



How the Texas Litter Database Supports Conservation Action

www.texaslitter.org

Kirsten Sorensen

Senior Program Manager, Research and Cleanups, Keep Texas Beautiful

Keep Texas Beautiful & the Texas Litter Database





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About Keep Texas Beautiful

- Mission: To inspire and empower Texans to keep our communities clean and beautiful
- Statewide network of 250 KTB Affiliates
- Programs focused on:
 - Litter Prevention
 - Beautification
 - Waste Reduction
- Maintains the **Texas Litter Database**



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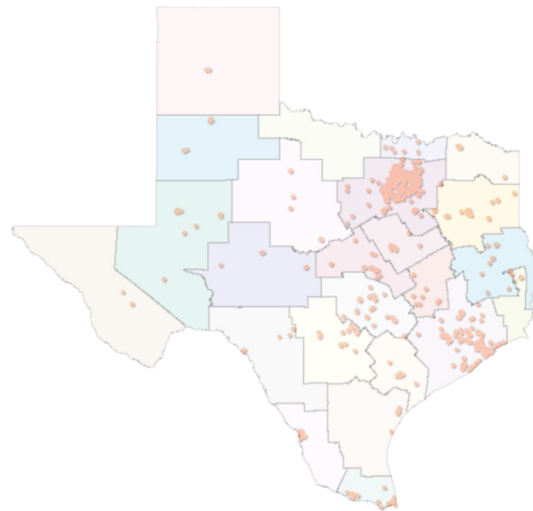
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What is the Texas Litter Database?

The Texas Litter Database was created in partnership by Keep Texas Beautiful, HARC, and Black Cat GIS with funding from the Garver Black Hilyard Family Foundation, originally launched in 2021.

It is the first statewide litter database of its kind.

Public data source that can be leveraged by communities in addition to provide evidence for policy and research.



HARC





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What Does It Measure?

There are two types of reports accepted by the Texas Litter Database:

- **Cleanup Reports**

- Location (drawn on map)
- Site Details
- Trash Weight and/or Volume
- Volunteer Data

- **Litter Samples**

- All of the above
- Detailed item count of trash sample





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Who Uses It?

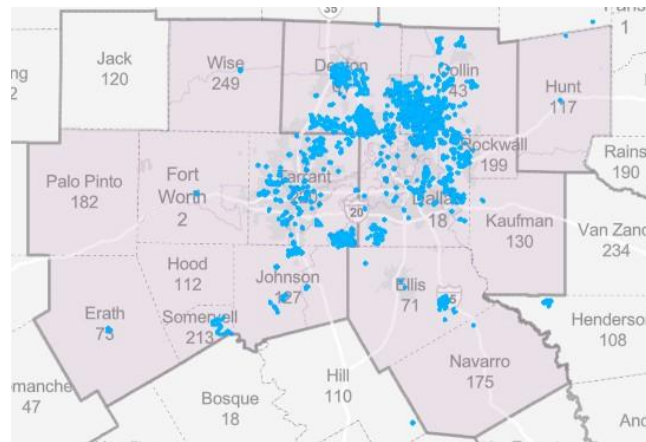
The Texas Litter Database has been broadly adopted statewide, including:

Users

- 781 organizations have reported to the Texas Litter Database

Geographic Coverage

- 110 counties reporting at least one litter cleanup
 - 43% of Texas counties
- Vast majority of reports from the DFW Metroplex and Houston-Galveston region



North Central Texas Council of Government Region



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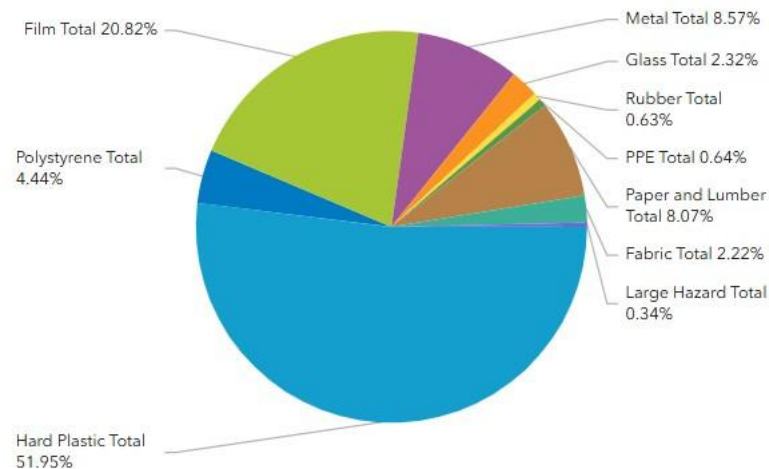
Texas Litter Database and Litter Sampling

Texas Litter Database

Since its launch in 2021, the Texas Litter Database has been broadly adopted statewide

- 781 organizations have reported over 5,000 cleanups
- 110 counties reporting (43% of Texas counties)
- 680 litter samples reported

These samples represent 78,131 individual pieces of litter that have been counted, recorded, and categorized by type of material



Major litter category percentages of trash collected on detailed samples.

Poll: How much litter accumulates on Texas shorelines compared to other states?

1. 2x less
2. Same as other states
3. 5x more
4. 10x more



Poll: How much litter accumulates on Texas shorelines compared to other states?

Answer: 10x more

Source: [2018 Study](#)

NOAA: Texas has the highest average weight of trash debris per mile surveyed of any state in the nation



STOP Litter Sample Data





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What is the STOP Method?

Study , Track, remOve, and Prevent

- Originally modeled on NOAA's Marine Debris Tracker
- Incorporates commonly found items in samples conducted in Texas (particularly the Gulf Coast region)
- Trash flows downhill → Gulf Coast is a reflection of the trash problem across Texas





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Baseline Data

Statewide Samples Tell Us:

- Approximately 73% of Texas litter (by item) is composed of plastic
- You can expect to find approximately 107 pieces of litter per 500 square meters (the size of a basketball court)

Baseline Average

- This sets a statewide average that can be a helpful benchmark – if you conduct a survey in your area and get wildly different percentages, this may tell you that you have a specific problem in your area that varies from the norm

On average, samples find
(when corrected for area)

107.18

individual trash items per 500 square meters.



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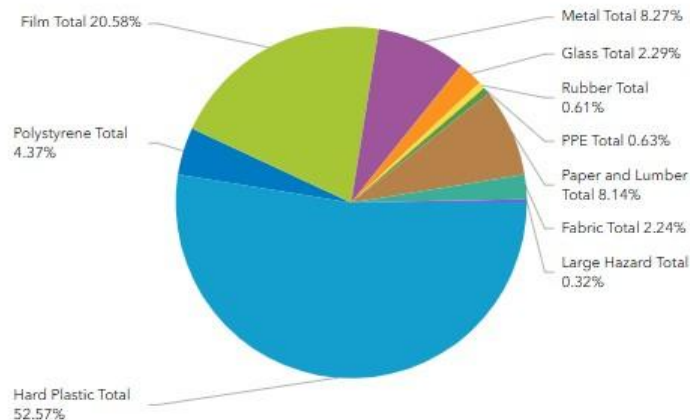
What We've Learned: Item Counts

Individual Item Counts (Top Offenders)

Top Individual Item Counts:

- Plastic Container Caps (10.2K)
- Plastic Beverage Bottles (6.1K)
- Film Food or Drink Wrappers (6.1K)
- Cigarette Butts (5.6K)
- Fishing Lines and Plastic Lures (4.9K)
- Film Bags (4.9K)

If your sample results deviate substantially from these averages, that tells you that you have a specific problem in your area



Major litter category percentages of trash collected on detailed surveys.

Poll: What site type accumulates the most litter?

1. Parks
2. Neighborhoods
3. Waterways
4. Roads



Poll: What site type accumulates the most litter?

Answer: Waterways

Source: [Texas Litter Database](#)

Current sample data shows that approximately 106 pieces of litter per sample are found on waterways (Parks: 103, Roads: 72, Neighborhoods: 35)



Conducting a STOP Litter Sample



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How to Conduct a STOP Sample



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Preparing to Conduct a STOP Litter Sample

- Pick a Site
- Get Your Equipment
- Pick Your Process (Designated Sample Area vs Random Bag Sample)
- Tally Your Data
- Submit to the Texas Litter Database



Pick a Site

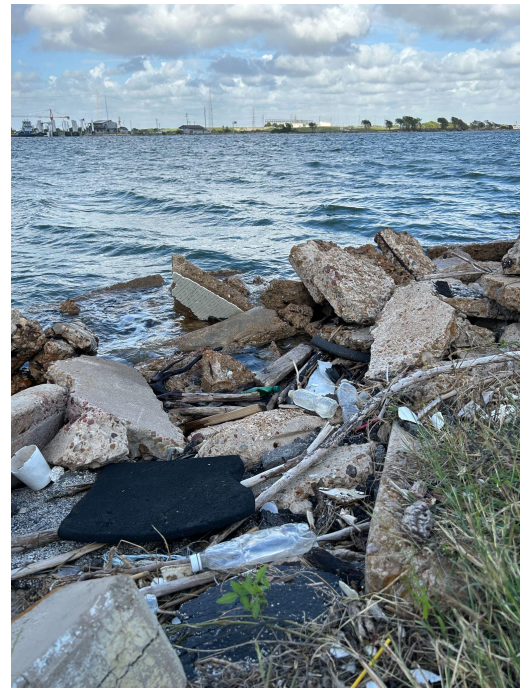


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Define Your Cleanup Area

Choose an area you want to learn more about, and identify a goal

- Select an area you want to learn more about - often, planning repeat samples over time (after weather events, high traffic times, etc) will give you the best possible data
- If you're looking to implement different infrastructure solutions, taking baseline data and post-data can help understand the efficacy of that solution, etc



Get Your Equipment



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Consider Cleanup and Data Collection Needs

- Trash Bags and Gloves
- Clip board, printed data sheet, pencil
- Litter grabbers
- Fish scale (to weigh trash)
- Optional: tarp, buckets or baskets (for sorting), onion bags (if collecting damp or water-logged trash)

Consider Safety

- If it will be difficult terrain, communicate to volunteers so they can wear proper attire for a safe cleanup



Pick Your Process



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Designated Sample Area

For this method, you'll catalog every single piece of trash collected in the sample area – works best for small areas, areas that aren't heavily littered (for capacity reasons), and can be any sample area you want to learn more about

Random Bag Sample

This method is best employed when conducting a cleanup at a very large area - instead of cataloging every single piece of trash, you select a few bags at random to catalog as a representative sample



Tally Your Data



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STOP Field Sheet

- One Page (front and back)
- 10 Categories (Plastics, Styrofoam, Metal, Glass, etc)
- Option for estimating fragments (ie, hundreds of styrofoam beads)
- Write-in option for notable item not listed in a category

Site name: _____

Date surveyed: _____

Contact name: _____

Contact email: _____

Scan this QR code for the online reporting form!



Type of Survey: ☐ Transect or ☐ Random bag sample **What was the transect distance/ area?:** _____

Weight of bagged trash: SURVEYED: _____ ENTIRE CLEANUP: _____ (Only needed if random bag sample)

Number of bags collected: SURVEYED: _____ ENTIRE CLEANUP: _____ (Only needed if random bag sample)

Circle if the following are visible from the survey site: ☐ Trash Can ☐ Recycling Bin **Is this an illegal dump site?** Yes ☐ No ☐

Examples: any "hard" plastic that is not styrofoam or plastic film

Item	ESTIMATED FRAGMENTS (Circle best choice)	1-25	26-100	101-999	Over 1000	Tally	Total #
6 pack rings							
Beverage Bottles/ Containers							
Bottle/ Container Caps							
Buoys and Floats							
Cigarette butts							
Cigar Plastic Tips							
Vape pens/ cartridges/ e-cigs							
Disposable lighters							
Fishing Lures and Line							
Food Containers							
Non-Food Containers							
Personal Care/ Hygiene Products							
Plastic Cup/ Plates							
Plastic Utensils							
Straws							
Plastic Rope/net pieces							
Plastic Toys							
Shotgun Shell/ Wad							
Writing Pens, Markers							
Other							

Hard and Solid Plastic

Examples: styrofoam cups, to-go boxes, insulation

Item	ESTIMATED FRAGMENTS (Circle best choice)	1-25	26-100	101-99	Over 1000	Tally	Total #
Styrofoam Cup/ Plates							
Fishing Buoy/ Floats							
Food Wrappers/ Containers							
Non Food Container							
Insulation							
Jug/ Containers							
Foam ear plugs							
Other							

Styrofoam

Enter your data at:  www.texaslitter.org

Examples: chip bags, clear wrappers, candy wrappers

Item	ESTIMATED FRAGMENTS (Circle best choice)	1-25	26-100	101-999	Over 1000	Tally	Total #
Abandoned Utility Fins							
Shopping/ Trash Bags							
Food or Drink Wrappers							
Non-Food/ Drink Wrappers							
Latex Balloons							
Mylar Balloons							
Personal Care/ Hygiene Products							
Large pieces of film							
Ribbon							
Other							

Plastic Films

Examples: any wearable object used to protect the wearer from illness

Item	Tally	Total #
PPE Disposable Gloves		
PPE Face Masks		
Other		

PPE

Examples: any MAN MADE products made from trees/ wood

Item	ESTIMATED FRAGMENTS (Circle best choice)	1-25	26-100	101-999	Over 1000	Tally	Total #
Cardboard Cartons							
Lumber/ Building Material							
Paper/ Cardboard/ Non Boxes							
Paper Bags							
Food Container/ Wrapper							
Other							

Paper/ Lumber

Item	ESTIMATED FRAGMENTS (Circle best choice)	1-25	26-100	101-999	Over 1000	Tally	Total #
Clothing							
Gloves (non rubber)							
Rope/ nets							
NON NYLON							
Towels/ Rags							
Shoes/ Shoe Tops							
Other							

Clothing/ Fabric

Examples: any metal including flat, aluminum, iron, tin, etc.

Item	ESTIMATED FRAGMENTS (Circle best choice)	1-25	26-100	101-999	Over 1000	Tally	Total #
Aerosol cans							
Aluminum Pail							
Aluminum/ Tin cans							
Crab/ Fish traps							
Metal Bottle Caps							
Metal Wire							
Shopping Cans							
Other							

Metal

Item	ESTIMATED FRAGMENTS (Circle best choice)	1-25	26-100	101-999	Over 1000	Tally	Total #
Beverage Bottles							
Jars							
Other							

Glass

Item	ESTIMATED FRAGMENTS (Circle best choice)	1-25	26-100	101-999	Over 1000	Tally	Total #
Flip flops/ Shoe soles							
Work (Thick) Gloves							
Tires							
Partial tires/ fragments							
Rubber Balls							
Other							

Rubber

Item	Tally	Total #
Regular Household Batteries		
Car/ Boat Batteries		
Lithium Batteries		
Biological/ Hazardous Waste		
Used Diapers		
Abandoned Boats/Vehicles		
Appliances		
Furniture		
Medical Waste/ Needles		
Construction Material		
Other		

Large/ Hazardous

Thanks for taking time to collect valuable data!

Tally Your Data



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In the Field? Or a Separate Location?

There are several options for tallying your trash count –

Tally As You Go – If you're doing a designated sample area, you can have 2-3 people picking up trash and calling out items to one person with a clipboard, who takes a tally of each item type as you go

Sort On-Site – Take the trash to a picnic table, or set up a tarp on the ground or another surface, dump out the trash and sort

Take It Home – If short on time, or conditions are rough (wind, rain, etc) you can take that bagged trash to a separate location and tally it after the cleanup takes place

Examples: any "hard" plastic that is not styrofoam or plastic film

Item	Tally	Total #
6 pack rings		
Beverage Bottles/ Containers		
Bottle/ Container Caps		
Buoys and Floats		
Cigar plastic tips		
Cigarette butts		
Disposable lighters		
Fishing Lures and Line		
Food Containers		
Fragments		
Non-Food Containers		
Personal care products		
Plastic Cups/ Plates		
Plastic Rope/net pieces		
Plastic Toys		
Plastic Utensils		
Shotgun Shell Casings		
Straws		
Other:		

Hard and Solid Plastic

Submit to the Texas Litter Database



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Enter Your Data Into the Texas Litter Database

Currently, reports can only be submitted via computer (not optimized for mobile devices)

Visit www.texaslitter.org

Select “Submit Data”

Select “Litter Sample Reporting”

www.texaslitter.org



Cleanup Reporting

Fill out this form to report large cleanup events to KTB.

[Enter Cleanup Data](#)



Litter Sample Reporting

A litter sample is a smaller portion of the cleanup that is carefully recorded using the STOP (Stop, Track, remove, and Prevent) method to track litter types, amounts, and trends over time. Submit this form if you recorded a detailed sample on individual trash items using this method.

[Enter Litter Sample](#)

Submit to the Texas Litter Database



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Enter Survey & Cleanup Details

Tip: Familiarize yourself with the report and the polygon mapping tool before going out in the field

- Contact Information
- Draw Cleanup or Survey Area on the Map
- Trash Volume and Weight Data
- Site Information
- Survey Results
 - Fragment Counts
 - Individual Item Counts



Poll: Where do you find more Styrofoam than the statewide average?

1. Waterways
2. Parks
3. Neighborhoods
4. Roads



Poll: Where do you find more Styrofoam than the statewide average?

Answer: Waterways

Source: [Texas Litter Database](#)

Current sample data shows that the total percentage of trash removed from waterway sites is composed of nearly 12% styrofoam (statewide average is 4%)



How Can You Use This Data?



Poll: What do you think is the most valuable use of litter data?

1. Identifying litter hotspots
2. Measuring cleanup impact
3. Understanding where litter comes from
4. Supporting funding decisions
5. All of the above



Poll: What do you think is the most valuable use of litter data?

Answer: All of the Above

Identifying litter hotspots, measuring cleanup impact,
understanding where litter comes from, supporting funding
decisions



Why Data Collection Matters



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We Can't Reach a Solution Without Understanding the Problem

- Tool for civic engagement - foster partnerships and collaboration between residents, volunteer groups, and organizations
- Track hot spots, where cleanups take place, and potentially identify gaps in those efforts
- Track trends over time, including measuring efficacy of any given solution
- Use the collected data for various reporting needs





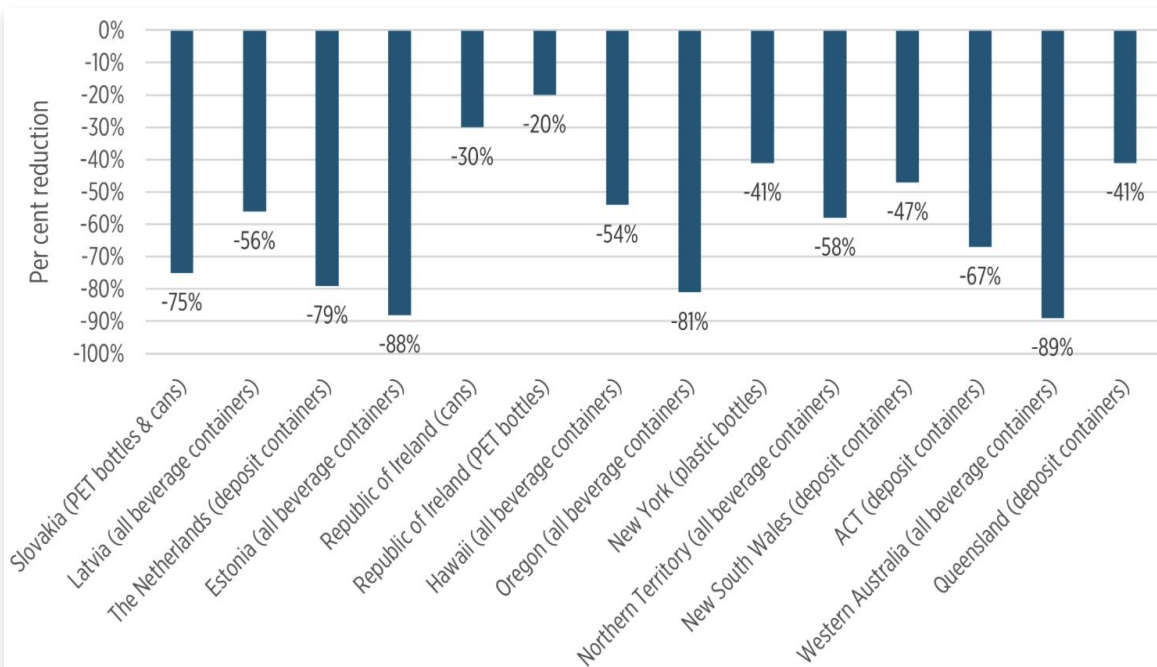
This problem has solutions.



Your data drives
action.

***Scan to help us
tell the story!***

Let's add Texas to the list!



*Resource Recycling,
2025*

Other Resources/Programs



Keep Texas Waterways Clean



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Open Year-Round

- Keep Texas Waterways Clean (KTWC) is a program to support the efforts of anyone in Texas cleaning up litter on a waterway - including coast, rivers, lakes, streams (even storm drains!)
- Supply kits are available to any organization who will commit to cleaning up a waterway within 30 miles of an H-E-B store (including Central Market, Mi Tienda, and Joe V's Smart Shop)
- Anyone receiving free supplies must report their litter cleanup data to the [Texas Litter Database](https://ktb.org/our-work/keep-texas-waterways-clean)



<https://ktb.org/our-work/keep-texas-waterways-clean>
L

2026 Pilot: EPA Making WAVES Campaign



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Testing a Scalable Training Model

In 2025, Keep Texas Beautiful received an EPA grant to conduct a statewide high school art contest raising awareness of the issue of litter flowing to the Gulf. Through this project, Keep Texas Beautiful is exploring how environmental messages influence real-world action to prevent litter and reduce plastic pollution in Texas waterways.

<https://ktb.org/our-work/making-waves/>



Making WAVES



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Year 1: Behavior Change Research

Year 2: Statewide Educational Art Contest

Year 3: WAVES Cleanups and Litter Data

<https://ktb.org/our-work/making-waves/>

MAKING WAVES PROCESS WAVES Project Components

Behavior Change Research

Utilizing focus groups of youth across the state of Texas to get a pulse for their perception of waterway litter



Statewide Educational Art Contest

Creating educational resources to promote an art contest statewide based on the areas identified in the focus groups



Cleanups and Litter Data

Hosting WAVES Waterway cleanups and tracking data throughout the 3 year process to identify growth



Questions?



Thank You!



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From Cleanup to Contribution

- Individuals aren't just volunteers - they're data contributors
- Scaling participation scales impact

Help us grow the Texas Litter Database by submitting a cleanup report, completing a litter sample, and more!

Contact: kirsten@ktb.org

