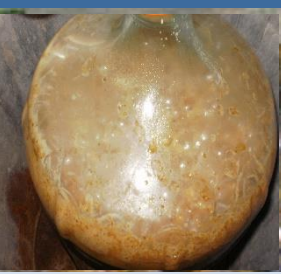




Connecticut Department of Energy and Environmental Protection



Connecticut Department of
**ENERGY &
ENVIRONMENTAL
PROTECTION**

CT Brewer's Guild Wastewater Permitting

April 7, 2021

Don Gonyea, CT DEEP



Connecticut Department of Energy and Environmental Protection

Brewery Wastewater Issues

- While limited in number, there have been problems at WPCFs that were attributed to brewery waste and wastewater. Aggravating factors can include:
 - Breweries that discharge to small WPCFs
 - Small WPCFs do not have capacity to assimilate slug loads
 - Breweries that discharge to larger WPCFs
 - Large WPCFs have a greater capacity to adapt to slug loads but coordination is vital and cost sharing is encouraged.



Brewery Wastewater Issues

Breweries produce waste products that have the potential to harm sewage treatment plants if not managed properly. Similar concerns apply to cideries and distilleries.

- Background:
 - We generally assume normal sewage has a BOD of about 150 ppm and COD of 300 ppm.
 - Brewery wastewaters can be significantly higher.
 - Spent grains can have BOD/COD over 100,000 ppm.
 - Trub can have BOD/COD of over 250,000;
 - 1 gallon trub costs the same as 400 gallons of sewage to treat
 - Spent grains can cause clogs in the sewer and scum formation at the WPCF.



Brewery Wastewater Permits

DEEP issues discharge permits with minimum requirements as required by state law.

- Before 10/31/20, *General Permit for Miscellaneous Discharges of Sewer Compatible (MISC) Wastewater*
- Now, *Significant Industrial User (SIU) or Miscellaneous Industrial User (MIU) General Permits*
- *What changed?*



Brewery Wastewater Permits

DEEP has determined that brewery wastewater is eligible for either the Significant Industrial User (SIU) or Miscellaneous Industrial User (MIU) General Permits:

SIU General Permit will be required for any brewery that:

- Discharges greater than 25,000 gpd on any day, or
- Has a wastewater that makes up 5% or more of the average dry weather flow or organic loading of the receiving WPCF, or
- Has been determined by the commissioner to be an SIU.
- SIU General Permit requires registration with DEEP
- After being approved by all applicable POTW Authorities



Brewery Wastewater Permits

MIU General Permit will be required for any brewery that discharges wastewater below these thresholds.

- MIU General Permit requires submittal of a Notification to all POTW Authorities.
- To prevent adverse impacts to the receiving POTW both MIU and SIU incorporate “general and specific prohibitions” consistent with federal law (40 CFR 403.5).
- Receiving POTWs may also be required develop local limits to address discharges that result in adverse impacts as required under 40 CFR 503.5.



Brewery Wastewater Management

- Brewery wastewater is considered a subset of Food Processing wastewater.
- Wastewater management requirements from the MIU and SIU General Permits include:
 - Isolation for proper disposal of grains, hops and other solids,
 - Isolation of other high strength liquids like trub, yeast, waste fermentables or off-spec product,
 - Limiting the types of cleaners and disinfecting agents that can be used.



Brewery Wastewater Management

DEEP regulations incorporated into the General Permits include:

- General water conservation practices,
 - Prohibition of diluting the discharge with clean water to meet permit limits.
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- DEEP will be evaluating the benefits and legal requirements of on-site wastewater disposal of brewery wastewater.
 - Discharges from breweries without access to a city sewer can be authorized under the SIU or MIU General Permits to haul their wastewater to an approved WPCF for discharge to the WPCF's receiving facility.



Questions? Contact Info

Wastewater permitting questions:

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Nutrient Management Plan questions (farm
breweries)

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Treatment plant questions

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CT Brewers Guild Meeting

April 7, 2021

Caren Harder
Compliance Specialist



Connecticut Department of Energy and Environmental Protection

Sources of Organic Waste from Breweries

- Yeast
- Hops
- Trub
- Grains
- Off spec product



Options for Recycling of Organic Waste

Anaerobic Digestors (AD):

- 2 permitted AD sites in CT, and others in MA and NY

Animal Feed

- 27 known sites in CT for accepting organics – beef, pig, poultry, goat and lamb

Composting

- 3 permitted sites in CT



Upcoming Waste Assistance to Breweries

- Schedule follow up meeting for additional information and assistance
- On-site visits
- Assisting with organics diversion
- Implementing general recycling
- Help identify ways to reduce waste, reduce related costs and other trash related issues
- Provide information on disposal/reuse/recycling facilities and haulers



Questions? Contact Info

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