Small Business Environmental Assistance Program
& Office of Policy and Sustainable Practices
Agribusiness Assistance Program

Environmental Guidance and Assistance for

New Livestock Meat Processing Facilities

This document provides general resources and information to help livestock agribusinesses understand the environmental rules, regulations, and issues that may affect the establishment of an onsite meat processing facility. It also serves as an introduction to the Small Business Environmental Assistance Program (SBEAP), a non-regulatory, confidential, and free service to agribusinesses they can call on for assistance complying with regulations and operating in a sustainable manner.

The livestock industry is generally regulated at the Federal level by the United States Dept. of Agriculture (USAA) and at the State level by the Tennessee Dept. of Agriculture (TDA). However, when proposing to build an onsite processing facility, several regulations administered by the Tennessee Dept. of Environment and Conservation (TDEC) must be complied with. A new facility will need to consider the following regulations:

- Construction of the facility
- Alteration of a stream or wetland
- Wastewater/processwater disposal
- Solid waste disposal
- Offal disposal

In addition to State regulation, a facility will need to present the proposed project to their respective local County permitting department to make sure they comply with local ordinances.

Facility Construction

In most cases, the construction of an onsite meat processing facility will not impact/disturb an area greater than an acre. Therefore, most facilities will not require an NPDES Stormwater Construction Permit. If the full footprint of the facility, which includes the associated parking and storage areas, is greater than an acre, the Construction Permit must be submitted.

Prior to selecting the location for the facility, it is recommended to review the soils and water features of the farm to identify potential sensitive areas not to impact. General layout of soils, wetlands, and streams can be identified via USDA's Web Soil Survey portal. If you are limited to selecting a site that may impact a stream or wetland, you will likely need coverage under an Aquatic Resource Alteration Permit.

While designing the facility to be constructed, be sure to account for all necessary services including parking, waste storage & collection, and temporary livestock holding. Additionally, make sure to have a plan that best suits your needs for dealing with waste before beginning construction.

Waste Management

A new meat processing facility will typically have four waste streams, offal waste, processwater waste, solid waste, and domestic wastewater.

- Offal waste may be contained onsite and hauled off or it may be composted. If you wish for the offal waste to be hauled off, you will need to identify a provider that specializes in animal byproduct disposal and pickup. TDEC does not provide recommendations of potential service providers. If you have the available land with suitable soils, you may consider composting the offal waste. More information on composting is available here. If you are interested in composting, please reach out to Robert Wadley (Robert.Wadley@tn.gov) for additional information. A third option may be incineration, which would require an application for an Air Pollution Control Permit. Depending on the size and volume of incineration, the facility may be considered an insignificant source of air emissions.
- Processwater waste and animal fluids, such as blood, cannot be disposed of/discharged directly with domestic wastewater effectively. It may be disposed of along with the offal waste and combined with the animal byproduct disposal and pickup or pump and haul service. Similar to composting, if there is enough suitable land you may be able to pretreat the processwater and broadcast it over land (land application). Land use application would require an application for a Solid Waste Management Permit-by-Rule. Depending on the size of the facility (amount processed), you may be able to install a large septic system with advanced treatment to handle the processwater. An engineer familiar with processwater treatment will need to evaluate treatment/disposal alternatives depending on the processwater content and volume. Though it is possible to design such a system, they are typically expensive and do not handle blood well. Either system will require a Water Quality State Operating Permit. Concerning blood, specifically, most local sewer ordinances do not allow the direct discharge of blood into the municipal system – you will need to validate this with your local municipal sewer authority. The best option is to render the blood or include it in the pump and haul disposal service. If you wish to discharge blood into a subsurface sewage disposal system (SSDS), you will need to make sure it can handle the additional (pollutant) load when designing the system.[1]
- Domestic wastewater should be directed to the public sewer system or an independent septic system for which you would need to complete a Septic System Construction Permit.

Direct Assistance

TDEC is glad to provide further or direct guidance for your livestock meat processing facility. For general guidance, please contact the Small Business Environmental Assistance Program (SBEAP) by phone, 800-734-3619 or by email, BGSBEAP@tn.gov. If you would like to contact your regional Environmental Field Office, please call 888-891-TDEC (8332) or find your field office here.

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[1] If a septic system is preferred, the most likely design solution would be installation of an aerobic treatment unit after settling and oil and grease removal in septic tanks. Best practices include separating the animal processing wastewater from human domestic wastewater, minimal use of detergents and other cleaning chemicals, the use of fine grates on all floor and sink drains to catch any small particles and hair, a commercial-size effluent filter (designed for high-strength waste) should be placed on the outlet of the last septic tank, and a maintenance contract should be in place with a licensed onsite professional to assure the proper operation and maintenance of the treatment system. For additional information, see Onsite Installer's article on Recommendations for a Slaughterhouse Septic System, Jan. 24, 2019.