Village of Highland Falls
303MainStreet
Highland Falls, NY 10928-1896
Telephone 845 446 -3400 Fax 845 446-2952

DRINKING WATER QUALITY REPORT
CALENDAR YEAR 2020

Public Water Supply ID # 3503532

We are pleased to present to you this year's Annual Water Quality Report. This is to inform you about the quality water services we deliver to you every day. Our constant goal is to provide you with a safe dependable supply of drinking water. We want you to understand the efforts we make continually to improve the water treatment process and protect our water sources. We are committed to insure the quality of our water. We are pleased to report that our water meets federal and state requirements.

INTRODUCTION
To comply with State and Federal regulations, Highland Falls is pleased to present its 2020 Annual Water Quality Report. The purpose of this report is to raise your understanding of drinking water and your awareness of the need to protect our drinking water sources. Last year, your tap water met all state drinking water health standards, and we are proud to report that our system never violated a maximum contaminant level or any other water quality standard. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to state standards.

If you have any questions about this report or questions concerning your drinking water, please contact Mr. John Sibley, Water Plant Operator (845) 446-3252.

WHERE DOES OUR WATER COME FROM?
In general, 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 can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants, pesticides and herbicides; organic contaminants; and radioactive contaminants. In order to insure that tap water is safe to drink, the State and the EPA prescribe regulations, which limit the amount of certain contaminants in water provided by public water systems. The State's Health Department and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water source is a surface water supply that encompasses a 2.9 square-mile drainage area, which is located within the Highlands. The water is withdrawn from the main intake basin and treated by filtration to remove particulate matter. Chlorine is added to kill microorganisms. Fluoride is added for dental benefits and sodium carbonate for corrosion control prior to distribution.

SOURCE WATER SUSCEPTIBILITY TO CONTAMINATION
The NYS DOH has evaluated this PWS's susceptibility to contamination under the Source Water Assessment Program (SWAP), and their findings are summarized in the paragraph below. It is important to stress that these assessments were created using available information and only estimate the potential for source water contamination. Elevated susceptibility ratings do not mean that source water contamination has or will occur for this PWS. This PWS provides treatment and regular monitoring to ensure the water delivered to consumers meets all applicable standards.

This assessment found a moderate susceptibility to contamination for this source of drinking water. Land cover and its associated activities within the assessment area does not increase the potential for contamination. No permitted discharges are found in the assessment area. There are no noteworthy contamination threats associated with other discrete contaminant sources. Additional sources of potential contamination include: roadways. Finally, it should be noted that hydrologic characteristics (e.g. basin shape and flushing rates) generally make reservoirs highly sensitive to existing and new sources of phosphorous and microbial contamination.

A copy of the assessment, including a map of the assessment area, can be obtained by contacting us, as noted in this report.

FACTS AND FIGURES

Our water system serves approximately 5,400 people through 1,593 service connections including the Town of Highlands Water District. The total amount of water from our reservoir system treated at our water plant during the 2020 water billing period was 221,080,000 gallons. The amount of water treated and delivered to the water distribution system was 205,380,000 gallons. The amount of water that was metered and billed to consumers was 118,046,078 gallons. This leaves 87,333,922 gallons of water that was used for village buildings, parks, cemeteries, fighting fires, flushing water mains and water leaks. The average daily flow into the water plant was 605,000 gallons per day. The highest single day of filtration was 720,000 gallons. The Town was supplied 85,000 gallons of water per day. Water rates in the village were $4.63 per 1,000 gallons. The town water district rate was $6.94 per 1,000 gallons.

WHAT IS HAPPENING IN OUR WATER SYSTEM

Drought Emergency: The Village of Highland Falls water sources reached a low level of 38% of capacity due to drought conditions and leaks within the water distribution system. Village sources including Jim's Pond, the Upper and Lower Bog Meadow Reservoirs, and Glyceren Stream were affected. On September 21, 2020, a "Drought Alert" was issued by the Village. On October 5, 2020, and again on October 19, 2020, "Drought Warnings" were issued. As of October 20, 2020, the Village had moved to a "Drought Emergency Stage II" of the EPA regulations. By November 20,2020, the Village reservoirs had filled to 50% of capacity, and drought conditions removed, due to heavy rain and repairs completed on the distribution system. In December 2020, the Village reservoirs filled to 94% of capacity.

The Village of Highland Falls continuously performs repairs and maintains its system and provides the highest quality water. There were eleven (10) water leaks repaired in the system during 2020. Three were three water mains and seven service connections leaks. There were two major leaks, 8" main feeding O'Neill High School and another at the Water Plant on a 10" drain valve.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State Regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include; total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, and synthetic organic compounds. The table presented at the end of this report depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

It should be noted that all drinking water, including bottled drinking water, might be reasonably 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 affects can be obtained by calling EPA's Safe Drinking Water Hotline (800) 426-4791 or the Orange County Health Department at (845) 291-2331.

TABLE NOTES (See the Table of Detected Contaminants at the end of this report):

1. Turbidity is a measurement of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Our highest single turbidity measurement for the year occurred on July 11,2020 (0.399 NTU). State regulations require that turbidity must always be less than or equal to 1.0 NTU. The regulations also require that at 95% of turbidity samples collected have measurements below 0.3 NTU.

2. Lead and Copper - The levels presented represent the 90th percentile of 20 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the lead and copper values detected at your water system. In this case 20 samples were collected at your water system and the 90th percentile was the third highest value. The action level for copper was not exceeded at any of the sites tested. The action level for lead was exceeded at one location.

3. Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5) - Two (2) samples are collected each quarter. TTHM and HAA5 are produced when chemical disinfectants, like chlorine, react with natural organic matter. The maximum contaminant level for Total Trihalomethanes and Haloacetic Acids is 80ug/l and 60 ug/l respectively, based on a running annual average.

4. Sodium - Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.

TABLE DEFINITIONS:

Maximum contaminant level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible.

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 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 not known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

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

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

Non-Detect (ND): Laboratory analysis indicates that the constituent is not present.

Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Turbidity in excess of 5 NTUs is just noticeable to the average person.

Milligrams Per Liter (mg/l): Corresponds to one part of liquid in one million parts of liquid (parts per million-ppm).

Micrograms per liter (ug/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion-ppb).

Nanograms per Liter (ng/l): Corresponds to one part of liquid in one trillion parts of liquid (parts per trillion-ppt).

WHAT DOES THIS INFORMATION MEAN?

We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State. It should be noted that the action level for lead was exceeded in one of the samples collected. We are required to present the following information on lead in drinking water: If present, elevated levels of lead can cause serious health problems especially for pregnant women, infants, and young children. 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. The Village of Highland Falls 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 you 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 (1-800-426-4791) or at http:/www.epa.gov/safewater/lead.

A supplement containing all test results are available for viewing at the Highland Falls Water Plant.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

We are required to monitor our drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During 2020, our system was in compliance with all applicable state drinking water requirements.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met or exceeded state and federal regulations, some people may be more vulnerable to disease-causing micro-organisms or pathogens in drinking water than the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or immune system disorders, some elderly, and infants can be particularly at risk for infections. These people should seek advise from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to less the risk of infection by Cryptosporidium, Giarda and other microbial pathogens are available from the Safe Drinking Water Hotline (800) 416-4791.

INFORMATION ON FLUORIDE ADDITION

Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. The U.S. Department of Health and Human Service recommendation for optimal fluoride level in drinking water to prevent tooth decay is for a single level of 0.7 milligrams of fluoride per liter(parts per million,ppm) of water in New York State. We have been following those recommendations. None of the monitoring results showed fluoride at levels that approached the 2.2 mg/l MCL for fluoride.

INFORMATION ON CRYPTOSPORIDIUM

Cryptosporidium is a microbial pathogen found in surface water and groundwater under the influence of surface water. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. During 2020, 21 samples were collected from our source water and analyzed for Cryptosporidium oocysts. Of these samples, five tested positive, indicating the presence of Cryptosporidium in our source water. Current test methods

do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, a gastrointestinal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their health care provider regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

INFORMATION ON GIARDIA

Giardia is a microbial pathogen present in varying concentrations in many surface waters and groundwater under the influence of surface water. Giardia is removed/inactivated through a combination of filtration and disinfection or by disinfection. During 2020, 21 samples were collected from our source water and analyzed for Giardia cysts. Of these samples, ten tested positive, indicating the presence of Giardia in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Giardia may cause giardiasis, an intestinal illness. People exposed to Giardia may experience mild or severe diarrhea, or in some instances no symptoms at all. Fever is rarely present. Occasionally, some individuals will have chronic diarrhea over several weeks or a month, with significant weight loss. Giardiasis can be treated with anti-parasitic medication. Individuals with weakened immune systems should consult with their health care providers about what steps would best reduce their risks of becoming infected with Giardiasis. Individuals who think that they may have been exposed to Giardiasis should contact their health care providers immediately. The Giardia parasite is passed in the feces of an infected person or animal and may contaminate water or food. Person to person transmission may also occur in day care centers or other settings where hand washing practices are poor.

Sometimes my water is a rusty brown color. What causes this?

Brown water can be associated with plumbing inside house and from rusted hot water heaters. In addition brown water may result from work being done on water mains in the area. Any disturbance to the main, including the opening of a fire hydrant can cause pipe sediment to shift causing brown water. Avoid using hot water to prevent sediment accumulation in your hot water tank. The water should clear up in about an hour depending on the size of the water main.

Is home treatment necessary?

Your water meets all EPA requirements as it comes from the tap. Additional treatment for esthetic qualities is an option not a necessity. If you install treatment devices, you are responsible for their operation and maintenance. You can make your water unsafe by not taking proper care of your at-tap system.

WAYS TO SAVE WATER & MONEY

- Saving water saves energy and some of the costs associated with both of these necessities of life.
- Saving water lessens the strain on the water system during a dry spell or drought helping to avoid severe water use restrictions so that essential fire-fighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- Automatic dishwashers use 15 gallons for every cycle regardless of how many dishes are loaded, so get a run for your money and load it to capacity.
- Turn off tap when brushing teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6000 gallons per year.
- Check your toilet for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances, then check the meter after 15 minutes, if it moved you have a leak.
- You can conserve outdoors as well: Water lawn and garden early in the morning or evening. Use mulch around your shrubs and plants. Use water-saving nozzles. Use water from bucket to wash your car and save the hose for rinsing. Don’t water your sidewalk or driveway—sweep them clean.

CLOSING
Thank you for allowing us to provide your family with quality water this year. We ask that all our customers help us to protect our water resources, which are the heart of our community and our way of life. Please call our office if you have any questions.

To pay water bills or register online account visit www.highlandfallsny.org.

Our normal work hours are 7:00 AM to 3:30 PM, Monday - Friday.

Our telephone numbers are:	Billing:	(845) 446-3400, M-F (9:00 AM-4:00 PM)
	Operations:	(845) 446-3252, M-F (7:00 AM-3:30 PM)
	FAX:	(845) 446-2598
	EMERGENCY AFTER HOURS:	(845) 446-4911

SECURITY - Customers should report any suspicious activity within our Water System by calling (845) 446-4911.

Your Water Plant Operators are New York State Department of Health Certified. Water Department Employees carry a photo ID. If a Water Department Employee cannot produce a photo ID, you do not have to allow access to your home for meter repairs or meter readings.

Any time the water department is going to shut down a water main, we make every effort to notify you of the time and duration of the shut down. In times of an **"EMERGENCY"**, we must shut the water down without notice.

TABLE OF DETECTED CONTAMINANTS

Contaminant	Violation Yes/No	Date of Sample	Level Dected (Range)	Unit Measure-ment	MCLG	Regulatory Limit (MCL TT or AL)	Likely Source of Contamination
Barium	No	4/16/2020	7.7	ug/l	2000	MCL=2000	Erosion of natural deposits.
Chloride	No	6/11/2019	29	mg/l	N/A	MCL=250	Naturally occurring or indicative of road salt contamination.
Fluoride	No	4/16/2020	0.68 max. (0.5 - 0.89)	mg/l	N/A	MCL=2.2	Water additive which promotes strong teeth.
Nitrate	No	12/30/2020	0.21	mg/l	10	MCL=10	Runoff from fertilizer use; Leaching from septic tanks.
Sodium	No	6/11/2019	29	mg/l	N/A	(See Note 4)	Naturally occurring; road salt.
Lead (See Note 2)	No	8/12/2020	1.7 @ 90% (ND - 17.0)	ug/l	0	AL=15	Corrosion of household plumbing systems.
Copper (See Note 2)	No	8/12/2020	42 @ 90% (ND - 60)	ug/l	1300	AL=1300	Corrosion of household plumbing systems.
Turbidity (See Note 1)	No	7/11/2020	0.399 max.	NTU	N/A	TT=1.0	Soil Run-off.
Turbidity (See Note 1)	No	Continuously	More than 95% <0.3 NTU	NTU	N/A	TT=95% of samples <0.3 NTU.	Soil Run-off.
Total Coliform Bacteria	No	monthly	ND	N/A	0	TT=2 or more positive samples.	Naturally present in the environment.
Perfluorooctanoic Acid (PFOA)	No	10/28/2020	ND	ng/l	N/A	MCL=10	Released into the environment from widespread use in commercial and industrial applications.
Perfluorooctane Sulfonate Acid (PFOS)	No	10/28/2020	ND	ng/l	N/A	MCL=10	Released into the environment from widespread use in commercial and industrial applications.
1,4 Dioxane	No	10/28/2020	ND	ug/l	NA	MCL=1	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites.
Disinfection By-Products (See Note 3)							
Total Trihalomethanes (TTHM-chloroform, bromodichloromethane, dibromochloromethane, and bromoform)	No	Quarterly	Max Av. = 46.1 (31.0 - 65.0)	ug/l	N/A	MCL=80	By product of drinking water disinfection needed to kill harmful organisms. TTHMs are formed when source water contains organic matter.
Haloacetic Acids (mono-, di-, and trichlor-oacetic acid, and mono- and di-bromoacetic acid)	No	Quarterly	Max Av. = 18.8 (8.7-19.6)	ug/l	N/A	MCL=60	By product of drinking water disinfection needed to kill harmful organisms.