



# 2016 Consumer Confidence Report

## Naval Support Activity South Potomac Naval Support Facility Indian Head Indian Head, Maryland

Maryland Public Water Systems MD0080058 and MD1080039



Your tap water meets all EPA and State drinking water health standards.

◆ A Closer Look at Water Quality ◆

# 2016 Consumer Confidence Report

## Annual Drinking Water Quality Report

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) regulates Public Water Systems and the contaminants found in water through the implementation of the SDWA. The Maryland Department of the Environment (MDE) is responsible for the enforcement of the SDWA. MDE routinely conducts inspections and provides a yearly monitoring schedule for all public water systems. Monitoring schedules include the collection of monthly bacteria samples, annual nitrate samples, monitoring of chlorine disinfectant residuals, and other parameters sampled in multi-year intervals.

There are many different ways for you to get involved in the safety of your drinking water. If there are issues or concerns with your drinking water, contact the Environmental Office at Naval Support Facility Indian Head (NSFIH). Reporting

issues immediately can help prevent any problems from escalating. Your input is important to us! Check the MDE, <http://mde.maryland.gov/programs/water/pa ges/index.aspx>, and EPA, <https://www.epa.gov/environmental-topics/water-topics>, websites regularly to stay up to date with the newest SDWA regulations and topics.

To reduce water loss due to leakage and reduce costs associated with repairs, NSFIH is actively pursuing the replacement of the Installation's underground water distribution lines. Replacement is anticipated to begin in 2020. In the meantime, ongoing maintenance ensures the high quality of our drinking water.

## Water Source Information

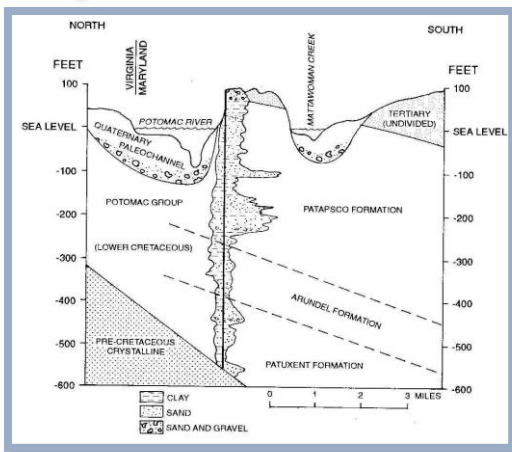
Groundwater from four Indian Head wells and two Stump Neck wells drilled to the Patapsco and Patuxent Aquifers supply the water for both NSFIH and Stump Neck Annex.

An aquifer is an underground geologic formation of sand, gravel, or rock through which water can pass and is stored. Because the layers of sand, gravel, and rock provide natural filtration, groundwater is usually clear when it is pumped out of the ground; thus, it can be disinfected without prior treatment. NSFIH wells are deep wells and are protected by these layers from most contaminants and bacteria.

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference - try one today and soon it will become second nature. Look for the blue boxes for water conservation tips!

Your water is treated by disinfection with sodium hypochlorite. Disinfection involves the addition of chlorine or other disinfectant to kill dangerous bacteria and microorganisms that may be in the water. Disinfection is considered to be one of the major public health advances of the 20th century.

Maintaining a chlorine residual is important in protecting the water and the distribution system from bacteria and microorganisms.



Sources of your drinking water include the  
**Patapsco and Patuxent Aquifers**

### Source Water Assessment

As of March 31, 2006, MDE completed source water assessments for all public water systems in the State. The required components of this report are:

- ◆ Delineation of an area that contributes water to each source,
- ◆ Identification of potential sources of contamination within the areas, and
- ◆ Determination of the susceptibility of each water supply system to contamination.

A Source Water Assessment was completed for both NSFIIH and Stump Neck Annex. It was determined that both water systems are not susceptible to contaminants originating at the land surface due to the protected nature of confined aquifers. The NSFIIH water system was determined to be susceptible to naturally occurring radiological contaminants. Your water is routinely sampled for radiological and other possible contaminants to ensure they are below levels of health concern. A copy of the Source Water Assessment can be found in the Environmental Office.

Protecting our source water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- ◆ Eliminate excess use of lawn and garden fertilizers and pesticides - they contain hazardous chemicals that can reach your drinking water source.
- ◆ Pick up after your pets.
- ◆ If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- ◆ Dispose of chemicals properly. Charles County Department of Public Works hosts a Household Hazardous Waste Collection Day the first Monday of each month. Visit <https://www.charlescountymd.gov/commissioners/calendar/hazardous-waste-collection-day> for more details on acceptable materials and location.

It's easy and inexpensive to insulate your water pipes with pre-slit foam pipe insulation. You'll get hot water faster plus avoid wasting water while it heats up.



- ◆ Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team, <https://cfpub.epa.gov/surf/locate/index.cfm>.
- ◆ Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

### Important Health Information

NSFIH routinely monitors its drinking water for contaminants. Some people may be more vulnerable to contaminants in drinking water. 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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline, (800)426-4791.

### Why are there substances in my 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 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, can pick up substances resulting from the presence of animals or from human activity:

- ◆ Microbial contaminants, such as viruses and bacteria, that may come from 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, urban stormwater runoff, and residential uses.

There is no need to keep the water running while brushing your teeth. Just wet your brush and fill a glass for mouth rinsing.

- 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 stormwater runoff, and septic systems
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

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

### 2016 Water Quality Monitoring

All sample results were under the maximum contaminant levels allowed by the Environmental Protection Agency (EPA) and Maryland Department of the Environment (MDE) regulations.

The 2016 NSF/ISH drinking water monitoring schedule involved collecting routine monthly samples for bacteria at several sites approved by MDE, samples collected annually for nitrates, and disinfection byproducts including total trihalomethanes (TTHM) & haloacetic acids (HAA5). MDE assisted NSF/ISH in 2016 by taking samples for volatile organic chemicals.

MDE allows public water systems to monitor for some contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. Some of our data, though representative, are more than one year old. To help you better understand terms used throughout this report, we have provided definitions on page 7. Sample results are provided on pages 8 and 9.

### Cross Connection Control Survey

The purpose of this survey is to determine whether a cross-connection may exist at your home or business. A cross connection is an improper connection, protected or unprotected, to a public water distribution system that may cause contamination or pollution to enter the system. We are responsible for enforcing cross-connection control regulations and ensuring that no contaminants can, under any flow conditions, enter the distribution system.

NSF/ISH, in accordance with applicable federal and state laws and regulations, has an active program in place to control cross connection and prevent backflow of contaminated water into the potable supply. Backflow can occur when water pressure drops. Routine surveys and annual inspections are done to identify and address cross connection hazards and ensure proper functioning of backflow preventers (BFPs).

Replacing an 18 liter per flush toilet with an ultra-low volume (ULV) 6 liter flush model represents a 70% savings in water flushed and will cut indoor water use by about 30%.

## Required Information

The following is a required informational statement about lead in drinking water and its effects on children by the EPA.

“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. NSF/ISH 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 may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).”

As consumers of the potable water, we all play a vital role in protection of the drinking water supply. Here are some tips you can use to control cross connections and prevent backflow:

- ◆ Do not leave hoses submerged in buckets, sinks, puddles, or other containment units.
- ◆ Do not use hoses to unclog blocked toilets, sewers, etc.
- ◆ Never connect plumbing hardware onto the supply system without obtaining prior approval from the Utilities and Energy Management (UEM) Branch.
- ◆ Notify the UEM Branch immediately if there is any indication or suspicion that contaminated water had entered the water supply system.



Hose bib without BFP; water supply is susceptible to contamination when a hose is connected.



Hose bib with BFP; water supply is protected from contamination when a hose is connected.

Read the house water meter before and after a two-hour period when no water is being used. If the meter does not read exactly the same, there is a leak.



## Water Quality Definitions

- ◆ **Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- ◆ **Average:** Regulatory compliance with some MCLs are based on running annual average of monthly samples.
- ◆ **Chlorine Disinfectant Residual:** Concentration of chlorine available for
- ◆ **Level 1 Assessment:** A level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
- ◆ **Level 2 Assessment:** A level 1 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E.coli MCL violation has occurred and/or why total coliform have been found in our water system on multiple occasions.
- ◆ **Maximum Contaminant Level (MCL):** The highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- ◆ **Maximum Contaminant Level Goal (MCLG):** The level of contaminant in drinking water below which there is no known or expected risk to health.
- ◆ **Maximum Residual Disinfectant Level (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 (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 contaminants.
- ◆ **mg/L:** Milligrams per liter or parts per million; number of milligrams of substance in one liter of water.
- ◆ **mrem:** Millirems per year (a measure of radiation absorbed by the body).
- ◆ **N/A:** Not applicable.
- ◆ **ND:** Non-Detection. Laboratory analysis indicates the contaminate is not present.
- ◆ **ppb:** Micrograms per liter or parts per million - or one ounce in 7,350 gallons of water.
- ◆ **ppm:** Milligrams per liter or parts per billion - or one ounce in 7,350,000 gallons of water.
- ◆ **pCi/L:** picocuries per liter (a measure of radioactivity in water).
- ◆ **Secondary Maximum Contaminant Level (SMCL):** These levels represent reasonable goals for drinking water aesthetic quality and are not federally enforceable.
- ◆ **Treatment Technique (TT):** These levels represent reasonable goals for drinking water aesthetic quality and are not federally enforceable
- ◆ **Unregulated Contaminants:** Substances that do not pose a threat to public health or are under consideration for further study to determine if a health risk exists.

If you are planting a new lawn, or overseeding an existing lawn, use drought-resistant grasses such as the new “Eco-Lawn”. Many beautiful shrubs and plants thrive with far less watering than other species.

## WATER QUALITY DATA

Contaminant	Unit	Level Detected or Range	MCLG/MRDLG (EPA Goal)	MCL/MRDL (Highest Level Allowed)	Violation Y/N	Year Tested	Major Source Typical Source of Contaminant
<b>DISINFECTANTS &amp; DISINFECTANT BY-PRODUCTS</b>							
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)							
Chlorine	ppm	1.1 - 1.2	4	4	N	2016	Water additive used to control microbes
Total Trihalomethanes	ppb	ND	N/A	80	N	2016	Byproduct of drinking water disinfection
<b>INORGANIC CONTAMINANTS</b>							
Barium	ppm	0.0062 - 0.035	2	2	N	2016	Discharge of drilling wastes and metal refineries; Erosion of natural deposits
Chromium	ppb	ND	100	100	N	2016	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride	ppm	0.68 - 0.9	4	4	N	2016	Erosion from natural deposits; Runoff from fertilizer and aluminum factories
Nitrate	ppm	ND	10	10	N	2016	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium	ppb	0 - 13	50	50	N	2016	Discharges from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
<b>MICROBIOLOGICAL CONTAMINANTS</b>							
Total Coliform	Positive samples /month	0	0	0	N	2016	Naturally present in the environment
<b>ORGANIC CONTAMINANTS</b>							
Methylene Chloride	ppb	3.3	0	5	N	2014	Discharge from pharmaceutical and chemical factories.
<b>RADIONUCLIDES</b>							
Beta/ Photon Emitters	pCi/L	0 - 4.5	0	50	N	2016	Decay of natural and man-made deposits
Gross Alpha	pCi/L	3.5	0	15	N	2014	Erosion of natural deposits
Radium – 226	pCi/L	0.3 - 0.4	0	5	N	2014	Erosion of natural deposits
Combined Radium 226 & 228	pCi/L	0.4	0	5	N	2014	Erosion of natural deposits
<b>Lead and Copper in Distribution System</b> MCL determined in the 90 <sup>th</sup> Percentile							
Lead	ppb	3.4	0	AL = 15	N	2016	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper	ppm	0.26	1.3	AL = 1.3	N	2016	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
<b>Secondary Contaminants</b> SMCLs are non-enforceable guidelines regulating contaminants that may cause aesthetic effects							
Chloride	ppm	14.7 - 125	N/A	SMCL 250	N	2016	Dissolving salt deposits, salting of highways, chemical industry effluent, oil well operations, sewage, irrigation drainage, refuse leachate
Iron	ppb	110 - 130	N/A	SMCL 300	N	2016	Erosion of natural deposits; household piping
Manganese	ppm	0.014 - 0.057	N/A	SMCL 50	N	2016	Naturally present in the environment

Teach your kids about water conservation to ensure a future generation that uses water wisely.  
Make it a family effort to reduce next month's water bill!



## WATER QUALITY DATA CHART

Contaminant	Unit	Level Detected or Range	Minimum Reporting Level	Violation Y/N	Year Tested	Major Source Typical Source of Contaminant
<b>UNREGULATED CONTAMINANTS</b>						
<b>Sampling not required by state or federal law</b>						
Total Hardness (CaCO <sub>3</sub> )	ppm	2.1 - 14.2	N/A	N	2016	Naturally present in the environmental
p-Isopropyl Toluene	ppb	3.9	N/A	N	2014	Heat transferring agent
Sodium	ppm	58.8 - 291	N/A	N	2016	Erosion of natural deposits
Sulfate	ppm	4 - 9.6	N/A	N	2013	Erosion of natural deposits
Bromo-chloromethane (Halon 1011)	ppb	15.4	0.06	N	2014	Use in fire extinguishers, may be released to the environment as a fugitive emission during the use of fire extinguishers that contain the compound
Bromo-dichloromethane	ppb	11.9	N/A	N	2014	Byproduct of drinking water disinfection
Bromoform	ppb	12.2	N/A	N	2014	Byproduct of drinking water disinfection
Bromomethane	ppb	4.6 - 21.1	0.2	N	2014	Used to kill pests; to make other chemicals or as a solvent to get oil out of nuts, seeds, and wool
Chloroform	ppb	25.1	N/A	N	2014	Byproduct of drinking water disinfection
Chloromethane	ppb	18.7	0.2	N	2014	Extractant for greases, oils, and resins; as a food additive, a fumigant, and a fire extinguisher
Dibromo-chloromethane	ppb	15.4	N/A	N	2014	Byproduct of drinking water disinfection
Dibromomethane	ppb	4.55	N/A	N	2014	Discharge from petroleum factories; Soil fumigant
Perfluorinated Compounds	ppb	ND	N/A	N	2015	Used for its emulsifier and surfactant properties in or as fluoropolymers (such as Teflon), fire - fighting foams, cleaners, cosmetics, greases and lubricants, paints, polishes, adhesives and photographic films; Manmade chemical; used in products to make them stain, grease, heat, and water resistant

### For more information on...

The Consumer Confidence Report, water quality, or related, please contact:

Drinking Water Program Manager

Lindsey Arndt, Environmental

3972 Ward Road, Building 289

Indian Head, MD 20640-5157

Phone: (301)744-2258

Email: lindsey.arndt@navy.mil

Utilities, water leaks, or related, please contact:

Water and Waste Water Branch Supervisor

Edward Hayden, Utilities

4120 Lloyd Road, Building 3162

Indian Head, MD 20640-5157

Phone: (301)744-4785

Email: edward.hayden@navy.mil