STOCKBRIDGE WATER QUALITY REPORT 2005
VOLUME 8, SPRING 2006, P.W.S.I.D. # 1283003

Whom to Call

Water problems, meter problems, leaks, fire hydrants, water quality, main breaks, and miscellaneous questions:

Stockbridge Water Department
298-4067 7:00-3:30

Billing information, account information, shutting off or turning on water service, meter problems:

Stockbridge Town Hall
298-3890 9:00-4:00

Emergency Water Problems

Stockbridge Police Dept.
298-5520

Who is the Water Department?

Clint Schneyer-Highway Super.
Michael Buffoni- Water Super.
Tony Campetti-Plant Operator
Peter Barenski- Plant Operator

The Water and Sewer Commission

Don Schneyer, Chairman
Peter Sochia, Commissioner
Tom Schuler, Commissioner

The Commission meets on the first Tuesday of each month at 4:30pm in the Town Hall. All town residents are encouraged to attend. If you wish to be put on the agenda to discuss a particular issue you must register 10 days prior. You may call the Town Hall at 298-4714 to register.
Email:
water@townofstockbridge.com, or see us on the web at **www.townofstockbridge.com**

Annual Water Quality Report

Welcome to our eighth annual report! This Newsletter will help keep our water customers informed about upcoming projects; local, state and federal policies, regulations and guidelines. If you have any questions about the water system, please feel free to contact us at 298-4067. We encourage all residents to tour both the Water Filtration and Wastewater Treatment facilities, located on Route 102 in Stockbridge.

Where Does Our Water Come From?

The Town's reservoir is located on Averic Road in Interlaken. The town watershed has a D.E.P. approved Watershed Protection Plan which helps control activities that could have a negative affects on our water quality. We are very fortunate to own our entire watershed area which is all undeveloped forest. The watershed consists of 640 acres of forest around our 40 acre reservoir, which holds approximately 132 million gallons of water. The water is gravity-fed to the Filtration facility located on Route 102 in Stockbridge. Once the water is filtered, it is either pumped directly to the homeowner or to two 156,000 gallon storage tanks located in Interlaken.
The water provided from the Stockbridge Water Filtration Facility is safe, clean and odor free. According to state regulations we are required to include the following paragraphs.

"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."
"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."

"Sources of drinking 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."

Questions????

Q: *Is Fluoride present in the water*?
A: Yes, there are small, detectable amounts of naturally-occurring Fluoride in the water, and we do not add any. Although there is a very small amount of fluoride present in the water, we still recommend that brushing your teeth with toothpaste is the best way to fight cavities!

Q: What causes red or yellow water?
A: Red or yellow water is caused by minute amounts of iron from the water pipes. It does not affect the safety of the water, but makes the color of the product somewhat unappealing.

Contaminants in Source Water
(Continued page over)

Microbial Contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife. The Water Department conducted 48 microbial (coliform) tests during 2000, all of which turned out negative in detecting this form of contaminant.

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

substances in accordance with state and federal regulations.

Radioactive Contaminants, can be naturally-occurring or be the result of oil and gas production, and mining activities**.** The Town tests for these substances under state and federal regulations as well.

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.

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

The Town of Stockbridge has received monitoring waivers for the above two groups of contaminants, due to no detects found in previous monitoring. Because the water has been found by the Massachusetts Department of Environmental Protection to be protected from these contaminants, monitoring frequency has been reduced. The last samples were collected in 1993, and were found to be free of these contaminants.

Water Treatment Process for Stockbridge

Small particles and organisms such as sediment, algae and bacteria can cause water to take on unpleasant odors or tastes, and sometimes make it unhealthy to drink. To remove this material, it is necessary to chemically treat the water and then pass it through two types of filtering units-an adsorption clarifier and a mixed media filter bed.

The process begins with aluminum sulfate being added to the water at an established rate. This prompts the small particles to coagulate, or stick together and form particles of increasing size. The chemically treated water then flows into the adsorption clarifier, which is a chamber filled with buoyant adsorption media. As the turbulent water passes through this unit, the large particles adhere to the beads. This effectively removes up to 75% of all impurities. The cleaner water then flows onto a filter bed. The filters are comprised of layers of garnet sand, silica sand, and anthracite coal, which trap the remaining particles. Over time, filters start to clog and need to be cleaned using a high flow backwash process.

All chemicals used for coagulation are approved for water treatment by the American National Standards Institute and by the National Sanitation Foundation. Chemicals also have to meet performance standards established by the American Water Works Association.

The water is sampled and tested in accordance with state and federal requirements. We also do additional tests for operational data.

Water Disinfecting Techniques for Stockbridge

All reservoirs and some groundwater sources contain numerous microorganisms, some of which can cause people to become sick. To eliminate the disease-carrying organisms, it is necessary to disinfect the water.

Disinfecting does not sterilize the water; it removes harmful organisms. Sterilization is too costly and kills all microorganisms, even though most are not harmful. The town of Stockbridge Water Department uses sodium hypochlorite (known to most as ***Chlorine***) as its primary disinfectant. Chlorine destroys organisms by penetrating cell walls and reacting with enzymes. When combined with proper filtration, disinfecting with chlorine has been proven effective at ensuring that water is free of harmful organism and safe to drink.

The Lead and Copper Issue

Corrosiveness: In order to minimize the leaching of lead and copper in home plumbing systems, the pH, or corrosivity, is monitored and adjusted. Water provided by Stockbridge is basically lead free when it leaves the reservoir but household plumbing and some individual building service lines can contain lead that is susceptible to corrosion and leaching into tapwater.

Stockbridge water has a pH. Of 7.2 after treatment and disenfection, which is still a little corrosive. So we adjust our pH. With a chemical called sodium hydroxide. The chemical is fed into the water with a metering pump as it is pumped from the plant to our customers and storage.

In 2004 we collected a round of 10 samples in which all samples were well below the set limits. In passing this round of samples we are now on a reduced monitoring schedule with the DEP. The next round of samples will be taken in 2007

In the water quality portion of this report you will see the lead and copper results from the round of samples.

S.W.A.P.
Surface Water Assessment Program

In 2003 a SWAP report was done on our watershed area by the DEP. This was done to see how vulnerable our water supply is to contamination due to certain land uses within our recharge area. Our system was in the moderate risk bracket. Contaminants can range from buried fuel tanks, septic systems, roads etc. Due to the lengthy report, if any of our customers would like a copy, call us at the above phone number.

WATER SERVICE OWNERSHIP

In the event of a water customer's service breaking or needing to be replaced , the customer is responsible for their service from the house to the water main. The town is responsible for the water main only. When a service is

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replaced, the water dept. will assist the contractor the homeowner obtains to do the job. The water dept. will connect the new service to the water main and install a new shut-off and shut-off box at no charge.We urge our customers with old iron pipe services to have them replaced with copper tubing. It seems like they always break in the winter months. This drives up the cost of repair to the homeowner do to frost, safety issues with plowing, and the availability of blacktop if need be. Another step to consider is to have your plumber check the water pressure at the meter. High pressure (80 lbs. +) can cause water hammer and damage to fixtures.

DROUGHT MANAGEMENT

One of the challenges facing the Water Dept. is drought management. We have developed a contingency plan which utilizes the Stockbridge Bowl as an emergency source. Under the plan a modified propane pump would be placed at the stream at Interlaken Town Park on Averic Rd. This water would then be fed into the raw water pipe that feeds the treatment plant.

The water dept. has received preliminary approval from the Mass. D.E.P. subject to the Town taking acceptable water quality samples. Initial samples taken at the Interlaken Park stream indicated good water quality.

UPCOMING PROJECTS

We planned to install an 8"D.I. loop over Lauryl Lane to Park St. in the summer of 2005, but we ran into a problem finding out who owned the "right of way" we intended to put our pipe in. We now have a survey completed and will hopefully complete this project this summer or fall after some easements are obtained.

The water tank project at Marion Fathers has another $100,000.00 for construction. At the May 2006 Town meeting it was voted in making the total $450,000.00. The construction cost estimate for the tank, 12" main down Rt. 7 to Main St and 12" main down Main St to Church St is $1,016,000.00 Note that these estimates are from the 2002 construction season.

The new radio read water meters are being installed as planned. The Water Dept. employees have installed well over 100 meters already. With the new fiscal year approaching we can purchase more and continue the replacement program.

Our forester has completed our Forestry Management Plan for the watershed at the reservoir. This plan was required by DEP due to the logging program we have at the reservoir.

With a wet winter the loggers had a tough time finishing up a 50 acre cut at the reservoir. This cutting plan was extended 2 times due to the wet skid roads and our concern for water quality in the feeder streams to the reservoir. This cut was finally finished in late winter/early spring of 2006. Our forester will now mark another 40 – 50 acre piece to go out to bid on for this summer.

The Water Dept. with assistance from the Highway Dept. installed 400' of 8" ductile iron water main on Goodrich St. last summer due to an interference with the new sewer project. The old 6" cast iron main was installed in the 20's and it was time to retire it. We also had 400' of 8" HDPE drilled under the big culvert on Goodrich St.

MCL=

CROSS CONNECTION CONTROL PROGRAM

The Water Dept. has an extensive cross connection control program. (cccp) A cross connection is within the plumbing of a building where a potable source of water and a non potable source are inter-connected. For example; a home owner may have a well and town water. The water Dept. doesn't know if the home owners well is contaminated. If the well pressure tank is set higher than the town water pressure, the well water would enter the town's water system. Another type of cross connection can be with equipment such as fertilizing equipment, photo developing, fire sprinkler systems, dentist offices, wastewater plants, and the list goes on. The Water Dept tests approximately 100 devices annually. 2/3rd's of the devices are tested twice a year due to high hazard situations.

EXTRA-INFORMATION

In 2005 we had 8 water leaks and 3 service line replacements. We also have many new customers with the Pine Woods project. There are 26 new services in that one facility.

The water plant treated & pumped 75,331,717 gallons of water last year. There are 680 services connected to the water system. 132 fire hydrants, 17.25 miles of water main, 691 water meters.

WATER CHARACTERISTICS

pH	7.5-8. adjusted
Alkalinity	51 CaCO3
Chlorine Residual	.3-2.1 mg/l
Tot. Dis. Solids	75 mg/l
Color finished	0-1 pt. Units
Total hardness	60 mg/l
Turbidity	0.03-0.10 ntu

TURBIDITY- The cloudy appearance of water caused by the presence of suspended and colloidal matter, such as clay and silt particles. In the waterworks field, a turbidity measurement is used to indicate the clarity of water. The turbidity limit for our plant is equal to or less than 0.3 ntu 95% of the measurements taken each month, and may not exceed 1.0 ntu at any time.

The highest monthly average turbidity readings we had last year was a 0.06 ntu in the months of January & February.