2024 Consumer Confidence Report

For

Otis Air National Guard Base

Otis ANGB, Massachusetts

MassDEP PWS ID #4096001

This report is a snapshot of the drinking water quality that we provided last year. Included are details about where your water comes from, what it contains, and how it compares to state and federal standards. We are committed to providing you with this information because informed customers are our best allies.

PUBLIC WATER SYSTEM INFORMATION

Address**:** 156 Reilly St., Box 12 Otis Air National Guard Base on Joint Base Cape Cod, Massachusetts

Contact Person: Mr. Bernie Marshall

Telephone #: (774) 392-7410

Water System Improvements

Our water system is routinely inspected by the Massachusetts Department of Environmental Protection (MassDEP). MassDEP inspects our system for its technical, financial, and managerial capacity to provide safe drinking water to you. To ensure that we provide the highest quality of water available, your water system is operated by a Massachusetts certified operator who oversees the routine operations of our system. As part of our ongoing commitment to service, the MassDEP Drinking Water Program has determined that the public water supply system at Otis Air National Guard Base is compliant with all national Primary Drinking Water Standards and MassDEP Drinking Water Regulations.

Opportunities for Public Participation

If you would like to participate in discussions regarding your water quality, you may attend the following meetings or educational events: *Please see the Otis Notice for any future meetings.*

YOUR DRINKING WATER SOURCE

Where Does My Drinking Water Come From?

Your water is provided by the following sources listed below:

Our drinking water supply is provided entirely by groundwater. J-Well (4096001-01G), which is located on Herbert Road, is our primary pumping station. We are also interconnected to the Upper Cape Regional Water Supply Cooperative. The Cooperative's water sources come from three wells located in the northeastern corner of Joint Base Cape Cod. On average, we provide up to 300,000 gallons of high-quality water every day. All of the Otis public water supply is drawn from the Sagamore Lens of the Cape Cod single-source aquifer. This lens runs from the Cape Cod Canal eastward into the town of Yarmouth. To learn more about our watershed on the Internet, go to the U.S. Environmental Protection Agency's (EPA) "How's My Waterway" website at the following link: *https://www.epa.gov/waterdata/hows-my-waterway.*

Source Name	MassDEP Source ID#	Source Type	Location of Source
J-Well	4096001-01G	Groundwater	Herbert Road

Is My Water Treated?

Our water system makes every effort to provide you with safe and pure drinking water. To improve the quality of the water delivered to you, we treat the system with potassium carbonate and sodium hypochlorite. The water in this geographic area is naturally acidic, with an average pH of 5.9 (7.0 is neutral). Acidic water can be harmful to the

distribution system. Potassium carbonate is used to buffer the water to as close to a neutral pH as possible. At the request of the U.S. Coast Guard, which is the owner and operator of the family housing area, sodium fluoride is added to the water. This compound has proven effective in strengthening teeth. Finally, sodium hypochlorite is used to disinfect the water supply by killing bacteria. The water quality of our system is constantly monitored by us and MassDEP to determine the effectiveness of existing water treatment and to determine if any additional treatment is required. We add a disinfectant to protect you against microbial contaminants.

How Are These Sources Protected?
The Source Water Assessment and Protection (SWAP) Program, established under the federal Safe Drinking Water Act, requires every state to inventory land uses within the recharge areas of all public water supply sources; to assess the susceptibility of drinking water sources to contamination from these land uses; and to publicize the results to provide support for improved protection. MassDEP has prepared a SWAP Report for the water supply source(s) serving this water system. The SWAP Report assesses the susceptibility of public water supplies.

What is My System's Ranking?
A susceptibility ranking of HIGH was assigned to this system due to the absence hydrogeological barriers (i.e., clay) that can prevent contaminant migration.

Where Can I See The SWAP Report?
Information on obtaining the complete SWAP Report is available by contacting the Water Supply Superintendent at (508) 968-4102. To access the SWAP Report on the Internet, go to the Source Water Assessment & Protection (SWAP) Program Website at the following link: *https://www.mass.gov/service-details/the-source-water-assessment-protection-swap-program.*

Members can help protect sources by:
• practicing good septic system maintenance
• proper disposal of hazardous chemicals and materials
• limiting pesticide and fertilizer use, etc.

SUBSTANCES FOUND IN TAP WATER

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, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

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

Inorganic contaminants – such as salts and metals, which 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 – 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, the Department of Environmental Protection (MassDEP) and U.S. Environmental Protection Agency (EPA) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and Massachusetts Department of Public Health (DPH) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

All 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'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 system disorders, some elderly, and some 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 and Prevention (CDC) guidelines on lowering 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. Otis Air National Guard Base 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 *http://www.epa.gov/safewater/lead*.

IMPORTANT DEFINITIONS

Maximum Contaminant Level (MCL) – The highest level of a contaminant that is 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 a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Secondary Maximum Contaminant Level (SMCL) – These standards are developed to protect the aesthetic qualities of drinking water and are not health based.

Unregulated Contaminants
Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated monitoring is to assist EPA in determining their occurrence in drinking water and whether future regulation is warranted.

Massachusetts Office of Research and Standards Guideline (ORSG) – This is the concentration of a chemical in drinking water, at or below which, adverse health effects are unlikely to occur after chronic (lifetime) exposure. If exceeded, it serves as an indicator of the potential need for further action.

Maximum Residual Disinfectant Level (MRDL) – The highest level of a disinfectant (chlorine, chloramines, chlorine dioxide) 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 (chlorine, chloramines, chlorine dioxide) below which there is no known expected risk to health.
MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

MFL = Million Fibers per Liter
ppm = parts per million, or milligrams per liter (mg/l)
ppb = parts per billion, or micrograms per liter (ug/l)
ppt = parts per trillion, or nanograms per liter (ng/l)
pCi/l = picocuries per liter (a measure of radioactivity)
NTU = Nephelometric Turbidity Units
ND = Not Detected
N/A = Not Applicable
mrem/year = millirems per year (a measure of radiation absorbed by the body)

WATER QUALITY TESTING RESULTS

What Does This Data Represent?
The water quality information presented in the table is from the most recent round of testing done in accordance with the regulations. All data shown was collected during the last calendar year unless otherwise noted in the table (within the last 5 years).

Substance (unit of measurement)	Date(s) Collected	90TH percentile	Action Level	MCLG	# of sites sampled	# of sites above Action Level	Possible Source of Contamination
Lead (mg/l)	Sep 25 – Oct 10 2024	0.0015	0.015	0	**40**	**0**	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (mg/l)	Sep 25 – Oct 10 2024	0.394	1.3	1.3	**40**	**0**	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

Regulated Contaminant	Date(s) Collected	Highest Amount Detected	Range Detected	MCL (MRDL)	MCLG (MRDLG)	Violation (Y/N)	Possible Source(s) of Contamination
Inorganic Contaminants							
Antimony (ug/l)	2024	ND	N/A	6	6	N	Discharge from fire retardants; ceramics; electronics; solder
Arsenic (ug/l)	2024	ND	N/A	10	N/A	N	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Asbestos (MFL)	2024	ND	N/A	7	7	N	Decay of asbestos cement watermains; Erosion of natural deposits
Barium (mg/l)	2024	0.012	0.00-0.012	2	2	N	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beryllium (ug/l)	2024	ND	N/A	4	4	N	Discharge from electrical, aerospace, and defense industries; erosion of natural deposits
Cadmium (ug/l)	2024	ND	N/A	5	5		Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Cyanide (mg/l)	2024	ND	N/A	0.2	0.2	N	Discharge from metal factories; discharge from plastic and fertilizer factories

Regulated Contaminant	Date(s) Collected	Highest Amount Detected	Range Detected	MCL (MRDL)	MCLG (MRDLG)	Violation (Y/N)	Possible Source(s) of Contamination
Fluoride* (mg/l)	2024	ND	N/A	4	4	N	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
*Fluoride also has a secondary contaminant level (SMCL) of 2 ppm.							
Nitrate (mg/l)	2024	1.6	0.0-1.6	10	10	N	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Nitrite (mg/l)	2024	ND	N/A	1	1	N	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Perchlorate (ug/l)	2024	ND	N/A	2.0	N/A	N	Rocket propellants, fireworks, munitions, flares, blasting agents
Organic Contaminant							
PFAS6 (ppt)	2024	2.2	0.20-2.2	4.0	N/A	N	Discharges and emissions from industrial and manufacturing sources associated with the production or use of these PFAS, including production of moisture and oil resistant coatings on fabrics and other materials. Additional sources include the use and disposal of products containing these PFAS, such as fire-fighting foams.
Selenium (ug/l)	2024	ND	N/A	50	50	N	Discharge from metal refineries; erosion of natural deposits; discharge from mines
Thallium (ug/l)	2024	ND	N/A	2	0.5	N	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
Volatile Organic Contaminants							
Benzene (ug/l)	2024	ND	N/A	5	0	N	Discharge from factories; leaching from gas storage tanks and landfills
Carbon tetrachloride (ug/l)	2024	ND	N/A	5	0	N	Discharge from chemical plants and other industrial activities
o-Dichlorobenzene (ug/l)	2024	ND	N/A	600	600	N	Discharge from industrial chemical factories
p-Dichlorobenzene (ug/l)	2024	ND	N/A	5	5	N	Discharge from industrial chemical factories
1,2-Dichloroethane (ug/l)	2024	ND	N/A	5	0	N	Discharge from industrial chemical factories
1,1-Dichloroethylene (ug/l)	2024	ND	N/A	7	7	N	Discharge from industrial chemical factories
cis-1,2-Dichloroethylene (ug/l)	2024	ND	N/A	70	70	N	Breakdown product of trichloroethylene and tetrachloroethylene

Regulated Contaminant	Date(s) Collected	Highest Amount Detected	Range Detected	MCL (MRDL)	MCLG (MRDLG)	Violation (Y/N)	Possible Source(s) of Contamination
trans-1,2-Dichloroethylene (ug/l)	2024	ND	N/A	100	100	N	Discharge from industrial chemical factories
Dichloromethane (ug/l)	2024	ND	N/A	5	0	N	Discharge from pharmaceutical and chemical factories
1,2-Dichloropropane (ug/l)	2024	ND	N/A	5	0	N	Discharge from industrial chemical factories
Ethylbenzene (ug/l)	2024	ND	N/A	700	700	N	Leaks and spills from gasoline and petroleum storage tanks
Styrene (ug/l)	2024	ND	N/A	100	100	N	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene (PCE) (ug/l)	2024	ND	N/A	5	0	N	Discharge from factories and dry cleaners; residual of vinyl-lined water mains
1,2,4-Triclorobenzene (ug/l)	2024	ND	N/A	70	70	N	Discharge from textile-finishing factories
1,1,1-Trichloroethane (ug/l)	2024	ND	N/A	200	200	N	Discharge from use in septic system cleaners
1,1,2-Trichloroethane (ug/l)	2024	ND	N/A	5	3	N	Discharge from industrial chemical factories
Trichloroethylene (TCE) (ug/l)	2024	ND	N/A	5	0	N	Discharge from metal degreasing sites and other factories
Toluene (mg/l)	2024	ND	N/A	1	1	N	Leaks and spills from gasoline and petroleum storage tanks; discharge from petroleum factories
Vinyl Chloride (ug/l)	2024	ND	N/A	2	0	N	Leaching from PVC piping; discharge from plastics factories
Xylenes (mg/l)	2024	ND	N/A	10	10	N	Leaks and spills from gasoline and petroleum storage tanks; discharge from petroleum factories; discharge from chemical factories
Radioactive Contaminants							
Gross Alpha▲(pCi/l) (minus uranium)	2021	-0.210 (+ -0.331)	-0.461 to -0.210	15	0	N	Erosion of natural deposits
▲The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for beta particles.							
Radium 226 & 228 (pCi/L) (combined values)	2021	0.377	-0.178 to 0.377	5	0	N	Erosion of natural deposits
Disinfectants and Disinfection By-Products							
Total Trihalomethanes (TTHMs) (ug/l)	QTR3 (2024)	5.08	3.2 - 5.08	80	N/A	N	Byproduct of drinking water chlorination
Haloacetic Acids [HAA5] (ug/l)	QTR3 (2024)	ND	N/A	60	N/A	N	Byproduct of drinking water disinfection

Regulated Contaminant	Date(s) Collected	Highest Amount Detected	Range Detected	MCL (MRDL)	MCLG (MRDLG)	Violation (Y/N)	Possible Source(s) of Contamination
Chlorine (mg/l) (free, total or combined)	Monthly (2024)	3.10	0.00 – 3.10	4	4	N	Water additive used to control microbes
Chloramines (mg/l)	Monthly (2024)	0.87	0.36 – 0.87	4	4	N	Water additive used to control microbes

Unregulated and Secondary Contaminants

Unregulated contaminants are those for which there are no established drinking water standards. The purpose of unregulated contaminant monitoring is to assist regulatory agencies in determining their occurrence in drinking water and whether future regulation is warranted.

Unregulated Contaminants	Date(s) Collected	Highest Detected	Range Detected	SMCL	ORSG	Possible Source
Bromodichloromethane (ug/l)	2024	ND	N/A	N/A	N/A	Trihalomethane; by-product of drinking water chlorination
Bromoform (ug/l)	2024	ND	N/A	N/A	N/A	Trihalomethane; by- product of drinking water chlorination
Chloroform (ug/l)	2024	ND	N/A	N/A	70	By-product of drinking water chlorination (In non-chlorinated sources it may be naturally occurring)
Dibromochloromethane (ug/l)	2024	1.66	1.23 – 1.66	N/A	N/A	Trihalomethane; by-product of drinking water chlorination
Manganese* (ug/l)	2023	N/A	ND	50	300	Erosion of natural deposits
* US EPA has established a lifetime health advisory (HA) value of 300 ppb for manganese to protect against concerns of potential neurological effects, and a one-day and 10-day HA of 1000 ppb for acute exposure.						
Chloride (mg/l)	2024	9.9	8.4 – 9.9	250	N/A	Runoff and leaching from natural deposits; seawater influence.
Copper (mg/l)	2024	0.764	0.010 – 0.764	1	N/A	Internal corrosion of household plumbing; erosion of natural deposits
Sulfate (mg/l)	2024	6.6	0.0 – 6.6	250	N/A	Runoff and leaching from natural deposits; industrial wastes.
Zinc (mg/l)	2024	0.025	0.0 – 0.025	5	N/A	Corrosion of household plumbing systems; erosion of natural deposits
Sodium (mg/l)	2024	14	0.0 - 14	N/A	20	Discharge from the use and improper storage of sodium-containing de-icing compounds or in water-softening agents

COMPLIANCE WITH DRINKING WATER REGS

Does My Drinking Water Meet Current Health Standards?

We are committed to providing you with the best water quality available. We are proud to report that last year your drinking water met all applicable health standards regulated by the state and federal government.

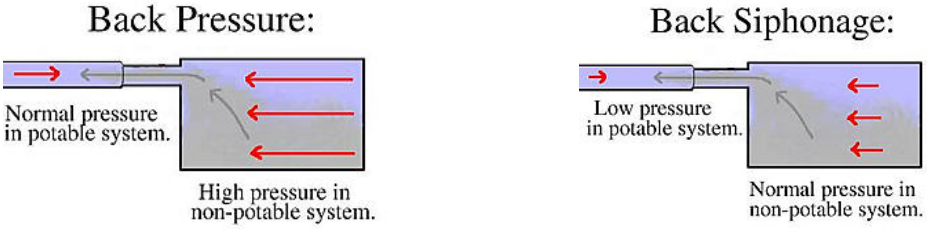
EDUCATIONAL INFORMATON

Cross-Connection Control and Backflow Prevention

Our water system makes every effort to ensure that the water delivered throughout the installation is clean, safe, and free of contamination. Our members work hard to protect the quality of the water delivered to our customers from the time the water is extracted via deep wells from underground aquifers or withdrawal point from a surface water source, throughout the entire treatment and distribution system. But what happens when the water reaches your building? Is there still a need to protect the water quality from contamination caused by a cross-connection? If so, how?

What is a cross-connection?
A cross-connection occurs whenever the drinking water supply is or could be in contact with potential sources of pollution or contamination. Cross-connections exist in piping arrangements or equipment that allows the drinking water to come in contact with non-potable liquids, solids, or gases (hazardous to humans) in event of a backflow.

What is a backflow?
Backflow is the undesired reverse of the water flow in the drinking water distribution lines. This backward flow of water can occur when the pressure created by equipment or a system such as a boiler or air-conditioning is higher than the water pressure inside the water distribution line (back pressure), or when the pressure in the distribution line drops due to routine occurrences such as water main breaks or heavy water demand causing the water to flow backward inside the water distribution system (back siphonage). Backflow is a problem that many water consumers are unaware of, a problem that each and every water customer has a responsibility to help prevent.



What can I do to help prevent a cross-connection?
Without the proper protection something as simple as a garden hose has the potential to contaminate or pollute the drinking water lines in your house. In fact, over half of the country's cross-connection incidents involve unprotected garden hoses. There are very simple steps that you as a drinking water user can take to prevent such hazards, they are:

- NEVER submerge a hose in soapy water buckets, pet watering containers, pool, tubs, sinks, drains, or chemicals.
- NEVER attached a hose to a garden sprayer without the proper backflow preventer.
- Buy and install a hose bibb vacuum breaker in any threaded water fixture. The installation can be as easy as attaching a garden hose to a spigot. This inexpensive device is available at most hardware stores and home-improvement centers.
- Identify and be aware of potential cross-connections to your water line.
- Buy appliances and equipment with backflow preventers.
- Buy and install backflow prevention devices or assemblies for all high and moderate hazard connections.

If you are the owner or manager of a property that is being used as a commercial, industrial, or institutional facility you must have your property's plumbing system surveyed for cross-connection by your water purveyor. If your property has NOT been surveyed for cross-connection, contact your water department to schedule a cross-connection survey.

ADDITIONAL INFORMATION

Brown, Red, Orange, or Yellow Water.
Brown, red, orange, or yellow water is usually caused by rust. The different colors can be attributed to varying chemical oxidation states of the iron (rust) and by varying concentrations of the rust in the water. There are two major sources that can cause water to be rusty:

•The water mains, or
•The water pipes in your building

Rusty water occurs from sediment or rust from the inside walls of the water mains. The rust can be disturbed and temporarily suspended in water with unusual water flows from water main breaks or maintenance or by *flushing of a hydrant*. This discolored water is not a health threat.

When the water is discolored it is recommended to either not wash laundry or to use a rust stain remover or regular detergent but not chlorine bleach as it will react with the iron to form a permanent stain. The other major cause of brown, red, orange or yellow water is rusty water pipes in your building. Water that is being discolored by rusty pipes is not a health hazard.