North Harris County Regional Water Authority

UPDATE ON WATER TASTE AND ODOR ISSUES...

Some customers have reported taste and odor issues with the water being delivered by the North Harris County Regional Water Authority. This water, purchased from the City of Houston, is withdrawn from Lake Houston and is treated at the City's Northeast Water Purification Plant before being delivered to the Authority. Our operator has been deliberately managing our system - reducing the amount of water taken from the City and supplementing supply by using our wells. The water being delivered is perfectly safe to drink.

The taste and odor issues were the result of naturally-occurring compounds sometimes produced by seasonal algae blooms. We sent an e-mail to all our customers' operators explaining the situation and we have continued communicating with the City while monitoring developments. At our request, the City has provided information detailing the situation and explaining what steps are being taken to help alleviate taste and odor issues. Their response - in Q&A format - follows: COH Taste and Odor Q&A PDF

We appreciate your patience in this matter. The Authority will continue to communicate and work with the City to help minimize the extent of the problem.

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City of Houston
Department of Public Works and Engineering
Public Utilities Division – Drinking Water Operations

The Questions & Answers below is provided in reference to recent changes detected in Lake Houston.

What is in the water that has caused the recent change in taste or odor?

We have detected increased levels of geosmin and MIB in our untreated surface water in Lake Houston and these substances are known to produce earthy or musty taste or odor in drinking water. Geosmin and MIB (2-methyl isoborneol) are naturally-occurring compounds sometimes produced by seasonal algae blooms. The substances are detectable by the human nose even at very low concentrations. This is similar to the taste and odor event Houston experienced in June. However, it is different than the event that recently occurred in Ohio. The water is safe to drink.

According to the Water Research Foundation, "There are hundreds of types of algae, but only a few produce chemicals that make water taste or smell unpleasant. When algae die, they release compounds. Two of the more troublesome by-products are MIB and geosmin. Both produce an earthy/musty taste. MIB mimics the smell of fresh dirt; geosmin is the compound that gives beets an earthy odor. Neither is harmful to people." (AWWA Water Research Foundation, 2006)

What is the City of Houston doing to remedy the issue?

Since MIB and geosmin are naturally-occurring, they will naturally diminish in the upstream water supply with time and weather changes.

How are you monitoring the situation?

We are taking additional water samples to better understand and track the levels of these substances, as well as maintaining our standard program of sampling and testing to assure that our drinking water is safe. We are monitoring Lake Houston and there have been no observed nor reported fish and/or waterfowl "kills" which are indicators of a toxic algae bloom. Furthermore, there is no history of algal toxins in our water supply.

What if it does not naturally clear from the system?

Conventional water treatment is ineffective for removal of geosmin and MIB. Treatments such as powdered activated carbon (PAC), ozonation and biofiltration have been effective for removal of these compounds. The City of Houston system does have a PAC system at the water plant treating Lake Houston water but it has not been effective at fully mitigating this event. We are reviewing the potential use of portable and temporary systems should this become necessary.

What can I do at home?

According to the Water Research Foundation, water is safe to drink when MIB and geosmin are present, but it may be unappealing when there are taste and odor problems. You can improve the taste and odor by refrigerating a pitcher of tap water. Additionally, standard home water filtration systems that contain carbon should mitigate the taste and odor of these substances.