



**PORT ANGELES COMPOSITE
GALES ADDITION WATER DISTRICT
WATER QUALITY REPORT FOR 2008
(DOH #432960)**

Dear Water Customer:

We're pleased to provide you with this year's Annual Water Quality Report. 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!*

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 each Monday at our Port Angeles office (2431 Highway 101 East) at 1:30 p.m. The public is welcome. You may also learn more about PUD #1 of Clallam County by contacting our website at www.clallampud.net, or by calling 360-452-9771 or toll free at 1-800-542-7859.

WATER SYSTEM INFORMATION

Water Source and Treatment: This system's primary water source is purchased water from the City of Port Angeles. The City's water source is groundwater from the Ranney Collector (well) located on the east bank of the Elwha River. Their DOH system identification number is 68550M.

Potable water produced by the City of Port Angeles is chlorinated and fluoridated to optimal levels at the source. For more information on chlorination and fluoridation, contact the Washington State Department of Health at www.doh.wa.gov or Center for Disease Control at www.cdc.gov.

The Ranney Collector has been classified as groundwater under the influence (GWI) of surface water. This designation requires the City to meet the requirements of the Surface Water Treatment Rule (SWTR). Regulatory compliance options available under the SWTR include filtration and complying with criteria to avoid filtration. The City and the Washington State Department of Health have negotiated an agreement that will effectively meet the filtration avoidance requirements by construction of a federally-funded municipal water treatment facility under the Elwha River Ecosystem and Fisheries Restoration Act. The City anticipates the water treatment facility will be in place by December 2009. In the meantime, you will receive a quarterly notice produced by the City of Port Angeles regarding the SWTR (see page 6).

Water purchased from the City 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 conditions, water may also be diverted from the Morse Creek Treatment Plant to provide water to these areas.

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

Also 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; and up 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.

Water Quality Data: Most of the contaminants that we sample for were not detected (ND). The Water Quality Data Table shows only those contaminants that were detected. None of the contaminants detected were at high enough levels to be a violation of the Water Quality Standards. Most of the data presented in the Water-Quality Data Table is from testing completed in 2008, per State law. We monitor for some contaminants less than once per year, and for those contaminants, the date of the last sample is shown in the table. All monitoring results of regulated and unregulated contaminants are available at our Port Angeles office.

Water Quality Data Table Definitions:

Maximum Contaminant Level or MCL: 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.

Maximum Contaminant Level Goal or MCLG: 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.

Maximum Residual Disinfectant Level or MRDL: 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.

Maximum Residual Disinfectant Level Goal or MRDLG: 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 contamination.

Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

Action Level or AL: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Key to the Water Quality Data Table:

- AL = Action Level
- MCL = Maximum Contaminant Level
- MCLG = Maximum Contaminant Level Goal
- MFL = million fibers per liter
- mrem/year = millirems per year (a measure of radiation absorbed by the body)
- NTU = Nephelometric Turbidity Units
- NA / ND = Not Applicable / Not Detectable
- pCi/L = picocuries per liter (a measure of radioactivity)
- ppm = parts per million, or milligrams per liter (mg/l)
- ppb = parts per billion, or micrograms per liter (µg/l)
- ppt = parts per trillion, or nanograms per liter
- ppq = parts per quadrillion, or picograms per liter
- TT = Treatment Technique

Regulated Water Quality Data Table:

| Contaminant | Sample Date | Unit | MCL | MCLG | Detected Level | Range | Violation | Major Sources |
|---|-------------|------|-----|------|----------------|-------|-----------|--|
| CITY OF PORT ANGELES WATER SOURCE (GALES ADDITION / MONROE ROAD / MT. ANGELES ROAD AREAS): | | | | | | | | |
| Disinfection Byproducts (DBPs) | | | | | | | | |
| Total Trihalomethanes | 8/5/08 | ppb | 80 | NA | 4.0 | 0-80 | NO | By product of drinking water chlorination. |
| Halo-Acetic Acids [HAA5] | 8/5/08 | ppb | 60 | N/A | 2.1 | 0-60 | NO | By product of drinking water chlorination. |

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|--|-------------|------|--------|------|----------------|-------|-----------|---|
| CITY OF PORT ANGELES WATER SOURCE (GALES ADDITION / MONROE ROAD / MT. ANGELES ROAD AREAS) | | | | | | | | |
| Inorganic Contaminants Continued | | | | | | | | |
| Lead | 8/6/08 | ppb | AL=15 | 0 | 2 | NA | NO | Corrosion of household plumbing systems; erosion of natural deposits. |
| Copper | 8/6/08 | ppm | AL=1.3 | 1.3 | 0.67 | NA | NO | Corrosion of household plumbing systems; erosion of natural deposits. |
| Fluoride (tested by City of Port Angeles) | Monthly | ppm | 4 | 2 | 0.90 | NA | NO | Water additive which promotes strong teeth and is regulated by the State. |

Water Quality Table Footnotes:

Fluoride is a natural substance found in varying degrees in almost all water supplies. The City of Port Angeles started adding optimal levels of fluoride in May 2006 to promote healthy teeth.

If you have any health-related questions about fluoridated water, please call the Clallam County Health Department at (360) 417.2377, visit their website at www.clallam.net/HealthServices. We recommend that you notify your family dentist and physician that you are now provided optimum fluoride levels in your potable (drinking) water supply. This is especially important for infants (whose diet consist mostly of liquids, such as baby formulas or concentrated juices mixed with water) and the elderly.

Lead and Copper monitoring requirements have been reduced to 10 water samples (from inside household taps) every three years due to consistently lower detection levels within this area since testing began in 1993. Detected levels listed above are achieved by removing 10 percent of the sample(s), starting with the highest level. The highest value left is considered to be the 90th percentile value. Samples are scheduled next for 2011.

In the past, City of Port Angeles water customers located within the City limits have experienced higher levels of copper in their drinking water. On June 23, 2008 the City of Port Angeles' Water Utility addressed the elevated copper levels with the addition of Orthophosphate at their water supply source located at the Elwha River. Orthophosphate is a drinking water approved product, commonly used in water systems, that coats the water distribution lines preventing corrosion of meter piping systems and protecting consumers from elevated levels of lead and copper. Phosphate and phosphoric acid are essential human nutrients and are naturally present in a wide variety of foods. The amount of phosphate in the Orthophosphate used to treat drinking water represents only a small fraction (approximately 1%) of the phosphate in a normal daily diet.

If you have questions about the potential health effects of lead or copper in drinking water, please visit the Washington State Department of Health's Office of Drinking Water website at <http://www.doh.wa.gov/ehp/dw/> and select a contaminant for detailed information. Additional information on Lead and Copper in Drinking Water is also enclosed.

Other Test 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. All of the samples taken for this water system showed a chlorine residual.

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: Calcium and Magnesium are naturally occurring minerals in groundwater. These minerals are measured to determine water hardness. Hardness interferes with the sudsing action of soap. According to the U.S. Geological Survey, the scale of hardness is: 0-55 mg/l = Soft; 55-100 mg/l = Slightly Hard; 100-200 mg/l =

Moderately Hard; >200 = Very Hard. Hardness for this system (from sample taken in July 2006) showed 42.8 mg/l. Appliance manufacturers convert this number into Grains per Gallon by dividing it by 17.1 (e.g., 42.8 mg/l / 17.1 = 2.50 Grains per Gallon).

Additional Health Information: As mentioned before, the EPA regulates the amount of certain contaminants in the water that is provided by public water systems. However, FDA regulations were established to limit the contaminants in bottled water, which must provide the same protection for public health.

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).

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 radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Washington's Source Water Assessment Program is conducted by the Department of Health (DOH) Office of Drinking Water. According to DOH, all surface water 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.

Contaminants that may be present in source water include:

- (A) *Microbial contaminants*, such as viruses and bacteria, which 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 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, stormwater runoff, and residential uses.
- (D) *Organic chemical contaminants*, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.
- (E) *Radioactive contaminants*, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Some people may be more vulnerable to contaminants in drinking water than is the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the EPA's 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 Washington State Department of Health recently 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 difference of the unaccounted-for or probable system leakage. The goal is to account for a minimum of 90% of water produced.

| Distribution System Leakage Summary (in millions of gallons: 1 cubic foot = 7.48 gallons) | |
|--|-------|
| Total Water Produced – Annual Volume | 124.3 |
| Total Water Purchased and Authorized Usage – Annual Volume | 110.7 |
| Distribution Unaccounted-for or System Leakage – Percent | 11% |

Together we can reduce the percentage to 10% or less, and save water 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.
- Check for leaks on your side of the meter and monitor your water bill.
- Ask your local nursery about landscaping with native plants.
- For deep root and drought tolerance, water your plants deeply, but less often.
- Replace old water appliances with Energy Star appliances – get a PUD REBATE: www.clallampud.net.
- Water wasted is water lost. For more information, go to these web-sites: www.wateruseitwisely.com and www.h2ouse.org.

Abbreviated Terms Used in This Report (alphabetical order):

| | |
|--|------------------------------------|
| AIDS: Acquired Immune Deficiency Syndrome | FDA: Food and Drug Administration |
| CDC: Centers for Disease Control | HIV: Human Immuno-Deficiency Virus |
| DOH: (Washington State) Department of Health | MGD: Million Gallons per Day |
| EPA: Environmental Protection Agency | WUE: Water Use Efficiency |

No matter how we grow, we continually strive to fulfill our mission:

To provide reliable, efficient, safe, and low cost utility services in a financially and environmentally responsible manner.

For more information or questions regarding this report, please call PUD #1 of Clallam County at 360.565.3254.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER QUARTERLY NOTICE

Dear PUD Water Customer:

You are receiving City of Port Angeles water that is purchased by Clallam County PUD from the City of Port Angeles.

The following "*Important Information About Your Drinking Water*", is a notice produced by the City and sent to all the City of Port Angeles customers. It will be sent to you on a quarterly basis until the required water treatment is provided by the City. The City anticipates being in compliance with all State water treatment requirements by December 2009.

Please note that this is not a "boil water" notice.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER Our Water System Does Not Meet Treatment Requirements

The water you drink is provided by the City of Port Angeles water system. Test results indicate that our source contains organisms typically found in surface water (such as rivers, lakes and streams), but not in protected ground water sources. The state Department of Health re-designated our source, which is a well adjacent to the Elwha River that we refer to as the Elwha Pump Station. It is designated as a "groundwater under the direct influence of surface water" (GWI) source. The treatment currently provided does not meet all the current State requirements for GWI sources. Our water currently is treated in the following manner:

The primary disinfection injection point, using chlorine, is located at the Elwha Pump Station. Re-Chlorination Stations are located at our reservoirs to ensure that a minimum chlorine residual is maintained throughout the distribution system.

Disinfection alone does not always kill all disease-causing organisms, such as Giardia and other parasites. Filtration, in combination with disinfection, is an effective way to remove such parasites. We are required to have effective filtration and disinfection, but do not currently have this treatment.

What you should do:

- **You do not need to boil your water or take other corrective actions.** However, if you have specific health concerns, consult your doctor.
- Some people, including organ or bone marrow transplant recipients, those on chemotherapy, those with HIV/AIDS, some elderly, and infants may be at increased risk. These people should seek advice about drinking water from their health care providers. Guidelines on ways to lessen the risk of infection by microbes are available from the Environmental Protection Agency's Safe Drinking Water Hotline at 1.800.426.4791.

What this means to you:

- Inadequately treated water may contain disease-causing organisms such as bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and headaches. These symptoms, however, may also have other causes. If you experience any of these symptoms, and they persist, you may want to seek medical advice.
- This situation does not require that you take immediate action. If it did, you would have been notified immediately. We do not know of any cases of contamination or water-related illnesses and results of ongoing bacterial water quality tests do not indicate a problem occurring.

What the City of Port Angeles is doing:

- We are working with the Washington Department of Health to determine the appropriate steps to take to protect your health. Proposed treatment facilities are being designed by a Professional Engineer and the design documents have been submitted to the Department of Health for approval. We will provide information when available regarding proposed treatment options and corresponding cost estimates. The current estimated completion date for installation of a treatment plant is on or before September 30, 2009.

If other people, such as tenants, residents, patients, students, employees, or visitors receive water from you, it is important that you provide this notice to them by posting it in a conspicuous location or by direct hand or mail delivery. If you have any questions, contact your water system at 360.452.9771.

(4/08)



LEAD and COPPER in DRINKING WATER

Important Information on How to Protect Your Health

LEAD HEALTH EFFECTS

Lead is a common metal that has been in many consumer products but is now known to be harmful to human health if ingested or inhaled, primarily for pregnant women and young children. It can be found in lead-based paint, air, soil, household dust, food, some types of pottery, and drinking water. Lead is rarely found in natural sources of water such as rivers and lakes or underground aquifers.

When people come in contact with lead, it may enter their bodies and accumulate over time, resulting in damage to the brain, nervous system, red blood cells, and kidneys. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities.

Lead in water can be a special problem for pregnant women and infants. An infant's diet may be mostly liquids, such as baby formulas or concentrated juices mixed with water. Smaller bodies can absorb more rapidly than bigger ones, so amounts of lead that won't hurt an adult can be very harmful to a child. Adults who drink this water over many years could develop kidney problems or high blood pressure.

COPPER HEALTH EFFECTS

Copper is a reddish metal that occurs naturally in rock, soil, water, sediment, and air. It has many practical uses in our society and is commonly found in coins, electrical wiring, and pipes. It is an essential element for living organisms, including humans, and – in small amounts – necessary in our diet to ensure good health. However, some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience adverse health effects, including vomiting, diarrhea, stomach cramps, and nausea. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage.

The human body has a natural mechanism for maintaining the proper level of copper in it. However, children under one year old have not yet developed this mechanism and, as a result, are more vulnerable to the toxic effects of copper. People with Wilson's disease also have a problem with maintaining the proper balance and should also exercise particular care in limiting exposure to copper. People with Wilson's disease should consult their physician.

HOW TO REDUCE YOUR EXPOSURE

Lead may work its way into drinking water after the water has left the treatment plant and is on its way to people's faucets. This usually happens through the corrosion of materials containing lead in household plumbing. These materials include brass faucets, lead solder on copper

pipes, lead pipes, or lead service lines connecting the water main to the inside plumbing. Lead pipes installed for service lines or in household plumbing, and lead solder have been outlawed since 1986.

The amount of lead allowed in brass faucets has also been limited, but can still contribute some lead to drinking water (note that many faucets are made of brass even if they do not have a “brass” color). Even with these restrictions in place, some homes – especially older homes – may still have significant amounts of lead in their plumbing systems.

Copper works its way into the water by dissolving from copper pipes in the household plumbing. The longer the water has stood idle in the pipes, the more copper it is likely to have absorbed. Newer homes with copper pipes may be more likely to have a problem. Over time, a coating forms on the inside of the pipes and can insulate the water from the copper in the pipes. In newer homes, this coating has not yet had a chance to develop. Thus, anytime the water has not been used for more than 6 hours – overnight, for example, or during the day when people are gone to work or school – it should be cleared from the pipes before being used for drinking or cooking.

Let the cold water faucet run until you can feel the water getting colder, usually 30 to 60 seconds. The amount of time it takes will depend on your home and how its plumbing is arranged. If your home has a lead service line (which is unlikely in this area), you should flush water for an additional 2 minutes to make sure you are getting fresh water from the water main. This must be done before taking drinking water from any faucet in the house.

Other household water uses will also help clear standing water from your home’s plumbing. For example, you may want to establish a routine of doing household tasks that use water – such as showering, flushing the toilet, or running the dishwasher – first thing in the morning before using water for drinking or cooking. Keep in mind that you’ll still need to flush individual faucets for a short time before using them for drinking water.

Hot water dissolves lead/copper more quickly than cold water so don’t use water from your hot water faucet for cooking or drinking. If you need hot water for cooking or drinking, take water from the cold tap and heat it. It is especially important not to use the hot water for making baby formula.

Some treatment devices can reduce the amount of lead in your drinking water. Reverse-osmosis and distillation units can be used for that purpose. A few types of water filters also remove lead. Check the product literature to be sure it has been certified for lead removal by National Sanitation Foundation (NSF) International (<http://nsf.org>). Also, you must follow the manufacturer’s recommendations for operation and maintenance to ensure that the treatment equipment works correctly.

The water you run from drinking water taps does not have to be wasted. You can use this water for cleaning purposes or for watering plants. You may want to keep a container of drinking water in your refrigerator, so you don’t have to run water every time you need it.

For additional information on lead in your drinking water go to the Environmental Protection Agency (EPA) website (<http://www.epa.gov/oppt/lead/pubs/leadrev.pdf>), or contact the PUD Water Department at 360.565.3254 or 1-800-542-7859.