2021 ANNUAL DRINKING WATER QUALITY REPORT

Hanson Water Department -- Hanson, Massachusetts -- DEP PWSID # 4123000

This report is a snapshot of 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 information because informed customers are our best allies.

PUBLIC WATER SYSTEM INFORMATION

Address: 1073 West Washington Street
Contact Person: Gerald Davis, Water Superintendent
Telephone #: 781-447-1200 Fax #: 781-447-1206
Internet Address: http://www.hanson-ma.gov/water-department

Water System Improvements
Our water system is routinely inspected by the Massachusetts Department of Environmental Protection (DEP) 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 Massachusetts certified operators who oversee the routine operations of our system.

Opportunities for Public Participation
If you would like participate in discussions regarding your water quality, you are encouraged to attend any of our regularly scheduled meetings. The Board of Water Commissioners meets on the second and fourth Wednesday of each month at 6:00 p.m. in the Water Department office at 1073 West Washington Street.

Where Does My Drinking Water Come From?
The Hanson Water Department was created in 1916. From 1916 until the early 1980s, Hanson purchased its water from the City of Brockton and the Abington/Rockland Joint Waterworks. Since then, Hanson has developed its own water supply at the Crystal Spring Well Field located off of Main Street. Hanson currently maintains one interconnection with the Brockton system located at 1630 Main Street as a backup supply. Further information on the Brockton water supply can be obtained by calling the Brockton Water Department at (508) 580-7865.

Source Name	MassDEP Source ID#	Source Type	Location of Source
Well # 1	4123000-01G	Ground Water	Crystal Spring Well Field
Well # 3	4123000-03G	Ground Water	Crystal Spring Well Field
Well # 4	4123000-04G	Ground Water	Crystal Spring Well Field
Well # 5	4123000-05G	Ground Water	Crystal Spring Well Field
Brockton Water Dept.	4044000-01S	Surface Water	Silver Lake

Is My Water Treated?
Our water system makes every effort to provide you with safe and pure drinking water. The groundwater in Hanson is naturally corrosive (i.e. it has a pH of less than 7.0), therefore, untreated water has a tendency to corrode and dissolve the metal piping it flows through. This not only damages the internal plumbing of your home but can also add harmful metals, such as lead and copper to your water. To improve the quality of the water delivered to you, we chemically treat it with sodium hydroxide to raise the pH to a non-corrosive level, thereby reducing lead and copper concentrations. We also added chlorine to the water as a precaution against any bacteria that may be present in our source water. We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of our water. The water quality of our system is constantly monitored by us and DEP to determine the effectiveness of existing water treatment and to determine if any additional treatment is required.

How Are These Sources Protected?
DEP has prepared a Source Water Assessment Program (SWAP) Report for the water supply sources serving this water system. The SWAP Report assesses the susceptibility of these drinking water sources to contamination. The Hanson SWAP report is available at the Water Department Office at 1073 West Washington Street. In addition, the SWAP report is available on the DEP website at www.mass.gov/dep/water/drinking/swapreps.htm. For more information, call Jerry Davis, Water Superintendent at 781-447-1200.

What is My System's Ranking?
Hanson's SWAP report, which was completed in 2003, identifies the primary recharge area (Zone II) for the Crystal Spring Well Field as consisting primarily of forest and non-forested wetlands with small areas of cropland, residential, commercial, industrial and waste disposal land use. In addition, Hanson's wells are located in aquifers with high vulnerability to contamination due to the absence of hydrogeologic barriers (i.e. clay) that can prevent contaminant migration. As a result, Hanson's sources are considered **highly susceptible** to contamination from a variety of sources such as petroleum products, industrial solvents, fertilizers, and microbial contaminants. Susceptibility is a measure of a water supply's ***potential*** to become contaminated due to land uses and activities within its recharge area and does not imply poor water quality.

Residents and Businesses Can Help Protect Hanson's Sources By:

- Practicing good septic system maintenance
- Supporting water supply protection initiatives at the next town meeting
- Taking hazardous household chemicals to hazardous materials collection days
- Limiting pesticide and fertilizer use

SUBSTANCES FOUND IN TAP WATER

Drinking water, including bottled water, may reasonably be 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 the EPA's Safe Drinking Water Hotline (1-800-426-4791.)

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, 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 storm water 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 storm water 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 storm water 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, the Department and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. FDA and the Massachusetts Department of Public Health regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

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/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 (1-800-426-4791).

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.

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. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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

90th Percentile – Out of every 10 homes sampled, 9 were at or below this level.

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

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.

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

ppm: parts per million, or milligrams per liter (mg/l) **ppb**: parts per billion, or micrograms per liter (ug/l) **ND**: Not Detected **N/A**: Not Applicable

WATER QUALITY TESTING RESULTS

What Does This Data Represent?
The water quality information presented in the following tables 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 tables.

REGULATED CONTAMINANTS

Microbiological						
Contaminant	**Highest # Positive in a month**			**MCL**	**MCLG**	**Violation (Y/N)**	**Possible Sources of Contamination**
Total Coliform	0			1	0	N	Naturally present in the environment
Inorganics							
Contaminant	**Date**	**Highest Result**	**Range Detected**	**MCL**	**MCLG**	**Violation (Y/N)**	**Possible Sources of Contamination**
Chlorine (ppm)	2021	0.41	0.37-0.41	MRDL-4	MRDLG-4	N	Water additive used to control microbes
Nitrate (ppm)	2021	0.90	0.21-0.90	10	10	N	Runoff from fertilized use; leaching from septic tanks, sewage; erosion of natural deposits
Perchlorate (ppb)	2021	0.09	0.09	2	N/A	N	Rocket propellants, fireworks, munitions, flares, blasting agents
Volatile Organic Compounds							
Tetrachloroethylene (ppb)	2021	.06	ND-0.06	5	0	N	Discharge from factories and dry cleaners; residual of vinyl-lined water mains
*HAAS (ppb) Haloacetic Acids	2021	10.3	ND-10.3	60	N/A	N	By-product of drinking water disinfection
*TTHMS (ppb) Total Trihalomethanes	2021	32.2	29.3-32.2	80	N/A	N	By-product of drinking water disinfection
Lead & Copper							
Contaminant	**Date**	**90th Percentile**	**Action Level (AL)**	**MCLG**	**# Sites Sampled**	**# Sites Above AL**	**Possible Sources of Contamination**
Lead (ppm)	2021	0.006	0.015	0.015	20	0	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	2021	0.81	1.3	1.3	20	0	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

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

Inorganics						
Contaminant	**Date**	**Result or Range Detected**	**Average Detected**	**SMCL**	**ORSG**	**Possible Sources of Contamination**
Sodium (ppm)	2021	49.8	49.8	--	20	Natural sources; runoff from use of salt on roadways; by-product of water treatment process
Secondary Contaminants						
Manganese (ppb)	2021	0.141-0.41	0.252	50	--	Erosion of natural deposits

***TTHMS & HAAS samples were taken late; but in no way was your drinking water ever compromised.**

EDUCATIONAL INFORMATION

Lead: 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 Hanson Water Department 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.

Sodium: Sodium sensitive individuals, such as those experiencing hypertension, kidney failure, or congestive heart failure, should be aware of the sodium levels where exposures are being carefully controlled.

Manganese: Drinking water may naturally have manganese and, when concentrations are greater than 50 µg/L, the water may be discolored and taste bad. Over a lifetime, EPA recommends that people drink water with manganese levels less than 300 µg/L and over the short term, EPA recommends that people limit their consumption of water with levels over 1000 ug/L, primarily due to concerns about possible neurological effects. Children up to 1 year of age should not be given water with manganese concentrations over 300 ug/L, nor should formula for infants be made with that water for longer than 10 days

Total Coliform: Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

HAAs- Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Nitrate: Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

Perchlorate: interferes with the normal function of the thyroid gland and thus has the potential to affect growth and development, causing brain damage and other adverse effects, particularly in fetuses and infants. Pregnant women, the fetus, infants, children up to the age of 12, and people
with a hypothyroid condition are particularly susceptible to perchlorate toxicity.

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

THMs- Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Tetrachloroethylene: Some people who drink water containing Tetrachloroethylene in excess of the MCL over many years could have problems with their liver and may have an increased risk of getting cancer.

ADDITIONAL INFORMATION

What is a Cross Connection and What Can I do about it?

A cross connection is a connection between a drinking water pipe and a polluted source. The pollution can come from your own home. For instance, you're going to spray fertilizer on your lawn. You hook up your hose to the sprayer that contains the fertilizer. If the water pressure drops (say because of fire hydrant use in the town) when the hose is connected to the fertilizer, the fertilizer may be sucked back into the drinking water pipes through the hose. Using an attachment on your hose called a backflow-prevention device can prevent this problem.

The Hanson Water Department recommends the installation of backflow prevention devices, such as a low cost hose bib vacuum breaker, for all inside and outside hose connections. You can purchase this at a hardware store or plumbing supply store. This is a great way for you to help protect the water in your home as well as the drinking water system in your town. For additional information on cross connections and on the status of your water systems cross connection program, please contact the Hanson Water Department at 781-447-1200.