

## Total Coliform Bacteria Violation

The Hanson Water Department was issued a Notice of Noncompliance (NON) and Return to Compliance from DEP on October 21, 2003 for exceeding the maximum contaminant level for total coliform bacteria in September 2003.

Total coliform bacteria tested positive at the storage tank. The Town published public notice of this occurrence according to the DEP regulations.

As part of educating the public on substances in your drinking water, the U.S. Environmental Protection Agency (EPA) issued the following statement on the effect of total coliform. *Coliforms are bacteria that are naturally occurring in the environment and are used as an indicator that other potentially harmful bacteria may be present. Coliforms were detected in more samples than allowed by the regulations and this was a warning of potential concern.* Follow up testing performed by the Town confirmed no presence of any potentially harmful bacteria in the water.

Town's corrective actions included chlorination and repeated sampling. While chlorinating, the Town also conducted flushing of the water distribution system.

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### DEP commends the Town on the following source protection measures:

- Ownership of the active wells areas.
- Developing a Wellhead Protection Plan.
- Adopting the local bylaws and health regulations to meet DEP's Wellhead Protection controls.

### What can Town do to improve protection?

- Restrict non-water supply activities in protection areas;
- Educate residents on ways they can help protect drinking water sources;
- Work with emergency response teams to ensure awareness of stormwater drainage in and cooperative response to spills or accidents;
- Partner with local businesses to ensure proper storage, handling and disposal of hazardous materials;
- Monitor progress of any ongoing remedial action conducted for the known oil or contamination sites;
- Make a local bylaw and health regulation inspections within well protection areas a priority; and
- Convene a Wellhead Protection Committee with members representing local government, businesses, citizen's groups, the Water Department and other stakeholders.

The Town of Hanson plans to address the protection recommendations by taking action on the recommendations outlined in DEP's SWAP Residents can help protect sources by:

- Practicing good septic system maintenance;
- Supporting water supply protection initiatives at the Town's meetings;
- Properly disposing of hazardous household chemicals;
- Contacting the Public Works Department to volunteer for monitoring or education outreach to schools; and
- Limiting pesticide and fertilizer use.

The complete SWAP report is available for review at the Hanson Water Department. For more information, please contact Glen Doherty at 781-447-1200.

# 2003 DRINKING WATER QUALITY REPORT

Hanson Water Department • 1073 West Washington Street, Hanson, MA 02341 • Tel. 781-447-1200 • PWS ID#4123000

This report describes the Town of Hanson's drinking water sources and treated water quality for calendar year 2003, and the process that protects the high quality of our water supply. This publication is mandated by the federal public right-to-know regulation requiring community water suppliers to provide specific treated water quality information annually to their customers.

This report includes additional information beyond the minimum federal requirements in order to respond to typical questions our customers ask about Hanson's water system.

If you are interested in learning more about Hanson's water supply system, water quality and other related information please contact Glen Doherty, the Superintendent at the Hanson Water Department at 781-447-1200.

In addition, drinking water issues are addressed at the Board of Water Commissioner's meetings held the second and fourth Wednesday of each month at 7:30 P.M. at the Water Department Office.

## Water News

The Department of Environmental Protection (DEP) approved the new source application for Crystal Spring Wellfield. Installation and testing of new pumps at the wellfield is ongoing.

The Board of Water Commissioners approved the Water Use Reduction Program for new connection installations. For information on eligibility and the application process, please contact Hanson Water Department.

The Town developed a unidirectional flushing program for exercising all distribution system valves. The plan implementation began in the Fall of 2003, and will continue throughout 2004.

## Hanson's Water Meets Safety and Health Standards

Hanson's water meets all safety and health standards. We test our water regularly through a certified laboratory. During the year 2003 we collected over 500 water samples in the system that were then tested for compliance with state health standards. State regulators routinely monitor our compliance and testing protocols to assure that we deliver safe drinking water to our customers.

## Hanson's Water Sources

The Hanson Water Department was created in 1916 by an act of the State Legislature. From 1916 until the early 1980s, Hanson purchased its water from the City of Brockton and the joint waterworks of the towns of Abington/Rockland. Since then, Hanson developed and has operated its own water supply at the Crystal Spring Wellfield located on Main Street in Hanson. The Hanson Water Department continues to augment its supply with water purchases from the City of Brockton.

The Crystal Spring Wellfield consists of two well sites on Town-owned land on Main Street at the corner of Franklin Street. The land area around the well sites is protected and restricted from many uses in order to insure the high quality of the Town's water supply. The water system includes one storage tank located off of High Street.

In the year 2003, Hanson pumped 245 million gallons of water, with a maximum of 0.87 million gallons per day (mgd) and an average of 0.67

## Source Water Assessment Program

Hanson maintains and operates two public water supply sources. They include the GP Well #1 *Source ID # 4123000-01G* and the Crystal Spring Well *Source ID # 4123000-02G*. The Hanson Water Department has two proposed wells that it plans to add to its existing supply of drinking water.

### What is SWAP?

The Source Water Assessment and Protection (SWAP) program assesses the susceptibility of public water supplies to contamination. A susceptibility ranking of *high* was assigned to Hanson's wells using the information collected during the assessment by the DEP.

### What are the Key Issues for Your Water Supply?

- Non-water supply activities in protection areas;
- Residential land uses: potential threats due to septic systems, household hazardous materials, heating oil storage and stormwater;
- Transportation corridors: Route 27, local roads, rail;
- Hazardous materials storage and use;
- Oil or hazardous material contamination sites;
- Agricultural activities: landscape and livestock operations; and
- Wellhead Protection Planning.

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## Important Health Information

All sources of drinking water (both tap water and bottled water) including rivers, lakes, streams, ponds, reservoirs, springs and wells, contain some naturally occurring contaminants or substances.

Because water is the universal solvent, 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.

Drinking 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.

Removing all contaminants would be extremely expensive and in nearly all cases would not provide greater protection of health.

Contaminants that can be present include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from septic systems and wildlife.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.
- **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

- **Radioactive contaminants**, that can be naturally occurring or be the result of oil and gas production and mining activities.

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.

### Vulnerability

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 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 Safe Drinking Water Hotline, 800-426-4791.

## Water Conservation

### Indoor water conservation

The average household can reduce indoor water use by approximately 20 gallons per person per day by following some of these tips.

**Bathtub:** Fill your bathtub only halfway. Saves 5 gallons or more.

**Bathtub drain:** Close the bathtub drain prior to turning on the faucet to fill the tub. Saves 3 or more gallons.

**Dishwasher:** Run your dishwasher only when full. Saves up to 15 gallons per load.

**Garbage disposal:** Run your disposal only when necessary, and not for one or two items at a time. Saves 2 to 5 gallons per minute.

**Bathroom faucet:** Turn off the tap while brushing your teeth or shaving. Saves 4 to 10 gallons per day.

**Shower:** Consider taking shorter showers—5 minutes is sufficient to get you clean. Saves 3 to 7 gallons per shower.

**Kitchen sink:** Fill your sink or basin when washing or rinsing dishes, rather than letting the water run. Saves 2 to 5 gallons per day.

**Toilet:** Never use your toilet as a wastebasket. Saves 1.5 to 5 gallons per flush.

**Washing machine:** Run your washing machine only when full, or adjust the water level setting appropriately. Washing machines use 25 to 50 gallons per load.

### Outdoor water conservation

- Water your lawn only every 3 to 5 days as needed.
- Water during the early morning or late evening hours.
- Do not use automatic sprinkler systems.
- If you do own an automatic sprinkler system, install a moisture sensor.
- Consider alternative landscaping, using native grasses and plants. This type of landscaping requires much less water.

Water conservation is always good practice—it can help save valuable resources, save energy, save the environment, and save you money!

## Drinking Water Quality

Listed below are 9 substances detected in Hanson's drinking water during 2003. All results below are allowable limits. Not listed are the more than 100 other substances for which we tested that were not detected during 2003.

Substance	Highest Detected Level	Range of Detected Levels	Highest Level Allowed (MCL)	Ideal Goal (MCLG)	Sources of Contamination
<b>Regulated at the Water Supply Wells</b>					
Nitrate	0.79	0.19 – 0.79 ppm	10 ppm	10 ppm	Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks
cis-1,2 Dichloroethylene	1.6 ppb	ND – 1.6 ppb	70.0 ppb	70.0 ppb	Discharge from industrial chemical factories
Tetrachloroethylene	4.4 ppb	ND – 4.4 ppb	5.0 ppb	0	Discharge from factories and dry cleaners
<b>Regulated at the Distribution System</b>					
Total Coliform	10 positive samples in 1 month	ND – 10 positive samples in 1 month	1 positive sample per month	0	Naturally present in the environment
<b>Regulated at the Customer's Tap</b>					
Copper	0.5 ppm <sup>1,3</sup>	–	1.3 ppm AL # of sites above AL = 0	1.3 ppm	Corrosion of household plumbing
Lead	<1.0 ppb <sup>2,3</sup>	–	15.0 ppb AL # of sites above AL = 0	0	Corrosion of household plumbing
<b>Unregulated Contaminants</b>					
Sodium	28.2 ppm	17.8 – 28.2 ppm	not regulated	not regulated	Present in natural water (source water)
Sulfate	18.5 ppm	17.2 – 18.5 ppm	not regulated	not regulated	Erosion of natural deposits (source water)
Methyl Tertiary Butyl Ether (MTBE)	2.5 ppb	ND – 2.5 ppb	not regulated	not regulated	Leaching of gasoline

### Footnotes:

- <sup>1</sup> The copper result listed is the 90<sup>th</sup> percentile of all samples required by regulation.
- <sup>2</sup> The lead result listed is the 90<sup>th</sup> percentile of all samples as required by regulation.
- <sup>3</sup> Detected results are from 2003 sampling. DEP requires testing for these substances once every three years.

### Abbreviations

**ND** – Not detected

**AL** – Action Level

**ppm** – (Part Per Million) - One part per million is the equivalent of \$1 in \$1,000,000

**ppb** – (Part Per Billion) - One part per billion is the equivalent of \$1 in \$1,000,000,000

**>** – Greater than

**±** – Plus or minus, denoting a range

**gpm** – gallons per minute

**pCi/L** – picoCuries per Liter (a measure of radiation)

**90<sup>th</sup> percentile value** – Out of every 10 homes, 9 were below this level

### Definitions:

**Maximum Contaminant Level (MCL)** – The highest level of a contaminant that is allowed in drinking water.

**Maximum Contaminant Level Goal (MCLG)** – The level of a contaminant in drinking water below which there is no known or expected risk to health.

**Action Level (AL)** – An Action Level is the concentration of a contaminant which triggers treatment or other requirements which a water system must follow.

## Drinking Water Treatment

