

SINCE 1968

Houston Clean City Commission

QUARTERLY REPORT Q3 2023; SCRAP TIRES

OVERVIEW

In accordance with the City's Code of Ordinances Chapter 39 Article III, the Houston Clean City Commission is to direct and oversee a comprehensive litter control program for the purpose of reducing and controlling to an acceptable level the concentration of litter in the city and to bring about a long-term improvement in the attitudes and trash handling habits of citizens. The ordinance in Section 39-37 further directs the Commission to "each quarter, during the months of January, April, July and October submit a written report to the mayor and city council summarizing the status of the clean city program". Through a study completed in 2022, the Commission determined that the most impactful approach would be a near-term focus on greater and more efficient use of local source-separated landfill diversion options and a long-term focus on developing additional regional recycling infrastructure commensurate with local ability to supply high-quality feedstock. With this in mind, each of the Commission's Quarterly reports will focus on how a specific waste type is generated and managed in greater Houston and note opportunities for improvement, if identified. Reports will be kept to two pages, submitted in writing to the City and shared at the upcoming City Council public meeting. **Our Q3 2023 report focuses on scrap tires.**

HOUSTON CLEAN CITY COMMISSION REPORTS COMMITTEE

- Jason Smith, Committee Chair, Commissioner - District AL2
- Sara Tyler, Commissioner - District G
- Herlinda Gonzalez, Commissioner - District E
- Mark Wilfalk, Commissioner - Director of Solid Waste Management Department (SWMD)
- Johana Clark, Commissioner - Director of Public Works designee

HOUSTON CLEAN CITY COMMISSION CHAIR

- Alan Steinberg, Commissioner - Mayor Nominated Position 22

SPECIAL THANKS to these 2023 Q3 report advisors, consultants and industry experts

1. Thomas Boehme, CEO, Genan Inc.
2. Michael Perry, General Manager - BTN, Liberty Tire Recycling
3. E. Monique Johnson, Administrative Supervisor / City of Houston Scrap Tire Inspection team
4. Brittani Flowers, President & CEO, Bayou Preservation Association, Inc

Houston Clean City Commission Quarterly Report to City Council

Topic: Scrap Tires

Date: 10/23/23 **Committee:** Commissioners Smith, Tyler, Clark, Gonzalez, & Wilfalk

Overview:

Houston produces well over two million scrap tires annually. Depending on how they are handled, Houston's end of life tires may end up restored into new tires (retreaded), recycled as crumb rubber (ground into smaller particles useful for other applications such as playground and athletic field surfacing), intentionally repurposed (ex: tire gardens, retaining walls, tire art), used for energy recovery (tire-derived fuel), buried for land reclamation purposes, disposed of in landfills, or illegally dumped. Some of these outcomes add value to Houston's economy and environment while others detract. Consistent with permitting norms, we categorize participants in the scrap tire disposal chain as generators, transporters, processors (recyclers) and disposal facilities (land reclamation/landfills). For purposes of this report, we further categorize generators into three groups; large non-residential (500+ tires stored on site), small non-residential and residential. Houston Clean City Commission has reviewed how scrap tires are generated and flow around greater Houston and recommends that near-term program improvement efforts should target diverting more tires from the least desired outcome (illegal dumping) to the most desired outcome (local reuse/recycling) and long-term program improvement should focus on continuing to develop the regional market for scrap tire products and attracting and retaining the operations that produce such products.

Current State (system participants, areas of local success, regional/national models to follow)

Scrap tire disposal is a regulated activity in Houston and Texas. Scrap tires are not allowed to be part of the general municipal waste stream. Scrap tires collected and disposed of by the City include tires generated by and collected directly from City of Houston residents and scrap tires generated by City-owned fleets. The City of Houston Scrap Tire Ordinance is intended to alleviate the issues associated with improper disposal of scrap tires. In Houston, any non-residential generator or transporter of tires is required to have a City-issued permit, renewed annually. In addition to City program requirements, the Texas Commission on Environmental Quality (TCEQ) requires large generators (500+ scrap tires stored on site), commercial scrap tire transporters and scrap tire recyclers and disposal facilities to be registered with the TCEQ and adhere to TCEQ annual reporting requirements. Both State and City programs require the generation and retention of manifests which document scrap tire handling. Regional scrap tire recycling rates are not limited by a lack of nearby recycling capacity. Greater Houston's scrap tire recycling capability ranks among the nation's best as this region hosts the not only largest scrap tire recycling plant in the world (Genan, Inc.) but other large facilities such as Liberty Tire Recycling's Baytown site. Scrap tires must flow to these or comparable facilities in a condition acceptable to those facilities for recycling rates to remain high. Because the cost of proper scrap tire disposal generally exceeds the market value of recycled tire products, scrap tire disposal comes at a cost. This cost hinders smooth and efficient materials flow to recycling sites even though the cost of proper disposal is notionally covered when tire shops charge customers a tire disposal fee. Program friction manifests as widespread illegal scrap tire dumping which in turn requires extensive and expensive remediation by the City and other entities. Factors which contribute include ineffective communication of disposal options, improper sorting, insufficient enforcement, confusion regarding both State and City program requirements, financial pressure to avoid City permitting fees, and limited availability of affordable disposal options for small generators.

Challenges and Opportunities

1. **General Public Awareness:** A common theme across most waste streams is resident's lack of awareness of free waste handling resources and processes. SWMD should continue to maximize this information to ensure residents are aware of how to properly dispose of scrap tires and penalties when illegal measures are used. Additionally, information regarding non-residential generators City permitting status is not easily visible to the public and if available could encourage business to flow to

compliant facilities and operators. Online search capability of registered transporters could help generators identify additional transport options. The SWMD scrap tire program website should encourage citizens to check on the permitting status of local non-residential generators. This process would allow citizens to report non-compliant organizations to the SWMD scrap tire inspection team.

2. Enforcement of Illegal Dumping: Small non-residential generators are thought to be the source of a disproportionately large fraction of illegal scrap tire dumping, whether this is happening directly through their own actions or through commissioning scrap tire transporters that fail to provide appropriate transport. Enforcement agencies which include the SWMD scrap tire inspection team and City Police should be encouraged to hold those committing this illegal activity fully accountable.

3. Make State and City Scrap Tire Manifest Requirements Consistent: Both State and City scrap tire programs require the generation and retention of manifests to document scrap tire handling but only the State program administered through the TCEQ (which exempts non-residential generators with <500 tires stored on site) mandates a manifest format that tracks scrap tire handling all the way from the generator to the end-use facility and requires a copy of completed manifest be returned to the generator as proof that scrap tires were appropriately disposed of after collection and transport. Compliance with the City's scrap tire program (which includes all non-residential generators and transporters) requires permitted entities to maintain written records of tires transported without clarifying the format or process. This lack of guidance leads to generally inferior record keeping by entities subject to City permitting requirements but exempt from State permitting requirements. A standard City program manifest form, ideally consistent with the TCEQ manifest, is needed to clarify recordkeeping expectations, reduce confusion, ensure consistency between users, and most importantly to provide assurance of proper scrap tire disposal.

4. Supplemental Disposal Options for Very Small Non-Residential Generators: Small non-residential generators are subject to a higher per-tire cost of scrap tire program compliance than larger generators due to scaling factors. It is likely that these same facilities have fewer transport options and are a disproportionately large source of illegally dumped tires. An option which allows for very small non-residential generators (size to be determined) to self-transport a capped volume of tires to neighborhood depositories and/or environmental service centers for disposal without the need to register as a transporter should be implemented. Although accepting additional tires would incur some additional cost, that cost would be far less than clean-up of illegal dumping.

5) Proper Sorting at Collection Facilities: Processors report that trucks arriving at the facility, particularly from public collection facilities, are routinely contaminated with non-tire waste. Many loads are so contaminated that they are unfit for recycling and sent directly to reclamation/landfills. SWMD should improve monitoring of scrap type bins, particularly at public collection facilities, to ensure non-tire waste is kept out.

6) Scrap Tire Drop-Off Option for Non-Profits and Clean Up Contractors: It is common for clean-up or maintenance contracts to have a carve-out clause for found tires exempting them from tire collection due to the generally recognized expense and inconvenience associated with tire disposal. Clean-up contractors often simply tag found tires and then notify local authorities. Non-profit organizations engaging in community clean-ups routinely inform their volunteers to leave tires where found due to the lack of a viable disposal option. Because the degree to which clean-up contractors and the non-profit sector can contribute to remediating dumped tires is limited by insufficient disposal options, creating viable options for them to contribute to the solution is worthwhile. SWMD should develop and implement a process and communicate directly to clean up organizations that they are authorized to drop off dumped tires found within City limits at neighborhood depositories and/or environmental service centers.

