

# Water district: monochloramines safe, effective

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YORK -- York Water District Superintendent Don Neumann said he wants the residents of York to know that the monochloramines disinfectant that the district has used for 36 years has been proven safe and effective in reducing bacteria in the town's drinking water.

Neumann was speaking days after a public session in Kittery attended by more than 200 residents, many of whom expressed concern about Kittery Water District plans to add monochloramines to Kittery water.

Citizens there have raised a litany of concerns about chloramines, saying that there have been numerous health and other issues related to their use. The Kittery Water District needs to switch its disinfectant agent to monochloramines in order for the water to be compatible with both the York and the Kennebunk, Kennebunkport and Wells Water Districts.

Kittery intends to use water from YWD and KKWWD during two phases of its planned water treatment plant renovation -- a key part in a planned interconnectivity arrangement between the three districts that has been in the planning since 2002. This change will benefit all three utilities, said Neumann, in the event of an emergency such as drought, algae bloom or lightning strike. But in order for that to happen, both the disinfectant and the separate corrosion control chemicals need to be compatible.

Neumann said while he appreciates the right of all citizens to raise concerns, he said in this particular case, he believes there is a "disconnect" between concerns and reality when it comes to the use of monochloramines in the treatment of

surface water supplies like Chases Pond for YWD, and Boulter Pond, Foley Pond, Middle Pond and Belle Marsh Reservoir, all in York, for KWD.

There are several issues, he said, that he believes might be helpful in discussing monochloramines:

- \* Chloramines are formed from chlorine and ammonia. The only other disinfectant that is approved for use in water utilities is free chlorine alone, Neumann said. One or the other must be used in order for water to meet state and federal clean drinking water standards.

- \* Three separate compounds comprise chloramines in general: monochloramines, which is what YWD and KKWWD use, dichloramines and trichloramines. Ryan Lynch, YWD treatment plant manager, said YWD and KKWWD test regularly to ensure that monochloramines do not morph into the di and tri variety, which is when the water can take on a smell and a burning of eyes.

- \* Of key importance to this discussion, said Lynch and Neumann, monochloramines are the preferred disinfectant for surface water supplies, which has naturally occurring organic matter like leaf mold. The combination of chlorine and ammonia works to reduce “disinfectant byproducts” more than chlorine alone. The two primary byproducts are trihalomethanes, which studies have shown to be linked to certain cancers and health conditions, and haloacetic acids, which studies have shown could be carcinogenic at high levels.

If free chlorine alone is used, said Lynch, “these byproducts continue to climb. There are more known byproducts with free chlorine than with chloramines. The ammonia molecule adds something different,” he said. As with the use of either disinfectant, careful monitoring is necessary, he said.

- \* Water disinfectants have to be compatible. Kittery could not use free chlorine, and mix its water with the other two districts. “The two types of disinfectants do not play well together over a long period of time. Chlorine and monochloramine degrade each other, so you could have bacteria in the system over time, and that’s a health issue. Chemicals should be standardized,” Lynch said.

- \* Kittery residents point to the fact that chloramines must be removed from water used for aquatic life such as fish, and for kidney dialysis. Moreover, it may affect beer and bread making yeast. However, said Neumann, the same is true of chlorine. He said he or one of his staff has spoken with Stonewall Kitchen, When Pigs Fly baking company, Wiggly Bridge Distillery and SoMe Brewing in York, and none have expressed concerns with the water.

Neumann said he's worked for the water district for nearly 40 years; he said over that during that time, the district has only received a handful of complaints annually.

Norm Labbe of the Kennebunk, Kennebunkport and Wells Water District said at some point, science could create a new disinfectant that works better than either chlorine or chloramines.

“The facts are that with the known, proven science we have, chloramines do what you really need in your water system. With the science we have today, this is the better quality water you can produce,” he said of water with chloramines. “Who knows what will happen in the future? But for now, this is what we have.”

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