

Lysander Data Center Advisory Committee Meeting

August 21st 2026

Waste Water Concerns

Water Concerns from the spreadsheet

- Water overall priority: 2.5
 - Water Pollution (including PFAs) 2.5
 - Water Usage 2.7
 - Residential Water Pressure 2.1
 - Ground Water Levels 1.8
 - Who pays for Infrastructure upgrades? 3.0
 - Waste Water Handling and treatment 3.0
 - An additional item was suggested last week to discuss stormwater runoff



Background:

- The previously approved warehouse required water and sewer lines to be built out to the site
- The planning board typically requires developers to pay for any required infrastructure additions
- The town does not have its own municipal water system
- The town's waste water treatment is handled by the county
- Existing town code covers storm water and runoff



Town vs County Water Responsibilities

- County provides municipal water (OCWA)
- County provides waste water management (WEP)
- Town can mandate connection to municipal water supplies
- Town can regulate the use of wells including limits on large-scale water withdrawals
- During droughts towns can mandate limits on outdoor water use, including withdrawals from wells



Waste Water Concerns

Waste Water

- Ideal Case: They use a true closed loop system and there is no waste water
- **Reality:** Closed loop systems drastically reduce the total volume of water consumed, but most systems need to be periodically flushed and occasionally drained for maintenance
- We'll address leaks as part of the pollution discussion
- Open Loop is worse, but we already recommended against that



Waste Water Concerns

- Volume of waste water – depends on the cooling system
- Toxicity of the coolants used, often ethylene glycol based
- PFA's (forever chemicals)
 - In Data Centers they are found some of the immersion liquids, in the fluorinated gas used in some chillers, and in the chemicals used by some fire suppression systems
 - For today's discussion we'll focus on the coolants
- Anti-Corrosion Chemicals – Nitrites
- Biocides
- Heavy Metals leached from the equipment
- PH – How Acidic or Basic the waste water is
- Heat



Waste Water Concerns – Cont.

- Open Loop Specific Concerns (again, we recommended against this)
 - Much larger volume of waste water
 - Biocides
 - Anti-corrosion chemicals
 - Dense Mineral Content from constant evaporation
 - And all of the previous page's concerns due to the internal (server room) cooling loop chemicals



Waste Water Mitigation and Handling Options

- Choose the least toxic coolant possible
 - Biodegradable and non-toxic options exist for some cooling systems, but may not be as efficient or cost effective as other coolants
- Proper Disposal of used Chemical Coolants (not to the waste water system)
- On-Site Treatment
- Discharge to WEP for treatment
- Robust Monitoring and Reporting



Waste Water Monitoring

Waste Water Monitoring and Dashboard Reporting

- WEP and the DEC already require testing and monitoring, so this is more of a transparency requirement
- This requirement would apply to all industrial users
 - We can probably make the requirement volume or content dependent, i.e. Industrial users who discharge more than XXX gallons of wastewater in any given week, OR Industrial users whose wastewater discharge exceeds YYY level of PFAs, etc...
- I expect that we'll expand the dashboard when discussing other areas of concern



What to monitor - Wastewater

- Flow Rate and Total Volume
- Temperature
- PH
- Water Hardness
- Total Suspended Solids
- Conductivity
- Nutrient Levels
- Total Organic Carbon
- Biocide Levels
- Dissolved Oxygen
- COD and BOD (Chemical and BioChemical Oxygen Demand)
- Chlorides and Salts
- Heavy Metals
- PFAs



What to monitor – Wastewater

- Flow Rate and Total Volume
- Temperature – affects oxygen levels, can harm aquatic life and treatment processes
- PH – causes corrosion, can harm aquatic life and treatment processes
- Water Hardness – causes scaling in pipes, hampers sludge breakdown, can harm aquatic life
- Total Suspended Solids TSS – causes turbidity, blocks sunlight in water, transports toxins, clogs filters, harms aquatic life
- Conductivity – this is an easily measured proxy for TSS
- Nutrient Levels (nitrogen and phosphorous) – causes algal blooms, impacts downstream drinking water sources
- Total Organic Carbon TOC (glycol and organic biocides) toxic, depletes oxygen in waterways, interferes with treatment processes



What to monitor – Wastewater

- Biocide Levels -impacts treatment processes, toxic to aquatic life, fosters bacteria antibiotic resistance
- Dissolved Oxygen – low oxygen impacts treatment processes and kills aquatic life
- COD and BOD (Chemical and BioChemical Oxygen Demand) – measures oxygen depletion potential, same impacts as low oxygen above
- Chlorides and Salts – standard municipal treatment cannot remove dissolved salts, human and wildlife health impacts
- Heavy Metals – toxic and persistent in the environment, accumulates up the food chain, destroys habitats
- PFAs – emerging pollutant, treatment does not eliminate them, impacts downstream drinking water sources



Why require a Dashboard?

- Transparency
- Monitor trends on real time and periodic data
 - Allows the operator to react before problems occur
- Send alerts based on predetermined parameters
 - Ensures problems are identified and addressed as soon as possible
- Data Required for a dashboard is also available for reporting
 - Makes regulatory reporting easier for the operator

I expect we'll want more on a dashboard as we address the other identified concerns



Next Steps

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- Continue today's discussion on waste water
- Begin talking about storm water concerns and recommendations
 - What did we miss?
 - What needs clarification?



Thank You