



2020 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 end use or destination. The 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, regulatory entities, and citizens.

Background on the TCEQ Scrap Tire Program

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 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 are regulated tire management activities not required to submit an annual report.

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 in a form prescribed by TCEQ.

Transporters

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

- **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* to each destination or end-use facility, including 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 form [Annual Activity Report for Scrap Tire Facilities and Scrap Tire Storage Sites \(TCEO-10305\)](#):

- **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

According to agency records, the total number of active scrap tire registrations in 2020 was 11,977. 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	11,391
Transporter	423
Scrap Tire Facility—Processing	121
Scrap Tire Facility—Recycling	8
Scrap Tire Facility—Energy Recovery	8
Scrap Tire Storage Site	12
LRPUT	14

End-Uses and Disposal Rates for Scrap Tires

The summary findings were compiled from 155 Scrap Tire Transporter Annual Activity Reports and 103 Scrap Tire Facility and Scrap Tire Storage Site Annual Activity Reports received by March 1, 2021. The discrepancy in the number of reports received and the number of registered entities is due to owner or operators failing to submit timely annual reports and failing to notify the agency of changes in contact information or business operations.

Based on the findings, approximately 47.4 million used and scrap tires were managed in Texas in 2020. 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: tire-derived fuel (TDF) 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 2020*. 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 2016 to 2020*, and the percentages for each broad category over a five-year period are shown in *Figure 1. End-use Types Utilized by Year from 2016 to 2020*. A discussion for each end-use type begins on page 4.

Table 2. End-Use Types and Quantities of Tires Used in 2020

End-Use or Disposition	Approximate Scrap Tire Units Utilized or Disposed	Percent of Utilization
Tire-Derived Fuel	16,357,436	34.49%
Landfill	9,415,625	19.85%
Crumb Rubber	15,699,376	33.10%
Other Beneficial Use	693,760	1.46%
LRPUT	2,582,254	5.44%
Other Recycling	2,677,818	5.65%
Total	47,426,269	100%

Table 3. End-Use Types by Year 2016-2020

Year	TDF	Landfill	Crumb Rubber	Other Beneficial Use	LRPUT	Other Recycling	Total
2016	10,163,036	6,703,075	6,666,800	3,050,573	2,813,327	5,043,321	34,440,132
2017	13,558,237	10,720,825	7,806,881	5,615,488	4,103,046	1,944,520	43,748,997
2018	15,599,449	13,875,682	9,816,961	3,045,214	1,956,872	1,595,695	45,889,873
2019	16,335,234	9,220,752	6,526,925	3,116,038	5,115,955	4,470,128	44,785,032
2020	16,357,436	9,415,625	15,699,376	693,760	2,582,254	2,677,818	47,426,269

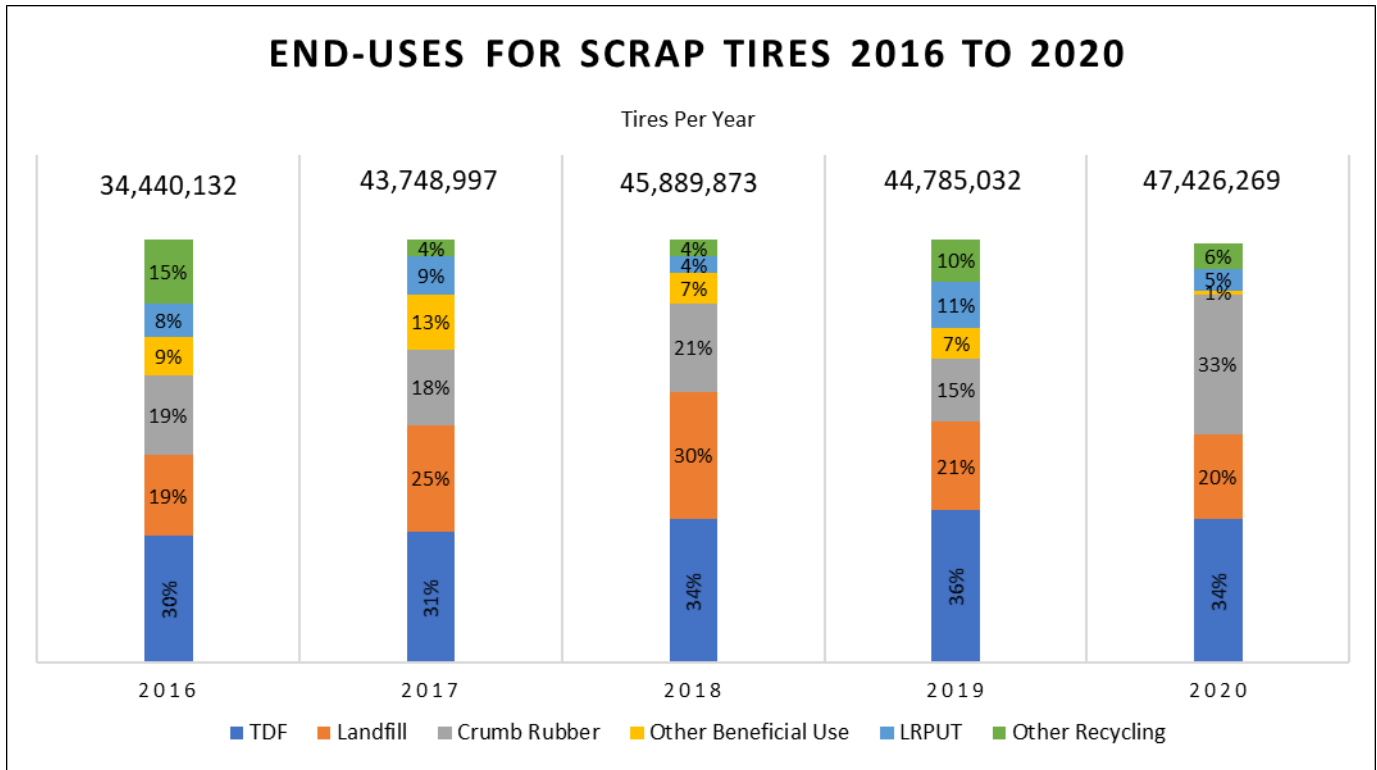


Figure 1. End-Use Types Utilized by Year from 2016 to 2020

Tire-derived fuel

The highest use of used and scrap tires is for energy recovery and use as a fuel source. Tire-derived fuel accounted for 16.3 million (34%) of the 47.4 million tires managed at six of the eight energy-recovery facilities with active registrations located in Texas. An additional 276,582 tires were transported outside the state for use as tire-derived fuel.

Landfill disposal

Approximately 9.4 million (20%) of the used tires and scrap tires generated or managed in Texas were disposed of in municipal solid waste landfills. The 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.

Crumb rubber

Approximately 15.7 million (33%) of used and/or 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 either with the aid of 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 and as feedstock to produce new products.

Other beneficial uses

Other beneficial use of tires accounted for 693,760 (1%) of the used and scrap tires utilized during 2020 in Texas. Beneficial uses in 2020 included construction rings (tire ring base for traffic barrel drums), agriculture uses (e.g. stall mats, water and feed troughs), and production of tire mulch for landscaping.

LRPUTs

Approximately 2.5 million (5%) of the used and scrap tires generated or managed in Texas during 2020 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

Of the 47.4 million tires managed in 2020, approximately 2.6 million (6%) 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.

The 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 and/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*. 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](#).

2020 scrap tire workshop

One of the goals of the *Five-Year Plan for Scrap Tire Management in Texas* is to develop and coordinate partnerships to facilitate communication with other TCEQ programs, scrap tire handlers, and state and local agencies. In line with that goal, TCEQ collaborated with the U.S. Tire Manufacturers Association (USTMA) to host a virtual scrap tire workshop on October 22, 2020.

The workshop included nine presenters from governmental entities throughout Texas to share a diverse range of experiences based on their geographic location, population

size, type of governmental entity, and methods used to address scrap tire management. TCEQ coordinated with the regional councils of governments (COGs) to invite local governments involved in regulating scrap tires which included solid waste departments, law-enforcement, fire departments, environmental offices, cities, and counties. Over 110 participants from state and local governments participated in the workshop.

Connecting end-users with scrap tire cleanups

Another goal of the five-year plan is to address unauthorized scrap tire sites in Texas. The Scrap Tire Program implemented a project to create a list of scrap tire end-users who are interested in assisting in the cleanup of unauthorized scrap tire sites. Scrap tire businesses interested in participating in cleanups can contact the TCEQ Scrap Tire Program by phone or email: 512-239-2335; tires@tceq.texas.gov.

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 conducts enforcement actions 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.

Challenges of Managing Scrap Tires

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 and minimize adverse impacts to human health and the environment.

Ongoing challenges and opportunities 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.

Scrap Tire Sites in Texas

TCEQ maintains a list of known 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 11.5 million tires across 108 sites.

In 2020, approximately 475,743 tires were removed from 12 unauthorized sites, with cleanup continuing at two sites.

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.

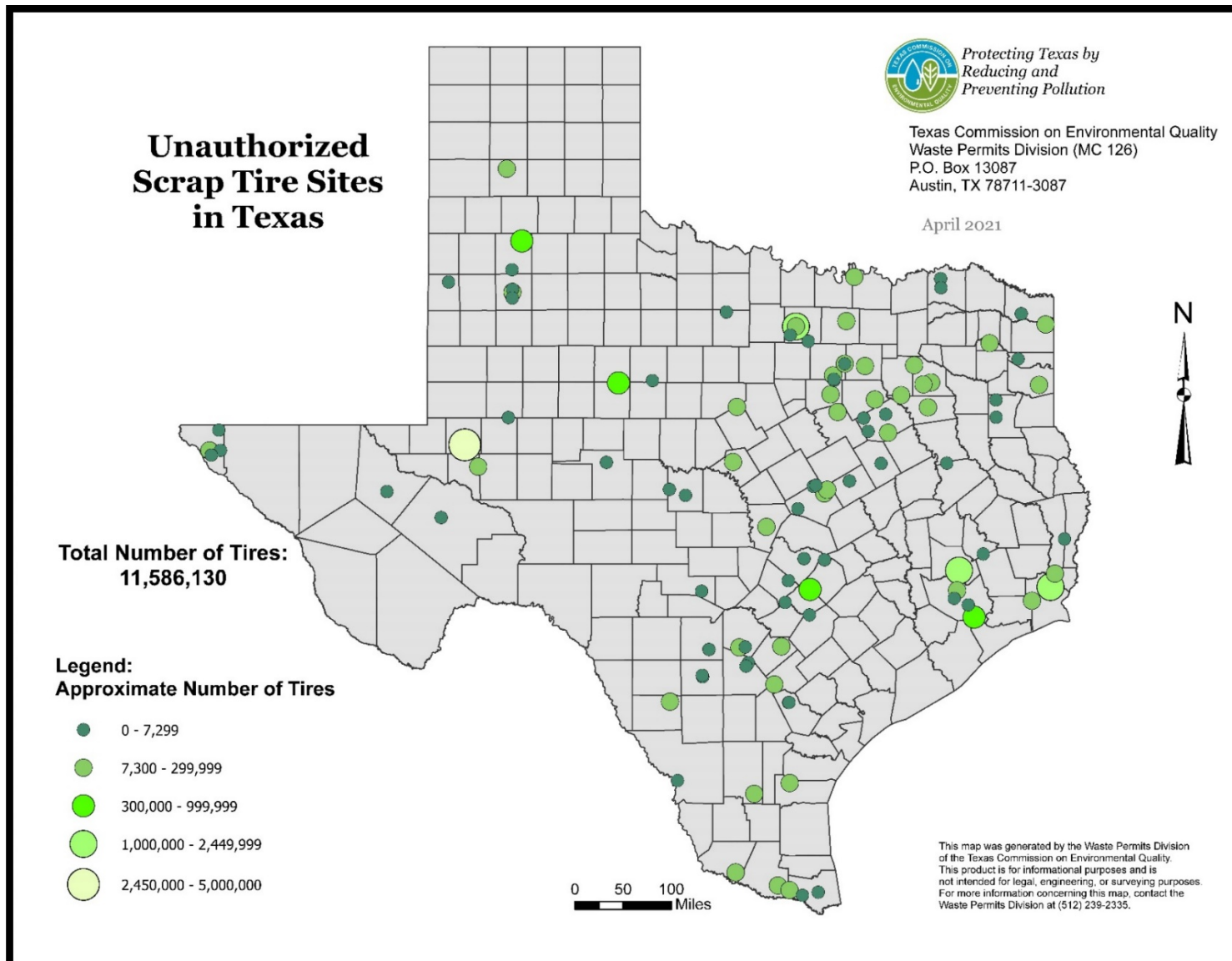


Figure 2. Unauthorized Scrap Tire Sites in Texas