)	9/20 Next Sample: 9/23	.68	mg/L	AL 1.3	NO	From specific plumbing in certain year homes
Asbestos	4/10/19 Next Sample 4/28	0.200	MFL>10 um		NO	Naturally occurring. Transmission mains
Complete Volatile Organic Compounds (VOC's) (surface water)	5/16/19 Next Sample: 5/25	ND	ug/l	Various	NO	Fuels and solvents that may enter source water
Complete Inorganic Compounds (IOC's) (surface water)	7/16/19 Next Sample: 7/24	Below MCL	mg/l	Various	NO	Naturally occurring or manmade non carbon compounds. Copper, Lead, Iron, etc.
Complete Synthetic Organic Compounds (SOC's)	8/9/22 Next Sample: 8/24	ND	Various	Various	NO	Synthesized compounds such as insecticides and pesticides
Cryptosporidium/ Giardia– at source for RAW surface water	2020	ND giardia ND Crypto	cyst count	Log removal	NO	Microorganisms found in raw water that can cause gastrointestinal illness
Gross Alpha-Beta/ Radium 228	10/13/20 Next Sample: 10/26	3.00 1.00	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.

Elwha Surface Water Intake Screens

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).

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 naturally 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.

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
Jeff Groves - Superintendent, Water/Wastewater Field:	360.417.4800	e-mail: publicworks@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 2023 thru December 2023

Total Production from the Elwha Source in Million Gallons:	856 MG
Total Authorized Consumption in Million Gallons:	770 MG
Unaccounted for Distribution System Water in Million Gallons:	86 MG
Distribution System Losses as a Percentage:	10.1%

Summary for 2022

In 2023, we realized a distribution system loss of 10.1%. Our 5-year loss average (Jan 2019 - Dec 2023) is 12.2%. We replaced 96 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 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 included a utility bill mailer for our leak education program as well as public outreach at community fairs. We 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 Jeff Groves at 360.417.4800 or via e-mail publicworks@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 2023, we evaluated 632 sites with a total of 1122 potential hazards eliminated with backflow assemblies. We added 10 new locations requiring annual inspections and testing to protect the drinking water system. If you have any questions regarding backflow requirements, contact our backflow office, at 360.417.4886 or via email backflowprevent@cityofpa.us.