Solid Waste Recycling in Texas

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Acronyms

30 TAC – 30 Texas Administrative Code

CFR – Code of Federal Regulations

EPA – U.S. Environmental Protection Agency

IHW – Industrial and Hazardous Waste

MSW – Municipal Solid Waste

RCRA – Resource Conservation and Recovery Act

THSC – Texas Health and Safety Code

MSW Permits Program

Recycling Authorizations

MSW recycling authorization requirements depend on several factors including the type of recyclable materials, the source of the material, and the percentage of material diverted from a mixed waste stream. Recycling rules are split between two rule chapters, Chapter 328, *Waste Minimization and Recycling*, and Chapter 330, *Municipal Solid Waste*. For exempt recycling facilities and facilities operating under a recycling notification, Chapter 328 discusses exemption criteria in 30 TAC §328.4(a) and operational and reporting requirements in 30 TAC §328.5. Chapter 330 describes the authorization requirements for recycling notifications (30 TAC §330.11(e)(2)), registrations (30 TAC §330.9), and permits (30 TAC §330.7); with operational requirements found in 30 TAC 330 Subchapter E for permitted and registered recycling facilities.

General information about MSW recycling can be found on the *Recycling Source-Separated Materials* webpage. This webpage includes the recycling notification form and form instructions, along with example worksheets for closure cost estimates, material tracking, and incidental waste tracking. Application forms for recycling registrations or permits use the same forms and processes as other waste disposal or processing activities and can be found on *MSW's Application Forms and Guidance* webpage.

Compost Authorizations

MSW compost rules are found in Chapter 332, *Composting*, and the level of authorization is dependent on the feedstocks accepted by the facility. The specific rules regarding composting

authorizations are found in 30 TAC §332.3(a) – (d). Operational requirements for compost facilities are found in Chapter 332, Subchapter B for notifications, Subchapter C for registrations, and Subchapter D for permits. The level of composting authorizations is based on the following feedstocks.

- Exempt – source-separated yard trimmings, clean wood material, vegetative material, paper, and manure.
- Notification – exempt tier and any source-separated meat, fish, dead animal carcasses, oils, greases, or dairy materials.
- Registration – notification tier and any municipal sewage sludge, positively-sorted organic materials from the MSW stream, disposable diapers, or sludge byproducts from paper mills.
- Permit – registration tier and mixed municipal solid waste and grease trap waste.

General information about the rules and regulations for compost activities and compost facilities can be found on the *Compost and Mulching* webpage. This webpage contains links to the various compost application forms (notification form, registration form, permit form), final product report form for registrations and permits, and guidance for complying with financial assurance requirements.

Other MSW Programs

TCEQ has several other MSW programs that have a recycling component or result in diversion of waste from landfills. Links are provided to TCEQ webpage for more information regarding that program.

- Landfill gas recovery (landfill gas to energy)
- Liquid waste processing
- Scrap tires processing
- TV recycling and electronics recycling

MSW Annual Data

Active landfills, waste processors such as transfer stations, medical waste facilities, and recycling or compost facilities authorized through a permit or registration must submit an annual report detailing the amount of waste accepted and disposed of (for landfills) or the amount of waste or feedstocks accepted and processed (for waste processors and recyclers). Exempt recycling or compost facilities and those authorized through a notification do not have to submit an annual report.

MSW Permits compiles the annual reports and publishes the yearly *Municipal Solid Waste in Texas: A Year in Review* which provides annual disposal amounts, types of waste, remaining landfill capacity, and diversion amounts. Previous summary reports are available through the link above and the raw data will soon be available on Texas Open Data Portal.

IHW Permits Program

Recycling regulations for industrial waste depend on the waste classification as hazardous or nonhazardous waste. TCEQ maintains a delegated RCRA program from EPA, so the hazardous waste regulations will be similar to other delegated states. For nonhazardous waste in Texas, generators must further classify their nonhazardous waste as Class I, Class II, or Class III. More information about Texas industrial waste classification can be found on the *How to Classify Industrial and Hazardous Waste* webpage or in TCEQ's guidance document.

Recycling Authorizations

Hazardous or nonhazardous industrial waste recycling is conducted under a notification to TCEQ (30 TAC §335.24). Other associated activities, like storage of hazardous waste, may still require a RCRA permit. TCEQ's guidance document, *Can I Recycle Some of My Industrial or Hazardous Waste?*, provides more detailed explanations and rule information on recycling.

IHW Permits requires both the industrial waste generator, using the generator recycling notification form, and the receiving recycling facility, using the receiver recycling notification form, to submit notifications to TCEQ. This promotes communication and consistency between the generator and the receiving facility.

Hazardous Secondary Materials

Hazardous secondary materials are secondary materials (e.g., spent materials, by-products, sludges, etc.) that when discarded, would be hazardous waste, except when following specific recycling exclusion rules if successfully reclaimed. TCEQ recognizes three types of hazardous secondary materials exclusions: generator-controlled, transfer-based, and remanufacturing-based. TCEQ rules in 30 TAC §335.26, 30 TAC §335.27, and 30 TAC Chapter 335, Subchapter V rely heavily on the federal regulations found in 40 CFR Part 260. Additionally, TCEQ requires entities to use the EPA RCRA Subtitle C site identification form (certain sections) and the EPA HSM recycling checklist when seeking authorization to manage hazardous secondary materials. More information can be found on TCEQ's *Managing Hazardous Secondary Materials* webpage.

Advanced Recycling

Recent state legislation has exempted advanced or chemical recycling facilities to convert post-use polymers (e.g., plastics) into valuable raw materials. Based on legislation, the post-use polymer feedstocks are not considered solid waste, and the recycling facilities are not required to obtain a solid waste authorization, but they must obtain appropriate air and water authorizations. More information can be found on TCEQ's *Advanced Recycling* webpage.

Renewable Energy Component Recycling Facilities

Due to state legislation from 2025, TCEQ is implementing a new reporting program for recycling facilities managing components from wind turbine generators, battery energy storage systems, or solar energy devices. Impacted recycling facilities must report annually the quantity of unrecycled components stored at their facility and provide financial assurance to TCEQ to cover cleanup and disposal costs. More information can be found on the *Renewable Energy Component Recycling* webpage.

IHW Reports and Data

Data on the amounts of hazardous and Class 1 waste generated and managed in Texas is reported through various monthly and annual reports. The Registration and Reporting Section handles data collection, compiling, and necessary reporting. The *IHW Datasets* webpage provides a quick summary, with graphics, on various datasets and links to the full data.

TCEQ Recycling Studies

TCEQ completed two recycling data studies in recent years. The first TCEQ recycling study, *Study on the Economic Impacts of Recycling*, was completed in 2017 and focused on the amount of recyclable materials and the economic impacts of recycling (summary webpage for this study). The second study, *Recycling Market Development Plan*, was completed in 2021 and focused on the types and amounts of recyclable materials and barriers to increasing the recycling rate (summary webpage for the second study).