



2023 Scrap Tire Annual Report Summary

Purpose of the Scrap Tire Annual Report Summary

Scrap tire transporters, storage sites, and facilities are required to submit an annual activity report detailing the number of tires transported and the tires' end uses or destinations. The Texas Commission on Environmental Quality (TCEQ) Scrap Tire Program compiles the data from annual activity reports to create this report summary. The purpose of the report is to provide information on the state of scrap tire management in Texas to industry professionals, legislators, regulated entities, and citizens.

Background on the TCEQ Scrap Tire Program

The TCEQ Waste Permits Division regulates the management of used and scrap tires in Texas under the authority of Texas Health and 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 conducting regulated scrap tire management activities are required to obtain a registration with TCEQ 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). Scrap tire generators and owners or operators of LRPUTs that do not process scrap tires on site are not required to submit an annual report for their regulated tire management activities.

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 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 on a form prescribed by TCEQ.

Transporters

Scrap tire transporters must report the following information using the form [Annual Activity Report for Scrap Tire Transporters \(TCEQ-10311\)](#)¹:

- **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* to each destination or end-use facility, including name and address.

Used tires with legal amount of tread remaining may be separated from total scrap tires collected from a generator and sold for use. These tires are subtracted from the total number of tires collected.

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 form [Annual Activity Report for Scrap Tire Facilities and Scrap Tire Storage Sites \(TCEQ-10305\)](#)²:

- **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

According to agency records, the total number of active scrap tire registrations in 2023 was 12,005. 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 management activity.

¹ tceq.texas.gov/downloads/permitting/waste-permits/tires/forms/10311.docx

² tceq.texas.gov/downloads/permitting/waste-permits/tires/forms/10305.docx

Table 1. Number of Active Registrations by Type

Type of Registered Entity	Number of Registrations
Generator	11,337
Transporter	500
Scrap Tire Facility—Processing	150
Scrap Tire Facility—Recycling	8
Scrap Tire Facility—Energy Recovery	8
Scrap Tire Storage Site	13
LRPUT	17

End-Uses and Disposal Rates for Scrap Tires

The summary findings were compiled from 161 Scrap Tire Transporter Annual Activity Reports and 96 Scrap Tire Facility and Scrap Tire Storage Site Annual Activity Reports received by March 1, 2023. The discrepancy in the number of reports received and the number of registered entities is due to owners or operators failing to submit timely annual reports and not notifying the agency of changes in contact information or business operations.

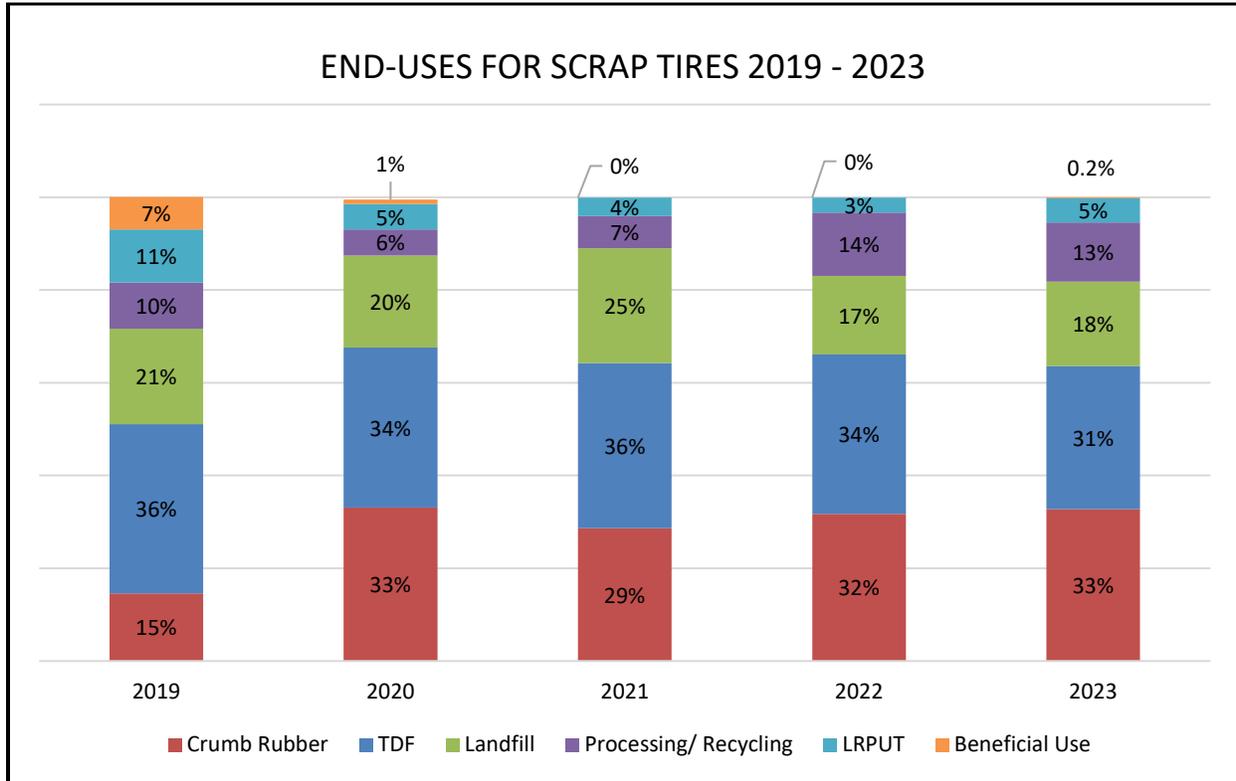
Based on the findings, approximately 57.1 million used and scrap tires were managed in Texas in 2023. For this report, TCEQ considers one scrap tire unit equivalent to weigh 20 pounds, regardless of size. The main use or disposition avenues in Texas for whole used and scrap tires include the following broad categories: crumb rubber production, tire-derived fuel (TDF), landfill disposal, other beneficial use, use in LRPUT, and other recycling. The breakdown of the distinct 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 2023*. The total number of tires for each broad category over a five-year period are shown in *Table 3. End-Use Types by Year from 2019 to 2023*, and the percentages for each broad category over a five-year period are shown in *Figure 1. End-Uses For Scrap Tires From 2019 to 2023*. A discussion for each end-use type begins on page 4.

Table 2. End-Use Types and Quantities of Tires Used in 2023.

End-Use or Disposition	Approximate Scrap Tire Units Utilized or Disposed	Percent of Utilization
Crumb Rubber	18,752,455	33%
TDF	17,580,994	31%
Landfill	10,447,266	18%
Processing & Recycling	7,312,805	13%
LRPUT	2,995,474	5%
Beneficial Use	105,508	0.02%
Total	57,194,502	100%

Table 3. End-Use Types by Year 2019-2023

<i>Year</i>	<i>TDF</i>	<i>Crumb Rubber</i>	<i>Landfill</i>	<i>Processing & Recycling</i>	<i>LRPUT</i>	<i>Other Beneficial Use</i>	<i>Total</i>
2019	16,335,234	6,526,925	9,220,752	4,470,128	5,115,955	3,116,038	44,785,032
2020	16,357,436	15,699,376	9,415,625	2,677,818	2,582,254	693,760	47,426,269
2021	18,024,479	14,497,329	12,537,120	3,509,605	2,025,484	41,132	50,635,149
2022	18,609,082	17,179,337	9,177,821	7,396,718	1,732,876	40,383	54,136,217
2023	17,580,994	18,752,455	10,447,266	7,312,805	2,995,474	105,508	57,194,502

Figure 1. End-Uses For Scrap Tires From 2019 to 2023

Crumb rubber

The highest end-use of used and scrap tires was crumb rubber in 2023. Approximately 18.7 million (33%) of used and/or scrap tires were repurposed to create crumb rubber. This process involves removing steel and tire cord, then grinding the tire shreds into granules. Crumb rubber finds applications in rubberized asphalt, road projects, synthetic turf infill, and as a base for new products.

Tire-derived fuel

Tire-derived fuel accounted for 17.5 million (31%) of the 57.1 million tires managed at six of the eight energy-recovery facilities with active registrations located in Texas. Approximately 1.7 million additional scrap tires were transported outside the state for use as tire-derived fuel.

Landfill disposal

Approximately 10.4 million (18%) of the used tires and scrap tires generated or managed in Texas were disposed of in municipal solid waste landfills. TCEQ regulations specify that tires be split, quartered, or shredded before they are disposed of in a landfill. Scrap tire storage or processing activities at a landfill are authorized through the landfill's municipal solid waste permit.

Processing and recycling

Of the 57.1 million tires managed in 2023, approximately 7.3 million (13%) tires were recycled or processed for another use or disposal. A tire is considered recycled when it has been collected, separated, or processed and returned to use in the form of new products.

LRPUTs

Approximately 2.9 million (5%) of the used and scrap tires generated or managed in Texas during 2023 were used for land reclamation at locations authorized by TCEQ. Approved projects restore land to its approximate natural grade to prepare or reclaim the land for reuse.

Other beneficial uses

Other beneficial use of tires accounted for approximately 105,000 (less than 1%) of the used and scrap tires utilized during 2023 in Texas. Beneficial uses in 2023 included agriculture uses (e.g., water and feed troughs), garden installations, and reinforcement and retaining walls.

TCEQ Scrap Tire Program Funding

Currently, there is no dedicated funding for the scrap tire program. There is no application fee for obtaining a scrap tire registration. Presently, the 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 scrap tire storage sites) or through supplemental environmental projects, administered by the TCEQ Office of Compliance and Enforcement or the Office of Legal Services.

Activities of the TCEQ Scrap Tire Program

In 2020, TCEQ published the [Five-Year Plan for Scrap Tire Management in Texas](#).³ The plan outlines strategies for proper handling, storage, use, and disposal of scrap tires; identifies challenges for scrap tire management; and established goals to improve scrap tire management in Texas. Activities related to the five-year plan are presented in annual report summaries. The five-year plan and previous annual report summaries are available on the [TCEQ Used and Scrap Tire Management webpage](#).⁴

Scrap Tire Workshop in 2023

As part of the Five-Year Plan, the TCEQ Scrap Tire Program held a webinar on critical scrap tire management issues on February 9, 2023. Presentations covered helpful scrap tire management guidance documents, scrap tire projects funded through the Regional Solid Waste Grants Program, Local Enforcement Options for Scrap Tire Management,

³ tceq.texas.gov/downloads/permitting/waste-permits/publications/as212-20_scrap_tire_5yrplan.pdf

⁴ tceq.texas.gov/permitting/waste_permits/tires

and an update on the Texas State University study, [“Scrap Tires in the Lower Rio Grande Valley: Searching for Alternatives to Landfilling.”](#)⁵

Additional Outreach Activities in 2023

The Scrap Tire Program extended its outreach efforts in 2023. Notably, it gave a presentation on the following topics during two noteworthy events:

TCEQ Border Affairs International Scrap Tire Webinar (August 26, 2023): The presentation covered the TCEQ Scrap Tire Program, scrap tire management in Texas, and successful scrap tire remediation projects.

Texas Environmental Health Association Conference (October 20, 2023): Attendees including local government health directors, code enforcement officers, and environmental inspection officers learned about scrap tire management activities and issues.

TCEQ’s Role in Monitoring Scrap Tire Activities and Enforcing Regulations

TCEQ regional offices monitor scrap tire management activities in the state and evaluate compliance with TCEQ rules. The TCEQ Office of Compliance and Enforcement inspects facilities and when violations are found takes enforcement actions against these facilities. Administrative and civil penalties for violating the Texas Health and Safety Code, Chapter 361, and corresponding TCEQ rules are outlined in the Texas Water Code, Chapter 7. TCEQ’s primary objective is to ensure proper management of scrap tire-related activities, including preventing unauthorized tire disposal. The TCEQ maintains a list of unauthorized scrap tire sites and annually audits these sites to maintain accuracy.

Challenges of Managing Scrap Tires

TCEQ has made significant efforts toward 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 and minimize adverse impacts to human health and the environment.

Ongoing challenges and opportunities for future progress include:

- **Funding Cleanup Efforts:** While TCEQ does not have dedicated funding for cleaning up existing and newly created tire stockpiles, the [Regional Solid Waste Grants Program](#)⁶ has funded scrap tire collection and cleanup projects.
- **Market Expansion:** Expanding new markets and end-users for scrap tires, especially in circular and transportation-related applications, can create sustainable solutions.
- **Combatting Illegal Dumping:** There are opportunities to implement measures, like local ordinances and amnesty days, to prevent unauthorized disposal of scrap tires.

⁵ www.lrgvdc.org/downloads/solid-waste/2022_scrap_tires_lrgvdc_final_report.pdf

⁶ tceq.texas.gov/permitting/waste_permits/waste_planning/wp_grants.html

- Enhancing Compliance: Strengthening compliance with TCEQ and local scrap tire regulations ensures that all stakeholders adhere to best practices, leading to better management overall.

Scrap Tire Sites in Texas

TCEQ maintains a list of known unauthorized scrap tire sites in the state. The locations of these sites 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 13.8 million tires across 112 sites. In 2023, approximately 41,000 tires were removed from 12 unauthorized sites including 7 smaller sites that were completely cleaned up.

Scrap tire sites can be broadly categorized as:

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

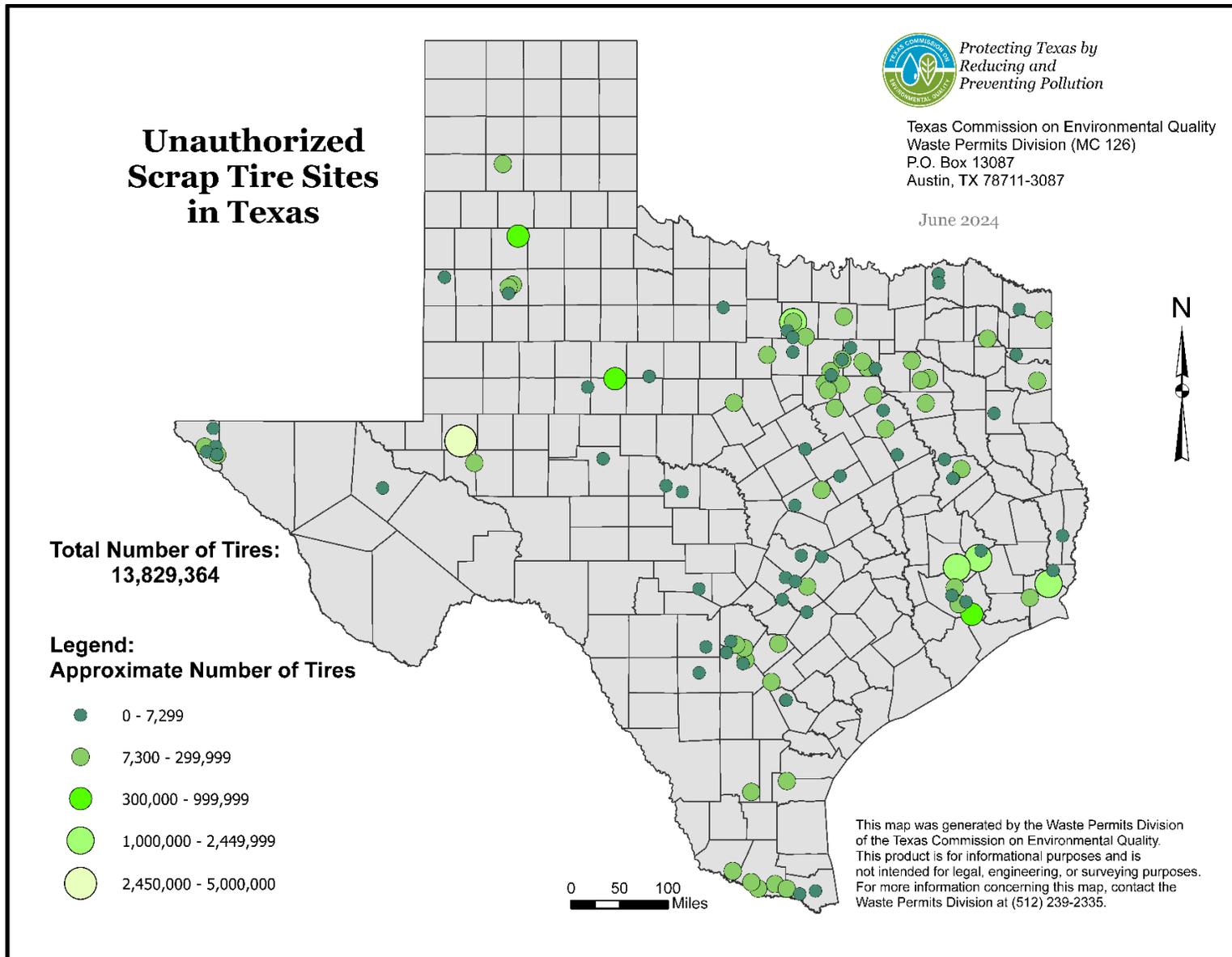


Figure 2. Unauthorized Scrap Tire Sites in Texas