

I've lived in Granville for 9 years and several years ago met John Mayo and saw that he was expressing concerns about the structure and functioning of SGWASA.

My first direct experience with SGWASA were the notices my wife and I received from SGWASA and required by the EPA relative to not being in compliance with controlling the contaminants called disinfectant byproducts. Having two graduate degrees in the sciences and hence curiosity about the chemistry, I studied them further and read they were associated with a number of health problems ranging from bladder cancer to reproductive and developmental health effects such as spontaneous abortion, stillbirth, neural tube defects, pre-term delivery, intrauterine growth retardation, and low birth weight.

Here is a statement from a 2017 science paper. "The disinfection of drinking water has been a major public health achievement. However, haloacetic acids (HAAs), generated as disinfectant byproducts of water disinfection, are cytotoxic, genotoxic, mutagenic, carcinogenic, and teratogenic." Cytotoxic means toxic to your cells (cells die or stop growing, etc.); Genotoxic means toxic to your DNA, the genetic material. This means the DNA is destroyed or made inactive (genotoxicity is often confused with mutagenicity, all mutagens are genotoxic, whereas not all genotoxic substances are mutagenic.); Mutagenic means the capacity to change your genetic material, DNA, and thus increase the frequency of mutations above the natural background level; Carcinogenic means the capacity to cause cancer in your body and Teratogenic means the capacity to cause birth defects in humans and other mammals.

I not trying to scare people, I'm trained scientifically and that's how I interpret the world so I try not to exaggerate but it is always a good idea to take these science reports seriously. The EPA reviews these studies regularly as it did recently for DBPs. These reported health issues always need more study and scientists debate the studies as they should and do more research.

But there are enough animal studies, mammal cell studies and some human population studies that indicate we need to constantly be aware of the balance of assessing these kinds of risks with the benefits. And that idea of risks versus benefits is called the science of risk assessment and people need to have this explained to them and that explaining needs to be done by their government, schools, the state water department and even SGWASA. We have bad communication there. More knowledge brings more understanding.

This may be a growing problem because there are over 600 different DBP molecules and some of them in your SGWASA water have no safe level. So it comes down to how much is in your water and how long have you been drinking the water. And you can answer one of those questions and other people should help you answer the other one.

There are quite a few substances other than DBPs in your water which have maximum contaminant levels that SGWASA must try to remove and there may always be new ones added to the list. You need confidence in SGWASA and it just isn't there for many of us.

And why is that confidence missing? We have many factors, such as the very regular contaminant violations, old WWII plants, the large debt of 54 million, the recent engineer report showing a deteriorated water plant infrastructure with very few modern tools for measuring

proper water quality, and poor communication with the public. I checked with the UNC School of Government recently and the SGASA fees are in the highest 10% of all NC Community water providers. And for the last 13 years there have been few advances in bringing the water plant into the 21<sup>st</sup> Century.

Regarding the infrastructure of the water plant here are some Quotes from the engineering report:

“The SGWASA WTP was constructed in the 1940’s and operated by the State of North Carolina until formation of SGWASA in 2006. The WTP is an aging facility (nearly 80 years old) and is in need of rehabilitation and upgrades to ensure sustainable and reliable performance. Whereas assessing the condition of the entire WTP is not within the scope of this project, it is recommended that SGWASA develop a master plan to determine needed improvements to enhance condition and improve treatment facilities to current industry standards. Many systems at this facility appear to have reached the end of their service life and in need of replacement or major rehabilitation.”

“The WTP lacks process monitoring and control systems that meet current industry standards. WTP operations staff operate the facility in a completely manual mode. This presents several challenges for operating the treatment process optimally to maintain high level of water quality and ensure compliance with all regulatory standards, particularly with a conventional treatment process.”

“Over the last year, the DBP levels in the WTP have been very high, exceeding the MCL within the treatment process. HAA5 levels in the filter effluent have been extremely high”

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All of this suggests we have an emergency on our hands and the situation calls for some radical changes. Mr. Mayo suggested some that sound reasonable to me.

A new administrative structure with experts in management, engineering and perhaps chemistry. Not a board of lay persons, who may be some of the finest people on earth but not what we need. Let’s be realistic. Does what I have stated sound like we can drift along and things will fix themselves as we had hoped for the last 13 years or more?

No, this emergency requires a few very specialized people at the administrative level and of course dedicated workers below them to bring this company into the 21<sup>st</sup> century and give the people of our community confidence in their water quality.