- **Can you give me some brief background on the drinking water situation at MES? When did this begin, how was it discovered, and how long has it been ongoing?**

Apologies in advance as I am neither a water expert nor a chemist, but hopefully I am mostly accurate here. Also please note short simple answers do not properly address the issues.

MES is served by a single 1000' deep well with a pump located 450 feet below the surface. The water is naturally high in iron and manganese which are essential nutrients, which although it may have limited health impacts, if any, its presence in water does cause unsightly color. For about 15 years, plus or minus, a filtration and treatment system has been run by an outside operator. The key to the treatment system to remove iron and manganese is a greensand filtration system. That system depends on addition of a chemical such as chlorine or permanganate to make the greensand filter media effective in its removal of iron and manganese. The system at MES uses chlorine.

If too much chlorine for the iron/manganese conditions is injected into the system what is called Disinfection Byproducts (DBPs) may result. About 8 years ago MassDEP started requiring periodic testing of DBPs. They are subject to MassDEP Maximum Contaminant Levels (MCLs) of 60 Parts Per BILLION for the type known as haloacetic acids based on a running annual average of test results.

Please also note although the reference in DBP includes Disinfection – at MES Chlorine is not used as a disinfectant – ultraviolet light is.

In the nearly 8 years DBPs have been tested at MES, there have been only four samples taken that basically caused the 8 quarters of violations. The first was in February 2016, then in fall 2018, another in fall 2021, and most recently in the spring of 2023 when the greensand media was replaced and high levels of chlorine were used to activate the new greensand media.

Please note that other undesired or unhealthy contaminants in drinking water are absent in MES water, with no water quality violations in at least the past 10 years, including lead, copper, VOCs, radiological contaminants, toxins, heavy metals, pesticides – the list of contaminants that is absent from MES water is reassuringly long.

The water currently tests below MassDEP PFAS ("forever chemicals") MCL levels but the MCL level (currently 20 parts per TRILLION) is expected to be reduced closer to 4 PPT. Accordingly, the Town is and will continue to be evaluating solutions that may be needed to meet the yet to be established but much more restrictive future criteria. Solutions can include supplemental activated carbon filtration or other systems added to the existing operating setup or possibly connecting to a neighboring water supply.

I refer you to this analysis prepared by the Town's water consultant, which includes important details on the water test results and water quality, on the Town's web site:

https://www.millvillema.org/sites/g/files/vyhlif906/f/uploads/mes_drinking_water_health_perspective_with_executive_summary.pdf

- **Just so readers can better understand, what does it mean when drinking water does not pass the standard for "disinfection by-products?" Is it safe or unsafe to drink currently?**

As described in the above referenced analysis that quotes MassDEP on health effects (starting on bottom of page 7), the presence of DBPs is only considered a potential health hazard with long term use (according to MassDEP one would have to essentially drink 8 glasses a day for 70 years to have an unhealthful exposure based on correlation to laboratory animal tests) but they include cautionary language for expectant mothers and women of childbearing age due to potential increased risks. The actual episodes at MES were very short lived.

- Are students able to use the school right now? What steps are being taken to remediate this issue, and do you expect it to be resolved by the start of the upcoming school year?

Yes, the students are able to use the school safely and the water supply safely, and have been able to for years. MassDEP recently started requiring bottled water but that is not under any official action order or mandate (something they have authority to do at any time). But as they have stated previously: "Overall the water is safe to drink". That said, MES water has not been used for drinking for many years, just for limited food preparation, hand washing, and toilet flushing.

Most importantly, MassDEP does not require closing the school as can be seen in the email referenced here:

https://www.millvillema.org/sites/g/files/vyhlif906/f/uploads/email_from_mass_dep.pdf

Simply put, the water operator merely needs to properly manage chlorine levels according to iron and manganese content to avoid additional testing that exceeds MassDEP MCLs for DBPs. Our new operations team operator is confident this should be easily manageable so that MassDEP regulatory requirements will consistently be met.

- **I understand there may have been a delay in submitting a permit application for a treatment system modification, can you clarify for me what caused the delay and how the town is proceeding forward?**

There was a plan in place to switch the chemical used for the greensand filters from chlorine to permanganate in order to eliminate chlorinated DBPs altogether, which would require a permit application submitted to MassDEP by the Town's former Operator/Engineer. For assorted reasons, and assertion of conditions by the prior operator which were unacceptable to the Town, the relationship of the parties recently ended.

The Town is currently in the process of putting a new operating and engineering team in place, one that is already continuing the water operations more effectively, efficiently, and safely. At this point the switch to permanganate from chlorine is not believed to be necessary.

- **Is there anything else you'd like readers to know?**

Receiving a MassDEP notice for MCL exceedance of DBPs or noncompliance by the prior operator with the manganese and iron treatment requirements or for missing collection of a required sample can certainly seem alarming. No one wants such notices to have to be sent out to parents, school staff, or others, no matter for what reason. And seeing an image of brown water at a school meeting in July can

be frightening to parents – even though that water was a result of a failed pump part that was quickly replaced last winter and the discoloration period was brief (that failed part event was one of the few, if not the only time, in my 4+ years involved in Millville and MES water that I was aware of any water discoloration). But as MassDEP leadership has cautioned, fearmongering is irresponsible.

I will not get into any decisions school leadership may have made or may make on use of facilities – that is their prerogative. Sections III (D) and (E) of the Regional Agreement among the District, Millville, and Blackstone are very specific on the authority, process, and conditions for grade configurations and student assignments among the District facilities as found here:

https://www.millvillema.org/sites/g/files/vyhlif906/f/uploads/bmr_regional_agreement_executed.pdf

That said I am all for consolidating facilities since with approximately 40% excess or unused capacity in each of the 5 school buildings (which was a significant benefit during Covid when BMR did an outstanding job of maintaining in person education), and a declining enrollment, a consolidation of facilities may be in the best interests of the taxpayers - and students.

Overall, I would just refer folks to the Town's web site where plenty of good information is available and factually correct about the water quality at the school, and I would caution them from making poorly informed decisions or opinions based on misinformation or unnecessarily alarming false narratives. There is no emergency and there is no acute health risk. Nobody wants nor is putting the students' or staff's health at risk.

Our new Certified Operator will be giving a presentation on the school's water quality and taking all questions at the Monday August 14th meeting of the Millville Board of Selectmen, which is held in the Town Hall at 7:00 p.m.