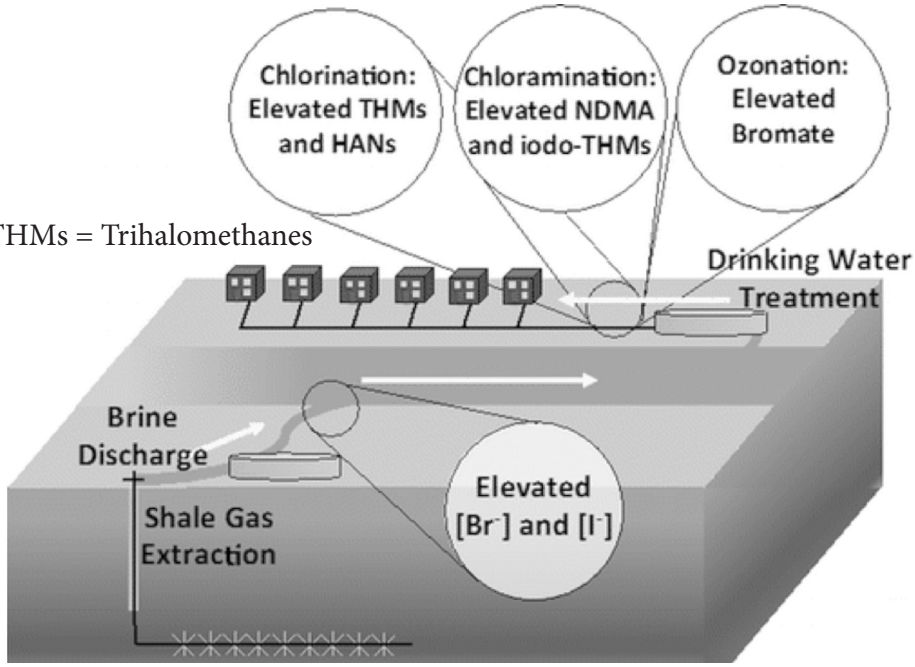
"During the Second Quarter of 2013 time period, we did not monitor for the following contaminants and therefore cannot be sure of the quality of our drinking water during that time: TOTAL TRIHALOMETHANES (TTHM), HALOACETIC ACIDS, FIVE (HAA5)."–from Drinking Water Notice, Youngstown PWS- Feb.28, 2014

"Drinking Water Notice, Youngstown City PWS Has Levels of TTHM above Drinking Water Standards" notice sent to customers September 16, 2015. This is of grave concern to all Youngstown citizens since there are 4 FRACK WELLS OPERATING IN THE "PROTECTED"WATERSHED OF THE MEANDER RESERVOIR, YOUNGSTOWN'S DRINKING WATER SOURCE!

Enhanced Formation of Disinfection Byproducts in Shale Gas Wastewater-Impacted Drinking Water Supplies

The disposal and leaks of hydraulic fracturing wastewater (HFW) to the environment pose human health risks. Since HFW is typically characterized by elevated salinity, concerns have been raised whether the high bromide and iodide in HFW may promote the formation of disinfection byproducts (DBPs) and alter their speciation to more toxic brominated and iodinated analogues. This study evaluated the minimum volume percentage of two Marcellus Shale and one Fayetteville Shale HFWs diluted by fresh water collected from the Ohio and Allegheny Rivers that would generate and/or alter the formation and speciation of DBPs following chlorination, chloramination, and ozonation treatments of the blended solutions. During chlorination, dilutions as low as 0.01% HFW altered the speciation toward formation of brominated and iodinated trihalomethanes (THMs) and brominated haloacetonitriles (HANs), and dilutions as low as 0.03% increased the overall formation of both compound classes. The increase in bromide concentration associated with 0.01–0.03% contribution of Marcellus HFW (a range of 70–200 μg/L for HFW with bromide = 600 mg/L) mimics the increased bromide levels observed in western Pennsylvanian surface waters following the Marcellus Shale gas production boom. Chloramination reduced HAN and regulated THM formation; however, iodinated trihalomethane formation was observed at lower pH. For municipal wastewater-impacted river water, the presence of 0.1% HFW increased the formation of N-nitrosodimethylamine (NDMA) during chloramination, particularly for the high iodide (54 ppm) Fayetteville Shale HFW. Finally, ozonation of 0.01–0.03% HFW-impacted river water resulted in significant increases in bromate formation. The results suggest that total elimination of HFW discharge and/or installation of halide-specific removal techniques in centralized brine treatment facilities may be a better strategy to mitigate impacts on downstream drinking water treatment plants than altering disinfection strategies. The potential formation of multiple DBPs in drinking water utilities in areas of shale gas development requires comprehensive monitoring plans beyond the common regulated DBPs.



THMs = Trihalomethanes

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VOTE YES ON THE YOUNGSTOWN COMMUNITY BILL OF RIGHTS November 3
Shut down the frack wells PROTECT MEANDER , PROTECT OUR DRINKING WATER