

# *2016 Drinking Water Quality Report*



*For the Calendar year 2016*

**W**e 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. Chris Inman runs and maintains the system on a full-time basis. Chris was recently hired and will be working toward his Operators license. Therefore, we must employ a certified Contract Operator. Donovan Sheppard is our certified operator. He can be reached at 360-794-6999.

## **Sources of Water**

Our water source is six ground water wells and our Reverse Osmosis (RO) Plant. In 2016, we capped off Well #4 and it is now used only for golf course watering. The other 5 wells are still in operation for our residential water consumption. 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 gravity feed distribution system. Homes near the base of storage tanks are served by a pressure boosting system. All 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 of Chlorides (salt). Because of these rotating pump runs, our wells produce on average 10,000 gallons per day. The RO plant can produce 20,000 – 40,000 gallons per day. On a three-day holiday weekend we can consume over 125,000 gallons of water. We do not have an unlimited water supply on the Island and you are asked to continue your conservation efforts.

We have a wellhead protection plan in place to help protect our water sources. This plan ensures that the Island owns and maintains a buffer of properties surrounding each of our 6 wells which allows us to insure that we protect the infiltration zones surrounding each well head. Still Hat Island is a small landform and everything that you put on the ground eventually ends up in our aquifers. Also the recharging of our aquifers depends in a very large part on rain water run off. Trees and other vegetation slow the movement of surface water to give it time to soak into the ground and eventually into the aquifers. When you strip your properties of trees and leave only grass you speed runoff and reduce absorption. Our long term water health is in your hands.

This year we established a contract relationship with CASE RO out of Arlington. They will provide system evaluations and recommendation twice per year with on-site visits. We worked with this company to replace the dock pump and piping leading to the RO plant. Their report results indicated we should be able to get two more years use out of our membranes. Staff will provide updates to the Community on any improvements and issues as they arise.

### **Detected Containments and Missed Samples**

During 2016 all required samples were submitted and no samples exceeded regulatory limits.

### **Arsenic Abatement Program**

Because our wells have a level of naturally occurring arsenic which exceeds federal limits we must treat the product of our fresh water wells to remove it. We do so by adding Ferric Chloride (iron) to our well water before it is filtered. The arsenic bonds with the iron and this iron is then removed via filtration. The average arsenic content of our treated well water during 2016 was 0.0005 Mg/ml. The maximum acceptable contaminate level is 0.01Mg/ml.

Our RO product has only a 0.0001 trace of arsenic. When we combine that water with our fresh water well product the amalgamated water has an arsenic level of around 0.0003.

### **Water Use Efficiency**

Washington State regulations require us to set conservation goals for our water consumption. To encourage conservation we have a tiered usage billing structure. Tiered fees and continued emphasis on conservation are being used to drive down per hook-up usage.

The State has an unaccounted water goal for community water systems of 10% through leaks and unmeasured uses. In 2016, Evergreen Rural evaluated our island water system for leaks. While they found many small leaks, they surmised the overall system condition falls within acceptable water loss ranges. Their recommendation to staff is to develop long range pipe replacement plans as part of our budgeted capital program. Leak detection equipment has been purchased and staff trained to better locate leaks when they occur. The Community approved funding for a part-time maintenance worker to focus on installing the remaining leak detection meters island wide. This project should be completed by July 2017.

We will continue to search for and repair small leaks in our distribution system and we only install new services and make repairs using schedule 80 pipe instead of the lower quality schedule 40 pipe with which the system was initially installed. These and other improvements support our commitment to keeping our water system the best that it can be.

You can help conserve water as well.

As an example, one island family catches all the water while warming up their morning showers and the sink to do dishes. They use this water for their coffee production, brushing their teeth and watering their plants and garden. You can also ensure that when you leave the island, shut off the water system at the meter. Even the smallest of leaks when left for weeks or months can consume a huge amount of water. We have three types of water loss. They include: Authorized Unmetered Use (flushing stand pipes, fire department and North Marina Water), Unauthorized Unmetered Use (use of standpipes for personal use), and Water Leaks. This past year the total

from all three sources was 1 million gallons or 31.7 percent. \*Note: As of May 12, 2017 the main water meter was 20 percent high. Our recalculated percentage was 900,000 gallons or 29.9 percent.

### **Results of State Required Sampling**

Maximum Contaminants Levels (MCL)'s are set at very stringent levels for your protection and are set to limit the probability of anyone suffering an adverse effect from contaminants.

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). All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these contaminants 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.

We test our system on a rotating schedule as determined by the WA DOH. Some years we have few requirements, others we have more requirements. In 2016 we were required to test for Lead and Copper at 5 locations around the Island. These tests were all within allowable limits. We also tested for Inorganic Compounds (Nitrates) which there were none detected.

Your Water Operations staff works around the clock to provide top quality water to every residence. We ask that all our customers help us protect our fragile water sources, which are the heart of our community, our way of life and our children's future.

If you have any questions about this report or concerning your water utility, please contact Chris Inman, Operator at [waterlab@hatisland.com](mailto:waterlab@hatisland.com) or Sandy Bettencourt, Island Manager, at 360-444-6611 or [hioffice@hatisland.com](mailto:hioffice@hatisland.com) between 7:30 AM and 3:00 PM during the work week. We want our valued customers to be informed about their water utility. If you want to learn more, please visit our community web site where 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 of our Board of Trustees meetings which are held on the 3<sup>rd</sup> Saturday of each month on Hat Island.