



**ZERO
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CITY OF PHILADELPHIA
ZERO WASTE AND LITTER CABINET



CITY OF PHILADELPHIA

2019 Municipal Building Waste Audit Report

Introduction

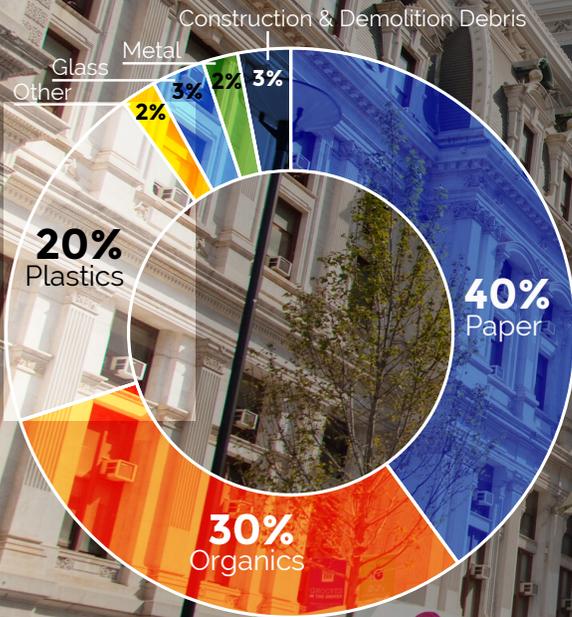
Contents

- 2 Introduction
- 4 Program Development
- 5 Optional Monthly Zero Waste Reporting
- 6 2017 Municipal Building Waste Audit
- 9 2018 Municipal Building Waste Audit
- 13 Waste Audit Insights by Department
- 20 Monthly Zero Waste Reporting Insights—City Zero Waste Partner Sites
- 21 Conclusions & Next Steps

The City of Philadelphia is working toward its ambitious goal of becoming a Zero Waste and litter-free city — with zero waste entering landfills and no more than 10% going to incinerators — by 2035. When it comes to recycling and other practices that divert waste away from the trash, municipal agencies should not only comply, but should lead by example. In 2017, the Zero Waste & Litter Cabinet (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 municipal departments with tools, resources, and support to help them minimize waste at their facilities.

Just like businesses and institutions, City buildings and municipal agencies operating in privately-leased space are required by City ordinance to recycle. Recycling, reuse, composting, and other practices that prevent materials from being thrown away as trash conserve energy and natural resources, reduce pollution, and lower the City’s waste disposal costs. The Municipal Building Waste Audit 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. The program aims to get building operators and staff to think more about the waste they generate while engaging City employees in Philadelphia’s Zero Waste movement.

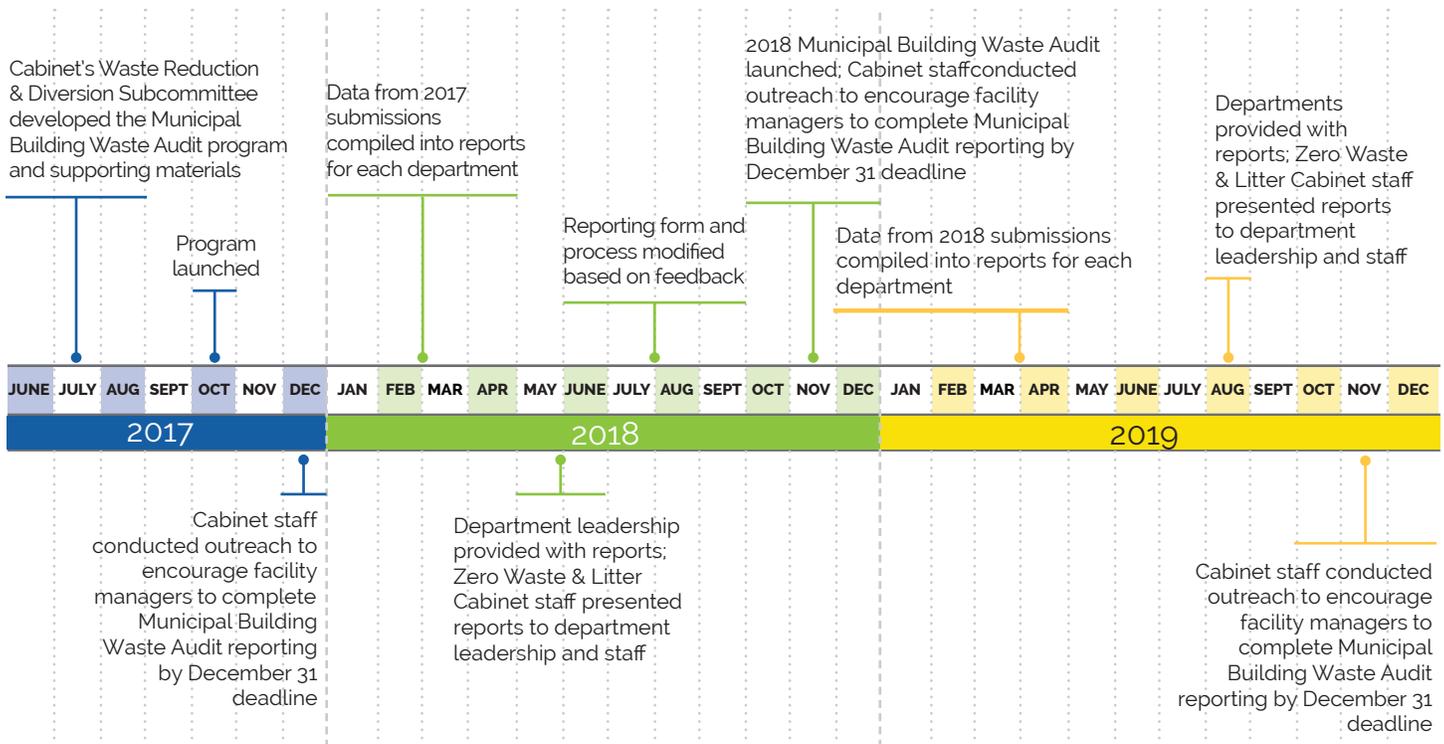
This report provides insights from the first two years of the Municipal Building Waste Audit Program’s implementation, analysis of data gathered through the program, and recommendations for how we can continue to promote sustainable waste management practices in Philadelphia’s City-owned and operated facilities moving forward.



Typical Waste Composition in Government Buildings

Most of the waste generated in typical government buildings is recyclable, so implementing and managing an effective recycling program is a relatively easy way to divert a significant amount of material from the trash.

Municipal Building Waste Audit Program Timeline





Program Development

The Cabinet's Waste Reduction and Diversion Subcommittee developed the program, building off of the City's former Commercial Recycling Plan (which was later transitioned into the new Commercial Waste Report) requirements. The Municipal Building Waste Audit process consists of filling out an annual reporting form and posting it publicly inside the facility. Facility operators are also encouraged to distribute copies of the completed form to employees working at the site, make sure that adequate recycling bins are available, and post recycling bin signage to ensure that staff know what is and is not recyclable as part of the City's single-stream recycling program.

Before the program was launched and as it was being implemented, the Cabinet and partners developed a set of materials to support the program and waste minimization efforts in municipal buildings:

- A Waste Audit Guide with information about program requirements, waste and recycling best practices, City recycling protocols, and options available to municipal departments for diverting different materials through practices like recycling, donations, and composting
- A list of Tips for Working with Custodial Staff
- A list of Philadelphia Disposal, Recycling, and Donation Options
- Standardized signage to hang above Trash, Recycling, & Compost bins
- A current list of City-wide recycling and disposal contracts through the City Procurement Department
- An E-waste Recycling Guide for City Departments

Copies of the Waste Audit Guide were distributed to participating City departments. It includes information about program requirements, waste and recycling best practices, City recycling protocols, and options available to municipal departments for diverting different materials through practices like recycling, donations, and composting.

Municipal Building Waste Audit Requirements

As part of the program, each City-owned and staffed building is required to:

- 1**
Fill Out Municipal Building Waste Audit Form
- 2**
Publicly Post Form
- 3**
Distribute Copies of Form to Employees
- 4**
Make Sure Recycling is Easy and Bins are Abundant
- 5**
Install Recycling Signage

Optional Monthly Zero Waste Reporting

After submitting a yearly Municipal Building Waste Audit form, facility managers can elect to learn more about opportunities for waste diversion and report in greater detail on the waste management practices at their facilities by completing optional monthly Zero Waste reporting. Through this program, building staff report on monthly waste generation totals at their facilities. The reporting form incorporates calculations and provides the user with the facility's estimated waste diversion rate—the amount of materials diverted away from the trash—for the month.

Building managers who go above and beyond to pursue Zero Waste in their buildings and complete the monthly reporting can achieve different levels of recognition as Zero Waste Partners in the City's Zero Waste Partnership Program. The Waste Reduction and Diversion Subcommittee developed an Excel-based Building Waste Generation Calculator Tool to help facility staff estimate monthly waste generation totals to complete the form. This tool is used widely by City staff and custodial contractors to estimate monthly waste generation totals.

Philadelphia Waste Generation Calculator Tool

Enter information about your collection service to estimate your facility's monthly materials generation. If you need help as you complete the form, click on the column heading that you have questions about, and you will be directed to more information.

Waste Generation Calculator Tool HELP

Average Monthly Materials Generation Estimate [View conversion factors list.](#)

Material Collected	# of Containers per Collection	Collection Frequency (# of Pickups Per Month)	Volume of Collection Container	Collection Container Units	Tons Collected per Month
Select Drop-down	Input Info	Input Info	Input Info	Select Drop-down	Calculation
Solid Waste (Trash)	1	8	8	cubic yards	8.800
Hazardous Waste	1	4	55	gallons	0.216
Single-Stream Recycling	1	4	8	cubic yards	1.792
Food Waste	1	8	55	gallons	0.505
Polyethylene (Styrofoam)	1	4	2	cubic yards	0.040
Construction & Demolition Debris	1	1	8	cubic yards	3.608

ESTIMATING BY INDIVIDUAL ITEMS

If you would like to estimate your weight of **electronic waste, universal waste, or wood** by individual items, use the matrix to the right.

The following materials are included:

- Electronic Waste:** Desktop Computers, Laptop Computers, Computer Monitors, Televisions
- Universal Waste:** Fluorescent Bulbs
- Wood:** Pallets

Material Collected	Number of Items Collected per Month	Tons Collected per Month
Select Drop-down	Input Info	Calculation
Desktop Computer	9	0.122
Computer Monitor	15	0.221
Laptop Computer	10	0.049
Wood Pallet	25	0.500

Calculator | Waste Log



2017 Municipal Building Waste Audit

In October 2017, the Municipal Building Waste Audit Program was launched, and the yearly waste audit form was published using the Jotform survey platform. A main contact for the program was identified within each City department, and those contacts were responsible for working with staff to have an individual from each site complete the reporting process. For many sites, an individual department staff person from each site was responsible for completing the reporting. For certain Department of Public Property, Police Department, and Fire Department locations, custodial team leaders were responsible for submitting forms. Zero Waste & Litter Cabinet staff provided updates, outreach, and assistance with the reporting process as needed.

394 of the 445 City-owned and staffed buildings identified to participate in the waste audit across all departments submitted reporting forms for the 2017 reporting year—an 87 percent submission rate. Zero Waste & Litter Cabinet staff sent reports detailing the findings from the waste audit to leadership and staff from each participating department and presented the findings to departments that requested.

The data and qualitative feedback the Cabinet received from City departments through the 2017 Municipal Building Waste Audit have already led to exciting outcomes, including:

- Uncovering needs for setting up City contracts for recycling construction and demolition debris (Philadelphia Water Department) and waste cooking oil (Philadelphia Fire Department). After the need to set up a City contract for waste cooking oil collection and recycling was identified in the 2017 waste audit, a contract was established that many Fire Department sites are now utilizing.
- The City's electronic waste and universal waste contracts have been combined to streamline the recycling process for these materials.

Participating Departments and Agencies

The following City departments/agencies take part in the Municipal Building Waste Audit Program:

- Fire Department
- Health Department
- Police Department
- Department of Licenses & Inspections
- Department of Prisons
- Department of Public Property
- Division of Aviation, Commerce Department
- Free Library
- Judicial Courts
- Office of Fleet Management
- Philadelphia Parks & Recreation
- SEPTA
- Streets Department
- Water Department

2017 Municipal Building Waste Audit

- Facilities that had not been receiving recycling collection were identified and added to the Streets Department's recycling collection routes.
- A Philadelphia Water Department facility that generates food waste in its cafeteria (the Bureau of Laboratory Services at 1500 E. Hunting Park Ave.) set up an on-site composting system, which serves as a model for other sites.
- Each department was provided with a list of waste-related challenges their staff identified, making department leadership aware of these issues, uncovering gaps in current practices, and allowing them to troubleshoot.
- Philadelphia Parks & Recreation used comments that facility contacts provided on waste-related challenges to determine which facilities could use interventions and additional support, such as installation of waste corrals to prevent curbside illegal dumping, and additional recycling education, outreach, and signage.
- 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.



Using data from the Municipal Building Waste Audit along with data from Philadelphia's City-wide Litter Index, Philadelphia Parks & Recreation identified sites within its network that would benefit most from installing waste corrals.

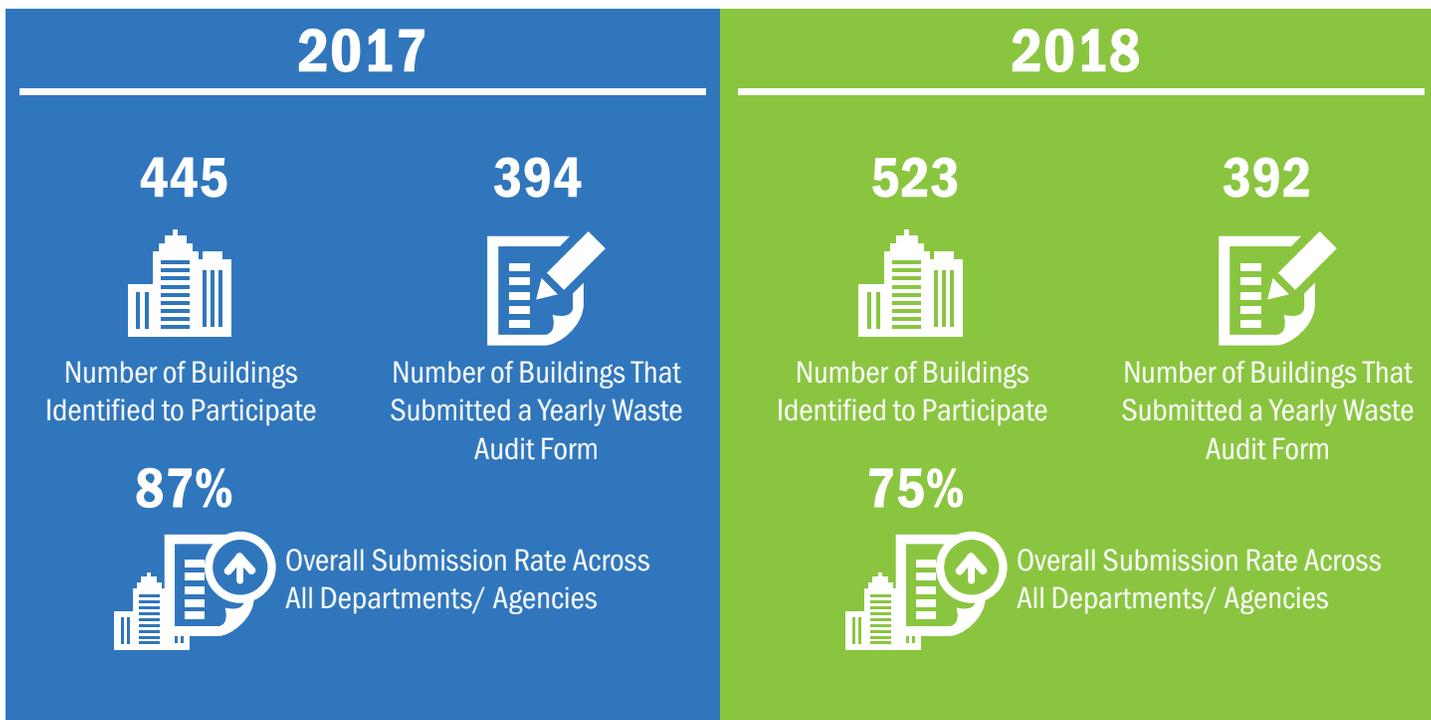
- All participating City departments were provided with information about recycling requirements as well as proper disposal and recycling contracts and procedures.
- Standardized recycling signage, recycling bin stickers, and other outreach materials and resources were distributed to all participating departments and made easily accessible on CleanPHL.org.
- Certain City-owned facilities began tracking their waste generation and waste diversion rates and submitting reporting forms on a monthly basis. They are now able to use this information to track changes over time and identify opportunities to reduce and divert waste.

Using Feedback to Modify the Program

Based on feedback provided by City staff, the reporting form and process were modified to streamline the program and improve the reporting experience. The following modifications were made:

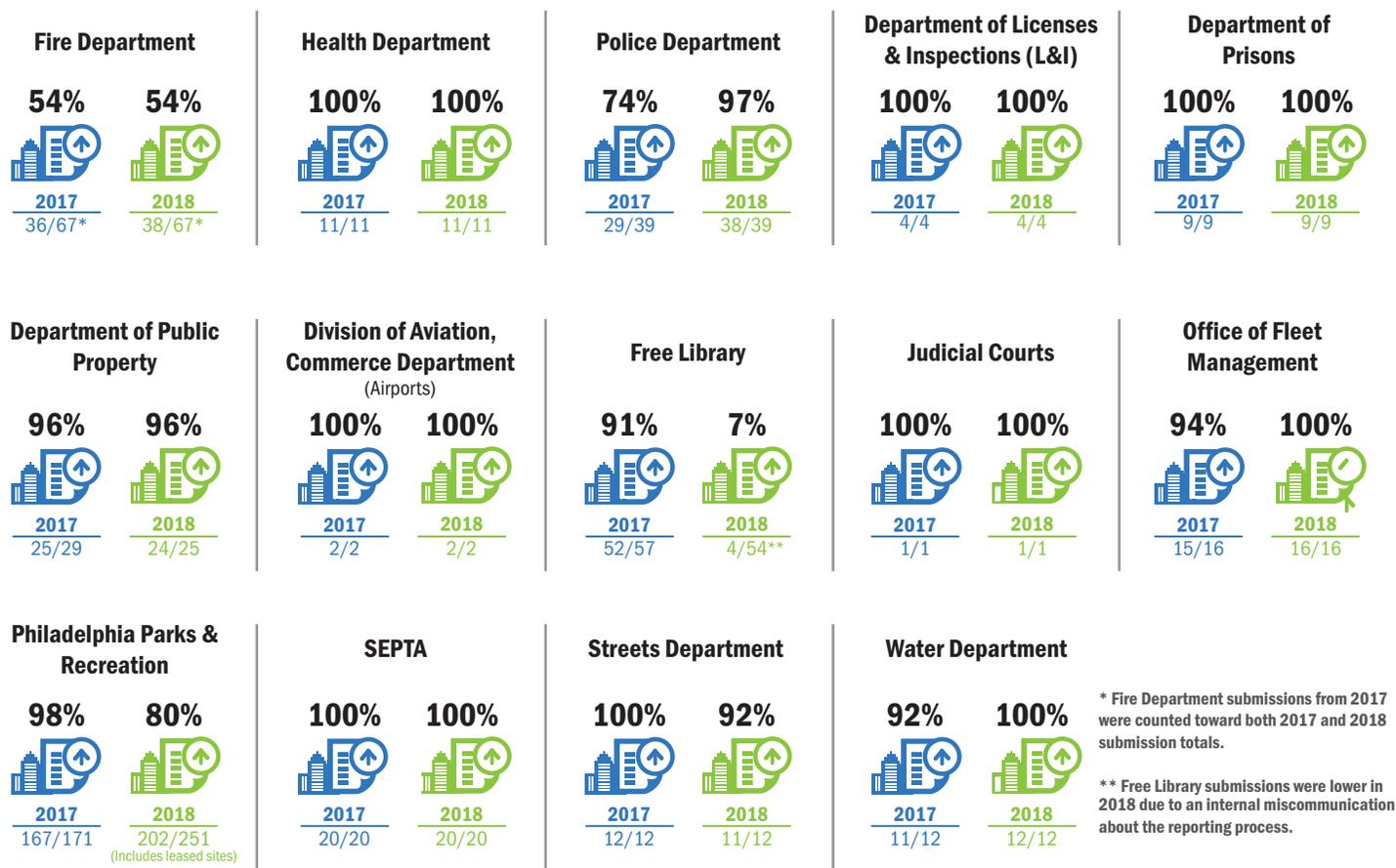
- In 2017, the optional Zero Waste reporting was a separate section within the yearly Municipal Building Waste Audit form. Some facility managers found the form confusing, so for the 2018 reporting year, the optional monthly Zero Waste reporting was moved to a separate form.
- A new question was added to the yearly waste audit form that asks facility staff if they are interested in recycling, donating, or composting any new materials at their facility and to name what new materials they are interested in diverting.

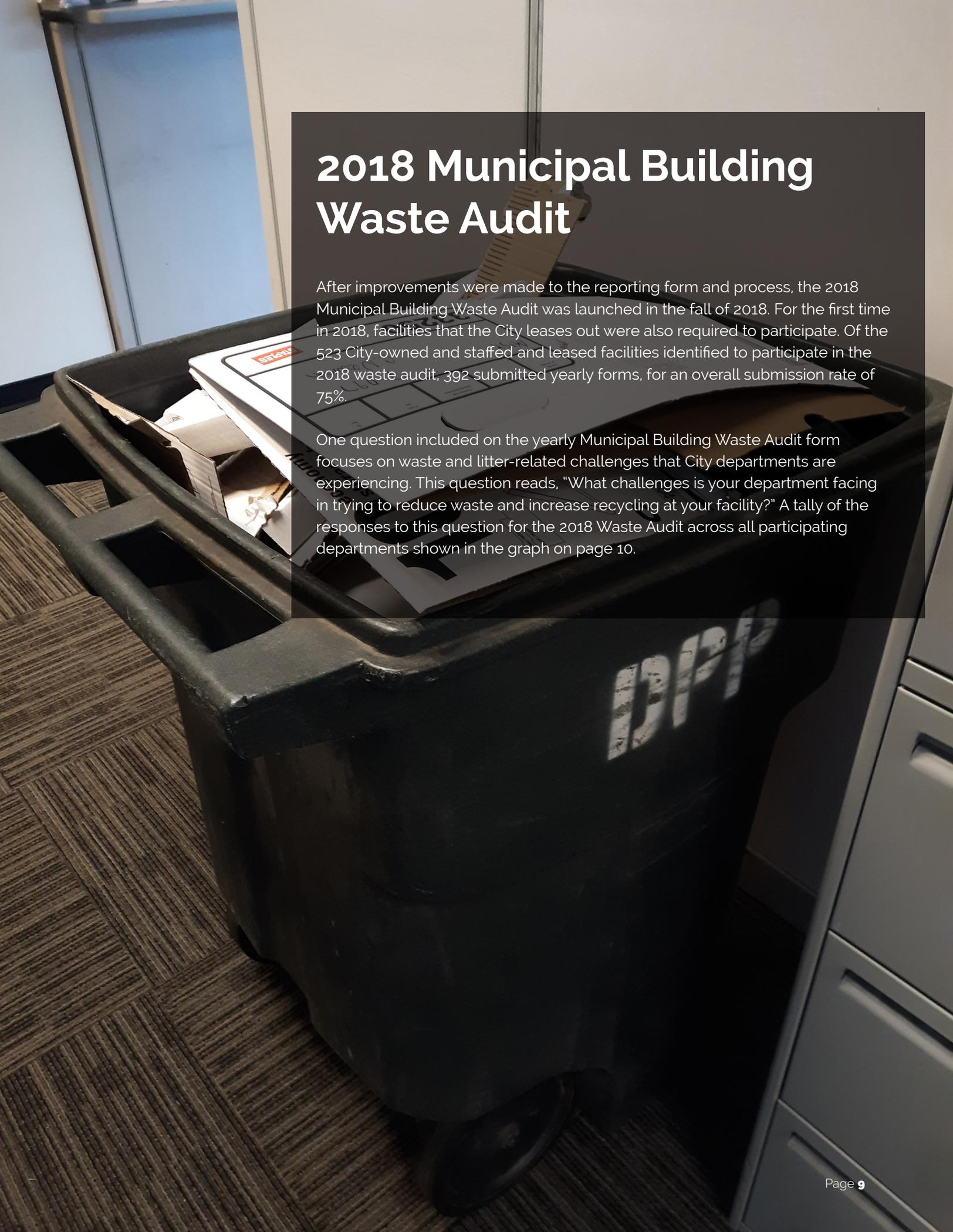
2017 - 2018 Municipal Building Waste Audit by the Numbers



2017-2018 Waste Audit Submission Totals by Department

Number of sites that submitted a yearly form



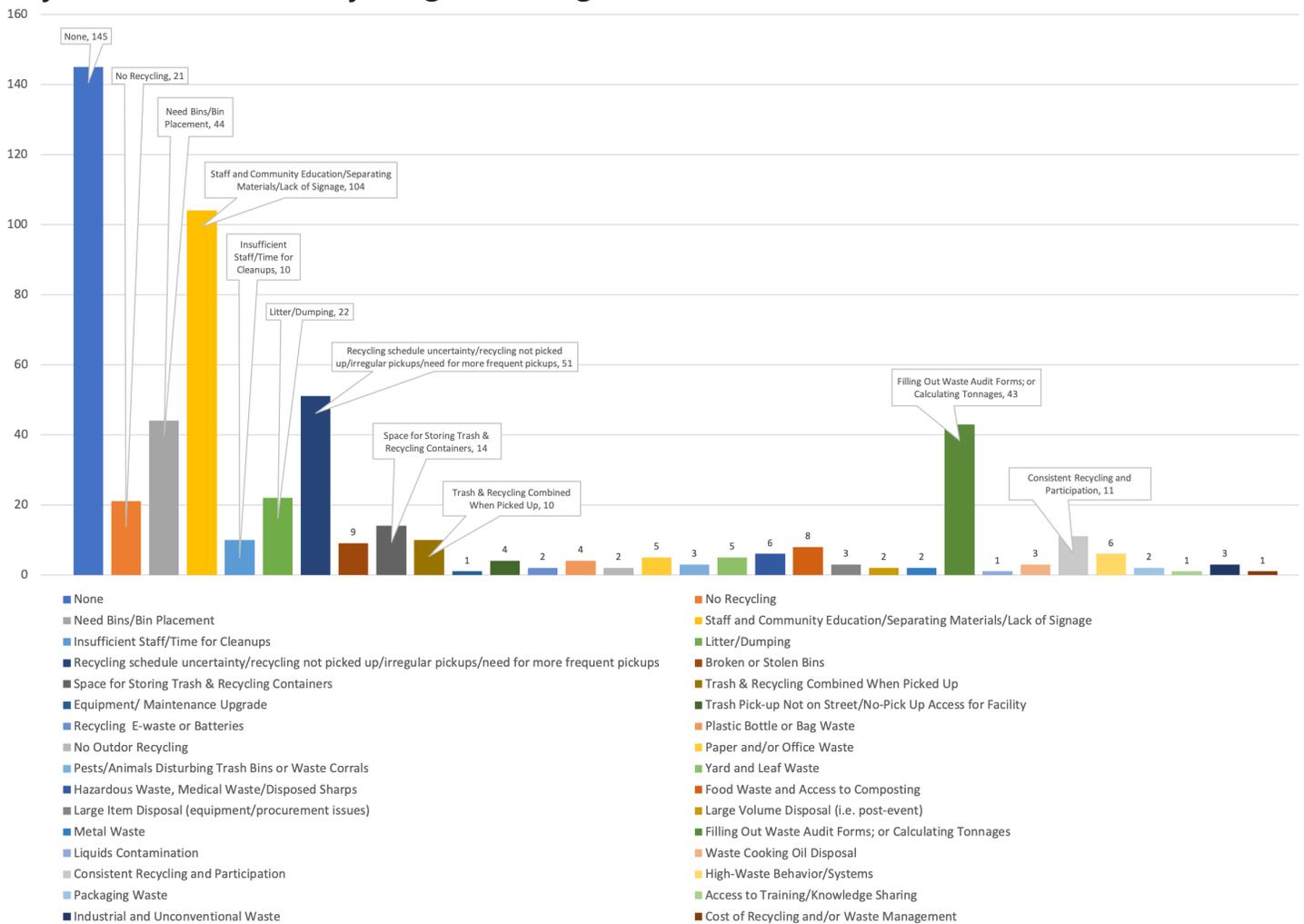


2018 Municipal Building Waste Audit

After improvements were made to the reporting form and process, the 2018 Municipal Building Waste Audit was launched in the fall of 2018. For the first time in 2018, facilities that the City leases out were also required to participate. Of the 523 City-owned and staffed and leased facilities identified to participate in the 2018 waste audit, 392 submitted yearly forms, for an overall submission rate of 75%.

One question included on the yearly Municipal Building Waste Audit form focuses on waste and litter-related challenges that City departments are experiencing. This question reads, "What challenges is your department facing in trying to reduce waste and increase recycling at your facility?" A tally of the responses to this question for the 2018 Waste Audit across all participating departments shown in the graph on page 10.

Citywide Waste & Recycling Challenges - 2018



This graph shows the most common waste and recycling-related challenges across City departments in 2018. The most common challenge at municipal buildings in the 2018 Waste Audit was staff and community education and/or a lack of recycling signage, leading to issues with separating materials and contamination. Challenges that were reported by 10 or more facilities are annotated in the graph.

Challenges & Recommendations

Biggest Waste and Recycling Challenges Among Municipal Facilities in 2018

The Municipal Building Waste Audit form asks facility managers to report any waste or recycling challenges they may have faced throughout the year. Some challenges are unique to a department, while others are commonly experienced across departments and their facilities. The most common challenge among municipal buildings by far is staff and community education or a lack of recycling

signage, leading to issues with separating materials and contamination. This has been a persistent challenge, as it was also commonly noted in 2017. Several facilities across multiple departments also noted a lack of recycling bins or a lack of storage for bins; recycling schedule uncertainty or a need for more frequent pickups; frequent littering and illegal dumping; insufficient staff to deal with litter and dumping cleanups; inconsistent participation in recycling; concern that recycling and trash are combined during pick-up; and no access to recycling services.

A new but common challenge in 2018, specifically across Department of Public Property facilities, was with facilities filling out Waste Audit and Monthly Zero Waste forms consistently. This challenge may be due to issues

2018 Municipal Building Waste Audit

with calculating waste tonnages for some facilities. The Cabinet has provided each department with specific recommendations to address their waste and recycling challenges, summaries of which can be found later in this report. A set of general recommendations to address City facilities' most common challenges is detailed in the section below.

Recommendations

While each City department experiences its own unique waste and recycling challenges, several challenges were common among many sites. The Cabinet has provided the following recommendations for facilities facing one or more of the most commonly noted waste and recycling challenges:

- **Staff and community education, separating materials, and signage:** The Cabinet's recommendations include downloading standardized waste bin signage, distributing recycling guidelines to staff, and requesting that the Cabinet and/or Philadelphia Recycling Office provide a staff presentation on waste and recycling.
- **Need for new recycling bins:** Another commonly-noted challenge was the need for new recycling bins. The Cabinet provides a full list of City contracts through which recycling bins can be procured and guidance on bin pairings and placements at City sites.
- **No/inconsistent recycling pickups:** For sites that report a lack of recycling pickup service or inconsistent service, the Cabinet helps to inform the Streets Department, where appropriate, and troubleshoot by site.
- **Litter/illegal dumping:** The Cabinet provides facilities that are having problems with litter and illegal dumping with information on how to report illegal dumping and suggestions for deterring litter and dumping at particular sites.
- **Space for storing trash/recycling bins:** The Cabinet helps on a case-by-case basis to find solutions for sites that are having issues with storing trash and recycling until collection days.
- **Tracking waste and completing waste reporting:** The Cabinet offers trainings and support to any City staff members completing waste reporting, and we look forward to incorporating feedback to remove any barriers and streamline the process as much as possible.

The Cabinet additionally encourages City department leadership and staff to contact us throughout the year with any challenges so that we can help to address them.

Diverting New Materials

Another question included on the yearly Municipal Building Waste Audit form for the first time in 2018 asks respondents whether there are any materials they generate at their facilities that they would like to divert from the trash. This question reads, "Do you want to find a way to recycle, donate, or compost any of the following materials at your facility?" The respondent is then provided with the following options: food waste, yard and leaf waste, polystyrene (Styrofoam™), plastic bags, wood, metal, clothing, and unopened packaged food. An "other" option is also provided, where the respondent can write in additional materials not included in the list of preset options. A tally of responses to this question for the 2018 waste audit across all participating departments is shown in the graph on page 12.

The most commonly identified material was food waste, with 135 sites listing it 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 & 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 and will continue to engage with City staff to identify strategies for diverting more waste away from the trash and share best practices across all City departments.

Zero Waste & Litter Cabinet staff 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.

2018 Waste Audit Materials to Divert by Department



Paper/cardboard

Philadelphia Parks & Recreation - 1
Office of Fleet Management - 1



Metal

Philadelphia Parks & Recreation - 9
Streets Department - 1
Department of Prisons - 1
Fire Department - 6
Department of Public Property - 2
Office of Fleet Management - 4



Food Waste

Philadelphia Parks & Recreation - 66
Department of L & I - 4
Streets Department - 1
Department of Prisons - 4
Health Department - 1
Police Department - 20
Fire Department - 12
Department of Public Property - 24
Airports - 1
Water Department - 1
Office of Fleet Management - 1



Yard & Leaf Waste

Philadelphia Parks & Recreation - 64
Streets Department - 1
Department of Prisons - 1
Health Department - 2
Police Department - 1
Free Library - 3
Fire Department - 3
Department of Public Property - 1
Airports - 1
Water Department - 3
Office of Fleet Management - 1



Plastic Bags

Philadelphia Parks & Recreation - 36
Department of L & I - 4
Streets Department - 2
Department of Prisons - 1
Health Department - 3
Free Library - 1
Fire Department - 9
Department of Public Property - 3
Airports - 1
Water Department - 1
Office of Fleet Management - 4



Polystyrene (Styrofoam™)

Philadelphia Parks & Recreation - 12
Streets Department - 1
Fire Department - 3
Department of Public Property - 1
Airports - 1
Water Department - 1
Office of Fleet Management - 4



Clothing

Philadelphia Parks & Recreation - 27
Streets Department - 1
Health Department - 2
Water Department - 1
Office of Fleet Management - 1



Wood

Philadelphia Parks & Recreation - 5
Streets Department - 1
Fire Department - 1
Water Department - 2



Edible, Unopened Packaged Food

Philadelphia Parks & Recreation - 23
Department of L & I - 1
Streets Department - 2
Fire Department - 5
Department of Public Property - 1
Airports - 1
Water Department - 1



Old Computers

Health Department - 1
Water Department - 1



Single-Stream Recycling

Philadelphia Parks & Recreation - 4
Health Department - 1



Fiberglass Poles

Streets Department - 1



Waste Cooking Oil

Philadelphia Parks & Recreation - 1



Used Motor Oil

Philadelphia Parks & Recreation - 2



Cement

Philadelphia Parks & Recreation - 1



Office Waste

Philadelphia Parks & Recreation - 1



Plastic

Philadelphia Parks & Recreation - 2



Gym Mats

Philadelphia Parks & Recreation - 1



Manure

Philadelphia Parks & Recreation - 1



Waste Audit Insights by Department

Each City department/agency participating in the Municipal Building Waste Audit reports its own specific challenges with waste and recycling. Sometimes challenges are prevalent across departments, however certain departments experience challenges that are unique to their own services or operations. These challenges and other takeaways are compiled by the Cabinet so that we can develop specific recommendations and resources to meet the needs of each department and help them achieve their Zero Waste goals. The Cabinet provides each department with its own comprehensive report separately. Summaries of each department's challenges, takeaways, and the Cabinet's recommendations are detailed below.

Philadelphia Water Department (PWD)

In 2018, all 12 eligible Water Department facilities submitted waste audit forms. Additionally, five PWD facilities have participated in Zero Waste reporting, achieving an average monthly waste diversion rate of 61.3%.

Challenges & Takeaways

Like many other City facilities, PWD facilities reported challenges with recycling education and waste separation/contamination. The Fox Street Field Office reported a need to incentivize staff to participate in recycling. Facilities reported additional challenges with storing waste and recycling bins, and with construction debris disposal. The City is currently establishing a contract for recycling construction and demolition debris, a need that was identified by PWD through the waste audit.

Water Department facilities reported interest in finding ways to divert several new materials away from the trash, including food waste, yard and leaf waste, plastic bags, polystyrene, clothing, wood, old computers (e-waste), and unopened packaged food. The Cabinet has provided a list of disposal resources by material and will continue to work with PWD to identify resources that fit its needs.

SITE SPOTLIGHT | Bureau of Laboratory Services

After identifying a need for diverting food waste away from the trash, the Water Department's Bureau of Laboratory Services (1500 E. Hunting Park Ave.) built and installed a three-bin composting system for food waste from their cafeteria.

Department of Public Property (DPP), Division of Aviation (Airports), & Judicial Courts

In 2018, 24 of 25 eligible DPP facilities submitted waste audit forms. Most of these facilities also completed monthly Zero Waste reporting, and the majority of DPP's buildings have been submitting monthly waste reporting forms consistently for over a year. DPP has been a wonderful partner and a leader in this effort, and participating facilities were mailed Zero Waste Partnership Program certificates and decals to hang in their buildings. With only three eligible properties between them, Airports and Judicial Courts properties achieved 100% submission rates in 2018.

Challenges & Takeaways

The majority of DPP facilities reported that it is a challenge to get representatives from some of its facilities to fill out the required annual form and optional monthly Zero Waste forms. Since the launch of the program, DPP has been a leader in Zero Waste reporting among municipal buildings. We aim to make the reporting process simple for facility managers to complete and to have the audit serve as a useful tool in assessing facilities' waste streams and will continue to support departments that choose to have their facilities participate in monthly waste reporting and troubleshoot any issues that arise.

Airport facilities noted that main challenges faced at their facilities include liquid and plastic bag contamination in recycling bins. Philadelphia International Airport is working to increase its waste diversion rate through projects that focus on reducing contamination of the recycling stream through improving recycling education and advocacy, as well as other efforts.

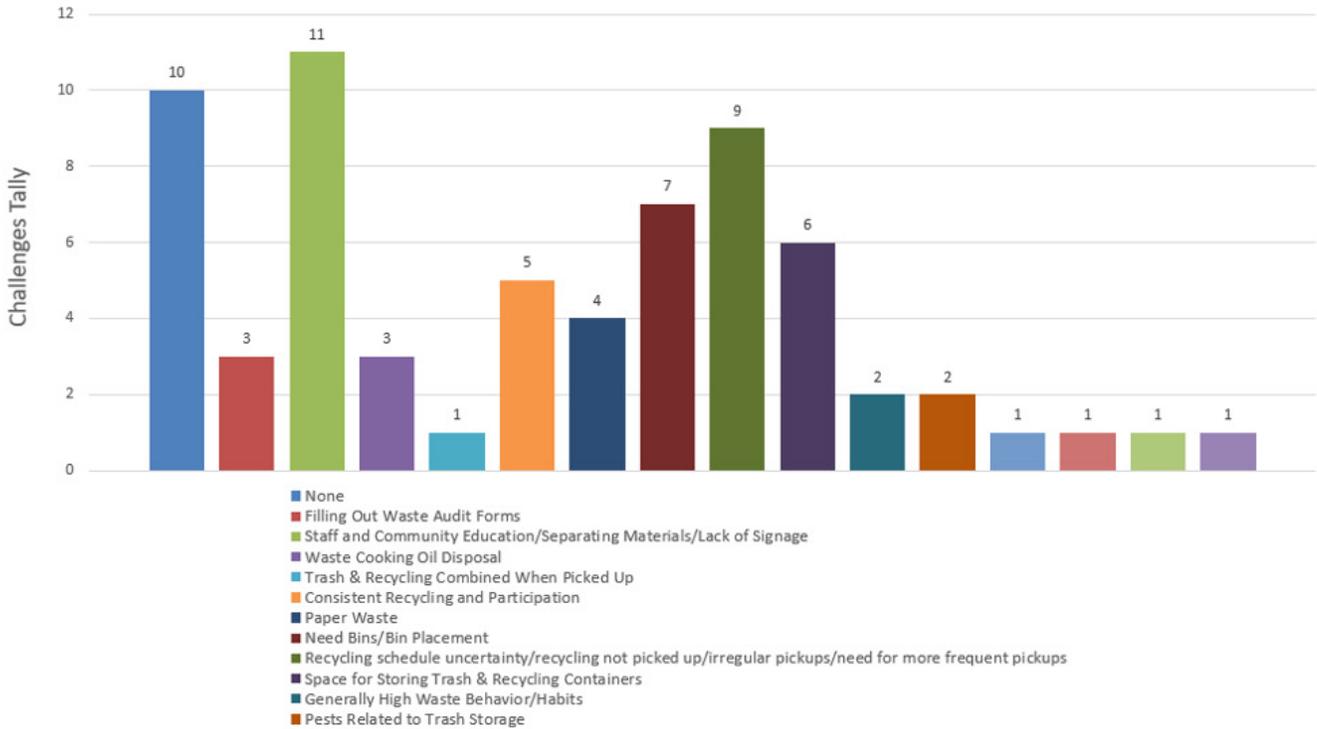
Many DPP facilities additionally reported interest in diverting new materials from the trash, primarily food waste (24 DPP sites and one Airports site). The Cabinet will provide assistance with setting up composting programs at interested facilities and connect department staff with local resources and guidelines for donating unopened, packaged food.



SITE SPOTLIGHT | Philadelphia City Hall

Three of the City's 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.

Waste & Recycling Challenges at Philadelphia Fire Department Facilities - 2018



Philadelphia Fire Department (PFD)

The Fire Department data included here is from waste audit forms submitted in both 2017 and 2018. Over this period, 38 of 67 Fire Department facilities submitted a waste audit form, resulting in a 54% compliance rate. Additionally, eight Fire Department facilities are participating in monthly Zero Waste reporting.

Challenges & Takeaways

The Fire Department offered lots of feedback through the waste audit form (tallied in the graph above). Staff and community education on recycling practices was listed as a challenge by 11 Fire Department facilities. Uncertainty around trash or recycling pickup schedules or the need for additional trash and recycling pickups during the week in order to address above-average waste accumulation was noted by nine facilities, and the need for new recycling bins was listed by seven sites. The need to recycle waste cooking oil was also identified through the 2017 waste audit, which led the City to initiate the process of establishing a cooking oil recycling contract for the Fire Department to utilize.

Several Fire Department facilities also noted interest in figuring out ways to divert metal, food waste, and plastic bags away from the trash. The Cabinet has provided Fire

Department leadership and staff with recommendations for addressing each challenge, as well as a list of waste diversion options by material, and will continue to work with the Fire Department to determine new ways to minimize waste.

Philadelphia Police Department (PPD)

38 of 39 eligible Police Department facilities submitted waste audit forms in 2018, earning a 97% submission rate. 19 PPD facilities completed optional Zero Waste reporting, as well, and PPD has been a leader in this monthly reporting effort.

Challenges & Takeaways

The most common challenge faced at Police Department facilities involved filling out the waste audit forms, and one facility reported problems with recycling stream contamination. Additionally, 20 PPD facilities reported interest in diverting additional materials away from the trash, specifically food waste. The 14th Police District also reported interest in diverting yard and leaf waste. The Cabinet has provided a list of diversion options by material and will continue to work with PPD on efforts to divert new materials and reduce waste.

Office of Fleet Management (OFM)

In 2018, all 16 Office of Fleet Management facilities submitted Waste Audit reports for a 100% submission rate. Additionally, two OFM facilities (Garage 209 and Garage 357) have been participating in monthly Zero Waste reporting for over a year.

Challenges & Takeaways

In 2018, facilities reported uncertainty around trash and recycling pick-ups from the Streets Department, specifically about whether recyclables are actually getting picked up. Additionally, one facility reported issues with handling excessive packaging from auto parts. The Cabinet has shared the names and addresses of the facilities that listed a need for recycling collection with the Streets Department. We have additionally recommended that OFM review the Procurement Department's list of current recycling and disposal contracts to address issues with bulk and unconventional waste.

Several OFM sites expressed an interest in diverting new materials from the trash, including cardboard, metal, food waste, yard and leaf waste, plastic bags, polystyrene (Styrofoam™), and clothing. The Cabinet has provided OFM with a list of diversion resources by material and will continue to work with them to divert these materials and minimize waste.

Free Library of Philadelphia

In 2018, four of 54 eligible Free Library branches submitted forms, resulting in a 7% compliance rate; this is a significant change from 2017, when the department's compliance rate was 91%. Four Library branches also completed monthly Zero Waste reporting in 2018; the Andorra Library branch has been participating in this initiative for over a year and was provided with a Zero Waste Partnership Program certificate and window decal.

Challenges & Takeaways

Similar to other public-facing departments, Free Library facilities have noted challenges with encouraging patrons to recycle properly and with vandalism of recycling bins. The Cabinet has created materials that facilities can download and print, then post near trash and recycling bins to educate patrons. It is equally

important that these materials are distributed to staff so that they know the ins and outs of recycling and can help patrons with recycling.

Free Library facilities indicated an interest in figuring out ways to divert both yard and leaf waste and plastic bags away from the trash. The Cabinet has provided a list of diversion options by material and will continue to work with the Free Library to address waste-related challenges.

Philadelphia Health Department

In 2018, 11 eligible Health Department facilities were identified, and 100% submitted waste audit forms.

Challenges & Takeaways

In 2018, challenges from the Health Department involved waste and recycling sorting, specifically in collaboration with facility custodial staff. Additionally, facilities reported a need for more training for employees, as well as proper storage for recyclables. Facilities noted interest in diverting several additional materials away from the trash, including food waste, yard and leaf waste, plastic bags, clothing, and old computers (e-waste). The Cabinet has provided a list of diversion options by material and will continue to work with the Health Department to find recycling and donation options that fit its needs.

Department of Licenses & Inspections (L&I)

In 2018, all four eligible Licenses & Inspections (L&I) facilities submitted waste audit forms, for a 100% compliance rate.

Challenges & Takeaways

Multiple facilities reported challenges with recycling contamination. Three of the four L&I District Offices (West, North, and East) reported challenges specifically with food, napkins, plastic bags, and other non-recyclable items being placed in recycling bins. The Cabinet recommends that facilities looking to reduce recycling contamination download the newly-developed, standardized City recycling signage to hang near waste bins and distribute to staff to ensure they know the ins and outs of recycling. The Cabinet and Philadelphia Recycling Office are also offering presentations on waste and recycling to any City departments that request them.

Waste Audit Insights by Department

Additionally, all four L&I district offices reported interest in diverting additional materials away from the trash, specifically food waste, plastic bags, and unopened packaged food. The Cabinet has provided a list of diversion options by material and will continue to work with L&I on efforts to divert new materials and minimize waste.

Philadelphia Parks & Recreation (PPR)

In 2018, the City required both City-owned and operated and leased facilities to file a Municipal Building Waste Audit form. This change was significant for Philadelphia Parks & Recreation, which leases out 82 properties in the city while operating and staffing 169 other facilities. For 2018, PPR's City-owned-and-operated properties achieved a reporting compliance rate of 96%, and leased properties achieved 48% compliance. In total, 80% of all PPR properties submitted a waste audit form in 2018. Lloyd Hall began participating in monthly Zero Waste reporting in fall 2019.

Challenges & Takeaways

As the largest department reporting under the waste audit, PPR facilities noted a large and diverse list of waste and recycling challenges in 2018.

Over 200 separate challenges were reported by non-leased PPR facilities. As a public-facing department, staff and community education, separating materials, and/or a lack of signage remains a significant challenge for PPR. A lack of recycling services, need for more bins, litter and illegal dumping, and recycling pick-up uncertainty are also common challenges. Other facilities reported issues with disposing of large or irregular waste items and illegal dumping. At PPR's leased facilities, the most common challenges by far were a lack of recycling services and uncertainty around recycling pick-up schedules. Several of these facilities noted that they do not have access to City or other recycling and waste pick-up services and instead have to drop off waste at a Sanitation Convenience Center themselves.

The Cabinet has provided both leased and non-leased PPR facilities with a comprehensive set of recommendations to address these challenges, which includes links to useful resources, lists of City departmental contacts, and other tools. Many PPR facilities (leased and non-leased) expressed interest in diverting additional materials away from the trash,

primarily food waste (66 facilities), yard and leaf waste (64), plastic bags (36), clothing (27), and edible, unopened packaged food (23). The Cabinet has provided these facilities with a list of diversion options by material, and will additionally provide assistance with setting up composting programs at interested facilities and connect department staff with local resources and guidelines for donating packaged food.



SITE SPOTLIGHT | Philadelphia Parks & Recreation Outdoor Recycling Program

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 parks and recreation 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. PPR is also utilizing standardized recycling bin signage to help patrons properly sort their trash and recycling.



SITE SPOTLIGHT | Holmesburg Prison

Closed in 1995, Holmesburg Prison has repurposed its yard as a composting facility run by the Department of Prisons, with funding from the Philadelphia Office of Sustainability's Greenworks Sustainability Fund. Composting stops waste from going to landfills or incinerators and saves the City money. The City now pays less in waste disposal fees and makes fertilizer for departmental use. This project consisted of two phases. Phase one put in a trommel screen (to separate materials) and a three-bin composting system. The second phase created an aerated compost bay system. These bays allow the Philadelphia Prisons to collect waste from many prison facilities. This system takes the food waste and turns it into compost. The Department's agriculture program and local nonprofit organizations use the compost.

In addition to waste diversion, this program provides training to inmates: inmates learn skills in urban greening and sustainable land care. This training is a result of a partnership between Philadelphia Department of Prisons, Temple University, Pennsylvania Horticultural Society, and the Mayor's Office of Reintegration Services (RISE).

This program also won the Environmental Protection Agency's Food Recovery Challenge, which highlights organizations that focus on sustainable food management practices.

“This composting facility not only diverts food waste from the landfill, but it also provides vocational training to inmates so that upon their release, they have marketable skills to better help them find jobs.”

- Laura Cassidy, Department of Prisons

Philadelphia Department of Prisons (PDP)

In 2018, all nine eligible Philadelphia Department of Prisons facilities submitted forms, resulting in a 100% submission rate. This year, the department was recognized by the U.S. Environmental Protection Agency for its food recovery achievements that include composting wasted food, saving the City \$28,000 in landfill fees.

Challenges & Takeaways

Prisons facilities face unique waste challenges, notably related to sorting and pickups. Facilities also noted a need for trainings to be sure staff know the ins and outs of recycling and interest in accessing tools and information from other departments participating in the waste audit. The Cabinet asks that any facilities experiencing issues with waste or recycling collection provide us with more information about which sites need recycling services and any barriers to pickup so that we can troubleshoot specific issues. Additionally, we recommend that facilities download recycling signage and distribute to staff along with this report. Finally, the Cabinet will be looking into opportunities for sharing best practices across departments.

PDP has been a leader in diverting food waste, and in the 2018 waste audit, additional PDP facilities expressed interest in figuring out ways to divert food waste themselves. Facilities also noted interest in diverting metal, yard and leaf waste, and plastic bags from the trash.



Philadelphia Department of Prisons Composting Program

Southeastern Pennsylvania Transportation Authority (SEPTA)

All 20 eligible SEPTA facilities submitted waste audit forms in 2018, resulting in a 100% submission rate. To date, no SEPTA facilities have participated in monthly Zero Waste reporting.

Challenges & Takeaways

While most SEPTA facilities did not report any challenges for 2018, the Allegheny Bus Facility reported an issue with managing packaging and industrial waste. The Cabinet has asked SEPTA to provide us with additional details on the specific materials that are posing a challenge, so that we can help to troubleshoot issues. No SEPTA facilities indicated interest in diverting additional materials away from the trash this year, however the Cabinet has provided a list of diversion options by material and is available to discuss these options at any time.

Philadelphia Streets Department

In 2018, 11 Streets Department facilities submitted waste audit forms of an eligible 12, resulting in a 92% submission rate. No Streets Department facilities have participated in monthly Zero Waste reporting to date.

Challenges & Takeaways

One Streets site is seeking to recycle scrap fiberglass light poles, and other sites requested additional educational resources for staff. The Cabinet recommends that facilities use existing educational resources, such as the City's standardized recycling signage, and work with the Cabinet and the Recycling Office to conduct trainings.

Streets Department facilities also expressed an interest in figuring out ways to divert several materials from the trash, including metal, food waste, yard and leaf waste, plastic bags, polystyrene, clothing, wood, and unopened packaged food. The Cabinet has provided a list of diversion options by material and will continue to work with the Streets Department on efforts to divert new materials and minimize waste.



Monthly Zero Waste Reporting Insights—City Zero Waste Partner Sites

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 reporting on their waste generation each month. By tracking waste generation over time, facility operators are better able to identify gaps in waste management practices. The Cabinet is then able to use this valuable data to help City departments identify opportunities for reducing waste and diverting materials away from the trash through practices like recycling, donations, and composting. 50 City-owned buildings are currently participating in this effort and tracking and reporting on their monthly waste generation.

50 municipal buildings consistently report on their monthly waste generation:

23

Department of Public Property sites

4

Fire Department sites

18

Police Department sites

3

Water Department sites

1

Free Library site

1

Philadelphia Parks & Recreation site



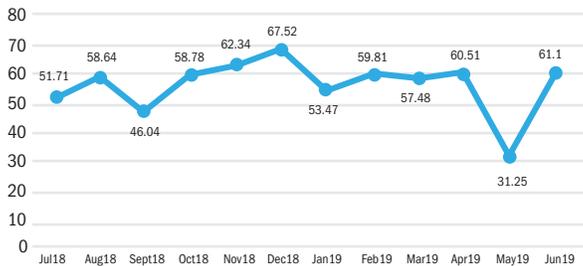
Each site that participates in optional monthly Zero Waste reporting receives a Zero Waste Partner window decal and Partnership certificate to hang publicly at the facility.

Monthly Waste Diversion Rates Over Time for Select Municipal Zero Waste Partner Sites

Tracking and reporting on waste generation over time allows City departments to benchmark their facilities' waste diversion rates, determine ways to reduce and divert waste, and set goals for improvement. The graphs below show monthly waste diversion rates over time for three City-owned and operated properties.

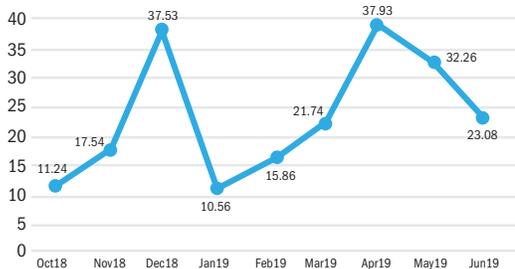
Monthly Waste Diversion Rate Over Time for Queen Lane Water Treatment Plant

(Philadelphia Water Department, 3110 W. Queen Ln.)



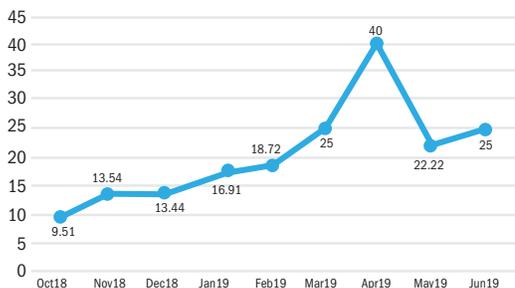
Monthly Waste Diversion Rate Over Time for Philadelphia Fire Academy

(Philadelphia Fire Department, 5200 Pennypack St.)



Monthly Waste Diversion Rate Over Time for Employee Health Services

(Department of Public Property, 1920 N. 20th St.)



Conclusions & Next Steps

The Zero Waste & Litter Cabinet is looking forward to continuing the yearly Municipal Building Waste Audit and using the data collected through this program to troubleshoot issues and connect City department staff with tools to help them minimize waste at their facilities. Conducting this annual assessment of waste management practices at City properties, engaging with City staff to ensure they understand waste and recycling best practices, working with the City's Procurement Department to address needs, working continuously to make improvements, and implementing new waste reduction and diversion initiatives will allow for better understanding and management of waste in Philadelphia's municipal sector. This program exists alongside efforts to benchmark commercial waste management practices through the City's Commercial Waste Report requirements, and to incentivize and reward commercial properties for implementing 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 and will allow for the development of data-driven policies and programs to support waste reduction and diversion in the city.