

Town considers permanently adding chlorine to water

By Tyler B. Reed / Daily News Staff

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HOLLISTON -- The town is considering permanently adding chlorine to town water to prevent potentially harmful bacteria from reaching residents faucets in the future, interim Water Superintendent Ron Sharpin said last night.

The chlorine would provide an additional barrier for bacteria and possibly prevent a contamination incident like the one in recent weeks, which has forced residents to boil drinking water for 12 days now, Sharpin said.

"It appears that we're going to be going to some kind of" long-term chlorination plan, Sharpin told selectmen last night.

Several samples of raw, untreated water from town wells in the last week have tested positive for coliform bacteria, which disappeared after it was treated with chlorine. The town has used the disinfectant to kill off remaining bacteria in the system.

With tests continuing to come back positive for coliform in raw well water, "you begin to think you need some kind of barrier," Sharpin said after last night's Board of Selectmen meeting.

The Water Department believes the recent bacteria contamination was caused by heavy rains in October, which created floods near well 2. Officials are guessing that floodwaters could have inundated the nine septic systems within 400 feet of well 2, causing E. coli bacteria to get into the system. Samples taken from well 2 on Nov. 2 tested positive for E. coli.

Sharpin said having septic systems so close to the well could lead to future problems, even after the current bacteria problem subsides.

"It's not good to have septic systems in close proximity" to wells, he said. "You try to prevent that and if you can't then you monitor that and manage that."

One potential complication for plans to permanently chlorinate, Sharpin said, is the town's problem with iron and manganese. Chlorine, which is an oxidant, can cause iron and manganese to turn water into an ugly rusty color, which can stain laundry. Adding chlorine to wells that have high levels of those minerals could worsen the problem.

Chlorine is common in municipal water systems, Sharpin said, though "every town is different." Small, household water filters can take the chlorine out and improve the taste.

The Water Department has infused town water with chlorine for the last 12 days to kill bacteria that began to show up in routine test samples drawn Nov. 2. Coliform bacteria still remains in the system, though officials believe they are close to eradicating it.

Chlorine is common disinfectant in public water

By Tyler B. Reed / Daily News Staff

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HOLLISTON -- Officials have decided to permanently use chlorine to disinfect town water, a strategy employed by most of the state's water systems and one that likely would have prevented recent problems with bacteria contamination.

For almost two weeks, local water officials have used chlorine to kill coliform and E. coli bacteria they believe seeped into the system when October floods inundated septic systems near well 2.

Before that, town water did not contain the disinfectant except for water pumped through a treatment plant at well 4. That well has been shut down for close to two months since a painting incident there caused epoxy paint fumes to mix with well water.

In the month since the October deluge, which dumped close to a foot of rain in some spots across MetroWest, town water contained no chemicals to kill intrusive bacteria before it was pumped to residents' faucets.

"If we think maybe the beginning or the origin of the whole problem was at well 2," interim Water Superintendent Ron Sharpin said, "having chlorinated would have prevented this from happening."

Once operational, treatment plants at wells 4 and 6 will begin adding the chlorine, which is an oxidizing agent and kills dangerous microorganisms associated with coliform and E. coli.

"It will be done at (wells) 4 and 6 and in the future and essentially we'll be doing it at all the wells temporarily at least," said Sharpin, who has been on the job for eight days.

Most MetroWest communities disinfected tap water with chlorine or a substance called chloramine, which mixes ammonia with chlorine. Hopkinton, for instance, adds chlorine to most of its water, Department of Public Works Director J.T. Gaucher said. "We chlorinate our well water at two locations," he said.

The Massachusetts Water Resources Authority, which provides water to Marlborough, Northborough, Southborough and Framingham, uses ozone to disinfect water from the Quabbin and Wachusett reservoirs at a new treatment plant in Marlborough. The MWRA also adds chloramine to the water, which, along with plain chlorine, is the only way to have disinfectant flow throughout a distribution system.

"Our primary disinfectant is ozone," MWRA spokesman Ria Convery said. "Before this treatment plan came online, chlorine was our primary disinfectant."

The reason Holliston did not add chlorine in the past, Sharpin said, is because of problems with iron and manganese in some well water. When mixed with an oxidant like chlorine, those minerals pose greater problems, turning water a rusty color and staining laundry. The town also had never had problems with coliform bacteria in the past, so disinfectant was never seen as necessary.

"There was no reason to chlorinate, and, in fact, it would have made the water in some cases tainted" with iron and manganese, Sharpin said.

The new treatment plants will clean out iron and manganese and allow the town to add chlorine to further ensure drinking water is safe.

"We sort of look at water treatment as a series of barriers that protect the public," Sharpin said. One barrier is a treatment plant, another is disinfection.

Chlorine poses no health risk, as long as it is not used in large amounts, according to the U.S. Environmental Protection Agency.

"Chlorinating tap water is critical to protect the public from disease-causing microorganisms," according to information provided by an EPA spokesman. "Drinking water is chlorinated to kill bacteria and viruses that cause serious illnesses and death."

Adding chlorine can affect the taste of water, "there's no doubt about that," spokesman Dale Kemery said.

"There are tradeoffs for odor and color of water," Town Administrator Paul LeBeau said. But "we would potentially prevent any future occurrences" of bacteria contamination.