

2007 Drinking Water Quality Report



For the Calendar year 2006

We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the water quality and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect the Island's water resources. We are committed to ensuring the quality of your water

Water System Information

Hat Island manages its own water system and is required to be licensed by the State of Washington. As such we are required to have a certified operator responsible for the daily operation of the system. Wayne Orff, our operator in training can be reached at 360-444-6611. Wayne is not yet certified. Therefore we must employ a certified Contract operator. Donovan Sheppard is our certified operator. He can be reached at 360-794-6999. Wayne is currently studying to obtain his certifications, but the process is up to three years in length. Until Wayne becomes fully certified we will be required to employ Donovan.

Sources of Water

Our water source is six ground water wells and our Reverse Osmosis (RO) Plant. The product of these sources is stored in two concrete storage tanks located on the high points of the Island. Unless your home is in Divisions G or M, the water is then delivered to your homes via a gravity feed distribution system. All six wells are located in the sea level aquifer and are therefore susceptible to salt water intrusion. These wells are pumped and rested to limit saline intrusion and maintain reservoir levels at or below 250 mg/L Secondary Maximum Contaminant Level. Because of these limited pump runs our wells can only produce an average of around 7,000 gallons per day. The RO plant can produce 30,000 – 40,000 gallons per day. On a 3 day holiday weekend we can consume over 125,000 gallons of water. This is the reason why we do not have an unlimited water supply on the island and you are asked to conserve.

We have a wellhead protection plan in place to help protect our water sources. This report shows our water quality and what it means.

If you have any questions about this report or concerning your water utility, please contact Chuck Motson or Wayne Orff at 360-444-6611 during the day. We want our valued customers to be informed about their water utility. If you want to learn more, please visit our community web site. We post the results of all our monthly biological and scheduled quality tests as well as information helpful in understanding how our water system works.

If you have concerns about the quality of our water feel free to attend any community meeting which are held on the 3rd Saturday of each month on Hat Island.

Hat Island routinely monitors for constituents in your drinking water according to Federal and State laws. The following table shows the results of our monitoring for the period of January 1st to December 31st, 2006. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts per trillion (ppt) or Nanograms per liter (nanograms/l) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

Parts per quadrillion (ppq) or Picograms per liter (picograms/l) - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Millirems per year (mrem/yr) - measure of radiation absorbed by the body.

Million Fibers per Liter (MFL) - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Treatment Technique (TT) - (mandatory language) A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level - (mandatory language) The "Maximum Allowed" (MCL) is 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 - (mandatory language) The "Goal"(MCLG) is 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.

Detected Containments and results of state

During 2006 we had one test returned with a positive measurement for fecal coliform. We immediately repeated the test with negative results. We are certain that the positive result from the first test sample was due to the condition of the sampling site and that it was not representative of the safety of the overall water system. Nonetheless we issued a boil water advisory, sanitized the entire water system, and complied with the state

mandated resampling methodology. In the months following the failed sample there has been no evidence of these bacteria in the system.

In October of 2006, following the positive coliform test we had an inspection from the state department of health. The results of this inspection can be seen on our web site. The inspection revealed a number of pressing and minor issues in our water system that need correcting. Most have been corrected and the remainder are in progress. Watch the Viewpoint for monthly updates on the progress that we are making on these identified faults.

In previous years our average measurement of unaccounted for and lost water was around 15-20%. Due to Wayne's efforts we believe that we have reduced that level to less than 5%. We will provide that data in the final Viewpoint of the year.

Currently the "Green Sand Filter" which removes iron and manganese from the well water is off line. The state found it to be inoperable during their visit and as a result we were instructed to take it off line. The Island's engineers, Gray and Osbourne, are working on an upgraded system and as soon as the engineering work is completed we will submit that to DOH for their approval.

Already approved is a Pressure Reducing Valve (RPRV) for Division H where the water pressure exceeds 120 psi in the main lines. We believe that this high pressure is the proximate cause of the high number of failures that occur in that division. The PRV will reduce system pressure to 40-60 psi and is expected to greatly reduce our inventory losses due to breaks in that area.

The Board of Directors has approved the creation of a water advisory board made up of island owners. If you have an interest in serving on this committee contact the office or Karl Arhart who has volunteered to serve as the chair person of this committee.

Arsenic in your drinking water has been reported once at greater than 10 ppb. This does not mean that your drinking water currently fails to meet EPA's newly revised drinking water standard for arsenic. We are monitoring arsenic quarterly and if the levels continue to surpass 10 ppb on average we will be required to install a removal system. The planned improvements to the green sand filter already will include an arsenic removal subsystem. In the future, your Consumer Confidence Report will reflect improved laboratory methods that will more accurately detect the level of arsenic (if any) in your drinking water. EPA believes that consumers should be aware of the uncertain health risks presented by very low levels of arsenic. EPA's standard balances the current understanding of arsenic's health effects against the cost of removing arsenic from drinking water.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

In our continuing efforts to maintain a safe and dependable water supply it is necessary to make improvements in your water system. These improvements include planned renovations of the well houses, a complete overhaul of the filtration building and water office, replacement of the Division G pressure system and improvements to the system in Division M pressure system. Currently there are funds to accomplish these improvements. Future improvements may be reflected in the rate structure.

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/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Please call our office at (360) 444 6611 if you have questions. Donovan, Wayne and I will work as hard as necessary to ensure that we have the highest possible water quality and that our distribution system is the safest it can possibly be. We welcome your input.

TEST RESULTS						
Contaminant	Violation Y/N	Level Detected	Unit	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
1. Total Coliform Bacteria	Y			0		Naturally present in the environment
Fecal coliform and <i>E.coli</i>	Y			0		Presence of coliform bacteria in 5% of monthly samples a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive
3. Turbidity	N	0.19		n/a	1.0	Human and animal fecal waste Soil runoff
Radioactive Contaminants						
Beta/photon emitters	N/A	ND	Mrem/yr	0	4	Decay of natural and man-made deposits
5. Alpha emitters	N/A	ND	PCi/1	2	15	Erosion of natural deposits
6. Combined radium	N/A	ND	PCi/1	0	5	Erosion of natural deposits
Inorganic Contaminants						
7. Antimony	N	ND	Ppb	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
8. Arsenic	N	10.4	Ppb	n/a	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
9. Asbestos	N	N/A	MFL	7	7	Decay of asbestos cement water mains; erosion of natural deposits
10. Barium	N	ND	Ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
11. Beryllium	N	ND	Ppb	4	4	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
12. Cadmium	N	ND	Ppb	5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
13. Chromium	N	ND	Ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
14. Copper	N	ND	Ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
15. Cyanide	N	ND	Ppb	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
16. Fluoride	N	ND	Ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
17. Lead	N	ND	Ppb	0.15	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
18. Mercury (inorganic)	N	ND	Ppb	2	2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
19. Nitrate (as Nitrogen)	N	ND	Ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
20. Nitrite (as Nitrogen)	N	ND	Ppm	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits