Options for the Management of Food Processing Wastewater

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What is Food Processing Wastewater?

Food processing wastewater is any wastewater generated from food processing activities such as:

- Beer and wine making
- Milk products processing such as ice cream, cheese, or yogurt
- Large scale produce washing
- On-Farm, ‘small scale’ poultry and rabbit processing

Food processing wastewater is considered industrial wastewater.

Since MDE makes a distinction between domestic wastewater and industrial wastewater, MDE regulates the onsite disposal of food processing wastewater.

First Step – Contact MDE to discuss wastewater management options
Onsite Food Processing Wastewater Management Options

• Option 1: Holding Tank
• Option 2: Land Application of Wastewater
• Option 3: Subsurface Disposal
Option 1:

Holding Tanks

Collect and Contain Wastewater for Transport for Offsite Treatment
Option 1: Holding Tanks

Holding Tank Requirements

- 7 days of storage
- Design approval required from MDE
- High-water alarm installation
- Water-tightness test before use
- Documentation to show wastewater will be removed for appropriate treatment and disposal
Holding Tank Authorization

Option 1: Holding Tanks

• MDE issues holding tank approvals

• A septic permit is not needed for the holding tank, unless required by local regulations

• Once a holding tank is approved by MDE, the facility can begin operations.
Option 2:

Land Application of Wastewater
What is Land Application?

Land application is the beneficial reuse of food processing wastewaters via spray irrigation to the land surface. These benefits include:

- Providing nutrients to support or increase the growth of vegetation
- Recharging the groundwater
Option 2: Land Application of Wastewater

Land application can be authorized by either:

1. MDE: A *discharge permit* is required for land application of food processing wastewater

   OR

2. MDA: State Chemist Office requires *registration* of nutrient containing wastewater as a ‘*Soil Conditioner*’ (*amendment*) if it is going to be land applied.

**Regulatory Overlap = Opportunity for an Exemption from a Groundwater Discharge Permit**

New regulation* utilizes this overlap with the intent to:

- Create a user-friendly approval process for land applying wastewater generated from small scale, typically on-farm food processing operations
- Provide an option to beneficially reuse food processing wastewater

*COMAR 26.02.08.09A(5)*
How Does this Exemption Work?

*IF*: MDA's State Chemist Office determines that food processing wastewater 'meets the requirements for registration as a soil conditioner' providing nutrients to support or increase the growth of vegetation.

*AND*: MDE approves an Exemption Application.

*THEN*: MDE won’t require a discharge permit for the land application of the food processing wastewater.

*HOWEVER*: Responsible stewardship of the Food Processing Wastewater is REQUIRED via MDA’s nutrient management and ‘soil conditioner’ regulations.
Option 2: Land Application of Wastewater

Requirements

- Land apply food processing wastewater onsite
- Register food processing wastewater as a Soil Amendment/Conditioner with the MDA’s State Chemist’s Office
- Comply with MDA’s Nutrient Management Regulations (COMAR 15.20.04 to 15.20.08)
- Provide storage for wastewater when it is not possible to land apply due to precipitation, saturated soil, snow covered, or frozen ground
- Renew exemption from MDE every 5 years
Exemption Process

1. Holding Tank Approval

2. Submission of exemption application and wastewater analysis to MDE

3. Registration of wastewater as a ‘soil conditioner’ by State Chemist

4. Exemption approval issued by MDE

*Note: It is often not possible to apply for an exemption until after the facility is in operation with a holding tank. Typically, a representative sample of the facility’s wastewater, which is necessary for approval by the State Chemist, can only be obtained after facilities have begun to operate.
IMPORTANT

MDE retains authority to deny an exemption application and require a discharge permit for the land application of wastewater - even if it meets the requirements of a Soil Conditioner.

If an exemption is granted, MDE has authority to:

- Inspect a discharge permit exempted operation
- Revoke an approved exemption

An exemption approval is for 5 years and will have to be renewed every 5 years.
Exemption Application

Option 2: Land Application of Wastewater
Exemption Approval Letter

Option 2: Land Application of Wastewater
Option 3: Subsurface Disposal
Option 3: Subsurface Disposal

Food processing wastewater that is discharged into the subsurface, typically via a drainfield.

Subsurface disposal is highly discouraged for many food processing wastewaters since it may:

- Be cost prohibitive for small scale food processing operations
- Require pretreatment
- Eventually cause drainfield issues even with pretreatment due to the nature of the wastewater
- Require a State Discharge permit
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https://mde.maryland.gov/programs/Water/wwp/Pages/GWDP.aspx