

The H₂Water Spout Holiday Hideaway Water Company

Issue 19

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June 2017

WATER QUALITY REPORT FOR 2016

A MESSAGE FROM
Cas Hancock, Operator
360-770-4633

Tama Campbell, Back-up Operator
360-333-0107

We are very pleased to provide you with **this year's Annual Water Quality Report**. We want to keep you informed about the excellent water and services delivered to you over the past years. The goal has always been to provide you with a safe and dependable water supply.

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Bill Rainwater, Treasurer
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Cas Hancock, Recording Secretary

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Sharon Hughlitt

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Cas Hancock, Business Manager

Darcy Daniells, Bookkeeper

Water Co. Staff

Cas Hancock, Business Manager, Certified Operator

Darcy Daniells, Bookkeeper

Tama Campbell, Back-up Certified Water Operator

Lisa Torcoletti, Back-up Bookkeeper

Cynthia Recker, Groundskeeper

The Board meets monthly to discuss all business for our Association Members and our Water Customers.

Tama is your first-line contact for any questions about our water quality or operations, please call her at 360-333-0107. If she does not answer, please LEAVE A MESSAGE or e-mail her at hideawaywater@gmail.com.

If you have billing questions, please email Darcy at billing@hhwater.org or call the Office phone at 360-299-4535 and leave a message. Please do NOT call her personal phone.

Questions about business operation, H2Water Policy? Send an e-mail to Cas.hhwater@gmail.com
Questions about Bylaws/Covenants ? Send an e-mail to Information.hha@gmail.com,
or please call Cas at 360-770-4633 PLEASE NOTE THESE ARE NEW EMAIL ADDRESSES for Cas .

Board meeting notes, Membership Meeting Minutes or Notes, and other documents are available on our webpage www.hha.octopia.com. Once you are on the home page, click on the word SEARCH (top of page) and type hha to get the minutes; or type documents to find the governing documents and H₂Water Spout publications.

IF THERE IS A WATER EMERGENCY PLEASE CALL TAMA CAMPBELL AT 360-333-0107.

WHAT DO YOU MEAN BY THAT?

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain constituents in water provided by public water systems. We do not treat our water, but we do test **according to EPA's regulations. Food and Drug Administration regulations establish limits for constituents in bottled water** which must provide the same protection for public health.

In this report 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:

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 (ug /L) - 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 that can be absorbed by the body.

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.

Micro-ohms per centimeter (umhos/cm) —A measure of conductivity; the ability of a solution to conduct an electric current between two electrodes.

Other terms used:

Maximum Contaminant Level Goal (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 Contaminant Level (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.

Action Level (AL): the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

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

N/A: not applicable ND: not detectable at testing limit SRL: State Reporting Level

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.

REQUIRED FEDERAL INFORMATION



WHAT ABOUT BOTTLED 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).**

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

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. We treat our water according to EPA's regulations. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Samples taken before 2012 no longer need to be reported. Samples taken for the same Contaminant from 2012 through 2016 will only be listed for the most recent date or if there was a detection. For example, we must test for Nitrate every year but only results for 2016 will be listed in this report.

Missing results for years 2012 and 2016 means that those compounds have been tested for again and the results are listed in this report or those results showed no detections.

Contaminants that may be present in source water before we provide it include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- **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.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture and residential uses.
- **Radioactive contaminants**, which are naturally occurring.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

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 microbial contaminants are available from the

SAFE DRINKING WATER HOTLINE

1-800-426-4791

OR

WWW.EPA.GOV/SAFEWATER

2016 Results from DISTRIBUTION SYSTEM

Lead & Copper Samples are taken from inside homes scattered around our system to see how the results differ. We took samples from 5 homes in August 2016 as required. The 90th Percentile of all lead and copper samples collected is compared to its respective action level. This means that no more than 10 percent of our samples can be above either action level. The results below are the 90th percentile values for each action level.

Chemical Contaminants	MCL Or AL	MCLG	H2 Water	State Reporting Level	Sample Date	Violation	Typical Source of Contaminant
Lead (ppb)	15	15	3.00	0.0010	Aug 2016	NO	Leaches from pipes and plumbing
Copper (ppm)	1.3	1.3	0.215	1.0200	Sep 2012	NO	Leaches from pipes and plumbing

About Copper: Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time may experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal physician.

About Lead: 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. Adults who drink this water over many years could develop kidney problems or high blood pressure. Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap water for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791).

WATER USE EFFICIENCY REPORT SUMMARY

The 2014 Membership Goal is to reduce Distribution System Leakage (DSL) by 3 percent each year and to maintain the current maximum usage limit to 342 gallons per day per household (GPD/h). Measures used by individuals include repairing leaks, installing low-flow toilets, and watering by hand. In 2015 we decided together to reduce maximum usage to 300 GPD/h as quickly as possible.

Our Distribution System Leakage for 2016 was 1%. That brings our 3-year Annual Average down to 4.6%. That is down from last year's 3-year Annual Average of 7.3%. We are getting there! **Thanks for you help!**

CONSERVATION

As you consider your high value shrubs, fruit trees, & etc., consider drip irrigation systems instead of surface sprinklers. With drip systems, much of the water gets to roots while, with sprinklers, much of the water is lost to direct evaporation. If you do use sprinklers, do so early in the morning or in the evening when evaporation will be considerably less.

For the remainder of the summer, we are asking that you water only before 8:00 a.m. or after 8:00 p.m. Please water for only 30 minutes each day. NO DAY-TIME WATERING.

**Those of you with odd numbered street addresses, please water on odd numbered days.
If you have an even street number, please water on even numbered days.**

**If you want to reduce the number of slugs in your yard,
experts suggest watering only in the morning!**

2016 Results for Wells 3,4,& 5 (SO6- Blended Sample)

Contaminants	MCL Or AL	MCLG	H2 Water	SRL	Sample Date	Viola- tion	Typical Source of Contaminant
Chlorides (ppm) Well 3,4,5 (SO6)	250	N/A	29.00	20.0	Aug 2016	NO	Erosion of natural mineral deposits
Chlorides (ppm) Well 3,4,5 (SO6)	250	N/A	28.00	20.0	Sept 2016	NO	Erosion of natural mineral deposits

About Chlorides: Chlorides produce effects related to corrosion. They may also have significant economic implications. Other effects of corrosive water, such as the corrosion of iron and copper, may stain household fixtures, and impart objectionable metallic taste and red or blue-green color to the water supply as well. Corrosion of distribution system pipes can reduce water flow.

2016 Results for Wells 3 (SO3),4 (SO5),& 5 (SO7)

Contaminants	MCL Or AL	MCLG	H2 Water	SRL	Sample Date	Violation	Typical Source of Contaminant
Nitrates ppm) Well 3 (SO3)	10	10	0.29	0.20	Apr 2016	NO	Erosion of natural mineral deposits
Nitrates ppm) Well 4 (SO5)	10	10	1.18	0.20	Apr 2016	NO	Erosion of natural mineral deposits
Nitrates ppm) Well 5 (SO7)	10	10	0.33	0.20	Apr 2016	NO	Erosion of natural mineral deposits
Nitrates ppm) Well 4 (SO5)	10	10	1.18	0.20	Jun 2016	NO	Erosion of natural mineral deposits

About Nitrate: At levels above 10 ppm nitrate and Nitrite are a health risk for infants of less than six months of age. High nitrate/nitrite levels in drinking water can cause blue baby syndrome. Nitrate/Nitrite 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.

2013 Results for Wells 1 and 2

Contaminants	MCL Or AL	MCLG	H2 Water	SRL	Sample Date	Violation	Typical Source of Contaminant
Gross Beta (pCi/L) Well 1 (SO1)	50.0	N/A	4.44	4.0	Aug 2015	NO	Decay of natural and manmade deposits
Gross Beta (pCi/L) Well 2 (SO2)	50.0	N/A	9.18	4.0	Aug 2015	NO	Decay of natural and manmade deposits
Gross Alpha (pCi/L) Well 2 (SO2)	N/A	N/A	9.18	4.0	Aug 2015	NO	Decay of natural and manmade deposits

2013 Results for Wells 1 and 2 or (SO4 Blended Sample)

Chemical Contaminants	MCL Or AL	MCLG	H2 Water	SRL	Sample Date	Violation	Typical Source of Contaminant
Chlorides (ppm) Well 1&2 (SO4)	250	N/A	22.00	20.0	Apr 2013	NO	Erosion of natural mineral deposits
Conductivity (Umhos/cm) (SO4)	700.00	N/A	470.00	20.0	Apr 2013	NO	Amount of dissolved solids in water

About Alpha and Beta/photon emitters: Certain minerals are radioactive and may emit forms of radiation known as photons or alpha and beta radiation. Some people who drink water containing alpha or beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.

About Conductivity: Conductivity measures the ability of a solution to conduct an electric current between two electrodes. In solution, the current flows by ion transport. Therefore, with an increasing amount of ions present in the liquid, the liquid will have a higher conductivity. If the number of ions in the liquid is very small, the solution will be "resistive" to current flow. AC current is used to prevent complete ion migration to the two electrodes.

2013 Results for Wells 3,4,& 5 or (SO6-Blended Sample)

Chemical Contaminants	MCL Or AL	MCLG	H2 Water	State Reporting Level	Sample Date	Violation	Typical Source of Contaminant
Conductivity (Umhos/cm)	700.00	N/A	470.00	70.0	Apr 2013	NO	Amount of dissolved solids in water
Conductivity (Umhos/cm)	700.00	N/A	615.00	70.0	Jul 2013	NO	Amount of dissolved solids in water
Total Nitrate/Nitrite ((ppm)	N/A	N/A	0.23	0.20	Jul 2013	NO	Erosion of natural mineral deposits
Arsenic (ppb)	10	0	2.0	1.0	Jul 2013	NO	Erosion of natural deposits; Runoff from electronics production wastes
Barium (ppm)	2	2	0.0200	0.4000	Jul 2013	NO	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Lead ((ppb)	15	0	2	1.00	Jul 2013	NO	Corrosion of household plumbing systems; Erosion of natural deposits
Manganese (ppm)	5 (SMCL)	5	3.60	1.00	Jul 2013	NO	Erosion of natural mineral deposits
Sodium (ppm)	N/A (SMCL)	N/A	19.9	5.00	Jul 2013	NO	Erosion of natural mineral deposits
Hardness (ppm)	N/A (SMCL)	N/A	297.2000	10.0	Jul 2013	NO	Erosion of natural mineral deposits
Turbidity (NTU)	N/A (SMCL)	N/A	6.83	0.10	Jul 2013	NO	Soil run off
Color (CU)	15.000 (SMCL)	N/A	8.000	15.0	Jul 2013	NO	Amount of dissolved solids in water
Sulfate (ppm)	250.000 (SMCL)	N/A	58.0000	50.0000	Jul 2013	NO	Erosion of natural mineral deposits
Copper (ppb)	N/A (SMCL)	N/A	0.0090	0.020	Jul 2013	NO	Corrosion of household plumbing systems; Erosion of natural deposits
Zinc (ppm)	5.0000 (SMCL)	N/A	1.9	0.20	Jul 2013	NO	Erosion of natural mineral deposits
Iron (ppm)	3.0000 (SMCL)	3.0000	1.20	1.00	Jul 2013	NO	Erosion of natural mineral deposits

Health Effects

About Arsenic: Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

About Barium: Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

About Copper: Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time may experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal physician.

About Lead: See page 4.

EPA has established National Secondary Drinking Water Regulations that set non-mandatory water quality standards for 15 contaminants. EPA does not enforce these "secondary maximum contaminant levels" or "SMCLs." They are established only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color and odor. These contaminants are not considered to present a risk to human health at the SMCL. (continued next page)

Health Effects (continued)

Aesthetic Effects

- *Standards related to odor and taste:* Chloride, Copper, Iron, Manganese, Sulfate, and Zinc.

Odor and Taste are useful indicators of water quality even though odor-free water is not necessarily safe to drink. Odor is also an indicator of the effectiveness of different kinds of treatment. However, present methods of measuring taste and odor are still fairly subjective and the task of identifying an unacceptable level for each chemical in different waters requires more study. Also, some contaminant odors are noticeable even when present in extremely small amounts. It is usually very expensive and often impossible to identify, much less remove, the odor-producing substance.

- *Standards related to color:* Copper, Iron, and Manganese

Color may be indicative of dissolved organic material, inadequate treatment, high disinfectant demand and the potential for the production of excess amounts of disinfectant by-products. Inorganic contaminants such as metals are also common causes of color. In general, the point of consumer complaint is variable over a range from 5 to 30 color units, though most people find color objectionable over 15 color units. Rapid changes in color levels may provoke more citizen complaints than a relatively high, constant color level.

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

Technical Effects

- *Standards related to corrosion and staining:* Chloride, Copper, Iron, Manganese and Zinc.

Corrosivity, and staining related to corrosion, not only affect the aesthetic quality of water, but may also have significant economic implications. Other effects of corrosive water, such as the corrosion of iron and copper, may stain household fixtures, and impart objectionable metallic taste and red or blue-green color to the water supply as well. Corrosion of distribution system pipes can reduce water flow.

- *Standards related to scale and sediments:* Iron

Scaling and sedimentation are other processes which have economic impacts. Scale is a mineral deposit which builds up on the insides of hot water pipes, boilers, and heat exchangers, restricting or even blocking water flow. Sediments are loose deposits in the distribution system or home plumbing.

- Conductivity measures the ability of a solution to conduct an electric current between two electrodes. In solution, the current flows by ion transport. Therefore, with an increasing amount of ions present in the liquid, the liquid will have a higher conductivity. If the number of ions in the liquid is very small, the solution will be "resistive" to current flow. AC current is used to prevent complete ion migration to the two electrodes.
- Hardness is a measure of the amount of certain naturally occurring minerals found in water, namely calcium and magnesium. While calcium and magnesium are essential minerals for human health, hardness may cause spotting on dishes and shower walls, affect the lathering of soap (more hardness = less lathering or suds = more soap/detergent required to do the same job) or cause deposits on water related fixtures.

Treated (or softened water) = 0

Slightly hard = 1-2 grains per gallon (total grains x 17.1 equals ppm)

Medium Hard = 3-7 grains per gallon (total grains x 17.1 equals ppm)

Hard = 7-10.5 grains per gallon (total grains x 17.1 equals ppm)

Extremely Hard Water = 10.5+ grains per gallon (total grains x 17.1 equals ppm)

Note: Each ppm of iron equals 4 grains per gallon of hardness.



**FIREWORKS ARE NOT
ALLOWED IN OUR HIDEAWAY
NO FIRES OR FIREWORKS
ON THE BEACHES
BYLAWS Part 3, Section 3.12.5**



EXTRA, EXTRA...

READ ALL ABOUT IT!

NOTES FROM 2017 ANNUAL

MEMBERSHIP MEETING ARE ENCLOSED

Holiday Hideaway Water
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This is Your

2016

Water Quality Report

AND

2017

Membership

Meeting Notes

