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**FOR IMMEDIATE RELEASE**

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## **TREATED WATER STILL SAFE WITHOUT UV DISINFECTION SYSTEM**

*Flow gate malfunction leads to required notification for those who share the river*

**MUSCATINE, Iowa** – The ultra violet (UV) disinfection system used by the City of Muscatine Water Pollution Control Plant (WPCP) is the final step in the wastewater treatment process before that water is released into the Mississippi River. The UV system is used to remove as much of the remaining bacteria from the water as possible by passing the water through a series of UV lights.

“We share the Mississippi River with people downstream and when we have a situation that is outside of our permit, we are required by the Iowa Department of Natural Resources to issue the notification,” Jon Koch, WPCP director, said. “It isn’t that the water being discharged is unsafe, but it is a requirement of our permit and it makes good sense to keep people informed.”

Before sending the water to the Mississippi River, WPCP uses a UV disinfection method. After final clarification, the water passes through the UV array where 254 nanometer wavelengths of UV attack the vital DNA of bacteria left in the water, making bacterial reproduction impossible.

The flow of treated water through the UV bulbs is regulated by a gate that keeps the water from completely submersing the bulbs. If the gate does not function then the UV system can fail and the bulbs damaged. There are 160 UV bulbs in the system and each one costs \$100.

The pretreatment process eliminates 98 percent of the impurities by the time the water reaches the UV system.



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“When the UV system is working, it disinfects 99.8 percent of the E.coli, an indicator microorganism used to look for the potential of other harmful bacteria from human and warm blooded animals,” Patti Fuller-Bloechl, WPCP chemist and lab supervisor, said. “E.coli lives in the digestive tracts of humans and warm blooded animals.”

It is important to note that the water, even before running through the UV system, is at acceptable levels for discharge into the Mississippi River.

The Mississippi River typically has E.coli in it from storm water runoff, poor functioning septic systems, and communities that do not have disinfection at their sewage treatment plants.

The required notification is an advisory to those downstream of the discharge point that an incident outside the parameters of the permit occurred. It includes an advisory that individuals should avoid full-body contact with the Mississippi River since the health hazards may make individuals sick if river water is swallowed while swimming, jet skiing, or water skiing.

If you do ingest some water anytime you are swimming in the Mississippi River the best advice is to contact your primary care physician with any questions about preventative care.

The UV disinfection system was installed at the WPCP in 2010 and became operational in June 2011 as part of an \$18 million plant expansion. Prior to 2011, the WPCP did not disinfect the wastewater and was not required to do so by the state. The 1980s was the last time that the City of Muscatine used chlorine to disinfect treated wastewater.

“That had its own problems including having to use chlorine gas to disinfect the water and then having to run the water through another process to remove the chlorine before it could be discharged into the river,” Koch said.



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This is just the second time since the installation of the UV disinfectant system that the system has been down as the same part that broke down earlier this week broke down in 2012 after being struck by lightning. No problems were reported following that incident.

A notice to the public will be issued when the gate is repaired and the system is back online.

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