

Hooksett Sewer Commission
December 17, 2018
Minutes

INITIAL	COMMENTS
FRK	

This meeting was called to order at 12:00pm. Present were Chairman Sidney Baines, Commissioner Frank Kotowski, Commissioner Richard Bairam, Superintendent Bruce Kudrick, Town Councilman Don Winterton, Guy Beloin and Kim Langlois.

Approve and Sign Manifest

Approve and sign minutes from December 3, 2018. Commissioner Richard Bairam made motion to accept the December 3, 2018 minutes as read. Commissioner Frank Kotowski seconded, all in favor. The motion was carried unanimously.

Read Correspondence

Financial Report: Guy came in to give a brief overview of the Sewer Commission accounts and to discuss the Route 3A project costs. Commissioner Kotowski made motion to transfer \$377,928.08 from the Trust account into the Sewer checking account to cover the remaining cost of the river crossing . Commissioner Bairam seconded, all in favor. The motion was carried unanimously.

Scheduled Appointments: None

Superintendents Report:

Maurais Project: Bruce was contacted last Tuesday, December 11, 2018 and asked to review the plans for the Maurais project. Bruce made notes and gave them to Bruce Thomas the Town Engineer and Nicholas Williams the Town Planner.

Brewery: Bruce addressed an article that was in the Concord Monitor regarding a possible Brewery coming to Hooksett. He passed out an informational packet on Breweries and their impact on the environment (Packet attached).

Pump Station: Bruce and the Commissioners talked more about possible plans for the pump station that is being designed for 3A. One thought was to dig deeper and do a gravity fed line which would alleviate the need for more pump stations for the sewer line.

Old Business: None

New Business: The office will be closed December 25, 2018 in observance of Christmas and January 1, 2019 in observance of New Years.

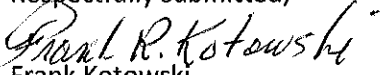
The next commissioners meeting is January 7, 2019

Non Public Session: None

Public Input: None

Adjournment: Commissioner Frank Kotowski made motion to adjourn at 1:28pm. Commissioner Richard Bairam seconded, all in favor. The motion was carried unanimously.

Respectfully submitted,


Frank Kotowski

Clerk

ENVIRONMENTAL Fact Sheet



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2018

WD-WEB-28

Effects of Breweries, Distilleries and Wineries on a Publicly Owned Treatment Works

While recent growth in the craft beer, spirits and wine industry has provided economic benefits for local communities, this increased activity has the potential to negatively impact the community's Publicly Owned Treatment Works (POTW). POTWs are typically owned by local government agencies, such as municipalities, and are usually designed to treat domestic wastewater, not industrial wastewater. Domestic wastewater consists of used water from houses and apartments, and has known typical biological and hydraulic characteristics. Industrial wastewater has different biological and hydraulic characteristics depending on the type of manufacturing or chemical processes being performed.

Every POTW is carefully designed to receive and treat incoming wastewater, based on the well-established characteristics of domestic wastewater and perhaps characteristics particular to industries located within a municipality. The wastewater generated from breweries, distilleries and wineries has its own unique characteristics, such as high-strength Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS), as well as hydraulic characteristics such as slug loads. These characteristics and their impacts are further described below.

Negative Impacts of Brewery and Distillery Waste on POTWs

Upsets to the normal biological treatment processes at a POTW can result in effluent discharge limit violations of the POTW's National Pollutant Discharge Elimination System (NPDES) permit as well as possible fines for discharge permit violations. It can also include loss of a disproportionate amount of biological treatment capacity, resulting in an increase in process upsets and operational costs. Operational costs include labor, chemical usage, energy usage, and sludge production and disposal. Specific negative impacts include:

- **Increase in Biochemical Oxygen Demand (BOD).** BOD is the amount of dissolved oxygen needed or demanded by aerobic biological organisms to break down organic materials in wastewater. Average municipal values range from 100 to 400 mg/L, while high strength BOD values from breweries, distilleries or wineries can range from 5,000 to over 20,000 mg/L. These high-strength BOD discharges originate from bad batches of product, first rinses of process tanks, or wasted product from fill stations and bottling lines when the waste product is washed down the drain. High-strength BOD discharges require additional treatment for the POTW to meet its discharge permit limits.
- **Increase in Total Suspended Solids (TSS).** TSS are solids in water that can be trapped by a filter. Average municipal values range from 100 to 400 mg/L, while high-strength TSS values from breweries, distilleries or wineries can range from 3,000 to over 15,000 mg/L. These high-strength TSS discharges come from spent grains, mash, hops, trub, grape skins and waste juice.

- **High flows/hydraulic loading** to the POTW due to process and cleaning operations from the brewery/distillery/winery. High flows can range from 5 to 15+ gallons for each gallon of product made.
- **Potential for high phosphorus loadings** due to cleaning processes at the brewery, distillery or winery.
- **Wide ranging pH values** from cleaning and disinfection processes at the brewery, distillery or winery. The pH can range from 2-12 as a result; the average range of municipal wastewater is 6.5-7.5. These widely ranging pH values can have a negative impact on both the collection system and the POTW.
- **High temperature discharges** can have negative impacts on the POTW as well as to the receiving water body, where ambient temperature ranges must be maintained to support native plants and animals.
- **Increase in high-strength wastewater** being discharged to municipal systems from slug loads, or episodic abnormal discharges, from the brewing and distilling processes. These municipal systems are not designed for such loads and can experience operational issues as a result.

Preventing Negative Impacts

Before connecting an industry to the wastewater collection system a POTW should:

- Determine how much hydraulic and load capacity the POTW has left.
- Require the discharger to file an Industrial Wastewater Indirect Discharge Request (IDR) with the New Hampshire Department of Environmental Services (NHDES).
- Issue an industrial discharge permit to the brewery, distillery or winery to control the wastewater discharge.
- Consider updating the sewer user ordinance (SUO) to address permitting authority/requirements and additional costs of treating high strength wastewater.

If the industry is already connected to the wastewater collection system a POTW should:

- Conduct a site visit of the facility and investigate for items that could cause an impact on the collection system and the POTW if discharged (e.g. general housekeeping, solids handling, storage and disposal).
- Require the discharger to file an Industrial Wastewater Indirect Discharge Request (IDR) with NHDES.
- Require the discharger to implement pollution prevention measures to prevent the high-strength solid and liquid wastes from entering the wastewater discharge.
- Issue an industrial discharge permit to the brewery, distillery or winery to control the wastewater discharge.
- Establish a monitoring point for representative sampling of discharge wastewater strength and flow metering. The sampling point should be after the production processes but before additional waste streams from restrooms or food service.
- Sample the process stream when the facility is in full production to determine their contribution to the POTW.
- If needed, require pretreatment of the wastewater stream including but not limited to:
 - Reduction of BOD and TSS to acceptable levels before discharge through Best Management Practices (BMPs), IDR and compliance with local SUO.
 - Reduction of amount of wastewater generated through BMPs. An efficiently managed process produces 2 to 4 gallons of wastewater for every 1 gallon of product. Whereas a poorly managed process may produce over 15 gallons of wastewater, per gallon of product.
 - pH neutralization and flow stabilization before discharge to collection system and POTW.
 - Minimization or elimination of phosphorus-based product cleaners.
 - Minimization of discharge quantities.
 - Elimination of high-temperature discharges.

- If needed, and the authority is granted in the SUO, implement a surcharge for high-strength waste or other impacts to POTW. If needed, and the authority is not granted in the SUO, update SUO to include the ability to implement a surcharge for high-strength waste or other impacts to POTW.

For more information about industrial wastewater discharge permits, contact the NHDES Wastewater Engineering Bureau Industrial Pretreatment Coordinator at (603) 271-2052. **For information on how to reduce** the impact on a POTW using Best Management Practices, contact the NHDES Pollution Prevention Program for additional information at (603) 271-6460.

All other questions may be directed to the NHDES Wastewater Engineering Bureau at (603) 271-3908.

Resources:

[NHDES Wastewater Best Management Practices for Breweries](#)