Naval Support Activity South Potomac

Naval Support Facility Indian Head

Indian Head, Maryland

Maryland Public Water Systems MD0080058 and MD1080039

2021 Annual Drinking Water Quality Report

Naval Support Facility Indian Head (NSFIH) is 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. In addition to the EPA and MDE, the NSFIH Public Works Department conducts routine inspections and sampling to ensure the highest water quality is provided to the consumer.

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 NSFIH at (301) 744-2265. Reporting issues immediately can help prevent any problems from escalating. Your input is important to us! Check the MDE, https://mde.maryland.gov/programs/water, 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 2023. In the meantime, ongoing maintenance ensures the high quality of your drinking water.

Throughout the report, italicized text reflects required information by the EPA or MDE.

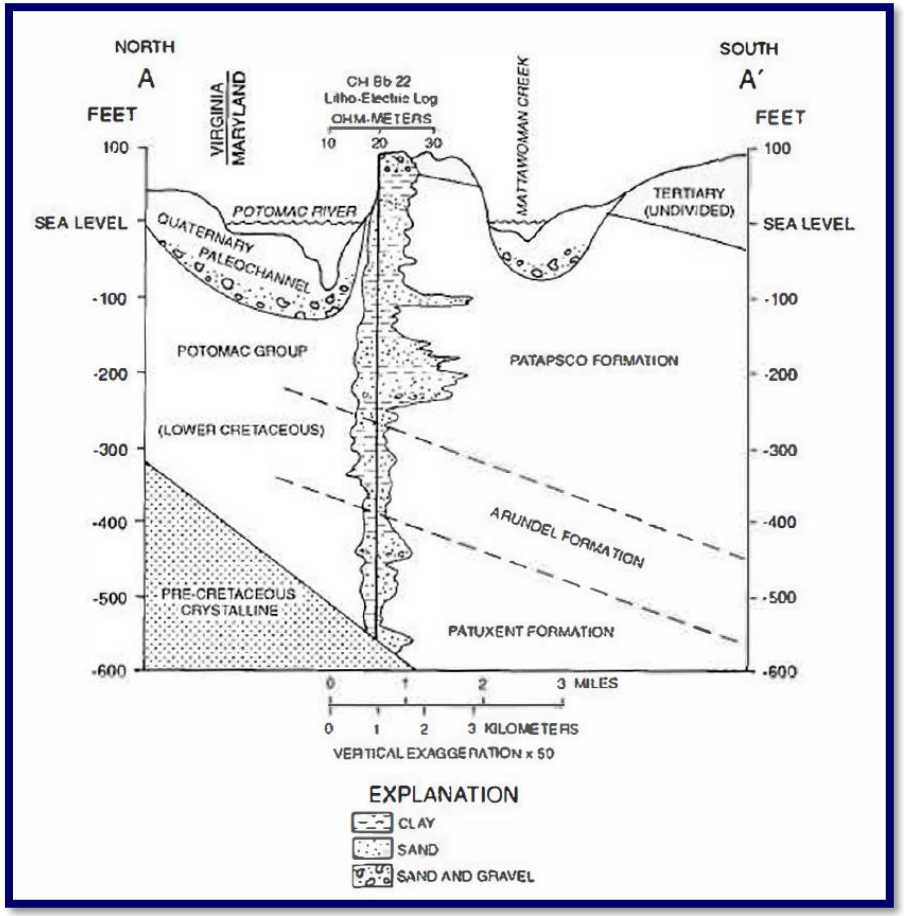
Water Source Information

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. Throughout this report, the use of "NSFIH" refers to NSFIH main side as well as 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.

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. According to the Centers for Disease Control and Prevention, disinfection is considered one of the major public health achievements of the 20th century.

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



U.S. Geological Survey – Water Resources Investigations Report 91-4059

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 NSFIH 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 NSFIH 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. Contract the Environmental Office at (301) 744-2265 for a copy of the Source Water Assessment.

Protecting your 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 Saturday of each month. Visit https://www.charlescountymd.gov/services/environmental-resources/trash-hazardous-material-disposal/household-hazardous-waste for more details on acceptable materials and location.
- 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 How's My Waterway, https://www.epa.gov/waterdata/hows-my-waterway.
- 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

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 (800-426-4791).

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. We are responsible for providing high quality drinking water, but we 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 http://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water.

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.*
- *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 human health.

2021 Water Quality Monitoring

The 2021 NSFIH drinking water monitoring schedule required 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 NSFIH in 2021 by taking samples for volatile organic chemicals. All sample results were under the maximum contaminant levels allowed by the EPA, MDE and Navy regulations.

MDE allows public water systems to monitor for certain 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 the data, though representative, are more than one year old but represent the most recent testing done in accordance with drinking water regulations. To help you better understand terms used throughout this report, we have provided the following definitions. Sample results are provided on pages 7 and 8.

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 remaining in the distribution system, which prevents growth of microbes.*

- ***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 2 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 billion - or one ounce in 7,350,000 gallons of water.*
- ***ppm:*** *Milligrams per liter or parts per million - or one ounce in 7,350 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)****: A required process intended to reduce the level of a contaminant in drinking water.*
- ***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.*

Water Quality Data
Naval Support Facility Indian Head: Regulated Contaminants

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Disinfectants and Disinfection By-Products								
Chlorine	2021	1.4	0.4 - 1.4	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Total Trihalomethanes (TTHM)	2021	1.5	1.5 - 1.5	N/A	80	ppb	N	By-product of drinking water disinfection.
Haloacetic Acids (HAA5)	2021	<2.0	<2.0 - <2.0	N/A	60	ppb	N	By-product of drinking water disinfection.
Inorganic Contaminants								
Fluoride	2021	1.3	0.88 - 1.3	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Barium	2021	0.017	0.013 - 0.017	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Microbial Contaminants								
Total Coliform	2021	ND	N/A	0	1	Positive samples/ month	N	Naturally present in the environment
Radioactive Contaminants								
Beta/photon emitters	2020	5.9	4 - 5.9	0	50	pCi/ L	N	Decay of natural and man-made deposits.
Combined Radium 226/228	2020	0.6	0.2 - 0.6	0	5	pCi/ L	N	Erosion of natural deposits.
Gross alpha excluding radon and uranium	2020	2	0 - 2.3	0	15	pCi/ L	N	Erosion of natural deposits.

Contaminant	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Likely Source of Contamination
Lead and Copper							
Copper	2019	1.3	1.3	0.26	0	ppm	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2019	0	15	5	0	ppb	Corrosion of household plumbing systems; Erosion of natural deposits.

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Disinfectants and Disinfection By-Products								
Chlorine	2021	1.3	0.2 - 1.3	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Total Trihalomethanes (TTHM)	2021	17	17 - 17	No goal for total	80	ppb	N	By-product of drinking water disinfection.
Haloacetic Acids (HAA5)	2021	<2.0	<2.0 - <2.0	No goal for total	60	ppb	N	By-product of drinking water disinfection.
Inorganic Contaminants								
Barium	2021	0.0089	0.0060 - 0.0089	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	2021	1.2	1.1 - 1.2	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Microbial Contaminants								
Total Coliform	2021	ND	N/A	0	1	Positive samples/ month	N	Naturally Present in the environment

Contaminant	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Likely Source of Contamination
Lead and Copper							
Copper	2019	1.3	1.3	0.19	0	ppm	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2019	0	15	0.0053	0	ppb	Corrosion of household plumbing systems; Erosion of natural deposits.

What's New in the World of Water?

PFC/PFAS

SECNAV – Energy, Installations, & Environment

https://www.secnav.navy.mil/eie/pages/pfc-pfas.aspx

What are per- and polyfluoroalkyl substances and where do they come from?

Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of man-made chemicals. PFAS have been used in a variety of industries and consumer products around the globe, including in the United States, since the 1940s. PFAS have been used to make coatings and products that are used as oil and water repellents for carpets, clothing, paper packaging for food, and cookware. They are also contained in some foams (aqueous film-forming foam or AFFF) used for fighting petroleum fires at airfields and in industrial fire suppression processes because they rapidly extinguish fires, saving lives and protecting property. PFAS chemicals are persistent in the environment and some are persistent in the human body – meaning they do not break down and they can accumulate over time.

Is there a regulation for PFAS in drinking water?

There is currently no established federal water quality regulation for any PFAS compounds. In May 2016, the EPA established a health advisory (HA) level at 70 parts per trillion (ppt) for individual or combined concentrations of perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). Both chemicals are types of PFAS.

Out of an abundance of caution for your safety, the Department of Defense's (DoD) PFAS testing and response actions go beyond EPA Safe Drinking Water Act requirements.

In 2020 the DoD promulgated a policy to monitor drinking water for PFAS at all service owned and operated water systems at a minimum of every three years.

The EPA's health advisory states that if water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than 70 parts per trillion, water systems should quickly undertake additional sampling to assess the level, scope, and localized source of contamination to inform next steps.

Has NSFIH tested its water for PFAS?

Yes. All NSFIH wells were tested for PFAS.

Below The MRL

We are pleased to report that drinking water testing results were below the Method Reporting Limit (MRL) for all 18 PFAS compounds covered by the sampling method, including PFOA and PFOS. This means that PFAS were not detected in your water system. In accordance with DoD policy, the water system will be resampled every three years for your continued protection.

Simple Steps to Save WATER

Inside the Home

By giving your bathroom a water efficiency makeover with WaterSense labeled toilets and faucets, you could save more than 11,000 gallons annually—and that's no drop in the bucket.

Get Flush With Savings

- Consider installing a WaterSense labeled toilet, which uses 20 percent less water while offering equal or superior performance. Compared to older, inefficient models, WaterSense labeled toilets could save a family of four more than $90 annually on its water utility bill, and $2,000 over the lifetime of the toilets.
- Check for toilet leaks by adding food coloring to the tank. If the toilet is leaking, color will appear in the bowl within 15 minutes. (Make sure to flush as soon as the test is done, since food coloring can stain the tank.)

Accessorize Your Faucet

- Installing a WaterSense labeled aerator is one of the most cost-effective ways to save water. Also consider replacing the entire faucet with a WaterSense labeled model. Either way, you can increase the faucet's efficiency by 30 percent without sacrificing performance.
- Repair dripping faucets and showerheads. A drip rate of one drip per second can waste more than 3,000 gallons per year.

Clean Up With Savings

- A full bathtub can require up to 70 gallons of water, while taking a 5-minute shower uses only 10 to 25 gallons.
- Turning off the tap while you brush your teeth can save 8 gallons per day.

Lighten Your Loads

- Wash only full loads of dishes and clothes or lower the water settings for smaller loads.
- Replace your old washing machine with a high-efficiency, ENERGY STAR® labeled model, which uses up to 50 percent less water and electricity.

The average single-family suburban home uses at least 30 percent of its water for outdoor purposes such as irrigation and as much as 70 percent in dry climates. Some experts estimate that more than 50 percent of landscape water is wasted due to evaporation, wind, or overwatering.

Water When Needed

- Water your lawn or garden during the cool morning hours, as opposed to midday, to reduce evaporation.
- Look for sprinklers that produce droplets, not mist, or use soaker hoses or trickle irrigation for trees and shrubs.
- Set sprinklers to water lawns and gardens only. Check that you're not watering the street or sidewalk.
- Try not to overwater your landscaping. Learn plants' water needs and water different types appropriately.

Grow Green Grass

- Don't overfertilize. You will increase the lawn's need for water.
- Raise your lawn mower blade to at least 3 inches. Taller grass promotes deeper roots, shades the root system, and holds soil moisture better than a closely cropped lawn.

Garden With Care

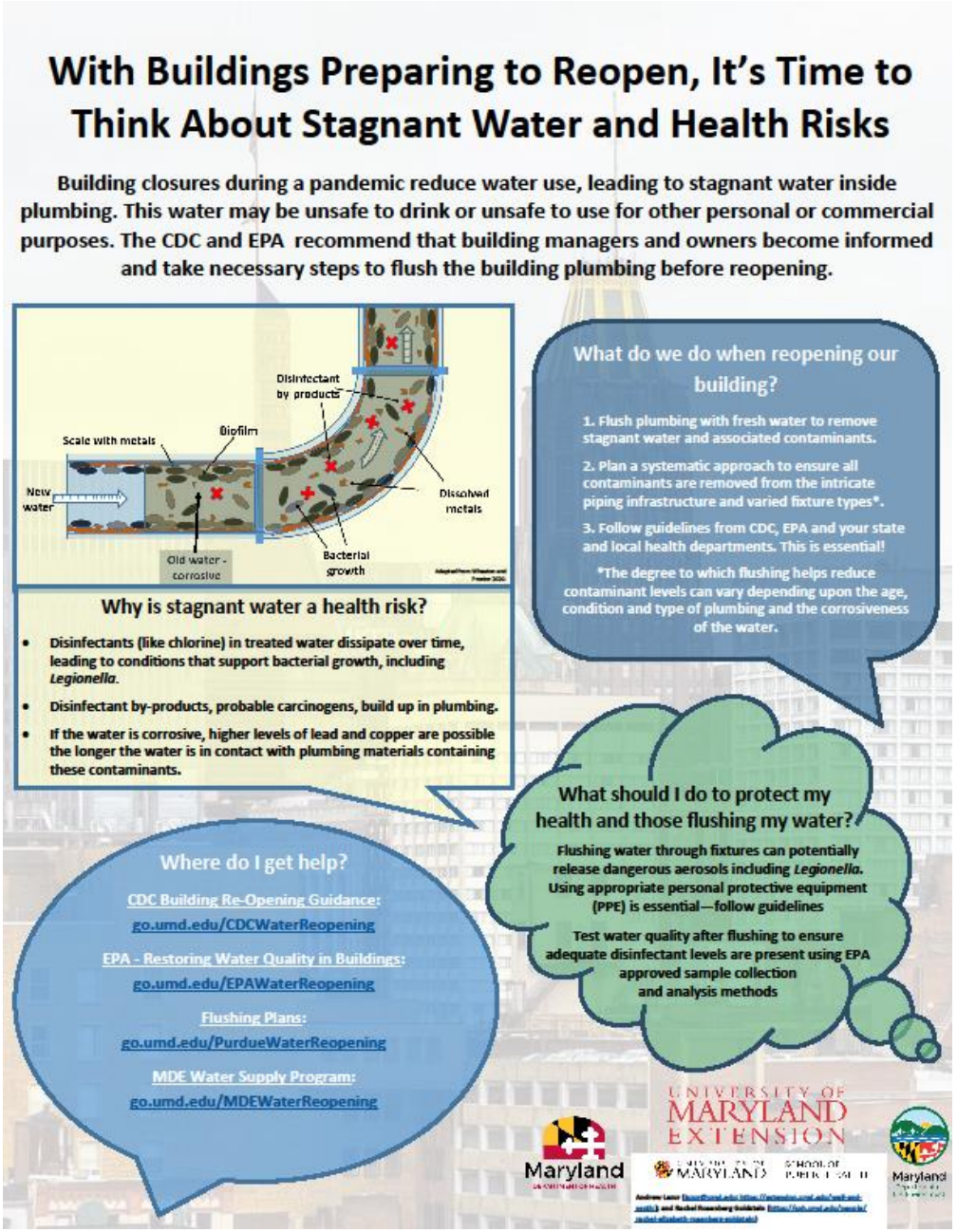
- Plant climate-appropriate species. Try plants that are native to where you live, which don't require as much water, and group plants together by water requirements.
- Use mulch around trees and plants to help reduce evaporation and control water-stealing weeds.

Outside the Home

https://www.epa.gov/sites/production/files/2017-03/documents/ws-simple-steps-to-save-water.pdf

COVID-19

In response to COVID-19 NSFIH updated the existing Water Emergency Action Plan to detail specific requirements established by the Centers for Disease Control, Department of Navy and other health-focused agencies to ensure continued protection of human health. With support of mission essential personnel in the Utilities Department, NSFIH maintains staffing and meets all requirements of the Safe Drinking Water Act. We continue adapting as we move through the phased reopening plans. As consumers return to work, NSFIH will implement a flushing plan to include flushing from the main lines and local flushing within each building. Additional information will be sent to building managers to include specific actions and timelines. The infographic to the right provides more detail on the importance of flushing lines.



Lead in Priority Areas

Lead exposure from drinking water pipes, fittings or faucets is a particular concern for children. The EPA recommends schools and childcare facilities test the lead content of drinking water. The Navy adopted the recommendation as policy and tests the Child Development, Youth Activity and Teen Centers every five years.

Between 29 June and 25 September 2019, NSFIH tested 86 water outlets for lead across the three centers in accordance with established sampling protocols. Of those outlets, four exceeded the EPA established 15 parts per billion (ppb) action level for lead. These outlets were in vacant rooms or not used as a source of drinking water. Personnel removed or replaced each fixture that exceeded the 15 ppb level with a new lead-free fixture to ensure the safety of children and staff. NSFIH plans to complete sampling again in 2024 and will provide advance notification to parents, caregivers and staff. To learn more about lead in drinking water in schools and day care centers visit the following EPA website: https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water#schools.

Replacement of Potable Water Lines

The Energy Resilience and Conservation Investment Program (ERCIP) is a subset of the Defense-wide Military Construction (MILCON) Program specifically intended to fund projects that save energy and water. In 2014, NSFIH identified resilience and redundancy concerns related to its potable water distribution system and developed a project to replace the existing lines and add key equipment such as additional flushing hydrants and isolation valves. In 2019, NSFIH received project approval totaling over $30 million dollars. The project is early in the contracting phase, but will quickly move into the design and engineering phase, with construction planned in 2023.

Water Scarcity

NSFIH uses wells within the Patuxent and Lower Patapsco Aquifers as its source of fresh water. Permits issued by MDE regulate withdrawal rate and require various reports on utilization. NSFIH monitors, and reports to MDE, water utilization in various ways. One way is the annual water audit, which categorizes and documents known water use. NSFIH uses this information to estimate leak loss rates and identify potential locations for water conservation efforts. NSFIH also completes monthly operating reports and biannual water withdrawal reports to record the volume of water utilized from each well. MDE and United States Geological Survey (USGS) compile information throughout the region to ensure aquifer viability for all users.

Annual water withdrawal at NSFIH averages less than 70% of its permitted allocation but NSFIH proactively identifies water conservation efforts such as source water alternatives, commitment to the rapid repair of leaks and installation of low flow plumbing fixtures. An example of source water alternative is in industrial operations, such as fire suppression, cooling and steam generation, which utilize surface water from the Potomac River.

Based on known water availability and planned future operations, NSFIH water scarcity is a minimal risk to current or future base operations.

For more information on…

Utilities, water leaks, or related, please contact:

Water and Waste Water Branch Supervisor

Jeffrey Goldsmith, Utilities

4120 Lloyd Road, Building 3162

Indian Head, MD 20640-5157

Phone: (301) 744-4785

Email: Jeffrey.S.Goldsmith.civ@us.navy.mil

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

Drinking Water Program Manager

Paul Wenninger, Environmental

3972 Ward Road, Building 289

Indian Head, MD 20640-5157

Phone: (301) 744-2265

Email: Paul.S.Wenninger.civ@us.navy.mil