Waste Permits Division

2018 Scrap Tire Annual Report Summary

Scrap Tire Program Background

The Texas Commission on Environmental Quality (TCEQ) Waste Permits Division regulates the management of used and scrap tires in Texas under the authority of Texas Health & Safety Code Sections (§) 361.011, 361.112, and 361.1125. The tire regulations in Title 30, Texas Administrative Code Chapter 328, Subchapter F, outline regulatory requirements and standards related to used and scrap tire management activities. Owners or operators of regulated scrap tire management activities are required to obtain a TCEQ Scrap Tire Registration to ensure the safe management of scrap tires to protect human health and the environment.

Regulated Tire Management Activities

Regulated management activities include used and scrap tire transportation, processing, recycling, utilization, storage, and land reclamation projects using tires (LRPUTs).

Reporting Period and Requirements

Scrap tire transporters, as well as owners or operators of scrap tire facilities and scrap tire storage sites, must submit an annual report to the TCEQ and include information related to their tire management activities during the calendar year. The annual report for the preceding calendar year is due on or before March 1 in a form prescribed by the TCEQ. Scrap tire generators and owners or operators of LRPUTs are not required to submit an annual report.

Transporters

Scrap tire transporters must report the following information using the Scrap Tire Transporter Annual Activity Report form (TCEQ-10311):

- **tires collected from generators**—number and type (passenger, truck, off-the-road) of whole used tires and scrap tires, and weight of tire pieces and shreds *collected*, listed by generator name and address, and
- **tires delivered to destination or end-use facility**—number and type of whole used tires and scrap tires, and weight of tire pieces and shreds *delivered*, listed by destination or end-use facility name and address.

Scrap Tire Facilities and Scrap Tire Storage Sites

Owners or operators of scrap tire facilities and scrap tire storage sites must report the following information using the Scrap Tire Facility and Scrap Tire Storage Site Combined Annual Activity Report form (TCEQ-10305):

- **tires received**—number and type of whole used tires and scrap tires, and weight of tire pieces and shreds *received* from generators, transporters, or other tire facilities,

- **tires processed or stored**—number and type of whole used tires and scrap tires, and weight of tire pieces and shreds *processed and stored* at scrap tire facilities and scrap tire storage sites, and
- **tires delivered to destination or end-use facility**—number and type of whole used tires and scrap tires, and weight of tire pieces and shreds *delivered*, listed by destination or end-use facility name and address.

Number of Active Registrations by Type

The total number of active scrap tire registrations in 2018 was 12,813. The numbers of each type of activity by registered entities are detailed in Table 1 *Number of Active Registrations by Type*. A single registration may include more than one type of tire handling activity.

Table 1. Number of Active Registrations by Type

Type of Registered Entity	Number of Registrations
Generator	12,288
Transporter	392
Scrap Tire Facility—Processing	95
Scrap Tire Facility—Recycling	5
Scrap Tire Facility—Energy Recovery	8
Scrap Tire Storage Site	11
Land Reclamation Project Using Tires	14

End-Use or Disposition

The summary findings were compiled from the 123 Scrap Tire Transporter Annual Activity Reports and 62 Scrap Tire Facility and Scrap Tire Storage Site Combined Annual Activity Reports received in 2019. The discrepancy in the number of reports received and the number of registered entities is attributed to owner or operators failing to comply with notifying the agency when they go out of business or move and failing to submit timely annual reports.

Based on the findings, approximately 45.9 million used and scrap tires were managed in Texas in 2018. For this report, the TCEQ considers one scrap tire unit equivalent to one scrap tire, regardless of size. The main use or disposition avenues in Texas for whole used and scrap tires include the following broad categories: tire-derived fuel source, landfill disposal, crumb rubber production, other beneficial use, use in LRPUT, and other recycling. The breakdown of the different types of end-uses and their corresponding number of scrap tire units utilized is presented in Table 2 *End-use Types and Quantities of Tires Used in 2018*. Figure 1 *End-use Types Utilized by Year from 2014 to 2018* shows the breakdown of the different types of end-uses utilized over a five-year period. A discussion for each end-use type begins on page 4.

Table 2. End-use Types and Quantities of Tires Used in 2018

End-Use or Disposition	Approximate Scrap Tire Units Utilized or Disposed	Percent of Utilization
Tire-Derived Fuel	15,599,449	34%
Landfill	13,875,682	30%
Crumb Rubber	9,816,961	21%
Other Beneficial Use	3,045,214	7%
LRPUT	1,956,872	4%
Other Recycling	1,595,695	4%
Total	**45,889,873**	**100%**

Note: Per Title 30, Texas Administrative Code Chapter 328, Subchapter F Rule §328.71(d)(1): A typical whole tire shall be considered to weigh 20 pounds.

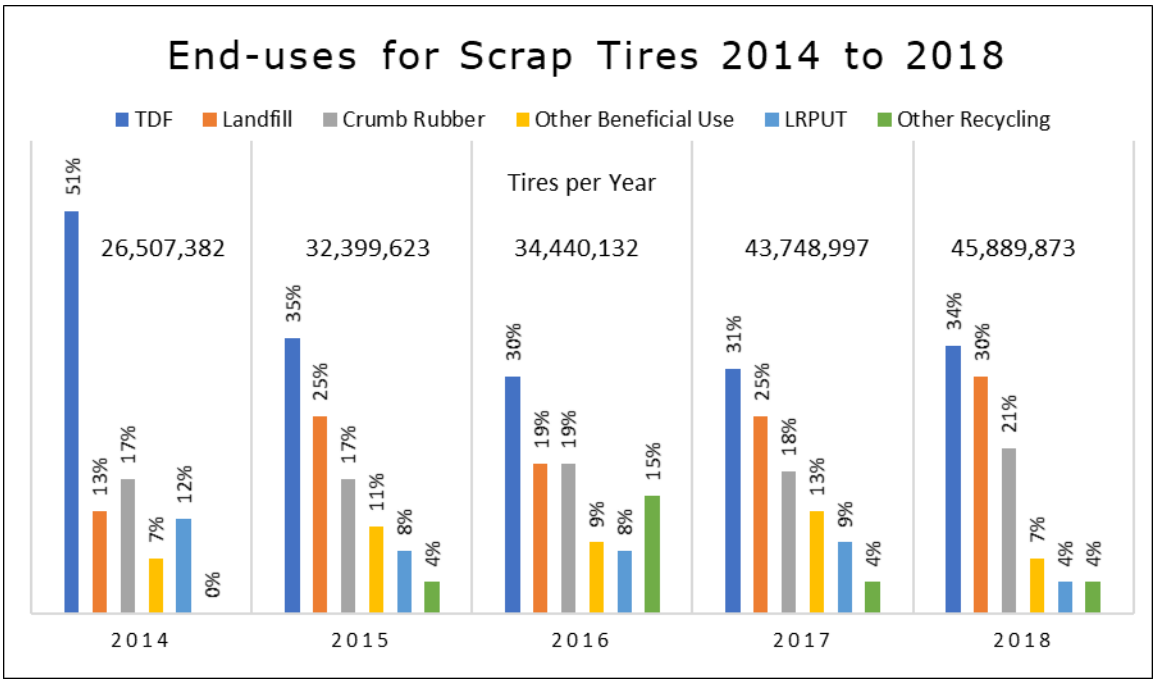

Figure 1. End-use Types Utilized by Year from 2014 to 2018

Tire-derived fuel

The highest end-use of used and scrap tires was for energy recovery and use as a fuel source. Approximately 15.6 million (34%) of the used and scrap tires were used as tire-derived fuel at six of the eight energy-recovery facilities with active registrations located in Texas. An additional 233,902 tires were transported outside the state for use as tire-derived fuel.

Landfill disposal

Approximately 13.9 million (30%) of the used and scrap tires were disposed in municipal solid waste landfills. The TCEQ regulations specify that tires be split, quartered, or shredded before they are disposed in a landfill. Scrap tire storage or processing activities at a landfill are authorized through the landfill's municipal solid waste permit.

Crumb rubber

Approximately 9.8 million (21%) of the used and scrap tires were recycled to produce crumb rubber. To produce crumb rubber, steel and tire cord are removed and the tire shreds are ground to a granular consistency with the aid of either cryogenic or mechanical means to reduce the size of the particles. Rubberized asphalt is the largest market for crumb rubber. Crumb rubber can be blended into asphalt and used in various roadway projects. Crumb rubber is also used as an infill for synthetic turf fields.

Other beneficial uses

Approximately 3 million (7%) of the used and scrap tires were utilized for other beneficial uses. Beneficial uses in 2018 included construction rings (tire ring base for traffic barrel drums), agricultural uses (e.g. stall mats, water and feed troughs), and production of tire mulch for landscaping.

Land Reclamation Project Using Tires

Approximately 2 million (4%) of the used and scrap tires were used for land reclamation at locations authorized by the TCEQ. Approved projects restore land to its approximate natural grade to prepare or reclaim the land for reuse.

Other recycling

Approximately 1.6 million (4%) of the used and scrap tires were recycled to recover wire and steel. A tire is considered recycled when it can no longer be used and has been collected, separated, or processed and returned to use in the form of raw materials in the production of new products.

Scrap Tire Management Program Funding

Currently, there is no dedicated funding for the scrap tire management program. There is no application fee for obtaining a scrap tire registration. Scrap tire management activities operate under a free-market system. Tire dealers set their own fees to cover their administrative and tire disposition costs.

The cleanup of tire sites is addressed using financial assurance funds posted by the registration holder (for registered tire storage sites) or through supplemental environmental

projects, administered by the TCEQ Office of Compliance and Enforcement and/or the Office of Legal Services.

TCEQ Compliance Monitoring and Enforcement

The TCEQ regional offices monitor scrap tire management activities in the state and evaluates compliance with TCEQ rules. The TCEQ Office of Compliance and Enforcement conducts enforcement action(s) against violators. The existing provisions for administrative and civil penalties for violating the Texas Health and Safety Code, Chapter 361 and corresponding TCEQ rules are in Texas Water Code, Chapter 7. TCEQs' efforts focus on ensuring proper management of scrap-tire related activities, including the prevention of unauthorized disposal of tires.

Scrap Tire Management Challenges

The TCEQ has made significant efforts towards addressing scrap tire management issues and in reducing the number of unauthorized stockpiles of scrap tires in Texas. Registration and regulatory requirements are designed to facilitate the safe management of tires in the state and minimize any adverse impacts to human health and the environment.

Ongoing challenges and opportunities that offer direction for future progress include:

- funding cleanup efforts for existing and newly created tire stockpiles;
- expanding existing markets or developing new markets and end-users, including transportation-related uses;
- minimizing illegal dumping of scrap tires;
- improving compliance with TCEQ scrap tire regulations; and
- establishing a review process for large beneficial use projects using tires.

Unauthorized Scrap Tire Sites in Texas

The TCEQ maintains a list of known unauthorized scrap tire sites in the state. The locations are shown in Figure 2 *Unauthorized Scrap Tire Sites in Texas*, along with information on the approximate quantity of tires. The number of tires at such sites ranges from a few hundred to a few million, for a total of approximately 14.7 million tires.

In 2018, approximately 2 million tires were removed from eleven such sites. Cleanup was ongoing at two sites and completed at nine sites.

Unauthorized scrap tire sites can broadly be categorized as:

- New, generally small, unauthorized scrap tire piles that are reported to the TCEQ; and
- Legacy, generally large, well-documented scrap tire piles that may have been registered at one time.

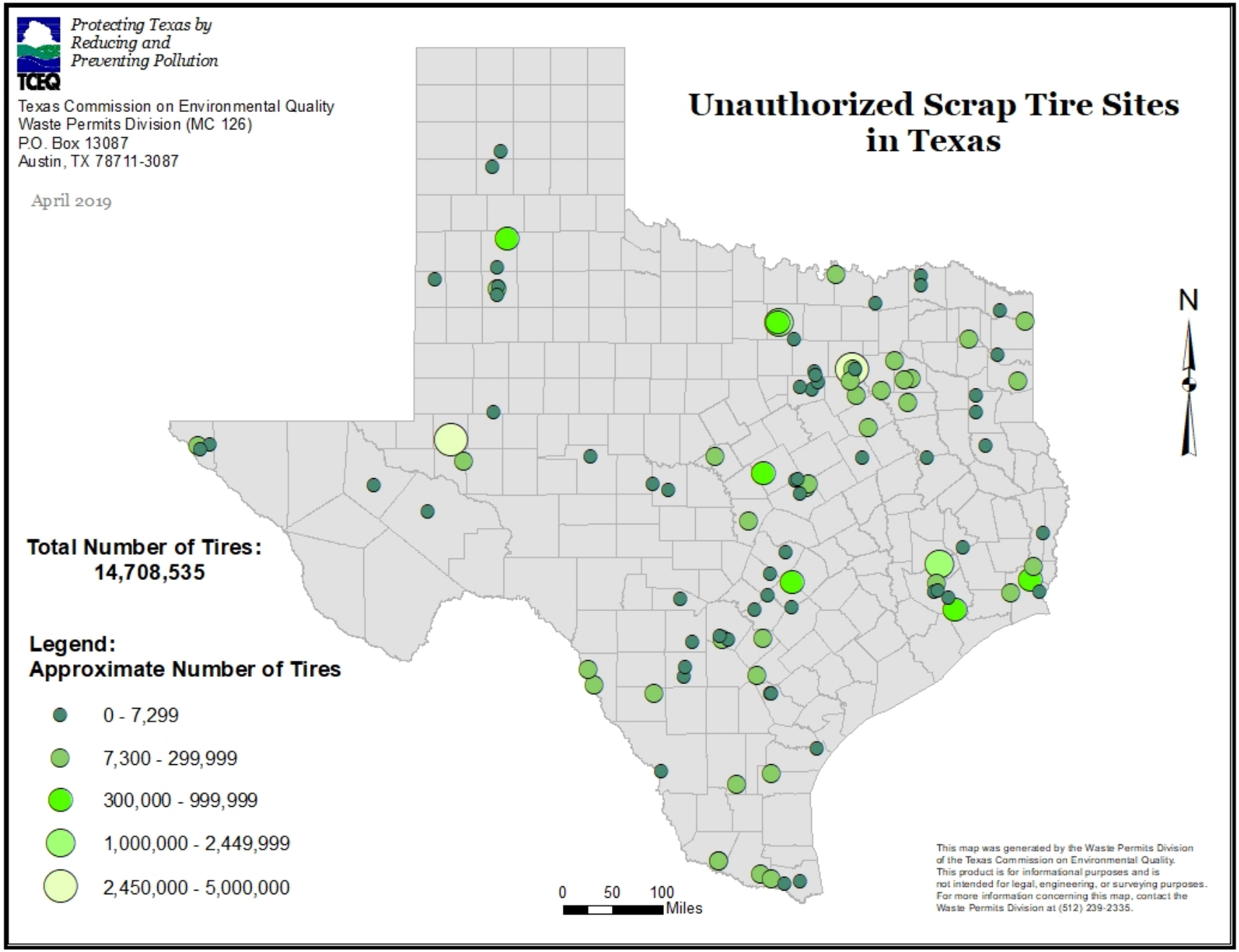

Figure 2. Unauthorized Scrap Tire Sites in Texas