

## 2019 PROGRESS REPORT

September 2018 - September 2019



**ZERO  
STARTS WITH  
ONE**

CITY OF PHILADELPHIA  
ZERO WASTE AND LITTER CABINET

ONE PERSON. ONE COMMUNITY.  
ONE BUSINESS. ONE CITY.



# Zero Waste & Litter Cabinet

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## Glossary

CLIP: Community Life Improvement Program

L&I: Department of Licenses and Inspections

MDO: Managing Director's Office

ODDT: Office of Data and Digital Transformation

OIT: Office of Innovation and Technology

PPD: Philadelphia Police Department

PPR: Philadelphia Parks & Recreation

PWD: Philadelphia Water Department

OOS: Office of Sustainability

KPB: Keep Philadelphia Beautiful

SEPTA: Southeastern Pennsylvania Transportation Authority

# Executive Summary

The release of the 2019 Zero Waste and Litter Cabinet Progress Report marks just over two years since Philadelphia's Zero Waste and Litter Action Plan was released. We are proud to report that, since that time, the Cabinet has accomplished every initiative set forth in the original Zero Waste road map. This includes developing and conducting two years of City-wide Litter Indexing and completing 71% of the initial litter enforcement and cleaner public spaces recommendations, with another 16% in progress and only 13% remaining to address. Some highlights of these recommendations are the implementation of a comprehensive illegal dumping enforcement and prevention strategy, development of systems to increase trash can coverage and improve trash can maintenance, and better use of data to drive these strategies.

This work has not been without its challenges. As stated in the 2018 Progress Report, the Cabinet developed its Zero Waste strategy during one of the most tumultuous periods in the history of recycling. The amount of money we now must pay to manage recycling was one of the driving factors in the discontinuation of the Philacycle Program. However, during this time period the City also brought on a new Recycling Director and Recycling Office staff, a new recycling contract, and multiple exciting projects to expand access to composting in Philadelphia. An increase in the city's population and subsequent development, while great for the city's growth, has also fueled increases in household and pedestrian littering as well as illegal dumping of construction debris. We are confident, though, that our litter enforcement and cleaner public spaces strategy will ensure that the waste resulting from this growth is managed in a way that limits the impacts of waste and litter on our communities.

We are preparing for an exciting 2020 as we embark on the Thriving Cities Initiative pilot with our public and private sector partners in Philadelphia, with direction from C40, Circle Economy, and Doughnut Economics Lab. This initiative will challenge us to strategize how to create a thriving city that can reduce its waste and consumption, a particularly challenging endeavor in a city with a 24.5% poverty rate. The Cabinet will also continue to implement and measure its illegal dumping and anti-litter strategies to ensure Philadelphia continues on the path to becoming a cleaner city.

Governments, innovators, businesses, and engaged citizens across the world are mobilizing to create cleaner, less wasteful cities because we can no longer go down the path of making, taking, and then trashing. Creating a thriving, lower-waste economy is a defining challenge for societies in the 21st century, and Philadelphia is proud to be at the forefront of developing solutions.

*The Zero Waste and Litter Cabinet has accomplished every initiative set forth in the original Zero Waste road map set for the city in its 2017 Zero Waste and Litter Action Plan. This includes developing and conducting two years of City-wide Litter Indexing and completing 71% of the initial litter enforcement and cleaner public spaces recommendations, with another 16% in progress and only 13% remaining to address.*



# Waste Reduction & Diversion

The 2017 Zero Waste and Litter Action Plan provided a roadmap for developing the structure used to define and evaluate Zero Waste in Philadelphia. In this section, we revisit the original goals set forth for Zero Waste, explore the ways we have instituted these goals into our municipal, residential, commercial, and tourism sectors, and discuss how we measure the effectiveness and success of these programs.







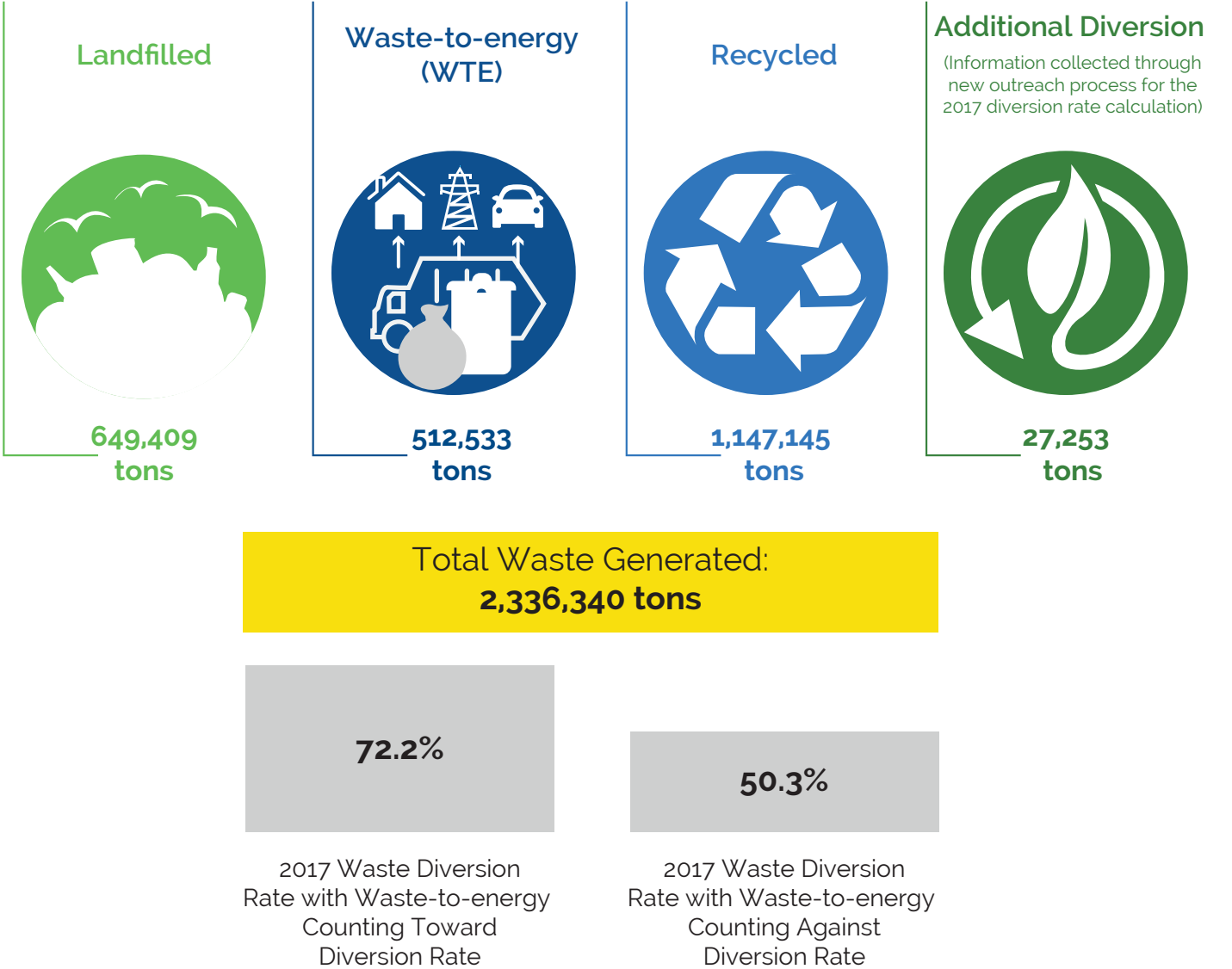
# City-wide Waste Diversion Calculation

*Waste diversion rate—a measure of the amount of waste diverted from the trash through practices such as source reduction, recycling, reuse, and composting—is a standard metric of progress toward Zero Waste.*

In the 2017 Zero Waste and Litter Action Plan, the Cabinet shared its strategy for capturing information about the city's waste stream beyond data for trash and single-stream recycling that has not been included previously in City waste diversion rate calculations. The Cabinet utilized a new set of materials and processes to build a database of local haulers, recycling facilities, donation facilitators, and City operations that handle waste. In its 2017 Action Plan, the Cabinet lists waste-to-energy as a waste diversion process. However, the City will now no longer include incineration (with or without conversion to fuel energy) as a waste diversion process within its city-wide waste diversion calculation. The City uses the U.S. Environmental Protection Agency's definition of waste diversion, which includes processes such as recycling, reuse, and composting and excludes processes such as disposing in landfills and incineration with or without conversion to fuel energy.

During the summer of 2018, entities included in this database were contacted and asked to report on the weight of material they handled in 2017. The information collected was compiled in a database, where the City is tracking Philadelphia's waste diversion activities. A number of entities provided information on the amount of material they handled in 2017, and this process and additional information allowed us to gain new insights on waste management practices in the city.

# 2017 Philadelphia Waste Generation & Waste Diversion Rate Calculation



This new, more comprehensive measurement of Philadelphia’s waste diversion rate and yearly benchmarking will allow the City to identify gaps in capacity to divert specific materials and consider different options to determine the most effective strategies for minimizing waste and advancing toward the City’s Zero Waste goal.





## 2018 Waste Diversion Highlights

**4,062.7**

**tons of organic materials**

like yard waste, leaves, and wood chips were composted at Philadelphia Parks & Recreation's Fairmount Park Organic Recycling Center.

**4,752**

**pounds of donated food**

were recovered through Philadelphia Parks & Recreation's partnership with the MEANS Database food recovery program.

**14,041.5**

**tons of material**

were recycled by the Philadelphia School District.

**14,634**

**tons of solid waste material**

were recycled at SEPTA, including 13,268 tons of clean rubble, 466 tons of wood waste, and 36 tons of clean paper.

**8,479\***

**tons of recyclable material**

were removed from local waterways through the Philadelphia Water Department's Litter and Floatables Control Program and related activities such as waterway cleanups with local partners like United by Blue, Friends of the Wissahickon, and the Tookany/Tacony Watershed Partnership Trash Task Force.

\*This number is for fiscal year 2018.



## Zero Waste Events

After the mandating of recycling at city events and first full season of Zero Waste Events in Philadelphia in 2017-2018, we continued to work with our partners at the Managing Director's Office (MDO)'s Special Events Office, Philadelphia Parks & Recreation (PPR), the Streets Department, and Philadelphia's Office of Sustainability (OOS) to offer Zero Waste services to Philadelphia event organizers in 2018-2019. Zero Waste services offered to event organizers included composting services, guidance on procuring reusable materials, and assistance with recruiting and managing volunteers to help with educating attendees on which materials belong in trash, recycling, and compost bins. From September 2018 to September 2019, nine events utilized Zero Waste services offered by the City.

The Philacycle Program was discontinued June 30, 2019 due to the rising costs of recycling and other industry challenges. Because the Philacycle platform was the main volunteer recruitment and management platform for Zero Waste Events, the Cabinet and its partners had to temporarily suspend Zero Waste Event management for any event that could not provide its own volunteers to manage the three-bin waste systems. However, we are continuing to work with event organizers that can manage their own Zero Waste volunteers for the remainder of 2019 and are in the process of rebuilding volunteer and event management platforms so that we may resume supplying Zero Waste Event volunteers for the 2020 events season.

## Zero Waste Events Waste Diversion Rates for September 2018-September 2019:

**88.43%**

2018 Philadelphia Marathon  
Weekend (11/17/18-11/18/18)

**88.89%**

Philadelphia Parks & Recreation  
(PPR) Holiday Party (12/23/18)

**23.45%**

2019 Broad Street Run (5/5/19)

**40%**

Kensington Derby and Arts Festival  
(5/11/19)

**50%**

Pizzadelphia Pizza Festival (6/15/19)

**63.02%**

Clean Air Council Greenfest Philly  
(9/8/19)

**75.79%**

Mount Airy Village Fair (9/8/19)

No waste diversion information  
reported by event organizer for  
Edison High School Earth Day  
(4/25/19) or Philadelphia Science  
Festival (4/28/19).



## Municipal Building Waste Audit

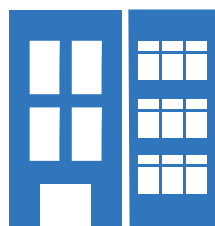
When it comes to recycling and other practices that divert waste away from the trash, municipal agencies should not only comply, they should lead by example. In 2017, the Cabinet launched the Municipal Building Waste Audit Program to benchmark waste management practices at City-owned facilities, uncover issues and gaps in the City's internal waste management operations, and provide City departments with tools, resources, and support to help them minimize waste at their facilities. The program requires all City-owned facilities to submit a waste audit form annually to report on which materials the facility generates, the waste haulers servicing the facility, and any waste-related challenges. Following observations and recommendations from the 2017 waste audit, new improvements were made to the reporting form for the 2018 waste audit. Additionally, the City's leased properties were required to participate in the waste audit along with City owned-and-operated facilities for the first time in 2018. As a result of these

changes, we are better able to separate and analyze data from the annual waste audit and the optional monthly Zero Waste reporting forms, and we are receiving more comprehensive waste and recycling data from a greater variety of City properties.

One question included on the yearly Municipal Building Waste Audit form focuses on waste and litter-related challenges that City departments are experiencing. A tally of the responses to this question for the 2018 Waste Audit across all participating departments and agencies is shown in the graph on page 10. The most common challenges cited by City departments included: educating staff and facility users on proper recycling practices and/or need for recycling signage; recycling schedule uncertainty and/or need for additional recycling pickups; need for assistance with waste reporting; need for additional recycling bins; and no recycling collection.

## 2018 Municipal Building Waste Audit by the Numbers

**523**



Number of  
Buildings Identified  
to Participate

**394**



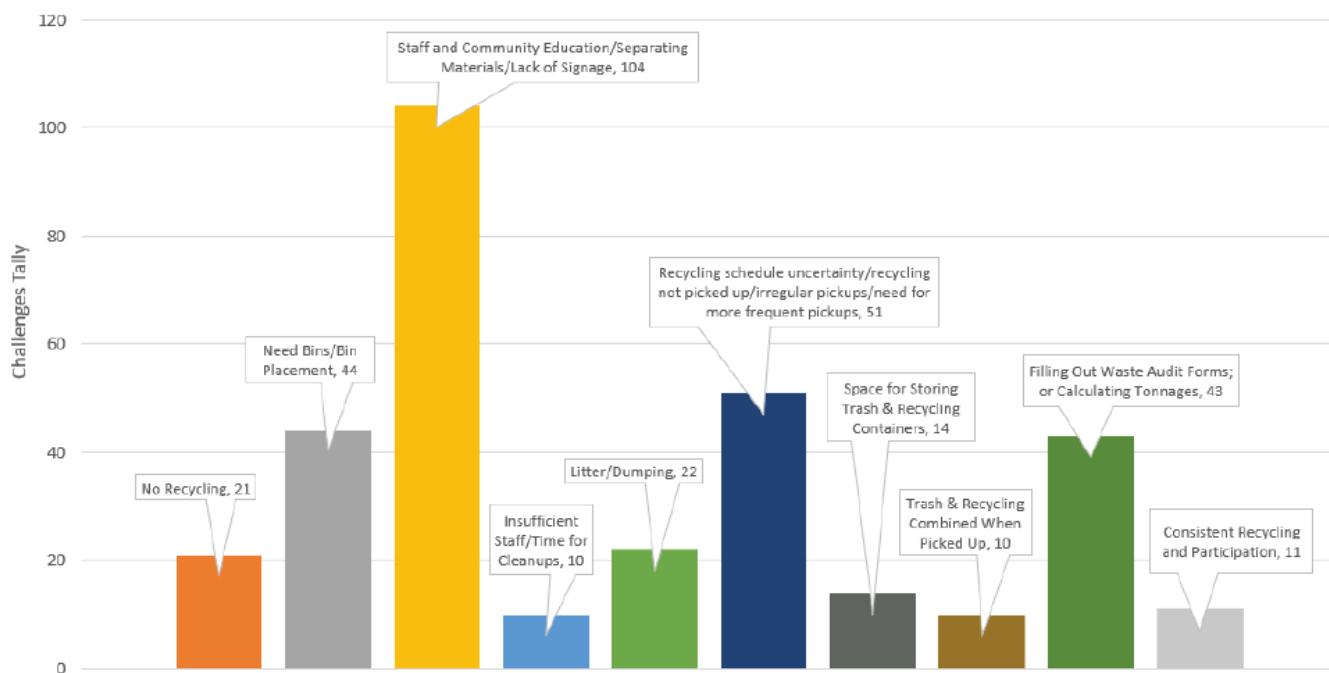
Number of  
Buildings That  
Submitted a Yearly  
Waste Audit Form

**75%**



Overall Submission  
Rate Across All  
Departments/  
Agencies

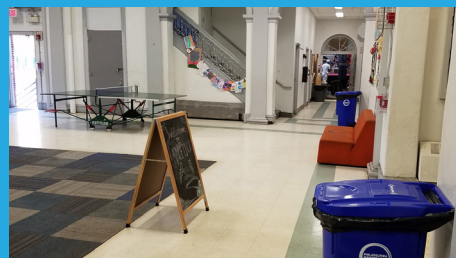
## Top 10 Waste & Recycling Challenges City-wide - 2018



The most common challenge at municipal buildings noted in the 2018 Waste Audit was staff and community education and/or a lack of recycling signage, leading to issues with separating materials and recycling stream contamination. Other commonly noted challenges included recycling schedule uncertainty, recycling bin placement, and filling out reporting forms.

## Expanding Recycling at Philadelphia Parks & Recreation Sites

In efforts to reduce overall waste and increase its department's waste diversion rate, PPR is continuing to expand its outdoor recycling operations. In 2017, PPR began equipping its facilities with recycling bins and pickups. As of this report's publication, 100 parks and recreation centers have joined the program with their own recycling capabilities, including sites in PPR Operations Districts 2, 3, 4, 6, and 7.





The Cabinet has provided each participating City department with specific recommendations to address their waste and recycling challenges. We additionally encourage facilities to contact us throughout the year with any challenges so that we can help to address them. In 2018, another question was included on the yearly Municipal Building Waste Audit form for the first time asking respondents whether there are new materials they generate at their facilities for which they would like to identify ways to divert from the trash. The most listed material was food waste, with 135 sites listing that as a material they are interested in diverting. Other commonly listed materials were yard and leaf waste (81 sites), plastic bags (65 sites), unopened packaged food (34 sites), and clothing (32 sites).

Zero Waste and Litter Cabinet staff are now working to make sure City department staff are aware of recycling, donation, and composting options for these materials. The Cabinet has started to look into new diversion options for certain materials where necessary and will continue to engage with City departments to identify strategies for diverting more waste away from the trash and share best practices. The Cabinet sent reports detailing the findings from the 2018 Waste Audit to leadership and staff from each participating department and will be presenting the findings to departments that request it.

*Three City buildings—City Hall, One Parkway Building, and the Municipal Services Building—installed hydration stations as part of a pilot program to improve access to and the appeal of tap water while lowering the use and purchasing of plastic water bottles and curbing associated carbon emissions. This project was funded through the Philadelphia Office of Sustainability's Greenworks Sustainability Fund, which supplies funding to departments for sustainability projects in City-owned buildings.*

## City Zero Waste Partners: Monthly Reporting Insights

City facilities have the option to go above and beyond the requirements of the Municipal Building Waste Audit and pursue Zero Waste in their buildings by becoming Zero Waste Partners and tracking and reporting their waste generation each month. By tracking waste generation over time, facility operators are able to identify gaps in waste management practices. The Cabinet is then able to use this valuable data to help City departments identify opportunities to reduce waste and divert materials away from the trash through practices like recycling, donation, and composting. 50 City-owned buildings are currently participating in this effort by tracking and reporting on their monthly waste generation.



We are looking forward to continuing the yearly Municipal Building Waste Audit and using the data collected through the audit to troubleshoot waste and recycling issues and connect City department staff with tools and resources to help them minimize waste at their facilities. This program exists alongside efforts to benchmark commercial waste management practices through the requirements of the City's Commercial Waste Report, and incentivize commercial properties to implement sustainable waste management practices through the Zero Waste Partnership Program. Together, these initiatives will lead to a better understanding of waste management practices across Philadelphia, allowing for the development of data-driven policies and programs that support waste reduction and diversion in Philadelphia.

## Commercial Waste Report

To expand and adapt the Municipal Building Waste Audit Program to the commercial sector, the Streets Department and Cabinet redeveloped the City's Commercial Recycling Plan into a new Commercial Waste Report. The Report is a more comprehensive version of the previous form, and buildings now have the opportunity to report on their waste management practices for multiple waste streams. Commercial properties in Philadelphia are required to submit a Commercial Waste Report each year.

The new system was designed using feedback from stakeholders and is now more streamlined and user-friendly. Additionally, property owners are now required to report annually, which eliminates confusion surrounding submission due-dates experienced with the previous form. To help commercial properties navigate these changes, a new Streets Department webpage and a Commercial Waste Report Guide were created. The Streets Department will continue to reach out to commercial property owners in Philadelphia to improve awareness of and compliance with the new requirements.

The image shows a web interface for the City of Philadelphia's Commercial Waste Report Portal. At the top, there is a blue header with the City of Philadelphia logo on the left and the text "Commercial Waste Report Portal" on the right. Below the header, there is a light gray search box. Inside the search box, the text "Search your business by street address (eg. 1234 Market St.) or by OPA# (9 Digits)" is displayed. Below this text is a white input field with the placeholder text "Street Address or OPA #". At the bottom of the search box is a blue button with the word "SEARCH" in white capital letters.

## Zero Waste Partnership Program

Launched in the fall of 2018, the Zero Waste Partnership Program is a new way for the City to collaborate with local businesses and organizations on achieving Zero Waste in Philadelphia. Partners report on their Zero Waste practices, including Zero Waste Actions and monthly waste diversion rates. Not only does this program encourage Zero Waste practices throughout the city, but it encourages knowledge sharing between the City and Zero Waste Partners: the Partnership gives the City access to waste diversion data and gives Partners the opportunity to share their best practices with the City and influence future goals. Partners also earn special incentives for implementing Zero Waste practices, such as eligibility for the Sustainable Business Tax Credit and exclusive marketing tools from the City. All businesses, institutions, nonprofits, and community organizations in Philadelphia are eligible to participate. Zero Waste Partners can achieve various tiers of Partnership based on the number of Zero Waste Actions achieved and their monthly waste diversion rate. Any property that submits a Zero Waste Partnership form monthly and completes Zero Waste Action #1 can become a Partner.

# Zero Waste Partnership Program Tiers



The Zero Waste Partnership Program has three tiers: Partner, Silver, and Gold. Any business or organization in Philadelphia can achieve status as a Zero Waste Partner, Silver Partner, or Gold Partner. Each tier corresponds with achieving a certain level of waste diversion and implementing Zero Waste practices.

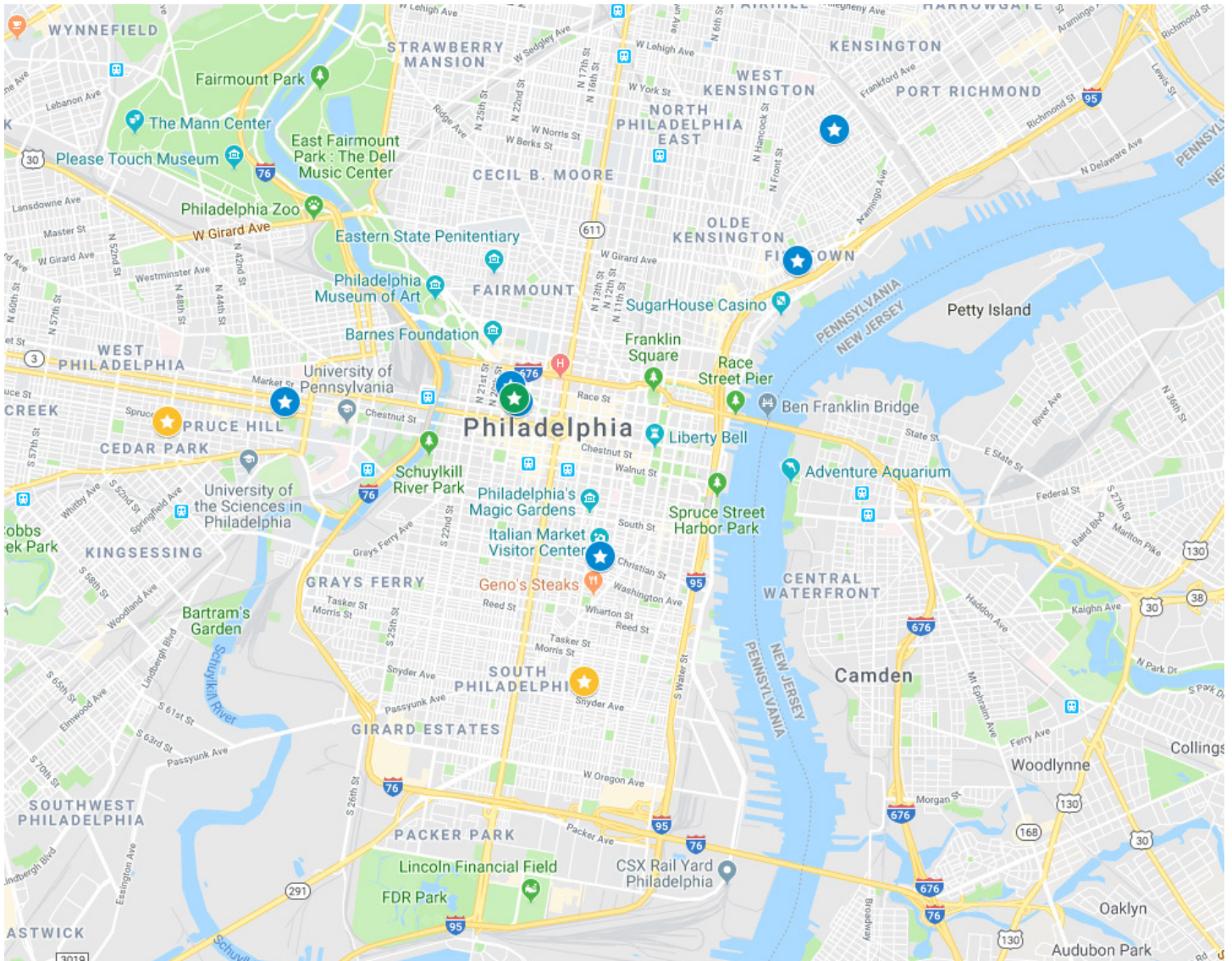
## Zero Waste Partnership Program - Zero Waste Actions

- 1**  
Implement the actions and initiatives required by the City's waste and recycling ordinances
- 2**  
Perform a comprehensive waste audit
- 3**  
Implement a composting program
- 4**  
Donate excess food, stock, and/or supplies to special materials collection services; or, host special materials collection events
- 5**  
Use or promote the use of recyclable, compostable, and durable materials
- 6**  
Implement a sustainable product purchasing program
- 7**  
Communicate electronically – instead of on paper – whenever possible
- 8**  
Purchase or obtain gently-used workplace furniture or other reclaimed materials for your workplace
- 9**  
Incorporate Zero Waste training into new team member orientation and incentivize participation in achieving Zero Waste goals
- 10**  
Adopt an in-house Zero Waste goal and nominate a Zero Waste Program Coordinator



## Early Adopters & Their Zero Waste Accomplishments

Eight Philadelphia businesses and organizations have joined the Zero Waste Partnership at various tiers. As of August 2019, there are five Partners, one Silver Partner, and two Gold Partners. The Partners come from various industries and represent several neighborhoods across the city, from a guitar shop in Fishtown, to an art studio in South Philly, to three highrises in Center City. You can spot Zero Waste Partners in the community by looking for the official Zero Waste Partnership seals. An interactive map of all Partners around the city can be found at [CleanPHL.org/ZeroWastePartnership](http://CleanPHL.org/ZeroWastePartnership).



Zero Waste Partners are given decals that show their Partnership Status: either Partner, Silver, or Gold. Partners are encouraged to post these decals in their storefront or office window so that patrons know that they are a Zero Waste business.

## Current Zero Waste Partners

### Zero Waste Partners:



#### **Anthony's Italian Coffee & Chocolate House, Inc.**

903 S 9th St., Philadelphia, PA 19147

*Partner Status since July 2019*



#### **DiPinto Guitars**

407 E. Girard Ave., Philadelphia, PA 19125

*Partner Status since January 2019*



#### **Greener Little Seeds, LLC**

2534 Amber St., Philadelphia, PA 19125

*Partner Status since May 2019*



#### **One Logan Square**

130 N. 18th St., Philadelphia, PA 19103

*Partner Status since January 2019*



#### **Three Logan Square**

1717 Arch St., Philadelphia, PA 19103

*Partner Status since January 2019*



#### **University City District**

3940 Chestnut St., Philadelphia, PA 19104

*Partner Status since March 2019*



#### **Two Logan Square**

100-20 N. 18th St., Philadelphia, PA 19103

*Silver Status since January 2019*

### Zero Waste Silver Partners:



#### **Remark Glass**

Bok B08, 1901 S. 9th St., Philadelphia, PA 19148

*Gold Status since June 2019; Partner since Jan. 2019*



#### **Simply Good Jars**

310-18 S 48th St., Philadelphia, PA 19143

*Gold Status since May 2019*

### Zero Waste Partners: DiPinto Guitars



DiPinto Guitars, located in the Fishtown neighborhood of Philadelphia, is Philly's Zero Waste guitar shop. The Cabinet met with the owners of DiPinto Guitars in summer 2019 to discuss their Zero Waste achievements and goals. DiPinto Guitars has long acted as a donation hub for used guitars and repairs these guitars for use by local music programs, ensuring the community's instruments never go to waste. Additionally, they are looking into becoming an instrument string recycling hub through the D'Addario and Terracycle "Play Back" partnership.

### Zero Waste Partners: Remark Glass



Remark Glass was the City's first Zero Waste Partner. Since the start of the Partnership, Remark has climbed each tier of Partnership, achieving Gold Status in June 2019. Remark has built Zero Waste into its business model from the beginning. The business collects used glass bottles from local bars and community members, which it uses to create unique, handmade glass pieces. As a result, 100% of their primary input is "upcycled." Elsewhere in its business model, Remark uses durable and recyclable products, including reclaimed and recycled packaging materials when possible.





## Future Goals

The Cabinet looks forward to continuing to promote and expand the Zero Waste Partnership Program. Our goal is to grow the Partnership into a group of diverse organizations and businesses actively engaged in Zero Waste efforts and for the program to eventually become self-promoting as a prominent local certification. We think that the program can serve as a model for other cities seeking to incentivize and recognize Zero Waste efforts in their own commercial sectors.





## Composting & Food Recovery

The City of Philadelphia's Greenworks Sustainability Plan and Zero Waste and Litter Action Plan call for expanded opportunities for residents to compost organic waste. Diverting organic materials away from landfills and incinerators is a crucial part of Philadelphia's commitment to Zero Waste. Composting not only helps keep organic matter out of landfills where it creates harmful greenhouse gas emissions that contribute to climate change, but also converts waste into valuable soil amendments, keeps material in a local closed-loop system, and engages communities through participation and education.

### Urban Composting Permit

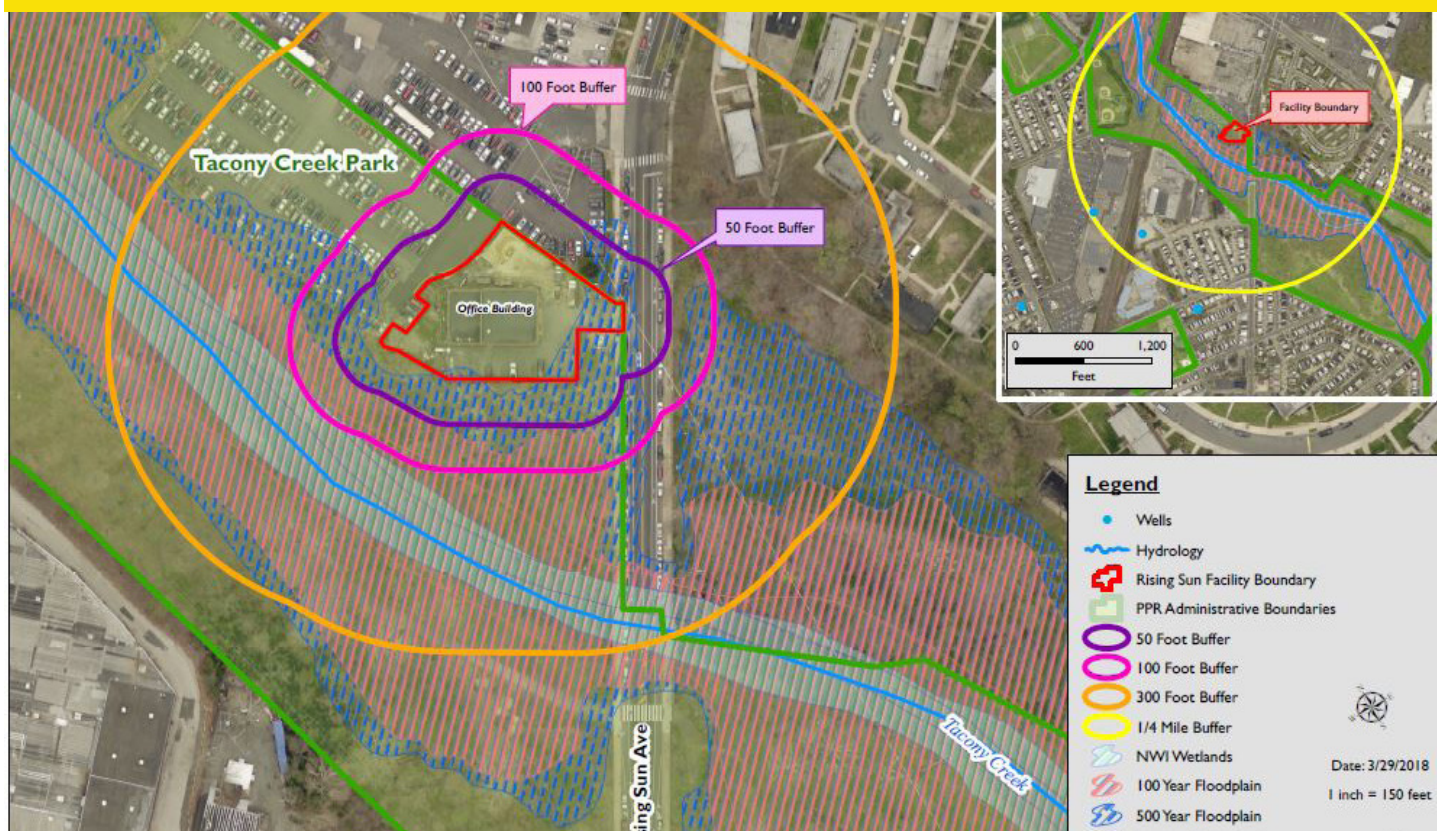
The Cabinet conducted an assessment of the possibilities for composting in Philadelphia and identified that a major roadblock to building city-wide composting capacity is the lack of state-level permitting for composting in dense urban areas in Pennsylvania. To remove this roadblock, the Cabinet established a partnership with PPR, OOS, PA Department of Environmental Protection (PADEP) and PA Recycling Markets Center (PRMC) to create a demonstration project for the state's first urban composting permit.

PPR identified its Operations District 3 Maintenance Facility at 5650 Rising Sun Avenue as the site for this project due to its size, layout, and the fact that the staff working at the site would be moving to a new facility in 2019.



# Rising Sun Facility - Composting Pilot

## Sitting Criteria Map



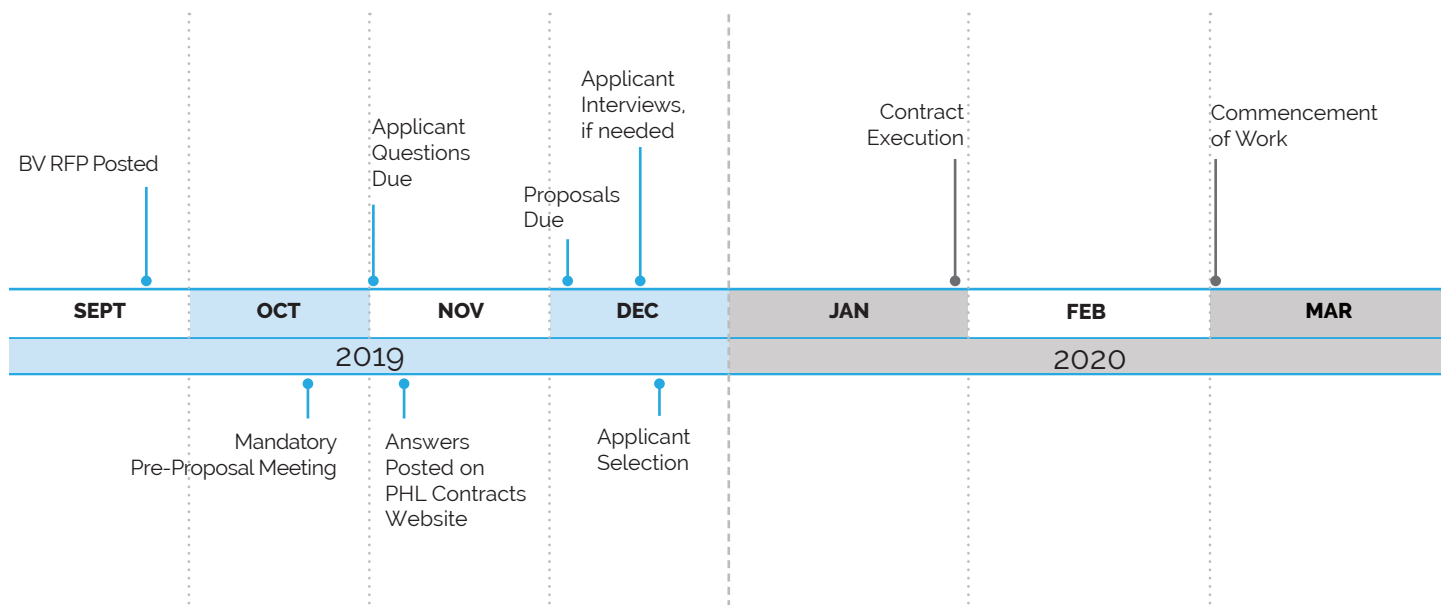
Once the site was selected, the Cabinet worked with project partners to develop a demonstration permit to be submitted to the PADEP for approval. The Cabinet, OOS, and PPR also worked with the City's Procurement and Law Departments to hold a vendors forum. Held in November of 2018, the forum solicited feedback on the concept of creating a public-private partnership where a third party composting company would operate a composting business at the selected City-owned site. The vendor would pay no rent or utilities and would in return provide a free portion of finished compost to PPR's farming programs as well as free pick up of organic waste from recreation centers.



An urban composting vendors forum took place at the pilot site at 5688 Rising Sun Ave. on November 7, 2018. Vendors heard about the potential for hosting a composting operation on the site and provided their feedback.

After soliciting feedback from these vendors and identifying a consultant to help draft the request for proposals (RFP), the Cabinet, PPR, and OOS released the RFP on September 20, 2019, with the timeline on the following page, for full implementation of the program by spring 2020. As stated above, this project will also serve as a demonstration site to solidify the first Urban Composting Permit in the state of Pennsylvania, which the Cabinet will continue to work on with the PADEP and PRMC.

# Urban Composting RFP Timeline



## Community Composting Network

To support Philadelphia residents in becoming more aware of and engaged in local composting efforts, OOS, PPR, and the Cabinet developed a Community Composting Network that will serve Philadelphia neighborhoods. Modeled after the successful program in Washington D.C., the Philadelphia program is identifying sites across the city where community-scale composting systems will be installed. The program, which is intended to operate on public or privately-preserved gardens, urban farms, recreation areas, and school sites, was made possible with a grant from Comcast.


### Goals of this program include:

- Building capacity of residents to engage in community composting and host workshops on the importance of responsible waste disposal and the environmental advantages of composting
- Supporting neighborhoods to reduce their waste and increase their recycling rates

- Sharing best practices for the management of composting systems
- Collecting data on each composting system and the food scraps contributed and fertilizer generated

The partnering organizations are currently reviewing applications for sites where the composting systems may be installed. The partners are also working with the PowerCorpsPHL program to build the bins for each site, a consultant to develop a community composting manual and train participating sites, and the Institute for Local Self-Reliance to conduct composting workshops for project leaders and community members who will be participating in the program by dropping off their household compost at Community Composting Network sites.





# Supporting Food Recovery Efforts

The Philadelphia Food Policy Advisory Council (FPAC), which connects Philadelphians and their local government to create a more just food system, has a Zero Waste Subcommittee that convenes stakeholders to facilitate the development of environmentally responsible policies and practices. These policies help the city achieve Zero Waste through food waste minimization, increased surplus food donation, and a robust composting infrastructure. The FPAC provides strategic guidance and implements projects, including a Community Compost System Design Competition in 2017-2018 and the Summer Meals Food Recovery Pilot with PPR.





# C40 Thriving Cities Initiative

We are proud to report our achievements of the Zero Waste goals set forth in the 2017 Zero Waste and Litter Action Plan and are now aiming to set specific goals for reducing waste and diverting material from landfills and incinerators in Philadelphia.

Philadelphia was chosen as one of three global cities to take part in a pilot of the C40 Cities Thriving Cities Initiative (TCI). Philadelphia became a signatory of the C40 Cities in 2012 and has been an active partner in the waste declarations set forth following the 2015 Paris Climate Accord and the creation of the Zero Waste and Litter Cabinet. TCI is a phased program of support for pilot cities to become beacons of sustainable consumption, where citizens can access a 'good life' within planetary boundaries.

Many of the C40 Cities that have committed to delivering action consistent with meeting the 1.5°C ambition in the Paris Climate Accord are registering continued reductions in greenhouse gas emissions produced within their geographic boundaries in conjunction with rises in their standard of living.

However, when the emissions of goods and services that are consumed by city residents but produced

elsewhere are taken into account (such as food, clothing, electronics, air travel, and materials used in the construction of buildings), it is clear there is still much to do to reduce consumption-based greenhouse gas emissions. For this reason, C40 has initiated the TCI with three pilot cities and a wider group of advisory cities to ensure TCI learnings and resources are useful and applicable to cities worldwide.

Philadelphia hosted its first Thriving Cities workshop in September 2019 with members of the Zero Waste and Litter Cabinet as well as a cross section of other stakeholders from across City government and the private sector. This workshop focused on uncovering the systemic drivers of over-consumption and waste in the city. The Cabinet will host the second workshop in winter of 2020 to explore the ways Philadelphia is already addressing these drivers. The workshop will also discuss examples from around the world of how other cities are addressing waste and consumption in relation to the systemic drivers identified in Philadelphia. At the final workshop in summer 2020, the Thriving Cities team, the Cabinet, and workshop participants will develop a road map and implementation plan for the actions Philadelphia must take to reduce waste and consumption while creating a thriving city.

# Next Steps

**City-wide Waste Diversion Rate Calculation:** Continue to compile data to calculate Philadelphia's city-wide waste diversion rate and repeat the process yearly to track changes in Philadelphia's diversion rate over time and identify gaps and opportunities.

**Municipal Building Waste Audit:** Continue the yearly Municipal Building Waste Audit and use the data collected through the audit to troubleshoot issues and connect City department staff with tools and resources to help them minimize waste at their facilities. Work to improve the program's compliance rate in the coming year.

**Commercial Waste Report:** The Streets Department will continue to conduct outreach to commercial property owners in Philadelphia to improve awareness of and compliance with the new requirements among businesses and commercial property owners.

**Zero Waste Partnership:** Continue to promote and expand the Zero Waste Partnership Program in the coming year. Our goal is to grow the Partnership into a group of diverse organizations and businesses actively engaged in Zero Waste efforts and for the program to eventually become self-promoting as a prominent local certification.

**Composting & Food Recovery:** With partners, select a vendor to operate the Urban Composting Permit pilot site, commence work at the site, and test the efficacy of the operation over the coming year. Launch the Community Composting Network and collect data on food scraps contributed and fertilizer generated at each participating site. Continue to support the efforts of FPAC and other entities to expand food recovery in Philadelphia. Launch the C40 Thriving Cities Initiative in Philadelphia, and hold Thriving Cities workshops with project partners in the coming year.





# Litter Enforcement & Cleaner Public Spaces

*The Cabinet is proud to report that of the 31 recommendations originally set forth in the Zero Waste and Litter Action Plan, 71% are complete, 16% are in progress, and only 13% are yet to be addressed. The following section shows how these recommendations are coordinated into comprehensive strategies, integral to achieving the Cabinet's aim of a less littered Philadelphia.*

# Litter Enforcement

## Short-term Priorities

1. Improve tire regulation and enforcement
2. Include construction and demolition waste plans on all Licenses and Inspections (L&I) construction, demolition, and alterations permits
3. Coordinate and improve illegal dumping surveillance
4. Increase illegal dumping fines
5. Impose mandatory community service hours for illegal dumping diversion programs
6. Impose seizure of vehicles involved in illegal dumping crimes
7. Increase and streamline illegal dumping cases in court system
8. Coordinate education and enforcement of the requirements of the waste bin law for all commercial establishments selling prepared or prepackaged food
9. Increase zoning code enforcement of interior trash storage for new construction or variances
10. Identify and enforce dumpster-free streets
11. Increase enforcement and education on improper waste set outs
12. Increase enforcement of \$300 moving violation for throwing trash out of a window
13. Mandate that all circulars are designed as door hangers
14. Revise Section 9-604 (5)(6)(7)(8) of the Philadelphia Code regarding hauler reporting

## Long-term Priorities

1. Create a formalized Environmental Crimes Unit within Philadelphia Police Department Neighborhood Services Unit
2. Develop monthly Code Violation Notice (CVN) reports for issuing departments
3. Ban plastic bags
4. Coordinate commercial waste pickups with commercial waste haulers
5. Create a 311 "Street Trash" ticket
6. Improve coordination with Scrap Yard Task Force
7. Include an abatement fine when CLIP abates vacant lots

# Cleaner Public Spaces

## Short-term Priorities

1. Increase enforcement and education of mattress disposal regulations
2. Determine the most strategic placement of public waste receptacles and map their locations
3. Study increased access to lidded residential recycling bins
4. Increase outdoor recycling at parks and recreation sites
5. Increase removal of illegal clothing donation bins
6. Expand access to sanitation convenience centers
7. Construct trash corrals for recreation centers
8. Increase proactive solutions for illegal sign abatement

## Long-term Priorities

1. Consider restoration of street sweeping
2. Increase support of temporary and long-term community solutions to activate and secure vacant lots



## Illegal Dumping and Clean Up Data FY18-FY19

	FY18	FY19	% Change
Total Number of Litter/Illegal Dumping Requests Submitted to 311 by Residents	33,912	39,553	17% increase
Total Number of "Heavy Illegal Dumping" Requests Submitted to 311 by Residents*	—	3,846	N/A
Total Streets Heavy Dump Cleanups and Weight of Material Collected	3,897 cleanups 7,061 tons	4,568 cleanups 6,808 tons	17% increase 3.6% decrease
Total Number of Collection Events for the Water Department's Litter and Floatables Control Program and Weight of Material Collected**	108,308 collection events 8,479 tons	113,595 collection events 7,155 tons	4.9% increase 15.6% decrease
Total Number of Illegal Dumping Cases Charged by the DA's Office	13	35	169% increase

\*Began separating out heavy illegal dumping requests in fall of 2018.

\*\*The term "Collection Events" covers several different types of cleanup events, such as entire days spent collecting material from PWD's floatables skimming vessels, cleanups conducted by waterway maintenance crews, inlet cleanings, and aesthetic maintenance of green stormwater infrastructure. This tally includes all litter and debris collected during these events and excludes collection of organic debris.

The number of heavy illegal dumping cleanups conducted by the Streets Department increased by 17% between FY18 and FY19, in part due to the fact that the department began separately tallying cleanups from individual sites that had previously been combined. While the number of Streets Department heavy illegal dumping cleanups increased, the the weight of material collected by the department decreased by 3.6% between FY18 and FY19. **During FY16, the Streets Department collected 11,525 tons of material through heavy illegal dumping cleanups, which decreased to 6,808 tons for FY19.**

The number of litter/illegal dumping requests submitted to Philly311 increased by 17% between FY18 and FY19, signaling that residents reported illegal dumping at a higher rate during FY19 than they had during FY18. The number of illegal dumping cases charged by the DA's Office increased by 169% due to coordinated efforts to investigate and prosecute illegal dumping crimes in Philadelphia in FY19, efforts which are detailed on the following pages.





# Illegal Dumping Enforcement & Prevention

Through a comprehensive strategy to tackle illegal dumping, the City has implemented new legislation, stricter fines, and new enforcement procedures that are already leading to progress in enforcement against violators who illegally dump materials in Philadelphia. To improve illegal dumping enforcement and deter dumping in FY18, the Cabinet:

- Worked with Councilman Derek Green's Office to pass legislation increasing the criminal fines for illegal dumping from \$300 to \$1,000 for the first offense, \$1,500 for the second offense, and \$2,000 for the third offense.
- Worked with the Philadelphia Police Department (PPD) to establish an Environmental Crimes Detectives team within the Major Crimes Unit, with two detectives who exclusively handle illegal dumping cases
- Worked with law enforcement to ensure that the highest fines can be applied to the appropriate crimes
- Worked with Philadelphia City Council to solidify the ability on the municipal level to seize and forfeit vehicles involved in illegal dumping crimes
- Worked with PPD and the DA's Office to streamline illegal dumping cases within the court system, making sure that all necessary entities are aware of these cases, that they are coded and submitted for prosecution correctly, and then successfully prosecuted. Illegal dumping cases are now being charged as misdemeanors, where appropriate, instead of as summary offenses.
- Worked with the Law Department and the DA's Office to impose mandatory community service hours assisting the Community Life Improvement Program (CLIP) with litter and illegal dumping cleanup, for illegal dumping diversion programs

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## Illegal Dumping Enforcement and Prevention



The improved coordination, increased capacity to investigate and enforce illegal dumping crimes, and heightened penalties have already led to significant outcomes in the prosecution of illegal dumping crimes in Philadelphia.

\*NOV, which stands for Notice of Violation, is a notice of a violation of City code. Different types of NOVs are issued by various City agencies.

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## Illegal Dumping Case Statistics January-September 2019

**351**  
cases

in total being  
tracked

**8**  
defendants

sent to CLIP for  
community service for  
total of 152 hours

**153**  
illegal dumping  
tickets

issued by CLIP

**30**  
active  
investigations

**14**  
cases

currently awaiting  
trial

**\$2,538.28**  
collected in restitution  
payments

4 defendants have been  
ordered to pay restitution

All cases are being tracked by PPD Environmental Crimes, PPD Neighborhood Services, Law Department, Streets Department, L&I, DA's Office, and Philly311.





*Mayor Kenney and other City officials spoke about increased illegal dumping enforcement efforts at a January 2019 press event announcing the installation of 100 illegal dumping surveillance cameras throughout Philadelphia.*

Several new priorities have been implemented in FY19, each of which is detailed in this section.

## **Coordinated and Improved Illegal Dumping Surveillance**

To expand enforcement efforts combating illegal dumping, the Streets Department is installing surveillance cameras at targeted locations throughout Philadelphia. Litter Index data, in conjunction with existing data on known sites that experience consistent illegal dumping activity, was used to prioritize where cameras will be installed. 100 new surveillance cameras are planned to be installed by the end of 2019, after which the cameras will be monitored by enforcement staff in real-time. The Streets Department has partnered with PPD to catch illegal dumping violators in the act, with real-time photos that can be used in court for prosecution. These efforts are expected to significantly increase the volume of arrests and successful prosecutions for illegal dumping crimes, improving the cleanliness of our city.

## **Improved Tire Regulation and Enforcement**

In 2017-2018, the Cabinet worked with Councilwoman

Maria Quinones Sanchez's Office on pending legislation to create a "Tire Dealer Business License" that requires tire dealers to keep better records of the tires they receive and dispose of, as well as select a state-approved tire hauler from a drop-down list at the time of obtaining their license. This hauler registry will be included in the Department of Licenses and Inspections (L&I)'s eCLIPSE program and will be operational in fall of 2019.

## **Included Construction and Demolition Waste Plans on All L&I Construction, Demolition, and Alterations Permits**

The waste hauling industry in Philadelphia remains largely unregulated, which is a major driver of illegal dumping. The 2018 City-wide Litter Index survey revealed that construction and demolition debris was the most commonly reported litter type on heavily littered blocks. The Cabinet worked with Council President Darrell Clarke's Office on legislation that will require all permit applicants for demolition, alterations, and new construction to list their waste hauler in their permit application. The legislation also requires that the permit holder and hauler must keep a record of all disposal receipts. These requirements went into effect



## Outdoor Waste and Recycling Can Requirements

For Philadelphia Takeout Food Establishments and Convenience Stores

**Did you know that any business that sells prepared or prepackaged food for carry out MUST provide cans for trash and recycling?**

These cans must be placed outside the building within ten (10) feet of the public entrance during the business' normal hours of operation.

A litter-free storefront with trash and recycling cans is more likely to attract customers and keep pests away. That's better for your customers and better for your business.

Recycling and trash bins come in all shapes and sizes and can be purchased at most hardware and business supply stores. Here are some examples:

**The cans must meet the following requirements/standards:**

- Must be 24-32 gallons
- Must have a lid or hinge
- Must be placed outside your front door during business hours
- Must be maintained in good condition, without cracks, leaks or other damage
- Must be kept clean and maintained free of odors
- May only be used to collect customer waste and recycling and not waste and recycling generated by other business operations
- Must comply with standards for waste and recycling cans, established by a Business Improvement District or Special Services District that provides services in the district where applicable
- May be taken inside when the business is closed or secured with a cable or thin metal chain that can be cut by the Streets Department or other utility agency needing access to the infrastructure
- If locked to a piece of public infrastructure (street sign, street pole, or utility pole), the business owner or employees must be able to access the key during business hours.
- The business is responsible for emptying the cans to ensure that they are not overflowing.
- Trash bags from these outdoor cans can be placed curbside with other trash from your establishment. The business is responsible for disposal of the waste and recycling collected using its regular waste disposal and recycling methods.

For more information, visit <https://bit.ly/2Zzi0NZ>.

Questions? Email [CleanPHL@phila.gov](mailto:CleanPHL@phila.gov).

**ZERO STARTS WITH ONE**

**City of Philadelphia**

being distributed throughout Philadelphia to promote awareness of and compliance with the regulations.

## Introduced Legislation to Ban Plastic Bags

In June of 2019, a bill was introduced in Philadelphia City Council that would ban lightweight plastic bags and non-recycled content paper bags in the city. Philadelphians use about one billion single-use plastic bags each year, and many of these bags end up as litter. In fact, the 2018 Litter Index survey revealed that plastic bags were among the most prevalent littered items noted by surveyors on Philadelphia's streets, vacant lots, and other public spaces. The bill will go to committee this fall, and the Cabinet will continue to work toward reducing the use of plastic bags and other single-use items in Philadelphia.



October 1, 2019 and are included in L&I's eCLIPSE program.

## Coordinated Education and Enforcement of the Requirements of the Waste Bin Law for All Commercial Establishments Selling Prepared or Prepackaged Food

In 2018, the Cabinet worked to update exterior waste bin regulations applying to commercial establishments that sell prepared or prepackaged food in Philadelphia. The law requires such businesses to provide public trash and recycling cans outside their establishments within ten feet of the public entrance of the business. The regulations were modified to state that the cans must be placed outside, be 24-32 gallons, have a lid or hinge, and be properly maintained and serviced by the establishment, among other requirements. Outreach materials, including a new flyer detailing the requirements (pictured above), were produced and are





*Minda Living in Fairmount, one of the groups participating in the Community Cans Program, has already designed and placed their Community Cans.*

## **Determined the Most Strategic Placement of Public Waste Receptacles, Mapped Their Locations, and Launched Community Cans Program**

Public waste receptacles are an important component of litter management. To develop a data-informed strategy for optimizing waste receptacle placement around the city, the Cabinet partnered with GovLabPHL and academic partners to conduct a behavioral study on trash can placement in parks and along commercial corridors. The City also mapped public and private trash and recycling receptacles within parks and along major streets and commercial corridors to compare against the City-wide Litter Index data, analyzing the connections between trash can density, placement, maintenance, and litter. These analyses showed that availability of trash cans that are regularly emptied and kept in good condition reduces litter.

The City then looked to identify ways to strategically increase trash can coverage in Philadelphia's public right-of-way with the goal of reducing litter and illegal dumping. This led to the development of the Community Cans Program, a public-private partnership between the City of Philadelphia and community organizations to support clean business districts and commercial areas in Philadelphia neighborhoods. Through this program, community organizations, community development corporations, and business improvement districts sign agreements with the City to place and maintain wire mesh litter cans in designated locations along Philadelphia commercial corridors.

The City works with each group to identify where the cans should be placed to most effectively reduce litter and illegal dumping, coordinates with other City agencies, assists the organizations with branding, and helps to support the implementation process. As of this report's publication, the Cabinet has consulted with 14 community groups, 2 have signed the MOU, and 2 have installed Community Cans curbside.





Southwest CDC is one of the community groups that the City has consulted with for the Community Cans Program. During these consultations, Litter Index data is overlaid with the locations of trash cans along neighborhood commercial corridors to determine the best placements for Community Cans. This map shows waste receptacle locations and 2017 Litter Index scores for Woodland Avenue from 60th to 68th Street. Analysis of these datasets together helps determine optimal placements for Community Cans.

## Increased Access to Lidded Recycling Bins

Waste setout practices continue to be a significant contributor to litter in Philadelphia. A 2017-2018 behavioral science study led by the Cabinet and GovLabPHL with academic partners showed that distributing lidded recycling bins led to increases in residential recycling rates. In 2018-2019, the Streets Department established additional recycling bin distribution locations at parks and recreation sites and the offices of local community groups to increase the accessibility of recycling bins in neighborhoods. The department also now gives out lids along with the recycling bins it distributes to residents. A "Recycling Bin Finder" map was added to the Streets Department's website to make it easier for residents to acquire recycling bins.



## Constructed Waste Corrals for Recreation Centers

To discourage illegal dumping at recreation centers and playgrounds, PPR is installing waste corrals, using Litter Index data along with staff observation and reporting of illegal dumping activity for site selection. The waste corrals provide a designated, secure location for facilities to put their trash so that household waste is not added to facility-generated waste curbside. The department has installed waste corrals at 14 parks and recreation sites, with plans to add 15 additional corrals at sites throughout the city. PPR is using Litter Index scores to test their effectiveness.







*Southwest Philadelphia Neighborhood Litter Control Plan community meeting*

## Continued to Develop and Implement Neighborhood Litter Control Plans

In partnership with the Streets Department, Keep Philadelphia Beautiful, other City departments, and community partners, the Cabinet is developing and implementing neighborhood-specific plans for controlling litter (Neighborhood Litter Control Plans). Each plan identifies interventions for addressing litter and illegal dumping in individual Philadelphia neighborhoods and establishes a process for continued coordination and monitoring over time. Areas of the city with the highest Litter Index scores and most problematic litter conditions are being prioritized in this process, which includes engaging residents and community-based organizations working in specific neighborhoods through community meetings, using their feedback to develop the plans, implementing services, and continued data collection, monitoring, and follow-up. This process is underway in three neighborhoods: Southwest Philadelphia, Kensington, and North Philadelphia/Strawberry Mansion. The Cabinet has continued to implement plan recommendations, compile and share relevant metrics, and track progress on neighborhood interventions for each Neighborhood Litter Control Plan area in 2018-2019 and will continue to do so over the coming year.

## Continued to Increase Proactive Solutions for Illegal Sign Abatement

Illegal signs posted in the public right-of-way on utility poles, traffic signs, or trees are often predatory in nature and tend to end up as litter. To address illegally posted signs and the litter they cause, the Cabinet held its first Illegal Signs Roundup in the summer of 2017. Participating groups earned \$0.50 per sign up to \$250 (or 500 signs) to remove the signs, and a total of 24 community groups removed over 8,000 signs across the city. After a successful first year, the Cabinet held its second Illegal Signs Roundup in June of 2018. More than 7,400 illegal signs were collected during the 2019 roundup, and 13 community groups from across Philadelphia participated in organized efforts to take down the signs.

To step-up enforcement efforts, the Cabinet is working with L&I to investigate the root cause of the illegal signs problem: the companies that pay to have the signs posted. During the roundup, community groups took photos and kept track of where they removed signs and shared this information with the Cabinet to aid enforcement efforts. The City is also in discussions to create custom-designed, sanctioned advertising kiosks where signs can be legally posted in neighborhoods.

The Cabinet will continue to communicate with the roundup participants from 2017 and 2018, the "Bandit Signs Brigade," throughout the year to provide updates on illegal sign removal efforts and opportunities to stay involved.







Youth from the Providence Center pose with signs they collected for the 2019 Illegal Signs Roundup.



Signs collected through the roundup will be repurposed by Trash Academy, a project of Mural Arts Philadelphia, and Tiny WPA into play-disks (pictured here). This will be part of an ongoing series of Trash Academy projects that highlight the need to eliminate single-use plastics from the waste stream.

## Considering Restoration of Street Sweeping

In April 2019, the City launched a pilot street cleaning program, which will run through November of this year. The six neighborhoods where the pilot is taking place were chosen by identifying highly littered areas indicated by the Litter Index data: West Philadelphia, Southwest Philly, Kensington, Strawberry Mansion, and Logan. Streets Department workers use backpack blowers and hand brooms to clean each route, followed by mechanical brooms. The Streets Department is conducting additional Litter Index surveys within the targeted areas to test the pilot's efficacy.



## Increasing Support of Temporary and Long-term Community Solutions to Activate and Stabilize Vacant Lots and Other Under-utilized Spaces

Much of the illegal dumping activity that takes place in Philadelphia occurs on vacant land. Efforts to activate vacant lots and turn them into community assets can serve to deter illegal dumping while also providing a host of other community benefits. In 2019, the Cabinet's Enforcement and Cleaner Public Spaces Subcommittee began to explore what the City can do to make it easier for community organizations and others to





activate vacant lots in their neighborhoods. The team initially identified the internal regulatory requirements for different levels of activation, and what inter-organizational barriers would need to be addressed to create a streamlined process, a set of activation options, and guidelines for communities to utilize to temporarily activate vacant lots in their neighborhoods. This work aligns with the larger Vacant Property Initiative facilitated by the Department of Planning and Development, which aims to comprehensively address vacant and problem properties in Philadelphia, for which increasing the short-term use of vacant properties is a key outcome.

## Launched PhilaCan Pilot

While the Streets Department provides weekly trash and recycling collection to residents, some Philadelphians grapple with finding space to store their trash between collection days. Inadequate trash storage is one of the major contributors to litter in our city. To address the need for additional trash storage, the Streets Department developed and is piloting the PhilaCan Program, which provides 64-gallon lidded trash bins to be stored in front of homes between collection days on blocks where at least 75% of residents opt into the program. The PhilaCan pilot aims to provide additional trash storage in one neighborhood where this is an issue—North Philly/Temple—to assess the effectiveness of this approach. The Streets Department utilized the Litter Index data to select the neighborhood for the pilot and is conducting localized Litter Index surveys to track whether the program is effective at improving litter conditions.

## Next Steps

- Continue working through the list of 31 recommendations to monitor and track metrics of completed recommendations, complete the in-progress recommendations, and address the remaining recommendations.
- Continue to implement the illegal dumping strategy and work to increase the number of illegal dumping cases charged by the DA's Office and successfully prosecuted in Philadelphia.
- Explore a pilot project for streamlined community activation of publicly-owned vacant lots to deter illegal dumping.
- Continue to add Community Cans partners to strategically increase the number of trash cans on commercial corridors in Philadelphia.
- Continue to organize and support projects in the Neighborhood Litter Control Plan neighborhoods to progress the plans in those communities.

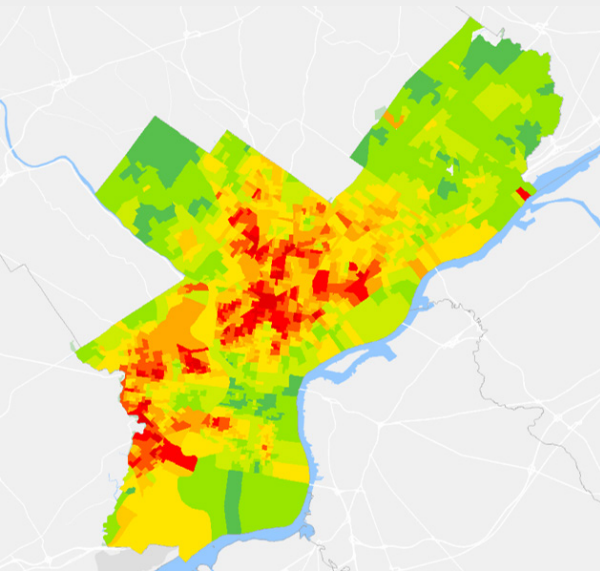


# Data

It is a key goal of the Zero Waste & Litter Cabinet to utilize data—across all of its projects and programs—to inform decision-making and wise allocation of resources to address litter and minimize waste in Philadelphia. The Data Subcommittee uses collaborative and innovative data management processes and tools to collect and analyze existing waste and litter data from each department represented on the Cabinet and its subcommittees. This subcommittee developed the revamped City-wide Litter Index and manages the litter indexing process. The work of this subcommittee has led to two years of comprehensive City-wide Litter Index data documenting litter conditions across the city, a newly-developed and continuously updated map of public trash can locations, and improved tracking systems for illegal dumping data. These dynamic datasets are being used together to develop a more complete understanding of litter conditions and illegal dumping across the city and identify where gaps and operational inefficiencies exist, with the aim of utilizing this data to develop effective strategies for tackling litter and illegal dumping in Philadelphia.







2018 City-wide Litter Index Map

## Litter Index Rating System

-  **1** Little to no litter
-  **2** Litter in the amount that can be collected by a single person
-  **3** Litter in the amount that would require collection by a team
-  **4** Litter in the amount that would require collection by a large team of people and/or heavy machinery

*This 1-4 rating system was derived from the Keep America Beautiful Community Appearance Index.*

Data

## Published 2018 Litter Index Data & 2019 Litter Index Report

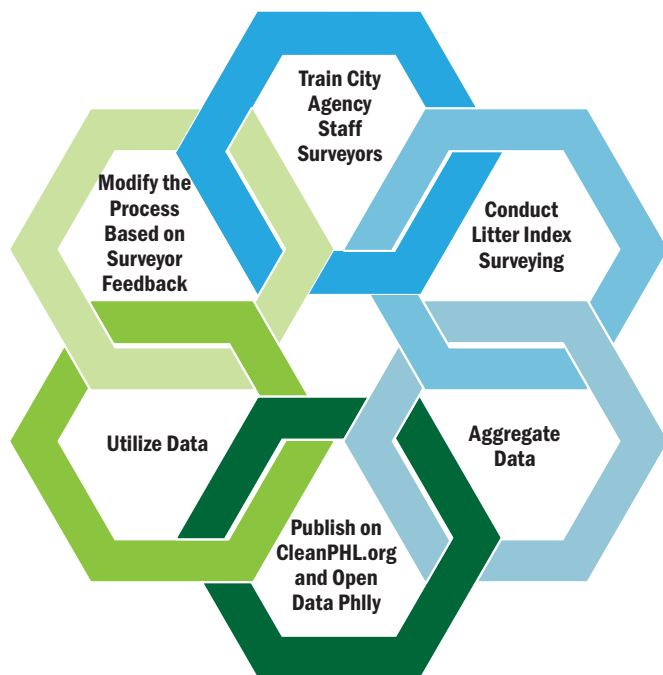
Philadelphia's City-wide Litter Index is a map-based survey of the litter conditions on city streets, vacant lots, parks and recreation sites, riverways, transit stations, and other public spaces. Along with identifying what types of litter they see, City surveyors give a 1-4 litter score, with 1 being the cleanest and 4 being the most littered. With the data collected through these surveys, the City creates an indexed map of litter conditions across Philadelphia. We plan to continue taking these measurements on a regular basis, release reports based on the data collected, and update block and neighborhood data on CleanPHL.org.

The City-wide Litter Index survey was piloted and launched in 2017. After this first year of city-wide litter surveying, surveyors provided their feedback on the survey and process, and several changes were made to the process for 2018, including:

- Surveyors would no longer record a "Litter Count," as it took the surveyor too much time to estimate, and this data was not a major factor once fully analyzed.
- Instead of estimating litter counts, surveyors would identify the types of litter present at each site. This information is helpful to the City departments deployed to clean up heavy dump sites and allows us to develop an overall understanding of commonly littered items and the locations where they are most commonly seen.
- The survey was modified to improve the location accuracy of each survey, which would save surveyors time, more easily track surveyors' progress, and reduce duplication of surveyed sites. Certain survey fields were also modified to streamline the surveying process. This improvement came from developing a new process that incorporated two cloud-based tools, Survey123 for ArcGIS and Collector for ArcGIS, to conduct surveys.

After being trained, field staff began surveying for the 2018 Litter Index in August of 2018. The participating departments conducted surveys through March 2019. The data was aggregated and analyzed in April-June of 2019 before being published publicly on CleanPHL.org and Open Data Philly in July 2019. 2017 and 2018 Litter Index data can now be compared using the address search tool on CleanPHL.org, and residents can see how their block and neighborhood scores may have changed year-to-year. After searching the Litter Index map, users can also find resources available to keep their block clean, including the block's trash and recycling day, whether the block has a Block Captain, and the nearest Park Friends Group.

## Litter Index Process



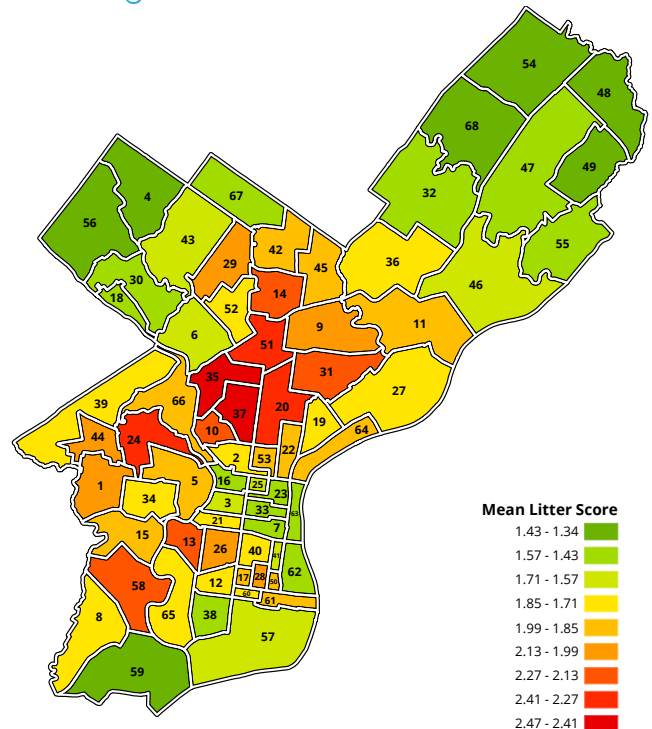
## 2019 Litter Index Report Takeaways

The 2019 Litter Index Report provides an overview and comparative analysis highlighting key points in the 2017-2018 Litter Index data and discussing some of the ways City departments, community partners, and Philadelphia residents are using the data to clean up our city. More blocks and park areas were included in the 2018 survey for a more comprehensive dataset. In addition, staff conducting the Litter Index surveys in 2018 received more thorough training, including a new manual and instructional video, to further standardize the process.

The main takeaways from the 2019 Litter Index Report were:

- City-wide average Litter Index scores differed (up by just 0.06 on a 1 to 4 point scale) between 2017 and 2018.
- More blocks and park areas were surveyed in 2018.
- Most blocks that were moderately or heavily littered in 2017 scored better in 2018, while a majority of blocks that were minimally littered stayed the same.

## Neighborhood Cluster Map For Neighborhood Litter Control Plan Process



### Neighborhoods with Highest 2017 Litter Index Scores (Most Littered Areas)

**North Central Philadelphia/Strawberry Mansion**  
**Temple Area**  
**Parkside**  
**Nicetown/Hunting Park**  
**West Kensington/Fairhill**  
**Southwest Philadelphia**  
**Kensington/Harrowgate**  
**Grays Ferry**  
**Brewerytown/Sharswood**  
**Logan**

### Neighborhoods with Highest 2018 Litter Index Scores (Most Littered Areas)

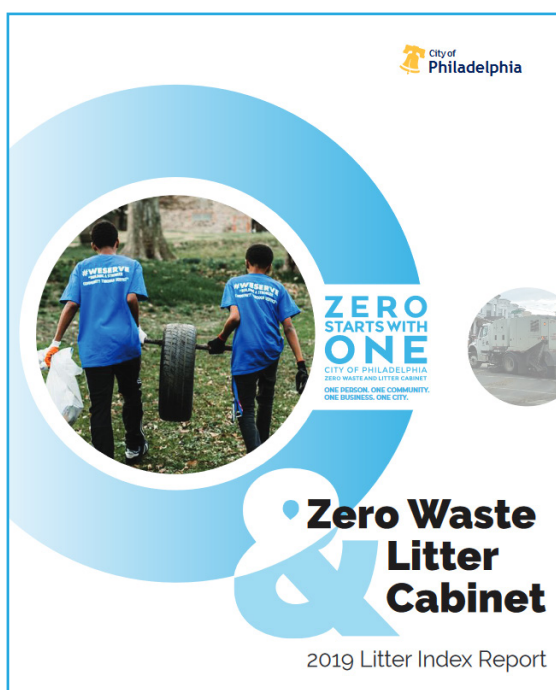
**West Kensington/Fairhill**  
**Temple Area**  
**North Central Philadelphia/Strawberry Mansion**  
**Southwest Philadelphia**  
**Nicetown/Hunting Park**  
**Cobbs Creek**  
**South Germantown**  
**Kingessing**  
**Kensington/Harrowgate**  
**Parkside**



- The most common types of reported litter include: paper/cardboard, bottles and cans, takeout packaging, snack bags or wrappers, and plastic bags. This shows the prevalence of single-use items ending up as litter on Philadelphia's streets and in other public spaces.
- The most commonly reported litter type on heavily littered blocks was construction debris, showing the importance of the City's efforts to take timely, coordinated action to tackle illegal dumping.

Analysis of the Litter Index data along with Philly311 illegal dumping request data identified areas where the number of illegal dumping requests is disproportionately higher than the degree of litteredness based on the Litter Index. Areas where relatively few requests are submitted but where litter scores are higher are areas of Southwest Philly, the Lower Northeast, and some sections of North Philly. More community outreach may be needed in these areas to encourage residents to report issues when they see them.

Comparing the Litter Index scores in and around park areas showed that on average, parks with Friends groups have better litter scores (1.55 with Friends groups versus 1.7 without) and fewer parks with high litter loads, showing the value of Friends groups in keeping parks and their surrounding neighborhoods clean.



## How the Data is Being Used

City departments will continue to use the Litter Index data to make data-driven decisions on operations and policy. Data compiled through the Litter Index is used to prioritize how the City allocates resources such as illegal dumping camera placement and identifying neighborhoods for the City's pilot street sweeping program. The data is also being used by Philadelphia residents, community groups, and academic partners for a variety of local efforts and projects. The Litter Index data has been used for:

- Prioritizing neighborhoods for Neighborhood Litter Control Plans
- Analyzing litter conditions with trash can locations to optimize waste bin placement along commercial corridors through the Community Cans Program
- Helping residents learn about the resources available to help them keep neighborhoods clean
- Identifying sites for installing illegal dumping enforcement cameras
- Identifying neighborhoods for the City's pilot street cleaning program
- Identifying a neighborhood for the PhilaCan Program pilot and testing the program
- Identifying heavily littered areas that have low requests for City cleanup services and proactively entering these areas
- Guiding site selection for PWD and partner cleanups
- Evaluating PWD maintenance and watershed protection programs to determine potential waterway dumping spots
- Identifying priority parks and recreation sites for installing updated illegal dumping signage and waste corrals and testing how effective these interventions are at reducing litter and illegal dumping
- Evaluating parks and recreation recycling collections
- Evaluating the Commerce Department's Commercial Corridor Cleaning Program
- Monitoring SEPTA transit station litter conditions and identifying areas for cleaning improvements
- Supporting behavioral science experiments aimed at increasing recycling and reducing litter
- Helping local organizations and residents conduct their own litter indexing and analysis
- Providing a valuable dataset for academic studies
- Supporting Temple University's Peer Ambassador Program



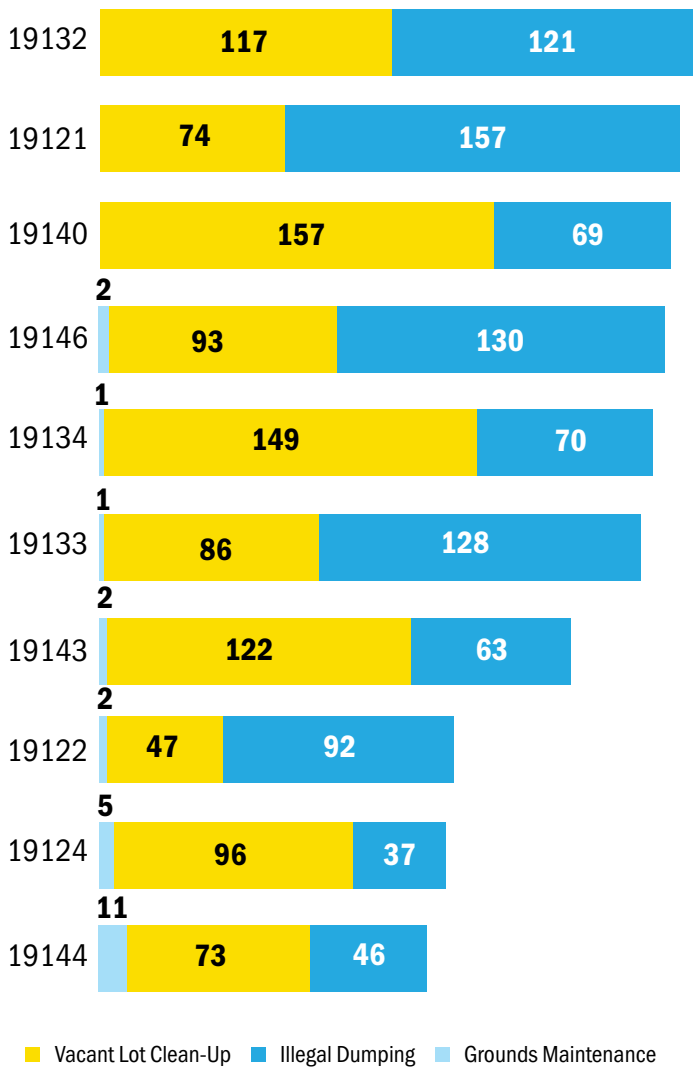
## Developed a New System for Tracking Illegal Dumping Data

To better understand illegal dumping in Philadelphia and identify effective strategies for addressing it, the Cabinet and partners have developed and implemented a new system for tracking illegal dumping data. Philly311 tracks illegal dumping requests submitted through its system and in 2017 created a separate category in its service requests for illegal dumping, vacant lot cleanup, and grounds maintenance to identify cases that qualify as "heavy illegal dumping," using the Litter Index's "4" rating designation—litter in the amount that would require heavy machinery and a team of people to remove. When a "heavy illegal dumping" request is submitted, Philly311 is now able to vet the information through pictures or further details to ensure that the incident actually requires this response by the designated operating department and send this filtered information to the operating department so that the field workers are better equipped to deal with the severity of the dump.

Since it began collecting this information, Philly311 can now track the number and locations on heavy illegal dumping cases specifically. In fall of 2018, the Data Subcommittee began reviewing monthly reports on illegal dumping requests generated by Philly311 detailing the locations of illegal dumping and heavy illegal dumping cases and the zip codes where these cases are most concentrated. Between September 2018 and June 2019, there were a total of 30,646 combined illegal dumping, vacant lot, and grounds maintenance service requests submitted to Philly311, and 3,836 (13 percent) of these cases were flagged as "heavy dumping."



# Top 10 Heavy Dumping Cases Reported by Zip Code (September 2018 - June 2019)



This graph shows the ten Philadelphia zip codes with the highest number of heavy illegal dumping service requests submitted to Philly311 from September 2018 to June 2019 across three different service request categories. Isolating the cases that qualify as heavy dumping allows for internal process improvements and provides valuable data for measuring the efficacy of efforts to address illegal dumping.

This Philly311 dumping request data is then compared against the illegal dumping clean up and tonnage numbers collected by the Streets Department, CLIP, PPR, and PWD. Cross-checking the Philly311 request data against departmental cleanup data allows us to identify areas where operational improvements can be made and to track the efficacy of our illegal dumping strategy. These datasets are also being compared against the Litter Index dataset, the city-wide trash can map, and data from the Community Cans Program to gain insights on how trash can coverage affects litter rates and illegal dumping on and around commercial corridors in specific Philadelphia neighborhoods.

## Next Steps

- Continue to utilize Litter Index data within City departments to develop data-driven strategies for addressing litter and illegal dumping in Philadelphia.
- Continue to conduct Litter Index surveys and publish results publicly.
- Continue to work with City departments to use the newly-developed system for tracking city-wide illegal dumping data.





# Behavioral Science

In 2017-2018, the Zero Waste & Litter Cabinet worked with GovLabPHL and academic partners to conduct two behavioral science studies that analyzed individual habits and neighborhood conditions that lead to more littered and less littered areas. The goals of these studies were to inform public messaging and initial neighborhood strategies for litter reduction, and promote more awareness on waste collection systems in Philadelphia.

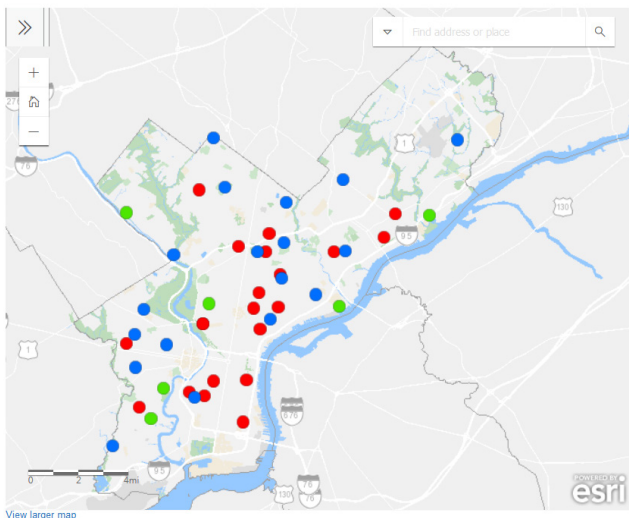
For the first study, called "Testing the Effect of Various Public Waste Receptacle Numbers on Litter and Staff Time," the number of trash cans available in four parks and three commercial corridors was changed during certain periods, and the effects on litter rates, the amount of trash collected from cans, and the time spent collecting litter were measured. The results showed that decreasing the number of available receptacles increased the percentage of trash collected as litter. The second study, called "Testing the Effect of Lidded Recycling Bins on Recycling Volume to Prevent Litter," examined whether lidded recycling bin distribution has an effect on recycling volume and litter. The results showed that distributing lidded recycling bins was likely to have had a positive effect on levels of recycling in one of the neighborhoods where the experiment took place.



*The Cabinet's Behavioral Science Subcommittee works with GovLabPHL and academic experts to develop and execute behavioral studies that analyze individual habits and neighborhood conditions with a goal of informing public messaging and strategies for litter and waste reduction. These experiments are conducted to identify potential improvements that could be made in City government, and the process we created to develop experiments, execute them, and implement new programs and policies based on their findings is already leading to significant improvements. In this section, we share outcomes from two completed behavioral experiments, discuss a behavioral study taking place now, and lay out next steps for future experiments.*

Both of the completed studies are influencing process improvements in recycling bin distribution and increasing public trash can coverage in Philadelphia. The goal of these behavioral experiments is to lead to improvements in City government, and the process we created to develop the experiments, execute them, and implement new programs and policies based on their findings is already leading to significant improvements. The Streets Department established additional recycling bin distribution locations at parks and recreation sites and the offices of local community groups to increase the accessibility of recycling bins in neighborhoods. The department also now gives out lids along with the recycling bins it distributes to residents. A "Recycling Bin Finder" map was added to the Streets Department's website to make it easier for residents to acquire recycling bins.

#### RECYCLING BIN PICKUP LOCATIONS



Residents can now explore this map, available on the Streets Department's website, to find a nearby location to pick up a recycling bin.

After researching how public trash can placement affects litter rates, the Cabinet and partners developed the Community Cans Program, a public-private partnership program through which the City partners with community organizations and businesses to support community responsibility for clean business districts and commercial areas in Philadelphia neighborhoods. The program allows community partners like non-profit organizations and businesses to place specially-branded, wire mesh litter baskets in the public right-of-way, engaging community partners and improving public trash can coverage.

## Current & Future Experiments

There is currently an experiment underway to determine how public messaging impacts rates of illegal dumping, and the results from that study will be shared in a future report. The Cabinet's Behavioral Science Subcommittee is currently working to develop another behavioral study for 2020 and will continue to use data-driven, scientific methods to learn more about what motivates individual action related to waste and litter in Philadelphia.

## Next Steps

- Continue to implement the experiment currently underway testing the effect of positive and negative messaging on illegal dumping behavior.
- Continue to develop and execute experiments on other topics using data-driven, scientific methods to learn more about what motivates individual actions related to litter and waste in Philadelphia.



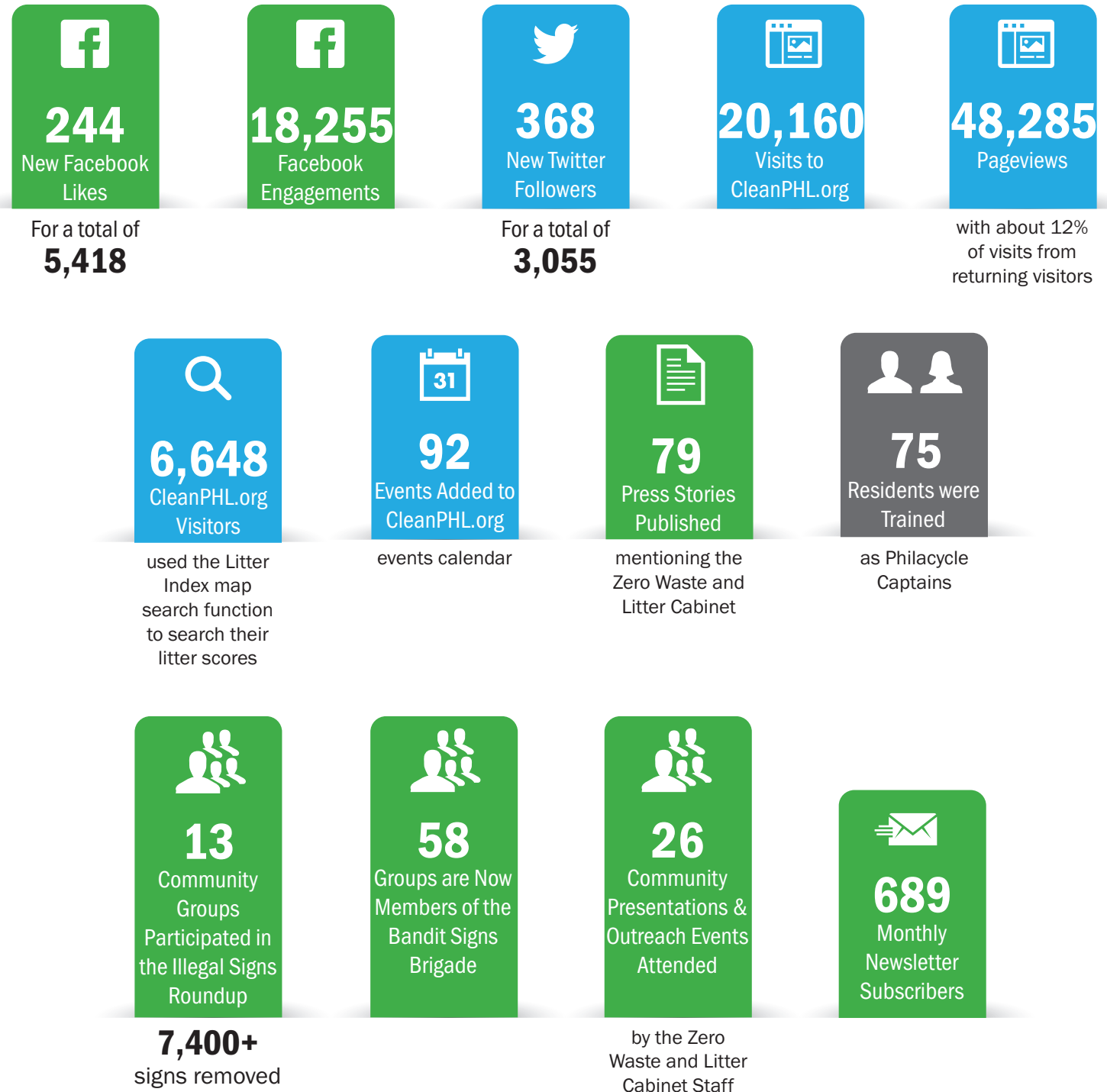
# Communications & Engagement

The Communications and Engagement Subcommittee develops strategies to engage City departments, residents, businesses, and other stakeholders to better understand litter and waste challenges, using clear and unified messaging that is informed by sophisticated data, improved collaboration between City departments, and increased outreach to residents. Community engagement and communications were not an afterthought of our Zero Waste and Litter Action Plan, but rather a feature built in to make the plan successful. Through monthly meetings and weekly updates, this subcommittee's members help to coordinate outreach and unify messaging around the extensive waste and litter-related work carried out by City departments and partner organizations, resources available through the City and partners, and opportunities to get involved. This section shares highlights from our communications and engagement efforts and next steps for engaging Philadelphia residents, businesses, organizations, and institutions in the city's Zero Waste movement and litter reduction.

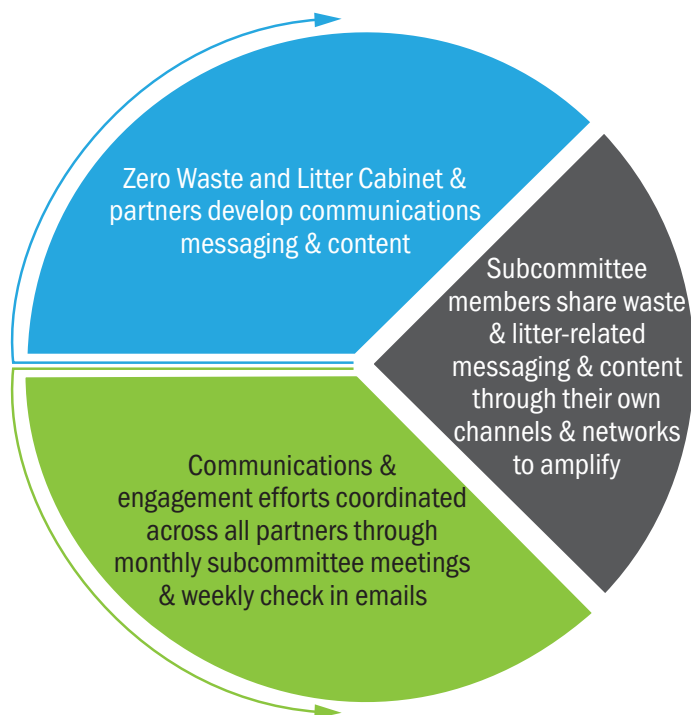


# CleanPHL Year-end Analytics

From September 18, 2018 to August 31, 2019



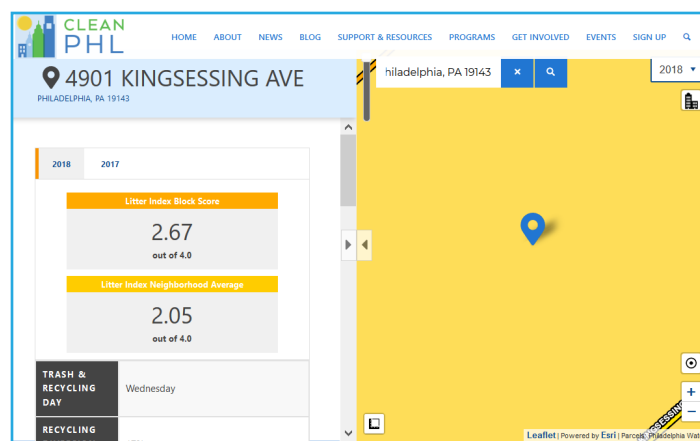
# Zero Waste & Litter Cabinet Coordinated Messaging Process



## Expanded CleanPHL.org

The Cabinet's website—CleanPHL.org—was launched in August of 2017 and aggregates resources from many City departments and outside partners, serving as the City's comprehensive digital platform for litter and waste related-information. This centralization of resources allows visitors to the site to access information like their block's Litter Index scores, recycling and waste reduction tips, and details on the Cabinet's programs and initiatives, all in one place. Our goal is to have residents re-visit CleanPHL.org regularly to learn how their neighborhood's Litter Index scores change over time, read about how their fellow Philadelphians are taking action to tackle waste and litter, and find new opportunities to get involved in helping Philadelphia advance toward its Zero Waste goal.

From September 18, 2018 to August 31, 2019, the website was visited 20,160 times, with about 12 percent of those visits coming from returning visitors. One of CleanPHL.org's main features is the Litter Index map search function, through which users can search an address to view block- and neighborhood-level Litter Index scores and find engagement opportunities to help keep their communities clean, including whether that block has a Block Captain, what the block's trash and recycling day is, the nearest Park Friends Group, and the block's recycling diversion rate. We hope for the Litter Index to become the tool that allows neighborhoods to achieve the cleanest litter ratings possible. From September 18, 2018 to August 31, 2019, visitors utilized the website's Litter Index map search function 6,648 times. A new function was also added to the website that allows users to toggle between 2017 and 2018 Litter Index scores to compare changes over time.

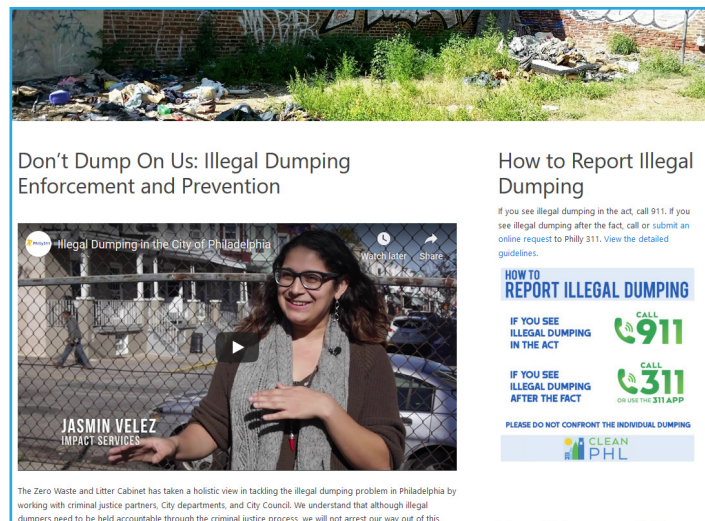
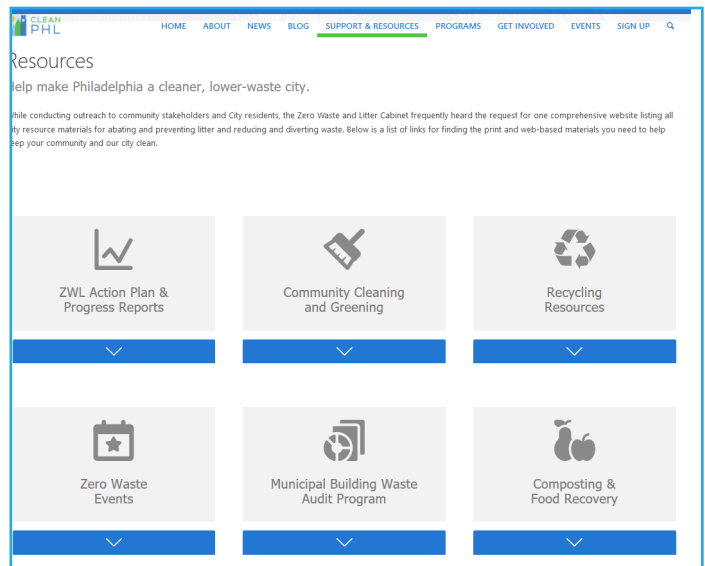


*When a CleanPHL.org visitor uses the Litter Index map search function to search for a specific address, the block and neighborhood-level Litter Index scores appear, along with a navigable Litter Index map and a sidebar with engagement opportunities for keeping that specific block clean. Users can toggle between 2017 and 2018 to see how Litter Index scores have changed over time.*

Several new sections have been added to CleanPHL.org, including a Press section where the Cabinet shares recent press coverage and monthly newsletters; and new pages for the Illegal Dumping Prevention and Enforcement Strategy, Commercial Waste Report, Zero Waste Partnership, and Community Cans Program.

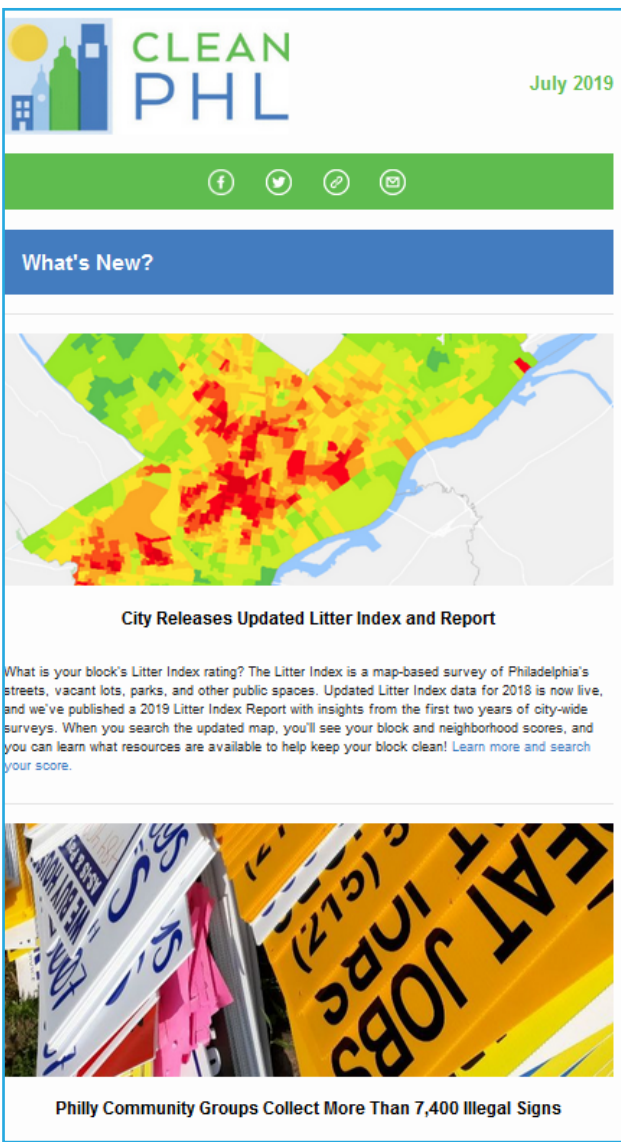


The “Support & Resources” section of the website was updated to make it easier for users to find resources and downloads. Now, visitors will find all downloadable materials on a single, streamlined page on the website. (cleanphl.org/resources). We also continued to promote the website’s events calendar (cleanphl.org/events), and we encourage residents and community to add any upcoming waste or litter-related events so that the Cabinet is aware of the event and can assist with promotion. We want CleanPHL.org to serve as a valuable resource for Philadelphia residents, and we look forward to continuing to engage with the public and incorporate feedback to make the CleanPHL platform as useful and as widely-used as possible.



## Engaged Thousands Through Social Media & Newsletter

The Cabinet has a robust social media presence that aggregates and shares content across City departments and other stakeholders, amplifying the messaging of our City, nonprofit, institutional, and business community partners and working with them to have them help promote the Cabinet's messaging. Over the past year, the Cabinet has worked to grow its social media audiences and to consistently share engaging content through the @CleanPHL social platforms. A main tenant of the Cabinet's social media strategy is to use social platforms to engage directly with residents, responding to their comments and concerns and cultivating positive interactions.



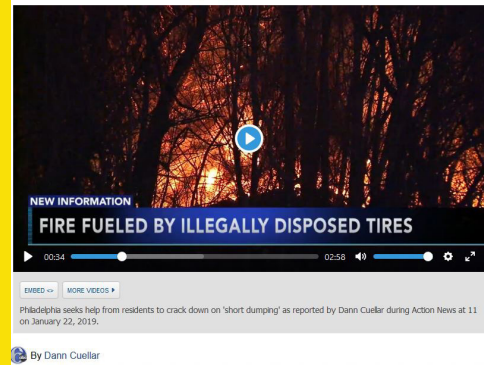
## Illegal Dumping Outreach Campaign

Along with efforts to improve enforcement of illegal dumping crimes in Philadelphia, the City has implemented a public outreach campaign to promote awareness of these efforts and educate residents on how to report illegal dumping when they see it. Using #DontDumpOnUs, the Cabinet and its many partners have shared this information across channels including CleanPHL.org and other City websites, social media, and newsletters. On June 5, 2019, the Mayor's Office held a joint press conference with the Streets Department, Police Department, DA's Office, and other City entities to promote the expanded enforcement efforts and enlist the public's help in catching those committing illegal dumping crimes in the city. We look forward to continuing to publicize outcomes of illegal dumping cases and to spreading the message that illegal dumping will not be tolerated in Philadelphia.



*District Attorney Larry Krasner speaks about the City's illegal dumping enforcement efforts at a joint press conference on June 5, 2019. Krasner spoke about the effects that illegal dumping has on Philadelphia communities, highlighting that dumping is an environmental justice issue.*

Philadelphia seeks help from residents to crack down on 'short dumping'



**Philly says hidden cameras, higher fines help catch more illegal dumpers**

By Catalina Jaramillo · June 6, 2019



Illegal dumpers throw construction debris on a Philadelphia street in a video screen capture from a video released by the City of Philadelphia.

**Video: Illegal dumpers shove construction debris, onto Philly roadways, sidewalks**

by Frank Kummer, Updated: June 5, 2019



The Cabinet also sends a monthly email newsletter containing news and announcements, upcoming events, and links to recent press coverage. People can subscribe to this email list through a form on CleanPHL.org or in-person at events attended by the Cabinet. Since the Cabinet began to build its email contact list in August of 2017, 689 subscribers have joined the list,

with 234 new subscribers since September 2018. The newsletter has had an average open rate of 26.9 percent and an average click rate of 8.5 percent, which is high for industry standards. We look forward to engaging people on the CleanPHL digital platforms and increasing our digital engagement over the coming year.



## Launched CleanFutures Program

One important component of reducing litter in our city is educating young people about its impacts and what they can do to prevent it. The CleanFutures Program does just that. CleanFutures is a contest-based citizen science and advocacy program that encourages Philadelphia students to engage in litter reduction. The program was launched in 2018 as a partnership between the Cabinet, the School District of Philadelphia, Keep Philadelphia Beautiful, and the technology platform Litterati. Through the program, groups of students from classes and after-school clubs at Philadelphia schools use the Litterati platform to track and count litter on their school properties and use the data they collect to implement litter awareness and reduction projects. Groups of students also compete with one another to win awards for their projects.

A total of 18 schools applied to participate in the contest, and 12 teams ultimately ended up participating for the 2018-2019 school year: School of the Future, McCall Elementary and Middle School, George Washington High School, Central High School, Paul Robeson High School for Human Services, Cook-Wissahickon School, Lankenau High School, Edison High School, Laura H. Carnell School, AMY Northwest Middle School, Lewis C.

Cassidy Academics Plus School, and Edwin M. Stanton School. Six of these schools submitted final projects and attended the awards banquet on May 28, 2019. In addition to cataloging litter found on school grounds using the Litterati app, the student groups implemented projects including holding cleanups on school grounds and surrounding neighborhoods, implementing in-school litter and recycling awareness campaigns, conducting student surveys to determine the causes of on-campus litter, and establishing school recycling programs.

More than 300 students across all participating schools took part in the data collection process in some capacity and picked up a total of about 13,000 pieces of litter. The top five tags used to identify the litter documented by the students were plastic, paper, cigarette, wrapper, and bottle.

We look forward to continuing the CleanFutures Program in the 2019-2020 school year and engaging more Philadelphia students in litter education and reduction efforts. Six of the participating schools from the 2018-2019 school year will receive mini-grants of \$300 to implement projects based off of the data they collected through Litterati. 11 schools that participated in the pilot year of CleanFutures will be re-enrolled for the 2019-2020 school year. We will additionally be adding another 10 schools to the Litterati platform to continue to promote the use of data and research to find student-based solutions to litter on school district sites. .

## Overall Litter Count Totals for 2018-2019 CleanFutures Program



**2,026**  
Plastics



**1,193**  
Paper



**904**  
Cigarette



**683**  
Wrapper



**417**  
Bottle



**248**  
Cup



**195**  
Bag



**157**  
Cardboard



**138**  
Straw



**128**  
Can



**94**  
Aluminum



**92**  
Cap



**78**  
Metal



**77**  
Candy



**70**  
Drink

Participating schools tallied about 13,000 individual pieces of litter. The top five tags used to identify the litter documented by the students were plastic, paper, cigarette, wrapper, and bottle.



2018-2019 CleanFutures Awards Banquet on May 28, 2019

## Developing Resource Finder Tool to Make it Easier for Philadelphians to Recycle and Donate Items

Conversations with Philadelphians revealed a major need for a centralized, comprehensive resource for residents to find information on how and where to recycle and donate different materials. Realizing that no such resource currently exists locally, the Cabinet began working with partners at the City's Office of Data & Digital Transformation (ODDT) to develop a "Resource Finder" tool. The Cabinet also partnered with GreenPhilly and the Resource Exchange on this project. Both entities have been providing valuable information on how to properly recycle, donate, and dispose of materials as a resident in Philadelphia and are helping to compile data for the new tool.

The tool, which is currently in development, will allow residents to find recycling and donation options for a variety of household items, all in one place. Users simply search for a material or item (like "metal" or "couch") and provide an address, and the tool will find a variety of recycling or donation options nearest to them.

The tool is being developed to make recycling and donating unconventional items—like furniture, packaging materials, sports equipment, and unopened packaged food—easier for Philadelphians, which will support the City's larger Zero Waste goals. This new platform is scheduled to go live on [phila.gov](http://phila.gov) in 2020.

## Philacycle Program

The Philacycle Program, which combined the existing RecycleBank Recycling Rewards Program with the City's Zero Waste Events Program, was launched in 2017. The program engaged Philadelphia residents in the City's Zero Waste movement by rewarding residents for recycling and encouraging them to take additional actions to support the City's Zero Waste efforts. The Cabinet and partners also recruited and trained Philacycle "Captains" to volunteer at Zero Waste Events and serve as Zero Waste ambassadors in their communities.

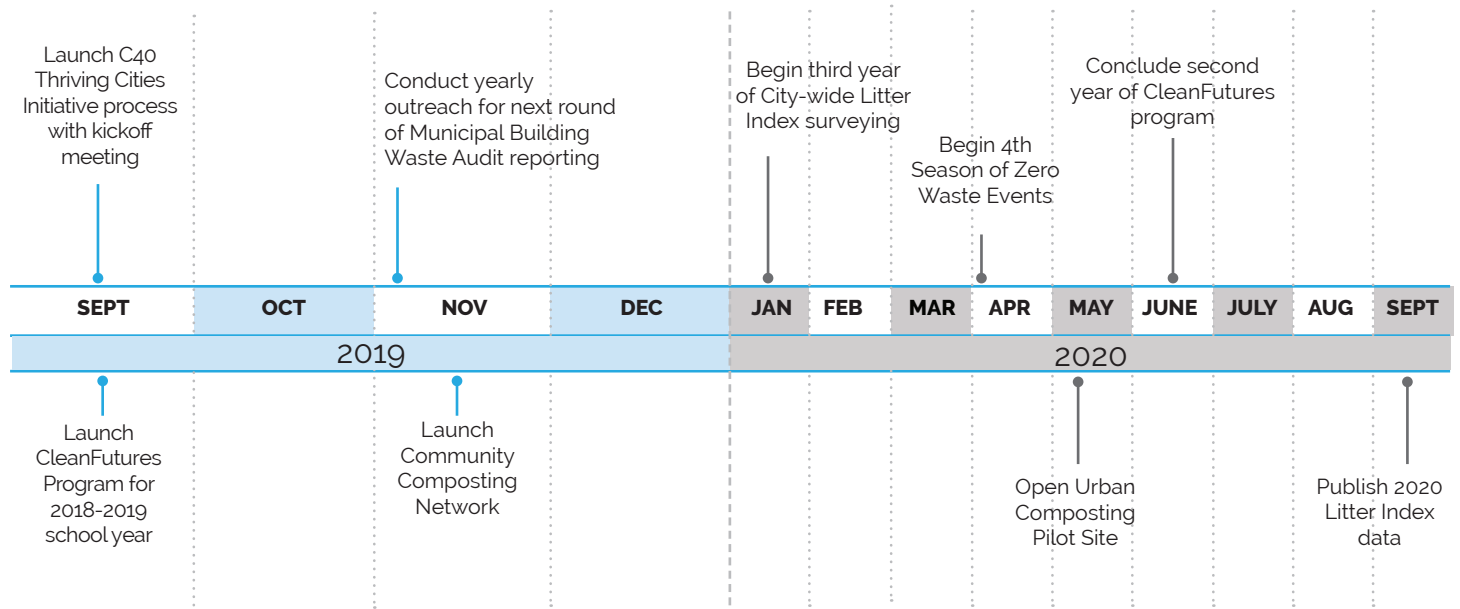
The Philacycle Program was discontinued as of June 30, 2019, due to the rising costs of recycling and other industry challenges. Despite the discontinuation of the Philacycle Program, the Cabinet will continue to engage with residents who were trained as Philacycle Captains to help promote the message of Zero Waste in their neighborhoods and to identify and implement new strategies for engaging Philadelphia residents in Zero Waste.

## Next Steps

- Continue to engage with Philadelphia residents, businesses, and other partners in person and through our digital platforms.
- Launch the digital Recycling and Donation Resource Finder Tool.
- Launch the second year of the CleanFutures Program for the 2019-2020 school year.



# 2019-2020 Timeline



# Acknowledgments



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**Helena Rudoff:**  
Office of Transportation,  
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**Community Life Improvement Program (CLIP)**  
**Tom Conway**  
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**Ralph DiPietro**  
Deputy Commissioner

**Department of Public Property**  
**Bridget Greenwald-Collins**  
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**Palak Raval-Nelson**  
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**Christine Knapp**  
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**Philadelphia More Beautiful Committee**  
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**Philadelphia Parks & Recreation**  
**Susan Buck**  
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**University of Pennsylvania**  
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[cleanphl.org](http://cleanphl.org)