HOLYOKE WATER WORKS

2024 Annual Water System Report

HWW Water Quality Standards in 2024

The Holyoke Water Works (HWW) is pleased to present its 2024 Annual Water System Report. The report is designed to inform you about the high quality water and services that we deliver each and every day. The HWW is committed to providing a safe and dependable drinking water supply. We want you to understand our continuing effort to protect and preserve our water resources. In 2024, our drinking water met all Federal and State drinking water standards. Water quality results are listed on pages 2, 3, 4, and 5 of this report. If you have any questions about this report or issues concerning water quality, please contact Matthew Smith, Source of Supply and Treatment Superintendent at (413) 532-6778. For questions concerning billing or other matters related to HWW, please call the main office at (413) 536-0442. Additional information can be obtained by attending the Holyoke Board of Water Commissioners regularly scheduled monthly public meetings. Meeting dates, times, and locations are posted on the bulletin board at the City Hall, 536 Dwight Street, Holyoke and on the City of Holyoke's website (www.holyoke.org). We want you to be informed about HWW and our commitment to ensuring the quality of your drinking water.

MassDEP Renews Holyoke's Filtration Waiver Confirming Holyoke's Compliance with Water Quality Standards

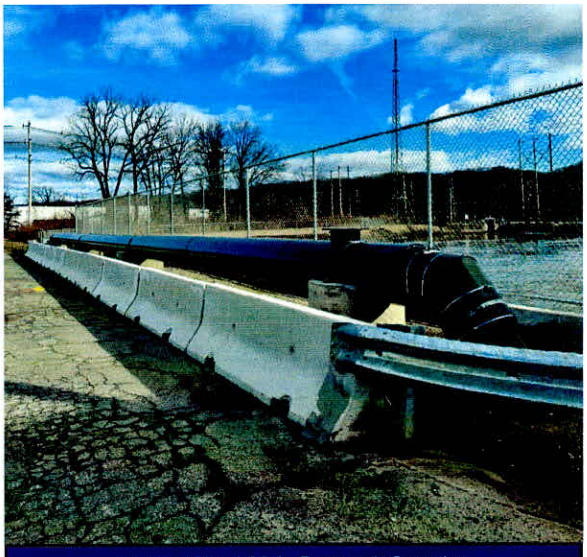
Holyoke's drinking water comes primarily from the Tighe-Carmody Reservoir in Southampton via a 6.6 mile long Pre-stressed Concrete Cylinder Pipe constructed in 1997 to the Water Treatment Facility located in Holyoke. The water supply is augmented by the McLean Reservoir by means of a transfer pump station located in the watershed of the Ashley Reservoir. The "blending" of these two water sources helps ensure the highest quality of water available throughout the year. Holyoke's water is treated at the Water Treatment Facility located at 600 Westfield Road adjacent to the McLean Reservoir.

In 2024, the Massachusetts Department of Environmental Protection (MassDEP) issued Holyoke Water Works (HWW) a waiver from filtration of the surface water sources which are subject to annual review. HWW continued to meet the criteria for avoiding filtration of the Tighe-Carmody and McLean Reservoirs. A method used to accomplish this goal is the blending of sources to reduce the formation of trihalomethanes (THMs) and halocetic acids (HAAs), which are regulated under the Disinfection Byproduct Rule. To meet this objective, HWW blended 49,478,300 gallons of water, or 3.28% of the total annual volume, from the McLean Reservoir along with 1,460,964,210 from the Tighe-Carmody Reservoir to satisfy the City's annual water supply needs of 1,510,442,510 gallons. Utilizing these practices to date, Holyoke and MWRA (Quabbin Reservoir) are the only two remaining unfiltered water sources in Massachusetts.

HWW Completes Water Street Water Main Extension Project

HWW continued its commitment to the City of Holyoke by installing a 12" water main in Water Street for the purpose of providing water service and fire protection for the development of land on Water Street and to loop the existing water distribution system for enhancing fire protection and system reliability.

In 2024, HWW contracted with Caracas Construction company for the installation of approximately 2,800 feet of new 12" water main. The project allows for Sublime Systems to construct a "clean energy" concrete manufacturing facility on approximately 16 acres of land on Water Street. The Water Main Project received funding from the City of Holyoke Office of Community Development through the American Rescue Plan Act (ARPA) Program in the amount of $1,350,000. The project was completed in the fall of 2024 at a total cost of $1,346,003.



12-inch Water Main Penstock Crossing

Watershed Resource Protection Plan

Enforcement for Source Protection

The Watershed Resource Protection Plan (WRPP) demonstrates our continuing effort to ensure a safe drinking water supply. The HWW uses the WRPP as a tool to: 1) identify potential threats to the drinking water supply sources; 2) shield the watersheds from identified threats; and 3) develop a plan to protect water quality from future threats.

In 2024, HWW continued its partnership with the Hampden County Sheriff's Department and Massachusetts Environmental Police to patrol the drinking water supplies to control illegal activities and issue fines and/or citations which are documented and reported to MassDEP. To address increased activity around Holyoke's primary water source, HWW began its partnership with the Southampton Police Department in 2023 to patrol the Tighe-Carmody Reservoir and its surrounding watershed in Southampton to monitor and control illegal activity around the water supply. In addition to source protection, HWW included minor updates to its WRPP to maintain compliance with MassDEP, Massachusetts Department of Conservation & Recreation (DCR), and the department's Forest Management Program (FMP). HWW contracts with Wigmore Forest Resource Management out of Williamsburg, MA, to manage annual selective timber harvests and to ensure the FMP meets current compliance regulations.

If you have any questions about the WRPP or FMP and want to learn more about what you can do to help protect the watershed of your drinking water supply, please contact Matthew Smith, Reservoir Division Superintendent at (413) 532-6778 or visit MADEP's website at http://www.state.ma.us/dep/ or the Massachusetts Drinking Water Education Partnership website at http://www.madwep.org.

Cross Connection Inspection/Backflow Prevention Program

A cross connection is an actual or potential connection between a drinking water distribution system pipe and any waste pipe, soil pipe, sewer, drain, or other non-potable sources. The purpose of the program is to protect the public water supply from potential contamination by non-potable sources which could backflow into the water system via a cross connection.

In 2024, HWW contracted with Water Safety Services for the testing of approximately 695 cross connection devices. Over 1,072 tests were conducted of which, 18 devices failed, testing. The devices were repaired and retested to ensure the protection of the public's drinking water supply from possible contamination of non-potable sources. As an adopted policy, HWW continues to provide commercial water users with hose bibb backflow preventers as necessary to help ensure the highest protection of Holyoke's drinking water.

Currently, HWW is not required to survey residential properties for cross connections, although the potential for cross connections can exist between outside faucets, lawn irrigation systems, swimming pools, and hot tubs. If you have any questions or concerns about the potential for cross connections in your home, please contact John Lachat, Cross Connection Coordinator at (413) 536-3392. For more information regarding cross connections or to obtain a copy of the regulations governing cross connections (310 CMR 22.22), please contact the MassDEP at its Western Region Office at (413) 784-1100.


Existing RPZ Protection Device

UCMR 5 2024 Testing

EPA released the Fifth Unregulated Contaminant Monitoring Rule (UCMR 5). This monitory rule requires Public Water Systems to sample 29 Per- and Polyfluoroalkyl Substance (PFAS) compounds and Lithium. The results of 2024 monitoring sampling conducted on March 19, 2024 is shown in the table below. There is currently no EPA Health Advisory for Lithium in drinking water. The screening Health Reference Level (HRL) is 10 ug/L based on adverse effects observed in patients administered lithium therapeutically, not at levels expected to be found in drinking water. EPA released an MCL for 6 PFAS compounds, none of which were reported of measurable quantities.

Unregulated Contaminants Contaminant (Units)	Reported Sample Value	HAL	HRL	Possible Source of Contamination
Lithium (ppb)	10.7	N/A	10	Naturally occurring in soils and rocks
PFTA (ppt)	9	N/A	N/A	
PFtrDA (ppt)	8	N/A	N/A	

Lead and Copper

Due to continued compliance with Lead and Copper Rule, HWW was not required to collect lead and copper samples in 2024. The lead and copper results presented below are based on results collected at 30 customer taps in the distribution system in July 2023. The basis for lead and copper compliance is the 90th percentile value, which is the highest level found in 9 out of every 10 homes sampled.

Lead and Copper	90th	Action Level (AL)	# Sites Above AL	Possible Source of Contamination
Copper (ppm)	0.54	1.3	1	Corrosion of household plumbing systems
Lead (ppb)	9.0	15	0	Corrosion of household plumbing systems

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. East Longmeadow DPW Water Department is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for a longer period. If you are concerned about lead in your water and wish to have your water tested, contact the Holyoke Water Works at 413-536-0442. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at https://www.epa.gov/safewater/lead.

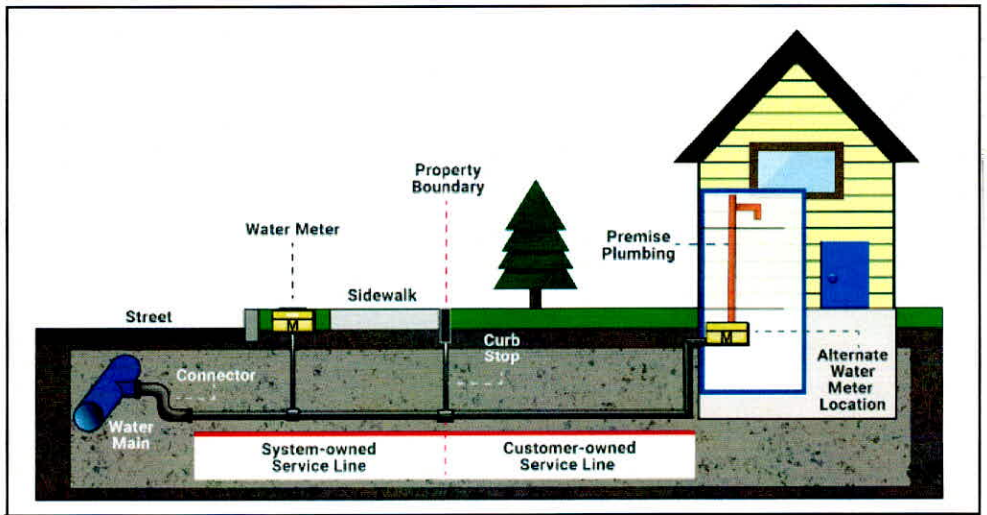
There is no safe level of lead in drinking water. Exposure to lead in drinking water can cause serious health effects in all age groups, especially pregnant people, infants (both formula-fed and breastfed), and young children. Some of the health effects to infants and children include decreases in IQ and attention span. Lead exposure can also result in new or worsened learning and behavior problems. The children of persons who are exposed to lead before or during pregnancy may be at increased risk of these harmful health effects. Adults have increased risks of heart disease, high blood pressure, kidney or nervous system problems. Contact your health care provider for more information about your risks.

Service Line Inventory

The US EPA recently published revisions to the Lead and Copper Rule that are intended to better protect children and communities from lead exposure risks and support efforts to remove lead from drinking water. Water systems are now required to document all water service line materials and identify any lead or lead containing materials.

Holyoke Water Works Service Line Inventory (SLI) identified a portion of the water pipe (called a service line) that connects to the water made is Unknown and may contain lead, or is made from galvanized material which may have absorbed lead. These customers were sent a notification letter in 2024. Customers may obtain a copy of the Holyoke Water Works Service Line Inventory by visiting us at 20 Commercial Street, Holyoke, MA 01040.

Where more information is needed about a service line, customers may be contacted to identify their service material. Customers may also be sent a request to conduct a service line inspections of their curb stop.



Example of Service Line Ownership Distinction between Water System and Customer

2024 Water Quality Testing Results

The Holyoke Water Works (PWS ID# 1137000) conducts over 6,000 individual tests every year on your drinking water to ensure that it meets all Federal and State standards. The table below shows the water quality monitoring results from January 1, 2024-December 31, 2024. The contaminants listed are the **only** contaminants that were detected in your drinking water. Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contamination. 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 EPA's Safe Drinking Water Hotline at 1-800-426-4791. Definitions of the terms and abbreviations used in the tables are given below.

MCL: *Maximum Contaminant Level*—the highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLG as feasible using the best available treatment technology. MCLs are enforceable standards.

MCLG: *Maximum Contaminant Level Goal*—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 and are non-enforceable public health goals.

MRDL: *Maximum Residual Disinfectant Level*—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.

MRDLG: *Maximum Residual Disinfectant Level Goal*—the level of 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.

TT: *Treatment Technique*—a required process intended to reduce the level of a contaminant in drinking water.

AL: *Action Level*—the concentration of a contaminant which, if exceeded, triggers treatment or other requirements.

NTU: *nephelemetric turbidity unit*—a measure of water clarity. Turbidity greater than 5 NTU is just noticeable to the average person.

ppm: *parts per million*—corresponds to one minute in two years or 1 cent in $10,000. 1 ppm = 1 mg/L

ppb: *parts per billion*—corresponds to one minute in 2,000 years or 1 cent in $10,000,000. 1 ppb = 1 ug/L

SMCL: *Secondary Maximum Contaminant Level*—standards developed to protect the aesthetic qualities of drinking water; not health based.

OSRG: *Office of Research and Standards Guideline*—chemical concentration in drinking water, at or below which adverse health effects are unlikely to occur after lifetime exposure. If exceeded, it serves as an indicator of the potential need for further action.

Regulated Contaminants Contaminant (Units)	Highest Level Detected	Range Detected	MCL/ MRDL	MCLG/ MRDLG	Violation (Yes/No)	Possible Source of Contamination
Turbidity (NTU)	1.60	0.29—1.60	TT	N/A	No	Soil runoff
Chlorine (ppm)	2.50	1.9—2.50	4	4	No	Water additive used to control microbes
Fluoride (ppm)[1]	0.85	0.61—0.85	4	4	No	Water additive that promotes strong teeth
Nitrate (ppm)	0.064	0.050—0.064	10	10	No	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits
Total Trihalomethanes (ppb)	42.2[2]	24.7—52.8	80	N/A	No	By-product of drinking water chlorination
Haloacetic Acids (ppb)	53.9[2]	0.0—58.2	60	N/A	No	By-product of drinking water chlorination
Di (2-thyl hexyl) phthates (ppb)[3]	0.91	0.70—0.91	6	N/A	No	Synthetic organic compound
Radium-226 & -228 (pCi/L)[4]	0.23	0.07—0.23	5	N/A	No	Naturally occurring radioactive decay in rocks

[1] Fluoride is added to help prevent tooth decay and cavities. In 2015, the Massachusetts Department of Public Health updated their recommendations for optimal water fluoridation from a range of 0.7 to 1.2 ppm to a standard of 0.7 ppm. In July 2015, HWW began targeting a fluoride dose of 0.7 ppm.

[2] HWW is required to measure total trihalomethanes and haloacetic acids at four distribution system sites, and compliance with the MCLs is based on quarterly running annual averages at each of the four sites. The highest quarterly running annual averages for the year are reported here. The range presents the high and low for samples at individual sites over the course of the year.

[3] HWW has a sampling plan to test for Synthetic Organic Compounds (SOCs) which are man-made, carbon-based chemicals used in various industries and manufacturing processes.

[4] Radium is a byproduct of decay of larger radioactive elements such as uranium and thorium that occur naturally in ambient quantities in rocks and soils. Radium and other nuclides are tested in pico-Curies per liter. Curies are a measure of the number of atomic decays per second. Surface water bodies typically range between 0.1 and 0.5 pCi/L.

Unregulated Contaminants Contaminant (Units)	Highest Level Detected	Range Detected	SMCL	OSRG	Possible Source of Contamination
Chloroform (ppb)	10.1	6.8—10.1	N/A	70	By-products of drinking water chlorination
Dichlorobromomethane (ppm)	1.92	1.0—1.92	N/A	N/A	By-products of drinking water chlorination
Sodium (ppm)	15.4	12.7—15.4	N/A	20	Natural sources; runoff from road salt
Sulfate (ppm)	<5.0	ND—<5.0	250	N/A	Natural sources

Potential Contaminants

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 through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and picks up substances resulting from the presence of animals or from human activity. The following is a list of potential contaminants that may be present in source water:

Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and farming.

Pesticides and herbicides may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Organic chemical contaminants include synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

Radioactive contaminants 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, MassDEP and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The Massachusetts Department of Public Health and the Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Special Concerns

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 from their health care providers. EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Act Hotline (800-426-4791).

* Español—Este informe contiene información importante sobre su agua potable. Si desea una copia en español contacte por favor el numero (413) 532-6778 o visite nuestras instalaciones en 600 Westfield Road.

* French—Ce rapport contient des informations importantes sur votre eau potable. Traduisez-le ou parlez-en avec quelqu'un un qui le comprend bien.

If you have any questions about this report or issues concerning water quality, please contact Matthew Smith, Source of Supply and Treatment Superintendent at (413) 532-6778. Questions concerning billing or other matters related to HWW, please call the main office at (413) 536-0442.

Water Treatment Facility

600 Westfield Road

Holyoke, MA 0040

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