



2022 Consumer Confidence Report

WATER UTILITY

The U.S. Environmental Protection Agency (EPA) requires drinking water utilities to provide an annual Consumer Confidence Report to help consumers understand where their drinking water comes from, so they can make informed decisions about their health and protection of the environment.

Port Washington's Public Works Water Utility produces some of the highest quality drinking water in the nation. Last year, and in years past, your tap water met and exceeded every federal and state drinking water health standard.

With our commitment to providing you with useful information, this report summarizes the quality of water provided to our customers in 2022. You will find:

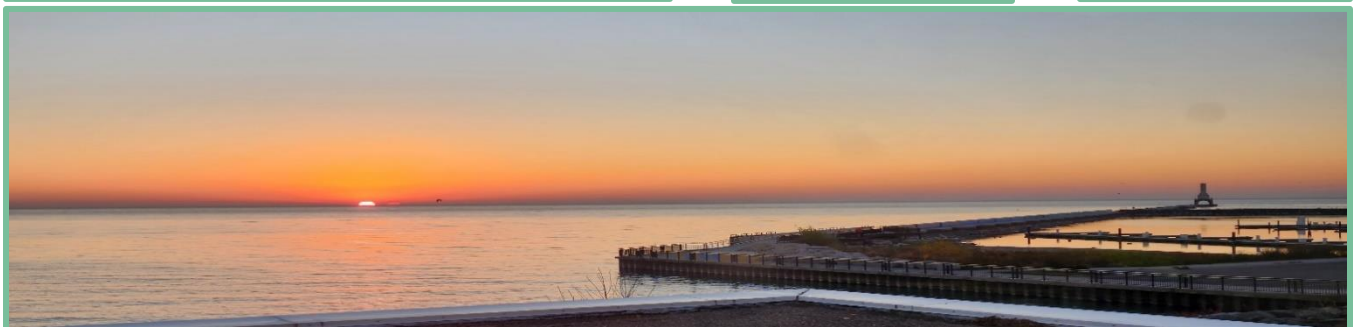
- Information about the source of your drinking water
- Results of water quality testing and compliance with water quality laws and standards
- Additional educational information

Highlights

- Health Information
- Educational Information

- Detected Contaminants
- Unregulated Contaminants
- Turbidity Monitoring

- 2022 Water Utility Key Accomplishments
- 2023 Water Utility Goals





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Water System Information

The City of Port Washington Water Utility provides clean, safe water to all residents of the City of Port Washington. The population of Port Washington is approximately 13,000, with a total land area of 5.8 square miles. To serve this customer base, the Utility manages and operates approximately sixty-eight miles of water main and approximately 650 hydrants. The Water Utility maintains and operates a surface water treatment plant, which produces an average of 1.16 million gallons of drinking water per day (MGD), with a total capacity of 4 MGD. The Utility also maintains three elevated storage towers, two booster stations and over 5,300 residential and commercial customers.

For more system information, or questions about this report, please call Dan Fisher, Utility Superintendent, at the Port Washington Water Utility, (262-284-2172) or email, (dfisher@portwashingtonwi.gov).

Participate and Opportunities on decisions regarding your water

Participate in decisions that affect drinking water quality at meetings of the City of Port Washington Board of Public Works. The Board of Public Works Commission meets on the 2nd Tuesday of each month at City Hall, located at 100 West Grand Avenue, Port Washington, WI 53074.

Health Information

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 Environmental Protection Agency's safe drinking water hotline (800-426-4791).

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 systems 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 Environmental Protection Agency's safe drinking water hotline (800-426-4791) and the CDC at [cdc.gov/parasites/crypto](https://www.cdc.gov/parasites/crypto).



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Source of Water & Educational Information

Port Washington's drinking water comes from Lake Michigan, a surface water source. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants, or substances, which may be present in source water include:

- **Microbial contaminants**, such as viruses, protozoa, and bacteria, may come from leaky sewer pipes, 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, 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, are byproducts of industrial processes and petroleum production, and also come from gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants**, which can be naturally occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which shall provide the same protection for public health. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline, (800) 426-4791.

Detected Contaminants or Substances

The following tables show the regulated contaminants, or substances, detected in Port Washington's drinking water distribution system during 2022. It also includes all contaminants tested for in the most recent (2018) Unregulated Contaminant Monitoring Rule – Phase 4 (UCMR4) mandatory monitoring program. **All contaminants detected continue to meet or exceed drinking water standards for health and safety and are within applicable state and federal laws.** The tables contain the name of each contaminant, the highest level regulated (Maximum Contaminant Level, or MCL), the ideal goals for public health (Maximum Contaminant Level Goal, or MCLG,) the average value detected, the usual sources of such contamination, possible health effects, and footnotes explaining the findings and units of measurement. **The presence of a substance in drinking water does not necessarily indicate the water poses a health risk. Certain quantities of some substances are essential to good health, but excessive quantities can be hazardous.**



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Definitions	
<	"less than" or not detected
AL	Action level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow
Haloacetic Acids	HAA5: Monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, dibromoacetic acid, tribromoacetic acid, bromochloroacetic acid, dibromochloroacetic acid, and bromodichloroacetic acid.
HA	Health Advisory: An estimate of acceptable drinking water levels for a chemical substance based on health effects information; a Health Advisory is not a legally enforceable federal standard, but serves as technical guidance to assist federal, state, and local officials.
HAL	Health Advisory Level: A concentration of contaminant which, if exceeded, poses a health risk, and may require a system to post a public notice.
MFL	Million Fibers Per Liter
MCL	Maximum Contaminant Level: The highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as using the best available treatment technology.
MCLG	Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety
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 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.



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Unit Abbreviations

NTU	Nephelometric Turbidity Units
ppm	Parts Per Million, or Milligrams Per Liter (mg/l)
ppb	Parts Per Billion, or Micrograms Per Liter (mg/l)
ppt	Parts Per Trillion, or Nanograms Per Liter
NTU	Nephelometric Turbidity Unit: A unit to measure turbidity
pCi/L	Picocuries per Liter: A measure of radioactivity
SMCL	Secondary drinking water standards or Secondary Maximum Contaminant Levels for contaminants that affect taste, odor, or appearance of the drinking water. The SMCLs do not represent health standards.
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water
Trihalomethanes	TTHMs: Chloroform, bromodichloromethane, dibromochloromethane, and bromoform
Turbidity	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

DISINFECTION BYPRODUCTS

Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date (If prior to 2022)	Violation	Typical Source of Contaminant
HAA5 (ppb)	60	60	13	7 - 16		No	By-product of drinking water chlorination
TTHM (ppb)	80	0	29.9	22.7 - 41.4		No	By-product of drinking water chlorination
HAA5 (ppb)	60	60	10	7 - 12		No	By-product of drinking water chlorination
TTHM (ppb)	80	0	22.2	17.6 - 30.0		No	By-product of drinking water chlorination



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INORGANIC CONTAMINANTS							
Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date (If prior to 2022)	Violation	Typical Source of Contaminant
ANTIMONY TOTAL (ppb)	6	6	0.2	0.2		No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
BARIUM	2	2	0.021	0.021	4/12/2021	No	Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits
CHROMIUM (ppb)	100	100	1	1		No	Discharge from steel and pulp mills; Erosion of natural deposits
FLUORIDE (ppm)	4	4	0.6	0.6	4/12/2021	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
NICKEL (ppb)	100		0.5100	0.5100		No	Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel, and alloy products
NITRATE (NO3-N) (ppm)	10	10	0.26	0.26	4/12/2021	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
SODIUM (ppm)	N/A	N/A	8.9	8.90	4/12/2021	No	N/A
Contaminant (units)	Action Level	MCLG	90th Percentile Level Found	# of Results	Sample Date (If prior to 2022)	Violation	Typical Source of Contaminant
COPPER (ppm)	AL = 1.3	1.3	0.0650	0 of 32 results were above action level	9/22/2020	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
LEAD (ppb)	AL = 15	0	5.40	0 of 32 results were above action level	7/20/2020	No	Corrosion of household plumbing systems; Erosion



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PFAS Contaminants with a Recommended Health Advisory Level

Perfluoroalkyl and polyfluoroalkyl substances (PFAS) are a large group of human-made chemicals that have been used in industry and consumer products worldwide since the 1950's. The following table lists PFAS contaminants which were detected in your water that have a Recommended Public Health Groundwater Standard (RPHGS) or Health Advisory Level (HAL). There are no violations for detections of contaminants that exceed the RPHGS or HAL. The RPHGS are levels at which concentrations of the contaminant present a health risk and are based on guidance provided by the Wisconsin Department of Health Services.

Typical Source of Contaminant: Drinking water is one way that people can be exposed to PFAS. In Wisconsin, two-thirds of people use groundwater as their drinking water source. PFAS can get into groundwater from places that make or use PFAS and release from consumer products in landfills.

Contaminant (units)	RPHGS or HAL (ppt)	Level Found	Range	Sample Date (if prior to 2022)
PFOS (ppt)	20	1.77	1.77	

Contaminants with a Public Health Groundwater Standard, Health Advisory Level, or a Secondary Maximum Contaminant Level

The following table lists contaminants which were detected in your water and that have either a Public Health Groundwater Standard (PHGS), Health Advisory Level (HAL), or a Secondary Maximum Contaminant Level (SMCL), or both. There are no violations for detections of contaminants that exceed Health Advisory Levels, Public Health Groundwater Standards or Secondary Maximum Contaminant Levels. Secondary Maximum Contaminant Levels are levels that do not present health concerns but may pose aesthetic problems such as objectionable taste, odor, or color. Public Health Groundwater Standards and Health Advisory Levels are levels at which concentrations of the contaminant present a health risk.

Contaminant (units)	SMCL (ppm)	PHGS or HAL (ppm)	Level Found	Range	Sample Date (If prior to 2022)	Typical Source of Contaminant
SULFATE (ppm)	250		22.00	22	4/12/2021	Runoff/leaching from natural deposits, industrial wastes



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Unregulated Contaminants

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. EPA required us to participate in this monitoring.

Contaminant (units)	Level Found	Range	Sample Date (if prior to 2022)
HAA5 (ppb)	29.473	12.696 - 29.473	7/15/2019 - 4/7/2020
HAA6Br (ppb)	10.473	6.846 - 10.473	7/15/2019 - 4/7/2020
HAA9 (ppb)	38.673	20.096 - 38.673	7/15/2019 - 4/7/2020

Other Compliance

Turbidity Monitoring: In accordance with s. NR 810.29, Wisconsin Administrative Code, the treated surface water is monitored for turbidity to confirm that the filtered water is less than 0.1 NTU/0.3 NTU. Turbidity is a measure of the cloudiness of water. The Utility monitors for it because it is a good indicator of the effectiveness of our filtration system. During the year, the highest single entry point turbidity measurement was 0.08 NTU. The lowest monthly percentage of samples meeting the turbidity limit was 100 percent.

Additional Health Information

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. The Port Washington Water Utility 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 drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800) 426-4791 or at www.epa.gov/safewater/lead.



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Dear Port Washington Water Utility Consumers,

In 2022, Port Washington's drinking water met and exceeded all standards set by the U.S. Environmental Protection Agency (EPA) and the Wisconsin Department of Natural Resources (WDNR). The number one goal of the Water Utility is to provide safe, clean drinking water.

The City of Port Washington Water Filtration Plant treated and distributed over 410 million gallons of clean drinking water to over 5,000 customers in 2022. Operators work 24/7, performing thousands of analyses per year of raw and tap water while adjusting treatment operations, as necessary.

In 2022 Distribution Operators took hundreds of samples throughout the entire distribution system (roughly 68 miles) to ensure water quality.

2022 Major Achievements

- Implemented a Private Lead Service Line Program – Replaced 33 Private Lead Service Lines
- Westside (Grand Ave) Water Tower was sandblasted and painted – The Premier Community on the Great Lakes Port Washington logo was placed on the south side of the tower
- Mineral Springs Water Tower Exterior was pressure washed and repainted
- Relayed 2,600 LF of PVC water main in conjunction with the 2022 Street Improvement Project

Looking Ahead

2023 shows great promise to move ahead with projects and major upgrades. Every year the Utility maintains compliance with all WDNR and PSC requirements for Valve Exercising, Hydrant Flushing, Meter Replacement, and Cross Connection Inspections. Major projects and upgrades include:

- Transition from a walking/driving based meter reading system to an Advanced Meter Infrastructure (AMI) system. Install a fixed based tower and infrastructure, then implement software to allow for real time reads and better customer service
- Successfully comply with all required UCMR-5, PFAS, and Lead and Copper sampling
- Pressure-wash the exterior of the Thomas Drive Water Tower
- Fill and test new water main in conjunction with the 2023 Street Improvement Project and new development sites
- Continue and expand the Private and Public Lead Service Line Program
- Complete design of Water Filtration Plant Upgrades
- Start Construction of Water Filtration Plant Upgrades



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Water Treatment Plant Improvements Project

In 2018 the Wisconsin Department of Natural Resources (WDNR) completed a Sanitary Survey to evaluate the system's source, facilities, equipment, operation, maintenance, and management as they relate to providing safe drinking water. Two major deficiencies were noted and required to be corrected by 2027.

- The clearwell floor (structure that holds treated water), must be at least 2-feet above groundwater level
- Install a generator to provide emergency power to the WTP in the event of an outage

A Needs Assessment was developed to identify other items that show the need to be upgraded. This assessment was determined based on age and operation of all plant conditions, processes, and equipment.

Goals

- Address the deficiencies noted in the WDNR Sanitary Survey
- Replace equipment that has reached the end of its service life
- Replace and improve plant electrical equipment

Highlights

- Construction of a new Ultraviolet (UV) Disinfection System. UV disinfection technology destroys the DNA of microorganisms which leaves them dead and unable to grow further. UV, paired with Chlorine will enable a robust, multibarrier of protection against micro-organisms.
- Installation of a new generator to provide emergency backup power
- Replacement of the chlorine gas system with a liquid sodium hypochlorite to improve environmental safety
- Replacement of Water Treatment Plant electrical equipment and security systems
- Construction of a new clearwell
- Replacement of pumping equipment and mixers

Overall, this is a major boost to the security and sustainability of providing safe, clean drinking water from one of the greatest sources on Earth. To learn more about this project please visit our website at <https://www.portwashingtonwi.gov/departments/public-works/water-utility>. Please comment on the 2023-2024 Water Treatment Plant Improvement Project Comment Form located on the Water Utility page.

Sincerely,

Dan Fisher
Water Utility Superintendent