

# Waste Report 2023

## Waste Audit and Community Compost Program



## Purpose

Since 2019, Hudson River Park (the Park) has been committed to its Park Over Plastic initiative, which was implemented to reduce single-use plastics and educate the community about plastic pollution. The Park has taken many steps to improve and encourage proper recycling throughout its bounds, including increasing the number of waste bins and strategically pairing trash and recycle bins with signage. To determine the effectiveness of these waste management methods, a yearly Waste Audit is conducted. In addition to plastic waste, the Park composts food scraps and horticulture waste to further its sustainability goals. Hudson River Park's Community Compost Program welcomes food scraps from local residents at 10 drop-off locations throughout the Park which are then processed into compost and distributed to plant beds.

## Project Goals

- Operate and maintain 10 community compost drop-off sites.
- Process food scraps and horticulture waste into compost to support plant health and Park sustainability.
- Manage over 100 landfill and recycling bins.
- Streamline waste metrics, increase recycling, and improve waste management capacity.
- Engage and educate the community through programs, resources, and volunteer opportunities.



**Fig. 1** | Community member utilizing updated food scrap drop-off bins installed in 2022.



**Fig. 2** | Hudson River Park staff performs a waste audit by analyzing contamination in landfill and recycling bags.

## Waste Audit Methods

Over two days, one recycling and one landfill bag were collected from each of 13 pre-determined sample sites in the Park and analyzed as follows:

- Full bags are weighed in total
- All non-organic material is removed and categorized (e.g., plastic utensils, straws, beverage bottles, etc.)
- Each item's resin identification code (RIC) is noted, and total category weights are taken
- Contaminants from each bag are noted (i.e., recyclables are contaminants in landfill bags and non-recyclables are contaminants in recycling bags.) as well as any unique plastic alternatives or common brands
- Liquid is collected in a bucket to be weighed and recorded at the completion of each bag

**Fig. 3 |** Plastics are sorted by resin identification code (RIC) during Waste Audit.



## Composting Methods

- Horticultural waste is collected by staff during daily maintenance of the Park's landscape, primarily carbon-rich material
- Food scraps are brought by community members to the 10 drop-off locations throughout the Park, primarily nitrogen-rich material
- All organic waste is transported to the Park's Compost Center on 33<sup>rd</sup> street where it is weighed and processed in the Park's EcoRich Rapido 2000 industrial composter
- Volunteer groups support maintenance in the Compost Center
- Compost is ready in approximately one to two months and returned to plant beds in the Park

**Fig. 4 |** Horticultural waste is mixed with community pumpkin donations during the annual Pumpkin Smash.



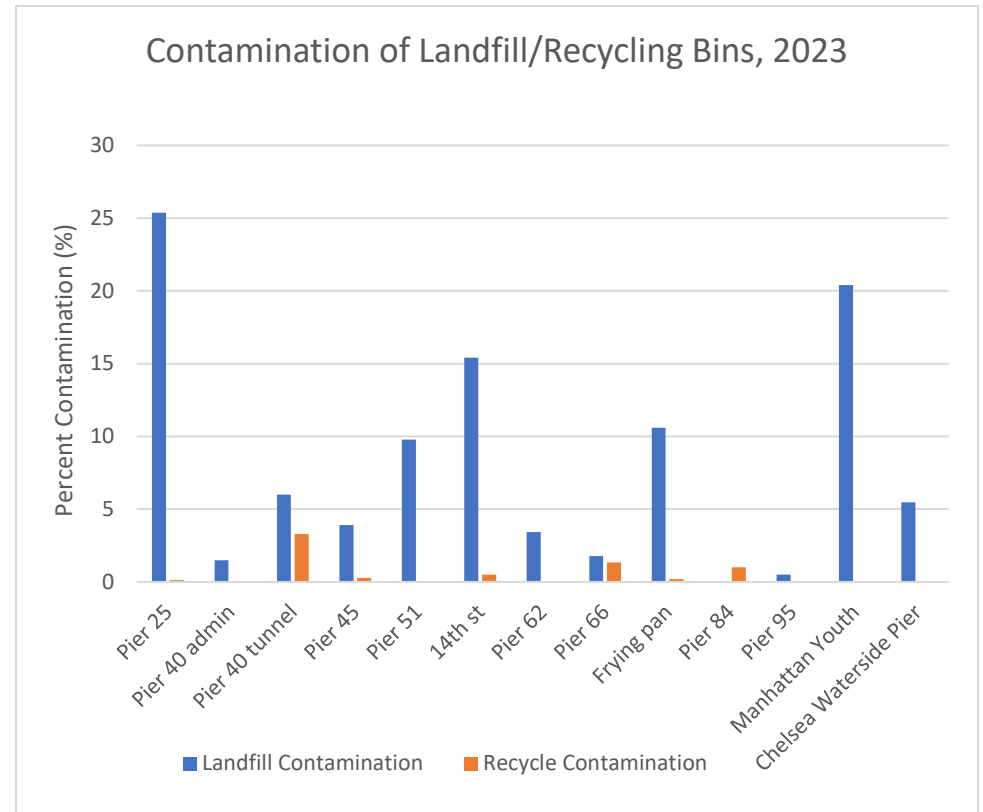
# Major Findings

## Waste Audit

The Pier 25 Landfill bin had the highest rate of contamination, with 25% of its weight being made up of recyclable materials. Manhattan Youth had the second highest, at 20%. However, there was a notable 58% decrease in rate of contamination for Manhattan Youth compared to 2022.

The Pier 40 Tunnel Recycling bin had the highest rate of contamination with 3% of its weight being made up of non-recyclable materials. Pier 66 boathouse had the second highest at 1%. However, this is a 1% decrease in rate of contamination compared to 2022 where Pier 66 boathouse had the highest rate of contamination with 2%.

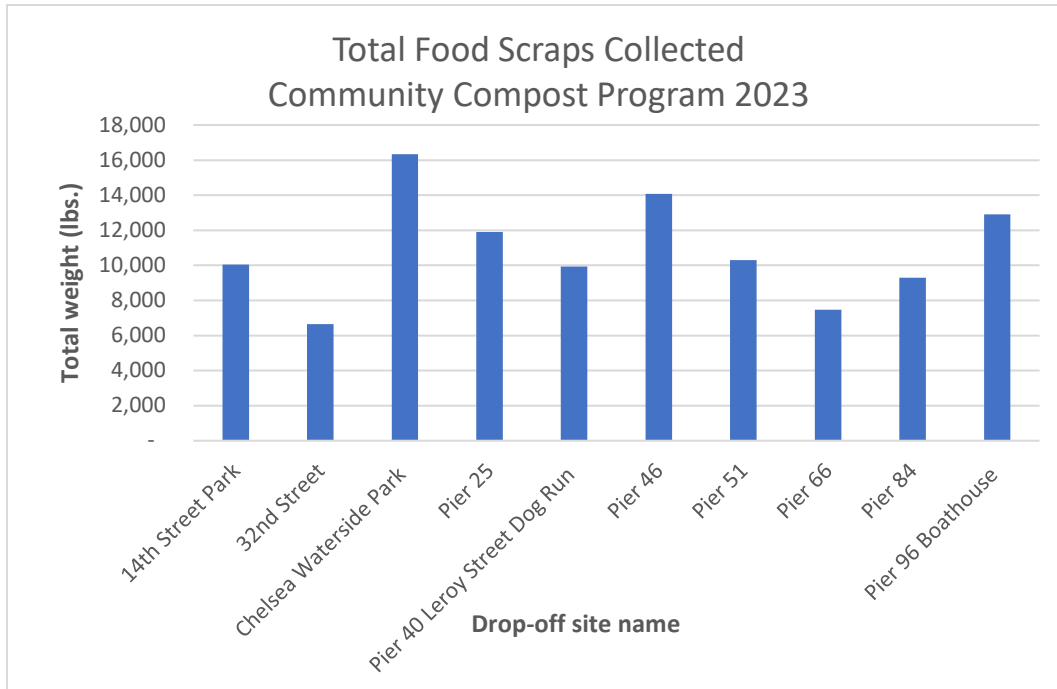
Overall, there was an average of 8% landfill contamination and 0.5% recycle contamination across all sites supporting consistently lower rates of recycling contamination than landfill contamination. Furthermore, average landfill contamination dropped 9.46% compared to 2022 while average recycling contamination increased 0.21% although it is important to note there were more sites with 0% recycle contamination in 2023.



**Fig. 5 |** Percent of contamination at each site. (Landfill contamination is recyclables in trash bins and recycle contamination is non-recyclables in recycle bins.)

**Community Compost**

As of November 17, 2023, the Park’s Community Compost program has composted 108,930 lbs. of food in 2023 alone and 416,400 lbs. in total since its inception in 2018. This is a combination of collections from all 10 public drop-off locations, Pier 40 offices, boathouses, and Pumpkin Smash. Of the 10 drop-off sites, Chelsea Waterside Park, Pier 46, and Pier 96 Boathouse were the top three contributors, with a combined total of 43,335 lbs. of food scraps. 2023 marks the third consecutive year of Chelsea Waterside Park’s top contribution.



**Fig. 6** | Total weight of food scraps in pounds collected across 10 drop-off sites in Hudson River Park, arranged South to North from left to right.



**Fig. 7** | Map of Community Compost Program drop-off sites in Hudson River Park. Size of circle is relative to amount of community compost has been collected at each site.

## Takeaways

The results of the waste audit suggest that Park users' recycling habits are generally improving but are dependent on accessibility to bins. The highest recycling contamination sites in 2022 and in 2023 had only one bin with clear labeling accessible to the public to dispose of all waste. This suggests that pairing labeled trash and recycling bins together may help park goers recycle more. Nonetheless, six out of 13 sites had zero landfill/non-recyclables in their recycling bins showing marked improvement from last year.

Total compost weight continues to rise over the years, demonstrating that locals are increasingly utilizing the Park's drop-off bins to dispose of food scraps. Each year, June is noted as the month with the greatest amount of compost collected. June 2023 marked an all-time high in the amount of compost collected in a single month at 12,300 lbs. The annual Pumpkin Smash's increasing trend in attendees shows that community members are interested in supporting and participating in Park composting events with 1752 attendees at this year's Pier 84 event, more than double the number of attendees from last year.

## Future Directions

The evolution of Park Over Plastic and the Community Compost Program has shown tremendous progress towards the goal of a low-waste Park. The waste audits and ongoing tracking provide a positive outlook for the further evolution of both programs. The Park hopes to continue to improve in waste education and management by adding more signage in the park and by paired landfill and recycling bins informing park goers more clearly of the different types of plastics that are and are not recyclable. Additionally, implementing more community education events, like Pumpkin smash, can help community members learn how to be proactive about waste sustainability in Hudson River Park.

## WasteShark

Since 2015, Hudson River Park has utilized the NOAA marine debris protocol and the help of community volunteers to collect and dispose 2,700 lbs. of marine debris at the Gansevoort Peninsula. One common obstacle faced during cleanups is the accumulation of debris a few feet too far from the shoreline to safely reach. This obstacle can be tackled with the help of the WasteShark: a compact marine drone designed to collect macroplastics and debris from water with zero carbon emissions. The addition of the WasteShark will help grow the impact of the community shoreline cleanup by increasing the amount of debris collected and serving as an educational tool for the public. We hope this kind of engagement will in turn encourage park goers to continue to make informed decisions regarding their trash and recycling habits within the park and at home. In October of 2023, the park conducted its first WasteShark trial at Gansevoort Peninsula, with regular use planned for 2024 as a valuable compliment to the Park Over Plastic initiative.



**Fig. 8** | The WasteShark during a shoreline cleanup trial off the southern shoreline of Gansevoort Peninsula



**Fig. 9** | Hudson River Park staff sorting trash and recycling collected by the WasteShark