

Public Comments on the proposed Consent Judgement with
Gelman Sciences

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I am writing to share some thoughts on the information provided to the public on the recent proposed consent judgement with Gelman Sciences. There is likely more science associated with some of these recommendations, but I have yet to see it.

My main area of concern is the proposed discharge of 200 gpm of extracted and treated groundwater into First Sister Lake, which is my neighborhood. I live on top of the plume.

I spent 17 years with the city of Ann Arbor and am fairly familiar with the history of the site and “cleanup” strategies proposed by the polluter and approved by the state.

- 1) Gelman has used a UV system to treat to lower levels of dioxane – the proposed treatment system using ozone is just cheaper for Gelman and a less effective remedy especially with a new 7 ppb limit
- 2) The proposed discharge of contaminated water treated with ozone/hydrogen peroxide system adds more of the probable carcinogen 1,4 Dioxane to the Honey Creek system that discharges upstream of the city water intake
- 3) The proposed discharge of contaminated water treated with ozone/hydrogen peroxide system adds more of the known carcinogen bromate to the Honey Creek system that discharges upstream of the city water intake
- 4) The proposed discharge is into one of two natural lakes in the city with no science to understand the current health of the lake, a baseline, and ongoing monitoring to demonstrate whether the discharge is a problem for lake ecology
 - a) I don't see any science suggesting that adding additional water to the first sister lake will improve the lake ecology although it might if done correctly.
 - b) At a minimum, modeling should occur to explore what the current health of the lake is and how the additional water will improve the ecosystem. If it's not improving the ecosystem, it should not be occurring.
- 5) My math estimates that 5 inches of water per day forever will be placed on top of the existing lake. That's the equivalent of a 100-year storm every day forever. (NOAA Atlas 14 – 5.17 inches in 24 hours)
 - a) I don't see any science suggesting that this has been modelled and that the lake hydrology and conveyance can handle this amount of new water. I don't see any science showing how 200 gpm will be accommodated by the current hydrology of first sister lake – the conveyance under Wagner and the tributary to honey creek.
 - b) There is also no contingency in the consent judgment for what happens when heavy rains overwhelm the system and we get flooding on Parklake.



- 6) The consent judgment shows no mechanism to judge whether the health of the ecosystem is being impaired, or the hydrology is being overwhelmed.
- 7) Typical for this site, there is no contingency plan for when this becomes a cluster.
- 8) I believe that more groundwater should be extracted from areas close to the source and the Parklake extraction site fits that description, however...
 - a) I don't see any science demonstrating that there is an amount that should be extracted from the Parklake site that would make an appreciable difference on future outcomes
 - i) My hypothesis is that 200 gpm was chosen because it is easy - Gelman has a mobile ozone/hydrogen peroxide unit that can treat up to that amount.
- 9) Gelman should be required to place all treated discharge water downstream of the city drinking water source.
 - a) Climate change is bringing more intense precipitation – we are already seeing more flooding and strain on the Sister lake and Honey creek hydrology. Climate change is also bringing longer periods of drought and low flow conditions that will increase the concentration of 1,4 dioxane and bromate upstream of the city drinking water intake. A pipe has previously been proposed along M-14 to the Huron to take all treated water to the Huron downstream of the intake.
- 10) If this is a consent judgment that is approved
 - a) The city, county water resources commissioner, and HRWC must commit to modeling the lake hydrology to demonstrate very minimal flood risk to the neighborhood with the addition of this water
 - b) The city, county water resources commissioner, and HRWC must monitor the lake ecosystem to develop a baseline and monitor progress over time
 - i) monitoring should be monthly to start and can be less frequent after a sufficient period showing no detrimental effects. The city water lab can do many of the analytical parameters
 - c) This should be supported by a council resolution requiring a recurring line item in the city budget from the stormwater and water enterprise funds to monitor this system for its life and build a legal fund to go back to court when some part of this fails.

	gpm	gpd	ft3/day		ft2	ft	Inches
First Sister Lake proposed discharge	200	288000	38503			0.42	5.05
First Sister Lake area (approx)					91543		