ANNUAL DRINKING WATER QUALITY REPORT – 2016

Get to know your water. Hannahville Indian Community's Water System met or exceeded all quality standards in 2016. This report provides information where your drinking water comes from, how it's treated, results from quality testing, and essential information.

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HANNAHVILLE INDIAN COMMUNITY WATER SYSTEM

WHAT IS THIS REPORT?

The Environmental Protection Agency requires public water suppliers to provide consumer confidence reports, also known as water quality reports to their consumers. This report is a snapshot of last year's water quality.

Please share this information with all other people who drink this water, especially those who may not have received this notice directly, for example, schools and businesses. You can do this by posting this report in a public place or distributing copies by hand or mail.

PUBLIC PARTICIPATION

Meetings concerning your public water supply and its decision making on water quality can be discussed at regular monthly Tribal Council Meetings which take place the first Monday of each month at the Administration Building.

WATER SYSTEM CONNECTIONS

Hannahville's Community Water System consists of the Island Resort & Casino, Island Oasis Convenience Store Building, RV Park, Health & Human Services, Hannahville Indian School, Elder's Complexes, Administration Office Building, VISIONS, Housing Office Building, Community Center, Environmental Office Building, and about 130 homes.

WHERE YOUR WATER COMES FROM

The water supply originates as water beneath the surface of the Earth, called Groundwater. It is naturally filtered as it travels through the soil and rocks. The community water system has two wells located near the Island Casino that pump groundwater to the Water Treatment Plant.

SOURCE WATER PROTECTION

Our Source Water Protection and Well Head Protection Program, is an assessment that consists of identifying the area around the wells, which need to be protected from contamination, and determining the susceptibility of the wells to contamination. Because the water we drink comes from underground wells, we need to be careful how we dispose of harmful contaminants. An assessment provides us with the information we need, as a Community to make sure our drinking water is safe now and in the future. This report is found at the Environmental Offices.

POSSIBLE CONTAMINANTS IN SOURCE WATER

The sources of drinking water, both tap 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 and or from human activity.

Contaminants that may be present in source water 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 salt and metals, this 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: may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.
- Organic Chemical Contaminates: including Synthetic and Volatile Organic Chemicals, which are by-products of industrial processes and petroleum production can also come from gas stations, urban storm runoff and septic systems.
- Radioactive Contaminates: can be naturally occurring or be the result of oil and gas production and mining activities. To protect public health, WTP's remove these contaminants to safe levels established by United States Environmental Protection Agency (EPA) regulations.

WATER TREATMENT PROCESS

Groundwater pumped to the Water Treatment Plant is first pre-filtered through a Multi-Media Filter then continues to a Reverse Osmosis Filtration Unit which forces water through semi-permeable membranes, trapping contaminates, ions, and microbes, but allowing clean water through. A small amount of chlorine is added for constant disinfection and the water is then sent to a clearwell, which is an underground storage tank. This treated and high quality drinking water is then pumped to the water tower for distribution.

TOTAL COLIFORM

Total Coliform Bacteria is a group of bacteria whose presence in drinking water indicates possible contamination with soil or waste from warm blooded animals. Hannahville's Water System is required to take 5 Total Coliform samples each month, a minimum of one each week from various sites throughout the distribution system. All Total Coliform samples in 2016 were absent of Total Coliforms. More on the Total Coliform Rule: http://water.epa.gov/lawsregs/rulesregs/sdwa/tcr/index.cfm

TAP WATER REGULATIONS & CHARACTERISTICS

Hannahville's Community Water System met or exceeded all drinking water standards and regulations established by the EPA. These regulations protect public health by setting legal limits on levels of potentially harmful 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 in drinking water 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 EPA has Secondary Standards for some parameters which are non-enforceable, but recommended guidelines. The following table are some parameters we test daily or weekly, these characteristics could also affect the aesthetics of drinking water such as taste, odor, and color.

PARAMETER	2016 HANNAHVILLE TAP WATER AVERAGE	EPA SECONDARY MCL'S
pH	7.16	6.50 - 8.50
Conductivity, µC/cm	99	No Federal Limit
Hardness Total, mg/L	41	No Federal Limit
Alkalinity Total, mg/L	46	No Federal Limit

LEAD

Hannahville's Community Water System tests for lead & copper every 3 years. The 90th Percentile Lead results from 2015 were Not Detected. 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. Hannahville Water Operations 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. If you are concerned about lead in your water, you can request your water to be tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at https://www.epa.gov/lead

A MESSAGE FROM THE EPA

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised people, some of the elderly, and infants can be particularly at risk for infections. These people should seek advice about their drinking water from their health care providers. EPA and the Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other Microbiological Contaminants are available from the Safe Drinking Water Hotline.

WATER QUALITY DATA TABLE & RESULTS

For the Detected Contaminant Table on Page 4: **The presence of contaminants in the water does not necessarily indicate that the water poses a health risk.** The EPA requires us to monitor for certain contaminates less than once a year because the concentrations of these contaminates do not frequently change. Some of the data reported are more than a year old but still representative. The contaminants listed were found in our water, but were detected at levels below the regulatory limit.

Many other contaminants such as Cyanide, Arsenic, Asbestos, Synthetic Organic Chemicals, Nitrate and Nitrite were tested and were Not Detected in our water system.

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2016 DETECTED CONTAMINANT TABLE

ANALYTE NAME	TEST DATE	LEVEL COMPARISON	VIOLATION	[1] Potential health effects from long-term exposure OVER the MCL. [2] Common sources of contaminant in drinking water.
CHLORINE ppm	7/27/16	MRDL: 400 MRDLG: 400 **Test Result: 51** *	**NO**	[1] Eye/nose irritation; stomach discomfort. [2] Water additive used to control microbes.

***** *Chlorine result reported here is the highest one-time test result for the whole year.*

DISINFECTION BY-PRODUCTS 2016

TOTAL-TRIHALO METHANES mg/L	8/2/16	MCL: 800 MCLG: NA † **Test Result: 28**	**NO**	[1] Liver, kidney, or central nervous system problems; increased risk of cancer. [2] Byproduct of drinking water disinfection.

† *There is no collective MCLG for this group, there are individual MCLG's for some individual contaminants.*

INORGANIC CONTAMINANTS 2015

FLUORIDE mg/L	3/2/15	MCL: 400 MCLG: 400 **Test Result: 61**	**NO**	[1]Bone disease (pain and tenderness of bones); children may get mottling of teeth [2]Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
BARIUM mg/L	3/9/15	MCL: 200 MCLG: 200 **Test Result: 1**	**NO**	[1] Increase in blood pressure. [2] Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
COPPER mg/L TT^5	7/2015	AL: 13 MCLG: 13 **Test Result: 1**	**NO**	[1] Short-term exposure: Gastrointestinal distress. Long-term exposure: Liver or kidney damage. People with Wilson's Disease should consult their personal doctor if the amount of copper in their water exceeds the Action Level. [2] Corrosion of household plumbing systems; erosions of natural deposits.

RADIOACTIVE CONTAMINANTS 2015

GROSS ALPHA pCi/L	4/6/15	MCL: 15.00 MCLG: 0.00 **Test Result: 5.60** ‡	**NO**	[1] Increased risk of cancer. [2] Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation.
GROSS BETA pCi/L	1/12/15	MCL: 50.00 § MCLG: 0.00 **Test Result: 1.33** ‖	**NO**	[1] Increased risk of cancer. [2] Decay of natural and man-made deposits of certain minerals that are radioactive and may emit forms of radiation known as photons and beta radiation.
RADIUM - 226 pCi/L	1/12/15	MCL: 5.00 MCLG: 0.00 **Test Result: 1.53**	**NO**	[1] Increased risk of cancer. [2] Erosion of natural deposits.

‡ *If the results of this sample had been above 15 pCi/L our system would have been required to do additional testing for uranium. Because the results were below 15 pCi/L, no testing for uranium was required.*

§ *The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for beta particles.*

‖ *Because the beta particle results were below 50.00 pCi/L, no testing for individual beta particles constituents was required.*

NOTE: Next Radioactive contaminants sample to be taken in the year 2024

VOLATILE ORGANIC COMPOUNDS 2014

TOTAL XYLENES mg/L	4/1/14	MCL: 10,000 MCLG: 10,000 **Test Result: 16**	**NO**	[1] Nervous system damage. [2] Discharge from petroleum and chemical factories.

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WATER QUALITY TABLE DEFINITIONS

MCL: Maximum Contaminant Level: The highest level of a contaminant that is allowed in the water we drink. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

MCLG: Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

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

mg/L: milligrams per liter = ppm, parts per million = 1¢ in $10,000.00

µg/L: micrograms per liter = ppb, parts per billion = 1¢ in $10,000,000.00

pCi/L: picocuries per liter. A measure of radio activity in water.

MRDL: Maximum Residual Disinfectant Level: The highest level of a drinking water disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG: Maximum Residual Disinfectant Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

TT[5]: Lead & Copper are regulated by a Treatment Technique that requires systems to control the corrosiveness of their water. If more than 10% of tap water samples exceed the Action Level, water systems must take additional steps.

SECURITY & MAINTENANCE

If you notice any activity that should need immediate attention at any time involving YOUR water supply, please do not hesitate to notify us. This includes buildings, hydrants, pipes, and abnormal leaks.

HANNAHVILLE WATER OPERATIONS EMPLOYEES

All employees are certified as a Waterworks System Operator though the State of Michigan's Department of Environmental Quality, each holding all three classifications. We are reachable at all times. Please call for further information, and additional copies. Wastewater Plant Telephone 906.723.2200 Website http://www.hannahville.net/services/hannahville-water-wastewater-department

Supervisor: Dan Stein

Operators: Tom Broeders
Steve Javurek
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