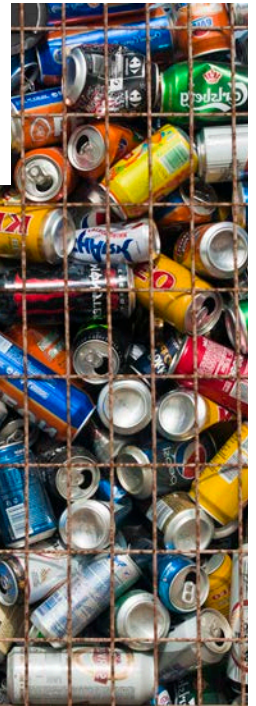




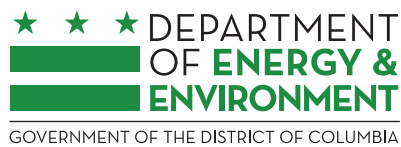
WASHINGTON, DC
SOLID WASTE DIVERSION
PROGRESS REPORT
FISCAL YEAR 2015 & 2016



ISSUED DECEMBER 2016

ACKNOWLEDGEMENTS

We would like to extend our sincerest appreciation to agency members of the Interagency Waste Reduction Working Group who assisted in the production of this report:



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ACRONYMS AND ABBREVIATIONS

DCHA

The District of Columbia Housing Authority

DCPS

The District of Columbia Public Schools

DOEE

The District of Columbia Department of Energy and Environment, formerly known as the District Department of the Environment (DDOE)

DGS

The District of Columbia Department of General Services

DPW

The District of Columbia Department of Public Works

DPR

The District of Columbia Department of Parks and Recreation

EPA

U.S. Environmental Protection Agency

E-Waste

Electronic Waste

HHW

Household Hazardous Waste

MWCOG

Metropolitan Washington Council of Governments

OCP

The District of Columbia Office of Contracting and Procurement

OWD

The District of Columbia Department of Public Works Office of Waste Diversion

SWEEP

The Solid Waste Education and Enforcement Program of the Solid Waste Management Administration, a division of the Department of Public Works

SWEEP Jr.

The Department of Public Works Solid Waste Education and Enforcement Program for youth

SWMA

Solid Waste Management Administration, a division of the Department of Public Works

WTE

Waste to Energy

DIRECTOR'S LETTER



Dear Washington D.C. Residents,

I am pleased to share the District of Columbia's Fiscal Year 2015 & 2016 Solid Waste Diversion Progress Report, the first report of its kind to be released by the District in five years.

This report provides a snapshot of FY 15's data, the District's recent successes, and the District's FY 17 plans to further waste diversion efforts.

To meet the goal of diverting 80% of the waste generated in the District from landfill and waste to energy, the District will need to implement innovative programs to promote waste prevention, recycling,

and composting. Achieving this goal requires the collaboration of businesses, government, community groups, and residents.

This report is designed to provide the information needed to the District's waste diversion partners and stakeholders to support a productive collaboration toward meeting our waste diversion goals. My hope is that this information be used by citizens, the Mayor, and City Council to make well-informed decisions in the pursuit of greater resource conservation and higher standards of sustainability.

We are proud of what we have accomplished so far and look forward to continuing to work with you to achieve the District's zero waste goals.

Sincerely,

Christopher Shorter
Director
Department of Public Works

INTRODUCTION



The District's Fiscal Year 2015 & 2016 Solid Waste Diversion Progress Report provides District residents and businesses, the Mayor, and the DC Council with a report on the waste diversion programs and initiatives in the District. The report includes an overview of the programs and initiatives being spearheaded by an array of individuals and organizations and their efficacy in meeting the District's waste diversion goals and objectives. It includes an overview of FY 15 & 16 key accomplishments and waste generation and diversion rates for FY 15.

The report is comprised of the following sections:

District Waste Diversion Achievements in FY 15 & 16 – provides highlights of groundbreaking work being undertaken by residents, businesses, schools, and District agencies to prevent, recycle and compost waste generated in the District.

District Waste System Overview – provides an overview of the entities involved in creating and overseeing waste policies and programs and how waste is handled and managed in the District.

Residential, Government Operations, and Transfer Station Waste Diversion – reports FY 15 waste diversion rates for the District managed waste streams and information concerning the destination where materials were processed. This section is designed to fulfill the annual waste diversion update requirements for FY 15. In addition, it includes information on steps being taken to increase availability of waste data for future years.

Future Plans – provides a snapshot of new waste diversion initiatives and planning slated to launch in FY 17.

DISTRICT WASTE DIVERSION ACHIEVEMENTS IN FY 2015



Community Garden created in partnership with the DPR Urban Garden Division

THE DC COMMUNITY COMPOST COOPERATIVE

By the end of FY 2015, the Department of Parks and Recreation (DPR) had created a Community Composting Cooperative Network of 25 newly designed compost bins capable of handling a ton of compost per month, and up to 100 active composters. All composting sites are operated by trained community members who contribute material from their homes and garden plots as well as maintain the compost bin. Each site functions as a self-sustaining cooperative.

2015 EARTH DAY WASTE SUMMIT

On Earth Day 2015, more than 150 people attended the District's half-day symposium on creating the Path to Zero Waste. The summit educated DC employees, residents, businesses, and environmental advocates on waste and recycling in DC, initiatives underway, and best practices among other jurisdictions throughout North America. Panelists included a nationally renowned waste and recycling expert and representatives from waste and recycling programs from Edmonton, ON and Seattle, WA – cities with leading waste and recycling programs. The forum also laid the foundation for ongoing stakeholder engagement throughout the year.

“The community composting model has been so successful that we now have over 1,000 people composting with us. By the end of 2016 we’ll have developed 50 cooperatives with a capacity to handle 5,000 people actively composting.”

- Josh Singer, DPR Community Garden Specialist

PATH TO ZERO WASTE

DC PUBLIC SCHOOLS

The DCPS Recycles! Program provided by the Department of General Services (DGS) continues to increase participation in recycling by DCPS schools in all wards of the city. During the 2014-2015 school year, fifty-two DCPS schools were recognized on

the DCPS Recycles! Honor Roll for establishing paper recycling programs and twenty-three were recognized “with distinction” for successfully rolling out organics recycling in their kitchens and cafeterias.² In school year 2015-2016 the organics recycling program was successfully expanded to 39 schools.³ Garfield Elementary School (Ward 8) and C.W. Harris Elementary School (Ward 7) continue to lead in best practices. Additionally, Cardozo Education Campus demonstrates that all schools – including high schools – can start effective recycling programs.

The school’s recycling committee includes several teachers and school leadership staff. Recently, the committee partnered with custodian Rhonda Keith to visit classrooms to explain the importance of student participation from a custodial perspective. As a result, Ms. Keith was a featured speaker in the panel “Every School Can Recycle: Listening to Custodian Leaders from DC Public Schools” at the U.S. Green Building Council’s Green Schools Conference & Expo in Pittsburgh in March 2016.





**Spotlight -
Cardozo Education Campus**

The Cardozo Education Campus has demonstrated what a DCPS school can achieve through a school-wide recycling effort that is rooted in strong leadership, operations, and education.

FIRST CITYWIDE COMPETITION FOR ALL DC SCHOOLS

In celebration of Growing Healthy Schools Month, an initiative of the Office of State Superintendent of Education's, the Department of General Services (DGS) hosted a waste diversion competition open to all DC schools. The goal of the competition was to sort all waste properly, and compost or recycle as much waste as possible. This was the first ever District-wide school recycling competition to address recycling correctly rather than simply recycling more. The competition rewarded participants for "recycling right" based on percentage of material placed in the "correct" bins. Students conducted simple surveys to demonstrate that their school was "recycling right" inside of classrooms. Twenty-one schools participated, and one winning school improved their "correctness" score by 46 percentage points.

NATIONAL COMPETITIONS

Students from Walker-Jones Education Campus (Ward 6), Langley Elementary School (Ward 5), Powell Elementary School (Ward 4), and H.D. Cooke Elementary School (Ward 1) participated in the FIRST LEGO League's 2015 Trash Trek Challenge⁴. More than 233,000 children ages 9 to 16 from over 80 countries were asked to explore the hidden world of trash, from collection to sorting to smart production and reuse. Teams were challenged to invent a solution to help global trash problems and create their own LEGO MINDSTORMS[®] robot to accomplish trash-themed "missions" on a playing field, demonstrating how they practice FIRST LEGO League Core Values, which promote teamwork and friendly competition. Both Langley Elementary School and Walker-Jones Education Campus made it to the LEGO League Nationals.

Cardozo won second place in the Most Improved category of the DC Recycle Right! Competition. One innovative solution developed by Cardozo students was a lid for classroom bins made out of a repurposed cardboard box. This no-cost lid drastically reduced contamination in paper-only bins, and is now a solution that the DCPS Recycles! Program is promoting in other high schools.

ENHANCING PUBLIC HOUSING RECYCLING

The Department of Energy and Environment (DOEE), the Department of General Services (DGS), and the DC Housing Authority (DCHA) partnered to develop a comprehensive recycling education toolkit and pilot program tailored for the public housing portfolio. To inform program development, a waste audit was conducted and resident focus groups were held. The waste audit revealed that nearly 80% of the waste stream could be diverted if composting and textile recycling was coupled with a traditional recycling program.

With the goal to empower DCHA residents to keep their local communities and environment clean and beautiful and increase the waste diversion rate, the Recycle Today! for a Beautiful DCHA program was developed. This “train-the-trainer” program arms Recycling Champions, which includes property management staff or resident leaders, with the tools they need to conduct successful recycling education programs in DCHA properties.

During the grant period, the program was piloted at two DCHA properties, one senior property, and one family property.



DCHA Recycle Today Initiative

I took the pledge

RECYCLE TODAY!

For a beautiful **DCHA**

DCHA
Healthy & Sustainable Communities

to Recycle Today! Participation:

...y recycle.
...ommunity activities.
...g Champion questions
...home and community
...ized recycling leader.

RECYCLE

- PAPER**
- PLASTIC**
- METAL**
- GLASS**

Have questions?
Ask your Recycling Champion:

DCHA Recycle Today Outreach Material

SPURRING INNOVATION

In June 2015, DOEE and DPW partnered with the George Washington University's (GW) Office of Sustainability to host a 24-hour 'Hackathon' on reducing food waste and climate change. The event was part of the global Climathon to "develop innovative solutions to a climate change challenge set by the city in which [participants] take part." Judges for the first round of the event included experts from DPW, DOEE, GW, and the World Resources Institute.

The winning team developed a plan for a new public-private partnership that would extend the reach of food pantries and food banks by way of a crowd-sourcing app that connects restaurants, caterers, and grocery stores with potential recipients. The team later pitched the idea, in France, at a special event coinciding with the 2015 United Nations Climate Change Conference in Paris, coming in third place in the global competition.



BUSINESSES IMPROVING WASTE DIVERSION

The Smarter DC Challenge⁵ is a free online and in-person program designed to catalyze sustainable actions in and for the workplace. It is supported by the Department of Energy and Environment (DOEE) and other District agencies. The program is designed to meet the Sustainable DC's goals for the business and nonprofit communities.

In 2015, the program's inaugural year, beginner and intermediate level waste and recycling activities were designed to give members of the Challenge the foundation and means to improve their impact on sustainability efforts through waste reduction and recycling actions. These activities ranged from conducting baseline assessments to developing plans for improving performance on an annual basis. Additionally, the program encouraged immediate improvements, such as providing visible and easily accessible recycling bins near work areas and creating electronics recycling programs.

"The DC Climathon project is a great example of how one innovative solution can address multiple problems. Removing food from the waste stream reduces greenhouse gas emissions, lessens the need for waste hauling and disposal by the District, and gets fresh, healthy food to some of our most vulnerable residents."

- Tommy Wells, Department of Energy and the Environment Director



In this first year of the Smarter DC Challenge, 15 participating organizations, and 58 managed properties, from both the public and private sectors, reported progress with workplace waste reduction, reuse and recycling initiatives.

In FY 2016 the Smarter DC Challenge added advanced activities designed specifically to support the hospitality industry's waste and recycling performance.

¹ Urban Garden Programs: <http://dpr.dc.gov/service/urban-garden-programs>

² DCPS Recycles! Honor Roll 2015: <http://dgs.dc.gov/node/1047392>

³ Organics Hauling Services Schedule: <http://dgs.dc.gov/node/1133919>

⁴ FIRST LEGO League: <http://www.firstlegoleague.org/>

⁵ Smarter DC Challenge: <http://greenpsf.com/go/community/about/washdc>

DISTRICT WASTE DIVERSION ACHIEVEMENTS IN FY 2016

FIRST ZERO WASTE DISTRICT MUSIC FESTIVAL

The first ever zero waste music festival in the District was held in April 2016. The Kingman Island Bluegrass Festival, an all-day event featuring local musicians, was the first zero waste music festival to take place in the District. Attendees were encouraged to use the multi-bin zero waste stations to meet the goal of diverting 80% or better of all waste, recycling, and composting. DOEE, DPW, the DC Chapter of the Sierra Club, and event host Living Classrooms worked together to achieve this goal.

The event attracted more than 12,000 fans who followed the guidelines to dispose of their waste with the help of waste station volunteers. The initiative was positively received by attendees and volunteers. Lessons learned from the event will be applied to future festivals and other special events in the District of Columbia.



“The Kingman Island Bluegrass & Folk Festival was the first special event where DPW provided composting services. We were delighted to support the Festival’s educational goal and to use this opportunity to advance our zero waste target through composting, recycling and waste diversion among event attendees.”*

*- Christopher Shorter,
DPW Director*



PATH TO ZERO WASTE: ORGANIC WASTE SUMMIT

To demonstrate support for newly adopted goals of the United Nations, the US Environmental Protection Agency, and the US Department of Agriculture to reduce food waste by 50% by 2030 and to assist in developing the District's path to zero waste, the Department of Public Works, in partnership with the Department of Energy and Environment and the DC Food Policy Council hosted the first ever Organic Waste Summit on May 18th, 2016 at the Ronald Reagan International Trade Center. Local and national policy experts and advocates came to discuss best practices in organic waste management. Panelists and presenters addressed the topics of household food waste source reduction, food donation, community composting, curbside collection of food and yard waste, as well as organic waste processing infrastructure.

Non-profits, as well policy experts were key partners in this endeavor. Non-profit partners included Feedback, DC Central Kitchen, DC-MD Compost Council, Institute for Local Self Reliance, and the Capital Area Food Bank.

"Today, we want to create a better understanding about opportunities and benefits of reducing organic waste, and demonstrate our support for reducing food waste by 50% by 2030. We also want to celebrate the launch of the District of Columbia Food Policy Council and generate ideas for the District's zero waste plan," said DPW Director Christopher J. Shorter.

"The District of Columbia adopted a bold vision to divert 80% of all solid waste through source reduction, reuse, recycling, composting and anaerobic digestion. Accomplishing this goal requires the collaboration of District agencies, business, non-profits, residents, and our neighboring jurisdictions. I believe we can create a solid waste management system for the 21st century, and organic waste is a key component of the District's waste stream."

*- Christopher Shorter,
DPW Director*



Cheryl Coleman, Sustainable Materials Management Director, Resource Conservation and Sustainability, US EPA Keynotes DC's Organic Waste Summit



FEEDING THE 5000: TAKING FOOD WASTE OFF THE MENU IN THE DISTRICT

On May 18, 2016, Feeding the 5000 took over Woodrow Wilson Plaza at the Ronald Reagan Building and International Trade Center. 6,750 members of the public were provided with a delicious and free meal, sourced entirely from fresh top-quality produce that would have otherwise been wasted. This event showcased and promoted positive and delicious solutions to the global food waste crisis. The event organizer, Feedback, teamed up with partners like The Rockefeller Foundation, DC Central Kitchen, DPW, the DC Food Policy Council and many other organizations to bring this event to DC. The event drew attention to DC's priorities around decreasing both food waste and hunger.

“By coordinating the Feeding the 5000 DC and the Organics Waste Summit events, the community will be able to see—and taste—for themselves how food is wasted every day and then hear real solutions from policy experts on what can be done to address this issue,” said Tommy Wells, Director of the Department of Energy & Environment.

WASTE PREVENTION EDUCATION AND OUTREACH

In FY 16 DPW commenced education and outreach on how to prevent waste at its source, the most environmental and cost effective way to handle waste, through online and social media outreach. DPW developed an online web page providing tips on household food waste reduction, opting out of catalogs and food waste, and grass cycling. This was complemented by ongoing social media education and outreach by both DPW and DOEE.

STUDENT RECYCLING EDUCATION

The SWEEP Jr. Program, an initiative of the DPW's Solid Waste Education and Enforcement Program (SWEEP), promotes recycling and litter prevention education to children and young adults in DC Public Schools, Public Charter Schools, and private schools. Their mascot, Clean Cat (“CC”), has led cafeteria skits and schoolyard activities since the program's re-launch in 2012.

In FY 15, employees interacted with youth participants and distributed literature at major public engagements including multiple Earth Day celebrations, the annual DC Truck Touch event (organized by DPW), the YMCA's annual Thingamajig, and the first LEGO League World Festival, focused on waste management and recycling. More recently, during the second half of 2016, SWEEP Jr. delivered presentations to 14 public schools, 15 recreation centers, eight community events, five senior citizen facilities, two events at a motel for homeless families, three Business Improvement District (BID)-related events, two professional organizations, and one recycling facility tour. This represents over 50 events with exposure to over 16,000 people.



DPW Website Waste Prevention Web Banner



DPW highlighted national waste prevention campaigns online and through social media such as Save the Food

DISTRICT WASTE SYSTEM OVERVIEW



WASTE DIVERSION GOVERNANCE

The District of Columbia has adopted a bold vision to divert 80% of all solid waste generated in the District through source reduction, reuse, recycling, composting, and anaerobic digestion. Anaerobic digestion is a process whereby microorganisms break down organic waste.

To support achieving this vision, DPW's Office of Waste Diversion was established in FY 2015 and is charged with supervising and coordinating the implementation of the District's waste diversion policies and programs required by the Sustainable Solid Waste Management Amendment Act of 2014.

To align and harmonize waste prevention and diversion initiatives, the Act also created the Interagency Waste Reduction Working Group.

The Interagency Waste Reduction Working Group meets quarterly and consists of representatives from the following agencies:

- Department of General Services
- Department of Energy and Environment
- Department of Parks and Recreation
- Department of Public Works

Interagency Waste Reduction Working Group Roles and Responsibilities

- *Developing a zero waste plan to achieve 80% diversion from waste to energy and landfill.*
- *Ensuring the issuance and accuracy of the annual waste diversion report and waste characterization studies.*
- *Guiding and ensuring the development of waste diversion educational and outreach materials and programs.*
- *Advising the Mayor, the DC Council, and the Office of Waste Diversion on sustainable solid waste management and waste diversion policy.*

In addition, Directors of the represented agencies meet twice a year to oversee the work of the Interagency Waste Reduction Working Group and to monitor progress toward the District's waste diversion goal.

WASTE MANAGEMENT

RESIDENTIAL

DPW manages the District's collection of residential waste and recycling, as well as the collection of holiday trees, for approximately 105,000 single-family homes and buildings with three or fewer housing units. Multi-family dwellings with four or more units and commercial buildings are served by private waste and recycling haulers.

Drop-Off Programs and Special Collections

DPW collects leaves at least twice from each residential neighborhood by "vacuuming" loose leaves residents rake into their treebox(es). Loose leaves are sent for composting. Leaf collections generally run from the first week of November through the last week of December. During the first two weeks of January, DPW collects holiday trees and greenery.

DPW also collects bulk items (e.g., large appliances and furniture) by appointment from residents in single-family homes or residential buildings with three or fewer units.

DPW offers a number of opportunities to drop off materials that are not collected with curbside trash or recycling. Residents may drop off bulk waste at Fort Totten every day except for Sunday. Every Saturday, except holidays, residents may bring recyclables and household hazardous wastes to the Ft. Totten Transfer Station, and on the first Saturday of each month, they may bring personal documents for shredding to Ft. Totten.

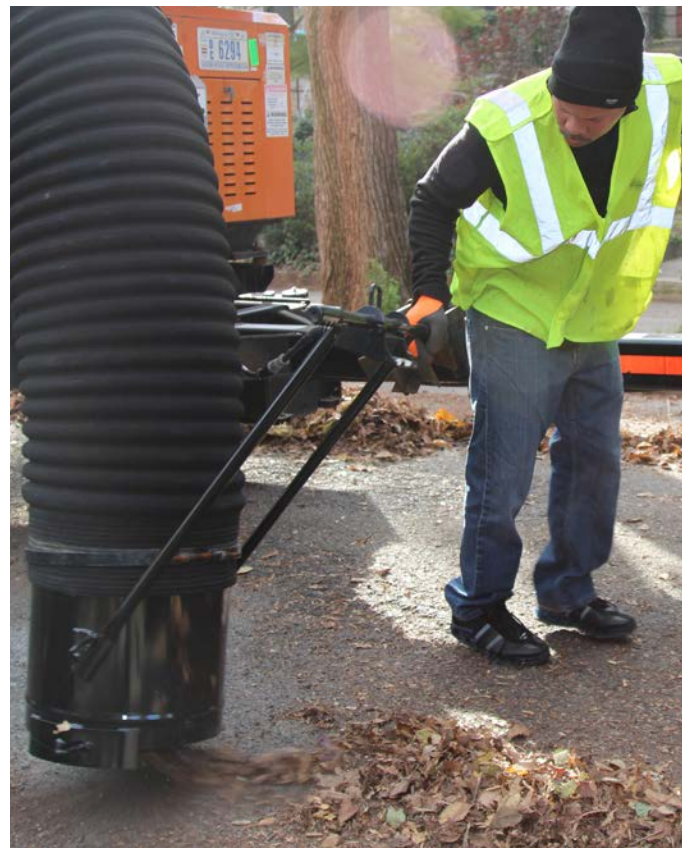
Lastly, the Department of Parks and Recreation (DPR) runs a Community Compost Cooperative Network affording residents who are members of a community garden the opportunity to drop off and participate in neighborhood composting programs.⁶

PUBLIC SPACE

Public space recycling and trash collection either is performed by DPW directly or facilitated through

external partnerships. Recycling and trash bins located in public spaces within the Business Improvement Districts (BIDs) are serviced through a partnership between the BIDs and DPW. The logistics of this process vary by BID, but generally staff employed by the BIDs collect waste each day and then transfer it to DPW, either at one of the two District Transfer stations or at a different drop-off location. There are 10 BIDs covering more than five square miles in the District.

Some commercial areas have Clean Teams that collect litter and provide other public space maintenance services. The Clean Team program is run by the Department of Small and Local Business Development (DSLBD). Non-profit grantees are awarded funding to provide public space cleaning and maintenance services in 21 Clean Team service areas, six of which are located within BIDs.⁷ The Department of General Services manages the collection of street cans in District parks. DPW manages the collection of street cans in all other locations throughout the District.



DPW vacuuming leaves for composting



ENFORCEMENT

DPW's SWEEP staff is charged with enforcing waste and recycling regulations for residential, government, and commercial sectors.

Specific to the enforcement of recycling regulations, a DPW investigator's primary goal is to determine whether establishments have effective recycling programs in compliance with District law. SWEEP enforces recycling related requirements such as the proper source separation of recyclables from refuse and correct labeling for recycling and refuse containers.

⁶ <http://dpr.dc.gov/service/community-compost-cooperative-network>

⁷ DSLBD Clean Team Program Summary, <http://dslbd.dc.gov/service/DCMS>

RESIDENTIAL, GOVERNMENT OPERATIONS, AND TRANSFER STATION WASTE DIVERSION

| Reporting Year | Residential Recycling Diversion Rate | | | Residential Diversion Rate | Citywide Residential Diversion Rate ⁹ |
|--|--------------------------------------|------------|------------|----------------------------|--|
| | FY 2005 | FY 2010 | FY 2015 | FY 2015 | FY 2015 |
| DPW Number of Properties Serviced ¹⁰ | 110,000 | 103,000 | 105,282 | 105,282 | 105,282 |
| Total Residential Waste Stream Tonnage ¹¹ | 167,344.00 | 133,307.00 | 157,524.92 | 146,128.60 | 146,188.60 |
| Recycling Tonnage ¹² | 28,261.00 | 28,985.00 | 44,829.23 | 30,577.71 | 30,637.71 |
| Diversion Rates | 16.8% ¹³ | 21.74% | 28.46% | 20.93% | 20.96% |

Table 1: FY 2005 - FY 2015 Residential Diversion Rates⁸

| Material | Tons | Percent of Total |
|---------------------------|------------|------------------|
| Electronic Waste | 140.71 | 0.10% |
| Household Hazardous Waste | 24.17 | 0.02% |
| Scrap Metal | 151.61 | 0.10% |
| Shredded Paper | 162.20 | 0.11% |
| Organics | 7058.99 | 4.83% |
| Single Stream Recyclables | 23,101.83 | 15.80% |
| Toters Recycled | 22.37 | 0.02% |
| Refuse | 115,526.72 | 79.03% |
| Total | 146,188.60 | 100% |

Table 2: Composition of FY 2015 Citywide Residential Waste Stream¹⁴

RESIDENTIAL RECYCLING TONNAGES AND DIVERSION RATES

The Residential Recycling Diversion Rate for FY 2015 was 28.46%, more than a 7% percentage point increase compared to FY 2010.

Two new diversion rates also have been calculated for FY 2015 – the Residential Diversion Rate and the Citywide Residential Diversion Rate. The Residential Diversion Rate will be introduced as part of DPW's Performance Plan and Key Performance Indicators for FY 2017. The Residential Diversion Rate includes waste from DPW curbside collections, DPW leaf and holiday tree collections, and residential drop-off at the Ft. Totten Transfer Station. The major differences between the Residential Recycling Diversion Rate and the Residential Diversion Rate is that the Residential Diversion also includes bulk waste dropped off by residents at Ft. Totten and utilizes a data source for curbside single stream recycling that provides a more accurate measure of the volume collected for recycling.

The Citywide Residential Diversion Rate is based on the Residential Diversion Rate but also includes data for waste diversion programs for residents that are managed by sister agencies (e.g., the Department of Parks and Recreation’s community composting program). The FY 2015 Residential Diversion Rate was 20.93% and the FY 2015 Citywide Residential Diversion Rate was 20.96%. Please see Appendix B for an overview of the methodologies utilized for calculating the Citywide Residential Diversion Rate and Residential Diversion Rate and key differences between these rates and the Residential Recycling Diversion Rate.

Table 1 shows the tonnage of residential waste and recyclables used to calculate residential diversion rates for FYs 2005, 2010, and 2015. Recycling tonnage includes materials that are collected for either recycling or composting.

Table 2 details the composition of the FY 2015 citywide residential waste stream by material type. Of the materials listed below, electronic waste, scrap metal, shredded paper, organics, single stream recyclables, and toters (trash and recycling cans) recycled are either recycled or composted.

GOVERNMENT OPERATIONS DIVERSION RATE

The following section provides waste tonnage data and diversion rates associated with District government operations.

Table 3 below details the composition of the government operations waste stream, including DCPS properties. Organics includes the food waste diverted as part of the DCPS cafeteria food waste collection and composting program.

**Citywide Residential
Diversion Rate:
20.96%**

| FY 2015 DC Government Building Total Tons - Estimate ¹⁵ | |
|--|------------------|
| Recycling ¹⁶ | 2,568 |
| Organics ¹⁷ | 248.74 |
| Trash ¹⁸ | 13,700 |
| Total | 16,516.74 |
| District Government Operations Diversion Rate | 17.05% |

Table 3: FY2015 DC Government Building Total Tons - Estimate

PUBLIC SPACE DIVERSION RATE

The following details the public space recycling rate in Business Improvement Districts (BIDs) that have public space recycling cans.

| | Tons of Recycling Collected | Tons of Waste Collected | Total Waste Stream | Recycling Rate |
|--------------------|-----------------------------|-------------------------|--------------------|----------------|
| Downtown | 928 | 3,245 | 4,173 | 29% |
| Golden Triangle | 243 | 510 | 753 | 48% |
| Georgetown | 84 | 600 | 684 | 14% |
| Capitol Hill | 103 | 1,252 | 1,355 | 8% |
| Mount Vernon | 88 | 195 | 283 | 45% |
| Adams Morgan | 50 | 600 | 650 | 8% |
| NOMA | 16 | 291 | 307 | 5% |
| Capitol Riverfront | 117 | 782 | 899 | 15% |
| Anacostia | 13 | 30 | 43 | 42% |
| SW | n/a | n/a | n/a | n/a |
| Total | 1,641 | 7,505 | 9,147 | 22% |

Table 4: Business Improvement District (BID) Public Space Waste Diversion Rate¹⁹

TRANSFER STATION OPERATIONS

DPW operates two transfer stations at Benning Road and Ft. Totten. All waste (including recyclables and compostables) collected by DPW is first taken to one of the transfer stations prior to being sent to a processing or disposal facility. The Ft. Totten Transfer Station also has a drop-off program where residents can drop off electronic waste, household hazardous waste, paper documents for shredding, and bulk items. Additionally, nearly 60 commercial hauling firms dispose of both recyclables and refuse at the transfer stations. Commercial haulers service both District and federal government facilities, multi-family dwellings with four or more units, and businesses throughout the District.

Table 5 details the total waste stream (refuse, recyclables, and compostables) processed through

District-owned transfer stations. Materials dropped off by residents are considered public sources. While some commercial haulers deliver waste collected in the District to District-owned transfer stations, the amount of waste collected in the District by commercial haulers and delivered to other facilities for processing or disposal is currently unknown.

| Source | Tons | Percent of Total |
|--------------------------------------|-------------------|------------------|
| Public (Citywide DPW) ²⁰ | 169,794.86 | 37.00% |
| Private ²¹ | 289,137.10 | 63.00% |
| Total Throughput²² | 458,931.96 | |

Table 5: FY 2015 Tons of Material Received at District-Owned Transfer Stations from Public and Private Sources

DISTRICT-WIDE WASTE GENERATION & WASTE DIVERSION RATES: PROGRESS & FUTURE PLANS

REPORTING ON COMMERCIAL WASTE DATA

Beginning in 2017, all private haulers who engage in the collection or transportation²³ of refuse, recyclables, compostables, or otherwise reusable materials from industrial, commercial, residential, or governmental operations²⁴ will be required to register and report to DPW's Office of Waste Diversion.²⁵ The registration and reporting system is currently being developed. All collectors will report calendar year 2017 solid waste data in early 2018.

The diversion report released in 2018 using 2017 data and information will fully report on the entire District-wide waste stream.

SOURCE REDUCTION AND DIVERSION RATES

The Sustainable Solid Waste Management Amendment Act also calls for the calculation of a District-wide diversion rate, which accounts for the full array of waste diversion activities, ranging from source reduction to recycling and composting. Many jurisdictions use the term "recycling rate" to refer to the percent of materials that are recycled or composted of the total waste stream generated, as well as the diversion rate to account for source reduction via the addition of a source reduction credit to the recycling rate.

Recycling Rate + Source Reduction Credit = Waste Diversion Rate

For the calculations in this report, recycling and diversion rates are used interchangeably as the District has not yet developed and adopted a methodology by which to evaluate and measure the city's activities related to source reduction. The development of a source reduction credit methodology will be considered by the Office of Waste Diversion and the Interagency Waste Reduction Working Group for adoption, promotion, and inclusion in future reports and waste diversion reports.

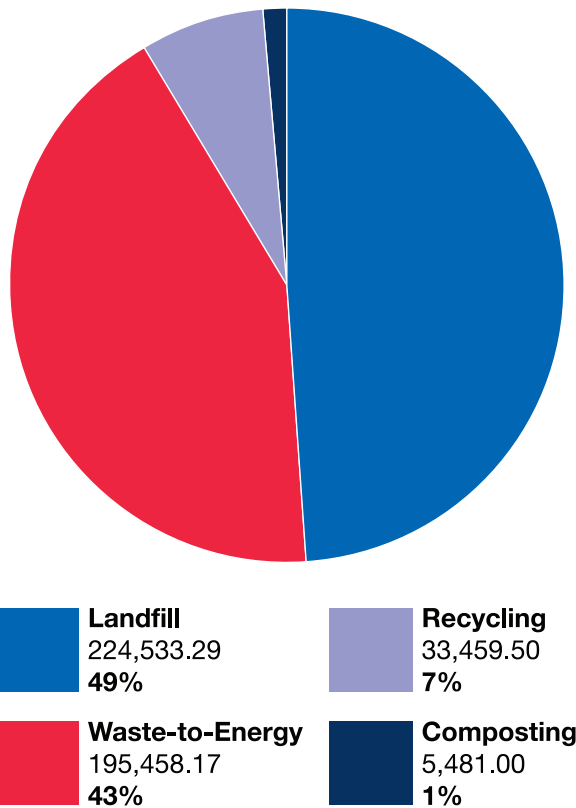


Figure 1: FY 15 Tonnage & Fate of Materials Exported from District-Owned Transfer Stations

Figure 1 details the FY 2015 tonnages and types of disposal facilities to which waste, recyclables, and compostables were sent from District-owned transfer stations.

FATE OF WASTE GENERATED IN THE DISTRICT

Section 113(a)(3) of the Sustainable Solid Waste Management Amendment Act requires the names, locations and tonnage of solid waste delivered to recycling, composting, landfill, waste-to-energy (WTE), and other waste processing or disposal facilities to be reported annually. Table 6 (on page 24) provides this information for waste processed through District-owned transfer stations and community gardens, or generated by government operations.

| Formal Name | Facility Type | Tons | Address |
|--|---------------|-------------------|---|
| King George Landfill | Landfill | 20,303.28 | 10376 Bullock Drive, King George, VA 22485 |
| Middle Peninsula Landfill | Landfill | 81,466.68 | 3714 Waste Management Way, Glenns, VA 23149 |
| King & Queen Landfill | Landfill | 503.62 | 4443 Iris Road, Little Plymouth, VA 23091 |
| I-95 Landfill Complex & Energy/ Resource Recovery Facility | WTE | 195,458.17 | 9850 Furnace Road, Lorton, Virginia 22079 |
| Joseph Smith & Sons, Inc. | Recycling | 135.77 | 2001 Kenilworth Ave, Capitol Heights, MD 20743 |
| WM Recycle America, LLC | Recycling | 31,779.05 | 7175 Kit Kat Road, Elkridge, MD 21075 |
| ACME Biomass Reduction Inc. | Composting | 5,421.00 | 21601 New Hampshire Avenue, Brookeville MD 20833 |
| Republic Services Old Dominion Landfill | Landfill | 122,211.43 | 2001 Charles City Road, Henrico, VA 23231 |
| Republic Services 623 Landfill | Landfill | 48.28 | 1961 Ashland Road, Rockville, VA 23146 |
| Crinc. Prince George Universal Recycling | Recycling | 273.47 | 1000 Ritchie Road, Capitol Heights, MD 20743 |
| WM Northern Virginia Recycling Facility | Recycling | 1,271.21 | 7911 Notes Drive, Manassas, VA 20109 |
| Prince George's County Yard Waste Composting Facility ²⁷ | Composting | 248.74 | 6601 S.E. Crain Highway, Upper Marlboro, MD 20772 |
| DGS - Shredded Paper Contract hailed by NexCut | Recycling | 296.00 | World Recycling Co. 2740 Wilmarco Avenue, Baltimore, MD 21223 |
| HHW hauled by Care Environmental | WTE | 24.17 | 429 East Blackwell St., Dover, NJ 07801 |
| United States Penitentiary, Lewisburg (E-Waste Hauled by Unicolor) ²⁸ | Recycling | 140.71 | 2400 Robert F Miller Dr, Lewisburg, PA 17837 |
| DPW Shredded Paper Contract hailed by NexCut | Recycling | 162.20 | World Recycling Co. 2740 Wilmarco Avenue, Baltimore, MD 21223 |
| Community Composting Facility | Composting | 60.00 | Multiple locations ²⁹ |
| Total | | 459,803.78 | |

Table 6: Fate of FY 15 Waste Generated or Handled by District Government²⁶

For example, Montgomery County, MD has adopted the State of Maryland's baseline calculation methodology per the Maryland Recycling Act to measure the county's recycling and diversion. The methodology utilizes a Source Reduction Credit (SRC) in their calculation of a waste diversion rate. The State of Maryland has provided a Source Reduction Checklist as well as a Tonnage Report Survey that provides counties and Baltimore City the means to report and receive credit for source reduction activities occurring in the reporting calendar/fiscal year. Counties may receive a Source Reduction Credit up to 5%.

WASTE GENERATION PER CAPITA

In 2018, the Office of Waste Diversion will have a more complete data-set for waste generated in the District with the availability of private hauler waste reports. With this additional data OWD will be able to estimate total waste collected in the District using data provided by DPW and private waste haulers. This will include trash, yard waste, recycling, bulk items, compostables, e-waste, paint and any other waste that is generated in the District. The total waste value will then be divided by the District's population to calculate a waste generation per capita figure that is fully representative of the District-wide waste stream.

¹³ Tonnage numbers come from previous year public recycling reports. FY 2005 - FY 2007 Public Recycling Report incorrectly states FY 2005 recycling rate was 17.1%. This number was corrected in Table 3.

¹⁴ DPW residential data comes from the CompuWeigh database. For specifics related to data sources used to calculate figures in this column, please refer to the data sources section in the appendix.

¹⁵ Included are only the major waste streams of mixed recyclables, trash, and organics that are managed under the city-wide hauling contract and which are typically included in diversion rate calculations. There are potentially other waste streams, such as ink toner cartridges that occur at DC government properties. DPW will work with DGS and OCP to assess future steps needed to account for these waste streams in future reports.

¹⁶ Mixed recyclables, shredded paper, and ferrous and non-ferrous metal

¹⁷ All organics come from DCPS via the DCPS Recycles! program

¹⁸ Due to irregularities in data reporting, data is unavailable for trash between April and September 2015. Therefore this number is a projected estimate which assumes consistent waste generation throughout the year.

¹⁹ Data was obtained from the DC BID Council Retrospective report. Data for the Southwest Bid was not included in the report.

²⁰ This value includes all materials, including those from street and alley collections collected throughout the District, as well as the residential curbside and drop-off solid waste streams.

²¹ This number is derived from subtracting the Public (DPW) total from the Transfer Station Outbound total.

²² Different from the total in Table 7, due to Table 7's inclusion of community composting which does not enter the two District transfer stations.

²³ Sustainable Solid Waste Management Amendment Act of 2014 § 101 (1)

²⁴ Sustainable Solid Waste Management Amendment Act of 2014 § 101 (15)

²⁵ Sustainable Solid Waste Management Amendment Act of 2014 § 106

²⁶ The difference between Tables 8, Figure 1, and Table 9, is that Table 9 includes government managed waste including 871.82 tons of composting, , shredded paper sent for recycling, HHW sent for incineration, E-waste sent for recycling, and shredded paper recycled by Nexcut.

²⁷ DCPS School Composting Collections

²⁸ For FY 2015 and FY 2016, Unicor has reported that all material was sent to the Lewisburg, PA site. In previous years, some material was sent to a site in Florida and Pennsylvania.

²⁹ Community Composting sites are included in the appendix.

⁸ Tonnage data for years before FY 2015 come from previous years' recycling reports. Please see appendix for data sources for FY 2015 and the Citywide Residential Diversion Rate calculation methodology.

⁹ DPW residential data comes from the CompuWeigh database. For specifics related to data sources used to calculate figures in this column, please refer to the data sources section in the appendix.

¹⁰ DPW estimates that it collects from 105,282 service locations for one, two, and three-unit dwellings. In the coming year DPW will be working to improve this estimate through this estimate.

¹¹ The residential waste stream tonnage includes all materials collected for recycling, composting, or disposal.

¹² Recycling is defined as consisting of both recyclable and compostable materials sent for recycling or composting.

LOOKING FORWARD: FY17 PLANS

WASTE PREVENTION

INTRODUCE SOURCE REDUCTION CREDIT

The Interagency Waste Reduction Working Group will create a Source Reduction Checklist to guide the District's source reduction efforts and by which the District's source reduction progress can be measured and reported. For more information on source reductions credits, please see the source reduction section this report.

In addition, the District will continue to promote waste prevention education and outreach building upon the online and social media campaigns, which commenced in FY 16.

DEFINING WHAT'S RECYCLABLE AND COMPOSTABLE

NEW FOODSERVICE PACKAGING RECYCLABILITY AND COMPOSTABILITY REQUIREMENTS

On January 1, 2017, foodservice establishments that use single use packaging must only use recyclable or compostable products. This requirement will ensure foodservice packaging that enters the waste stream is recyclable or compostable, thereby providing the opportunity to increase the District's waste diversion rate.

MAYOR'S LIST OF RECYCLABLES AND COMPOSTABLES

In FY 2017, the District will issue an updated list of materials required to be recycled in commercial and residential recycling. The purpose of this list is to achieve greater alignment of what can be recycled or composted in the District regardless of whether in a commercial setting or a single-family home.

ENHANCED WASTE DIVERSION OUTREACH AND EDUCATION

Utilizing the updated list of recyclable materials will inform the development of new education and outreach materials, including new zero waste web pages on DPW's website and new information for DPW-serviced residential properties, multi-family dwellings, businesses, and special events.

DPW will provide recycling and waste diversion education in 50 schools through its SWEEP Jr. program in FY 2017. SWEEP Jr. is the Department of Public Works' Solid Waste Education and Enforcement Program for youth.

LAUNCH OF NEW RECYCLING AND COMPOSTING PROGRAMS

PAINT AND ELECTRONICS PRODUCT STEWARDSHIP PROGRAMS

Paint and electronic products stewardship programs are scheduled to launch in FY 17. Led by the Department of Energy and Environment, the District's product stewardship programs require manufacturers to pay for and develop systems to reuse, recycle, or properly dispose of electronics and paint in a manner that is safe for people and the environment. In addition to electronics recycling programs at Fort Totten, the citywide electronics recycling program will provide many convenient options for District residents and small businesses to recycle electronic waste when it launches on January 1, 2017. Commencing November 1, 2016, the District's paint stewardship program will provide many convenient options to drop off left over paint. The paint collected is reused or recycled to the maximum extent practical.

COMMUNITY FOOD WASTE COMPOSTING DROP-OFF PROGRAM

In FY 2017, DPW will launch a food waste composting drop-off program. A convenient site in each ward, such as a farmer's market, will be established where residents, year-round, can drop off food waste for composting.

PLANNING FOR THE FUTURE

Food and yard waste, also called organic waste, comprises 28% of municipal solid waste generated nationally³¹ and these numbers are anticipated to be similar in the District. In FY 17 the District will be undertaking a number of feasibility studies to develop a plan for recovering the value in these wasted resources.

To assess the feasibility of and progress made toward implementing an organic waste collection program in the District of Columbia, DPW is conducting a study to provide a timeline and strategy for roll-out of the proposed curbside organics collection program, and a commercial landscaper yard waste drop off program at the District's transfer stations. In addition the consultant will be estimating regional composting facility capacity for food and yard waste as well as the volume of food and yard waste generated in the District from residential, commercial, and industrial sources. These recommendations will assist the District in identifying additional infrastructure needed to meet its organic waste diversion goals.

DPW also will assess the feasibility of utilizing the Blue Plains Advanced Wastewater Treatment Plant as a means to anaerobically digest food waste generated in the District.

³¹ U.S. Environmental Protection Agency. 2015. *Advancing Sustainable Materials Management: Facts and Figures 2013*. https://www.epa.gov/sites/production/files/2015-09/documents/2013_advncng_smm_rpt.pdf

GLOSSARY

Anaerobic Digestion

A process by which microorganisms break down organic waste, such as food waste, in the absence of oxygen. One of the end products is biogas, which can be combusted to generate electricity and heat, or can be processed into natural gas and transportation fuels. Separated digested solids, sometimes referred to as digestate, can be composted.

Bulk Waste

Refers to materials dropped off by residents at the Ft. Totten drop-off station or collected from residential homes through DPW's bulk collection service. Both services are designed for the collection and disposal of waste that cannot fit in the toters used to contain waste for routine weekly collection. Examples of bulk waste include appliances, furniture, and mattresses.

Citywide Residential Diversion Rate

Is a calculation of the diversion rate of material collected by DPW through curbside and bulk collections, dropped by residents for recycling or disposal at Ft. Totten, and composted by residents at DPR community gardens, as well as leaves and holiday trees collected for composting. The rate reflects the materials collected for recycling or composting divided by all materials collected from the sources listed. In future years, this rate may also include the Source Reduction Credit. The full methodology is detailed in the appendix.

Construction and Demolition Debris (C&D)

Waste building materials and rubble resulting from construction, remodeling, repair, and demolition operation on houses, commercial buildings, pavements, and other structures.

Collector

A person engaged in the collection or transportation of solid waste in the District.

Compost

A stable, organic substance produced by a controlled decomposition process that can be used as a soil additive, fertilizer, growth media, or other beneficial use.

Compostable

Made solely of materials that break down into, or otherwise become part of, usable compost in a safe and timely manner in an appropriate program.

Composting, Composted

The series of activities, including separation, collection, and processing, through which materials are recovered or otherwise diverted from the solid waste stream for conversion into compost.

Community Composting Program

Composting operations in the District of Columbia that are sustained by trained volunteer community members.

Core Facilities

Refers to the John A. Wilson Building, Frank D. Reeves Municipal Center, One Judiciary Square, and the Henry Daly Municipal Building.

Curbside Collection

Collection of materials contained within toters from single-family homes or multifamily dwellings with three or fewer units. Curbside includes materials collected from alleys that meet the criteria of this definition.

Discarded Waste or Waste Discards

Waste sent to combustion facilities or landfill. Synonymous with refuse.

Disposal

Refers to the end of life treatment of refuse at waste to energy facility or landfill.

Electronic Waste, E-Waste

A term loosely applied to consumer and business electronic equipment that is near or at the end of its useful life. There is no clear definition for e-waste. It includes, computers, computer peripherals, telephones, answering machines, radios, stereo equipment, tape players/recorders, phonographs, video cassette players/recorders, compact disc players/recorders, calculators, and some appliances. However, whether or not items like microwave ovens

and other similar “appliances” should be grouped into the category has not been established. Certain components of some electronic products contain materials that render them hazardous, depending on their condition and density.

Food Scraps, Food Waste

Unused and unconsumed organic matter remaining after meals or initial food preparation, intended for discard.

Generated Waste

Refers to the range of solid waste, including recyclables, compostables and trash, intended to be collected for processing or disposal.

Hauler

See “Collector.”

Hazardous Waste

Any waste or combination of wastes of a solid, liquid, contained gaseous, or semisolid form, which because of its quantity, concentration, or physical, chemical, or infectious characteristics, as established by the Mayor, may:

- (A) Cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating, reversible, illness; or
- (B) Pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. Such wastes include, but are not limited to, those which are toxic, carcinogenic, flammable, irritants, strong sensitizers, or which generate pressure through decomposition, heat, or other means, as well as containers and receptacles previously used in the transportation, storage, use or application of the substances described as a hazardous waste.

Household Hazardous Waste

Leftover household products that contain corrosive, toxic, ignitable, or reactive ingredients are considered to be household hazardous waste (HHW). Products such as lead-based paints, cleaners, oils, batteries, and pesticides, which contain potentially hazardous ingredients require special care when you dispose of them.

Inbound

Materials, measured in tons, entering a DPW managed transfer station by truck. See also, **Outbound**.

Incineration

A form of solid waste disposal through combustion or thermal conversion of solid waste materials into ash, flue gas, fuel, or heat; provided, that recycling, composting, anaerobic digestion of compostable solid waste, and conversion of compostable solid waste into biofuel are not considered incineration.

Industrial Waste

Refers to wastes generated from 17 different industry groups representing the manufacturing Standard Industrial Classification (SIC codes), such as organic chemicals, inorganic chemicals, primary iron and steel, plastics and resin manufacturing, stone, clay, glass and concrete, pulp and paper, food and kindred products.

Landfill

A site where waste is disposed or managed. Sites contain an impermeable liner and waste is deposited in different cells and covered daily with soil or another form of cover

Medical Waste

Solid waste from medical research, medical procedures, or pathological, industrial, or medical laboratories. For full list of inclusions, see: D.C. Law 10-117; D.C. Official Code § 8-901(3A).

Material Recovery Facility (MRF)

A facility where recyclables are sorted into marketable commodities.

Organics

In the context of **composting**; naturally occurring (i.e., non-synthetic) matter capable of biological decay, typically once-living organisms or the products thereof (e.g., grass, leaves and **food scraps**).

Outbound

Materials, measured in tons, leaving a DPW-managed transfer station by truck for purposes of processing, marketing, or disposal. See also, **Inbound**.

Private Collection Property

A property that does not receive solid waste collection services from the District.

Public Collection Property

A property that receives solid waste collection from the District either directly or through contract.

Recyclable

Made solely of materials that can be recycled using the District's recycling collection program.

Recycle or Recycling

The series of activities, including separation, collection, and processing, through which materials are recovered or otherwise diverted from the solid waste stream for use as raw materials or in the manufacture of products other than fuel.

Residential Diversion Rate

Refers to the new key performance indicator (KPI) DPW will introduce as part of its performance plan, which is based on the DPW, managed portion of the Citywide Diversion rate presented in this report.

Residential Recycling Diversion Rate

Refers to the KPI included in DPW's performance plans to report on the percent of DPW-collected waste diverted by recycling or composting.

Recycling Rate

Is defined as the amount of waste recycled or composted as a percentage of the amount of waste that is generated.

Refuse

Is waste that is intended to be disposed at a waste to energy or landfill and does not include material that is destined for recycling or composting. Synonymous with discarded waste, waste discards, and trash.

Shredded Paper

Refers to paper shredded as a means of document destruction.

Solid Waste

Refers to garbage, refuse, trash, or any other waste or waste product, including recyclable, compostable, or otherwise reusable material, whether in solid, liquid, semisolid, or contained gaseous state, resulting from an industrial, commercial, residential, or government operation or community activity; provided, that the following are not considered solid waste for the purpose of this subtitle:

- (A) Hazardous waste, as defined in section 2(2A) of the Illegal Dumping Enforcement Amendment Act of 1994, effective May 20, 1994 (D.C. Law 10-117; D.C. Official Code § 8-901(2A));

- (B) Medical waste, as defined in section 2(3A) of the Illegal Dumping Enforcement Amendment Act of 1994, effective May 20, 1994 (D.C. Law 10-117; D.C. Official Code § 8-901(3A)); and
- (C) Construction and demolition waste subject to sections 406 and 503 of Title 12K of the District of Columbia Municipal Regulations (12K DCMR §§ 406, 503).

Solid Waste Stream

All solid waste generated within the District.

Source Reduction (also known as waste prevention)

The elimination of waste before it is created by changing product or packaging design, procurement practices, or use and consumption behaviors.

Source Separation

The separation of solid waste at the point of discard into the following categories: Recyclable materials; Compostable materials; and Trash. Required under Section 103 of the Sustainable Solid Waste Management Amendment Act of 2014.

Textiles

Clothing and other items made from woven and non-woven cloth.

Trash

Solid waste that is collected for disposal by WTE or landfill.

Transfer Station

Facilities where construction and demolition or solid waste is unloaded from collection vehicles and briefly held while it is reloaded onto larger long-distance transport vehicles for shipment to landfills or other treatment or disposal facilities. By combining the loads of several individual waste collection trucks into a single shipment, communities can save money on the labor and operating costs of transporting the waste to a distant disposal site. They can also reduce the total number of vehicular trips traveling to and from the disposal site.

Waste Diversion

Activities that result in solid waste source reduction, reuse, recycling, composting, or conversion of compostable solid waste into biofuel.

Waste Diversion Rate

The percentage of the **solid waste stream**, by weight, successfully diverted from landfilling and WTE through source reduction, reuse, recycling, composting, and conversion of compostable solid waste into biofuel.

Waste Generated or Waste Generation

The total amount of waste produce. It includes all materials generated, including those, which are recycled, composted, or sent to landfills or combustion facilities.

Waste to Energy (WTE)

The process of generating heat and/or electricity through the combustion of solid waste. A type of incineration.

White Goods

Refer to appliances such as dishwashers and refrigerators that can be recycled for their scrap metal.

Yard Debris/Waste/Trimmings

Grass, leaves, tree branches, brush, tree stumps, and other compostable organic materials that are generated by homes, schools, or businesses.

APPENDICES

APPENDIX A: SUSTAINABLE SOLID WASTE MANAGEMENT AMENDMENT ACT OF 2014 REPORTING REQUIREMENTS

The FY 2015 Annual Waste Diversion Update was prepared in fulfillment of the reporting requirements in the Sustainable Solid Waste Management Amendment Act of 2014 (the Act). The specific reporting requirements in the Act are detailed in this appendix.

Section 113 (a) of the Act requires that the Mayor provide a solid waste diversion update to the Council annually on February 28th beginning in 2016.

The annual diversion update must include:

- (1) The total tonnage of solid waste collected in the District, from both private collection and public collection properties;
- (2) A breakdown of the total tonnage reported in paragraph (1) of this subsection by the individual tonnage of solid waste that was collected for delivery to recycling, composting, landfill, incineration, and any other waste processing or disposal facilities;
- (3) The names, locations and tonnage of solid waste delivered to the recycling, composting, landfill, incineration, and other waste processing or disposal facilities;
- (4) A calculation of the District's solid waste diversion rate for the previous year; and
- (5) A calculation of the District's per-capita solid waste generation for the previous year.

Section 101 (15) of the Act defines solid waste as garbage, refuse, trash, or any other waste or waste product, including recyclable, compostable, or otherwise reusable material, whether in solid, liquid, semisolid, or contained gaseous state, resulting from an industrial, commercial, residential, or government operation or community activity; provided, that the following are not considered solid waste for the purpose of the Act:

- (A) Hazardous waste, as defined in section 2(2A) of the Illegal Dumping Enforcement Amendment Act of 1994, effective May 20, 1994 (D.C. Law 10-117; D.C. Official Code § 8-901(2A));
- (B) Medical waste, as defined in section 2(3A) of the Illegal Dumping Enforcement Amendment Act of 1994, effective May 20, 1994 (D.C. Law 10-117; D.C. Official Code § 8-901(3A)); and
- (C) Construction and demolition waste subject to sections 406 and 503 of Title 12K of the District of Columbia Municipal Regulations (12K DCMR §§ 406, 503).

Section 101 (22) of the Act defines waste diversion rate as the percentage of the solid waste stream, by weight, successfully diverted from landfilling and incineration through source reduction, reuse, recycling, composting, and conversion of compostable solid waste into biofuel.

APPENDIX B: RESIDENTIAL DIVERSION RATE & CITYWIDE DIVERSION RATE METHODOLOGIES

DPW's annual diversion update introduces two new rates: the Residential Diversion Rate and the Citywide Residential Diversion Rate. The Residential Diversion Rate will be introduced as part of DPW's Performance Plan and Key Performance Indicators for FY 2017. The Citywide Residential Diversion Rate is based on the Residential Diversion Rate but also includes data for waste diversion programs targeting residents managed by sister agencies such as the Department of Parks and Recreation's (DPR) community composting program. The purpose of the appendix is to describe the methodologies for these two new rates.

The Citywide Residential Diversion Rate includes waste from DPW curbside collections, leaf and holiday

tree collections, residential drop-off at Ft. Totten, and residential drop-off at DPR community garden composting sites. The Residential Diversion Rate includes all the waste types and sources listed above except for what is processed at DPR community composting sites.

The figure below details the methodology.

The major differences between the Residential Recycling Diversion Rate and the Residential Diversion Rate is that the Residential Diversion Rate also includes bulk waste dropped off by residents at Fort Totten and utilizes a data source for curbside single stream recycling that provides a more accurate measure of the volume collected for recycling.

Appendix C details the data sources for each of the waste types listed in the table.

| | Curbside Collections | | | | | Residential Drop-Off at Transfer Stations | | | | | | Other Residential Drop-Off |
|------------------------------|----------------------|-------------------------|------------------------|-------------|-----|---|-------------|-----|----------------|-----------------|-----|----------------------------|
| Diversion Tonnage | N/A | Single Stream Recycling | Leaf & Christmas Trees | Scrap Metal | N/A | E-Waste | Scrap Metal | N/A | Shredded Paper | Toters Recycled | N/A | Community Composting |
| Diversion + Disposal Tonnage | Refuse | Single Stream Recycling | Leaf & Christmas Trees | Bulk Waste | | E-Waste | Bulk Waste | | Shredded Paper | Toters Recycled | HHW | Community Composting |

Figure 2: Citywide Residential Diversion Rate Methodology

APPENDIX C: DATA SOURCES

The following section details the data sources and methodology used to develop waste tonnages and diversion rates included in the report.

RESIDENTIAL WASTE STREAM TONNAGE DATA SOURCES FOR CITYWIDE RESIDENTIAL DIVERSION RATES AND RESIDENTIAL DIVERSION RATES

The majority of residential waste stream data was derived from data reports generated by DPW's Solid Waste Management Administration via the CompuWeigh Data System which compiles data for waste tonnage by weighing collection vehicles on inbound and outbound scales at the Ft. Totten and Benning Road Transfer Stations. Individual reports for commodity streams handled by third party vendors also were utilized.

Household Hazardous Waste

Household Hazardous Waste material under contract with Care Environmental is to be disposed in the most sustainable manner possible, following the District's solid waste hierarchy. For the purposes of this report, all household hazardous waste was considered to be disposed versus reused or recycled. DPW will work with the contractor to see if greater detail regarding the amount of material recycled can be provided for inclusion in future reports.

Electronic Waste

Data is provided by Unicor. All e-waste sent to Unicor is either refurbished or recycled.

Organics

For the Residential Diversion Rate calculation, organics includes leaves, yard debris, and holiday trees collected by DPW. Data sources include inbound transfer station scale tickets for leave and Christmas trees collected by DPW.

For the Citywide Residential Diversion Rate calculation, organics also includes community composting. Estimates for community composting figures were

derived from the Department of Parks and Recreation's (DPR) Community Garden Program. This document offers both a qualitative and conservative estimation of the DPR community garden program's diversion of organic waste. There were 25 composting bins active in FY 2015, altogether diverting roughly 60 tons of food and yard waste in FY 2015.

Refuse

Includes waste from DPW routine curbside and scheduled bulk collections, DPW leaf and holiday tree collections, and residential drop-off at the Ft. Totten Transfer Station. Data sources for all values are inbound transfer station scale tickets except for bulk waste dropped off by residents at Fort Totten Transfer Station. Residential bulk drop off was calculated by subtracting inbound bulk collected waste from outbound bulk waste.

Scrap Metal

Scrap metal, material dropped off by residents as part of the bulk pile, was calculated by subtracting inbound tonnages of scrap metal and white goods from the outbound total for scrap metal.

Shredded Paper

Shredded paper dropped off at DPW's transfer station by residents is handled by a separate contract under NexCut. Tonnage data is provided by the contractor.

Single Stream Recyclables

Data sources include inbound transfer station scale tickets for recycling recorded as collected by DPW's collections and bulk divisions.

Toters Recycled

Data sources include outbound transfer station scale tickets with material type recorded as 'Toters recycled.'

TABLE 4 GOVERNMENT OPERATIONS TONNAGE DATA SOURCES

Data for government buildings and managed properties was provided by the Energy and Sustainability Division within the Department of General Services (DGS).

TABLE 6 & 7 TOTAL TRANSFER STATION TONNAGE - DATA SOURCES

The total transfer station tonnage was derived from the Outbound Transfer Station report generated by SWMA via the CompuWeigh Data System. The privately collected number was derived from the difference between the outbound and the DPW inbound totals. Data for HHW, e-waste, and shredded paper were reported separately through reports provided by the contractors specific to handling these materials.

TABLE 8

The 'Public' value includes all materials, including those from street and alley collections collected throughout the District of Columbia, as well as the residential curbside and drop-off solid waste streams and therefore is higher than the DPW-collected residential waste stream tonnage.

The 'Private' value is derived from subtracting the Public (DPW) total from the Transfer Station Outbound total.

FIGURE 1

All values are from DPW's scale tickets in CompuWeigh, which are recorded as outbound values by location.

TABLE 9

Sources for community composting, reuse, shredded paper, e-waste, and household hazardous waste are the same as described in the Residential Waste Stream Data Sources section. All other values are from DPW's scale tickets in CompuWeigh, which are recorded as outbound values by location.

APPENDIX D: LIST OF DEPARTMENT OF PARKS AND RECREATION COMMUNITY COMPOSTING SITES

| Name | Address |
|--------------------------------|--|
| Howard Greening Center | Sherman Ave NW & Barry PI NW |
| City Blossoms Marion St Garden | 1519 Marion St NW |
| Dreaming Out Loud Micro Farm | 700 Delaware Ave SW |
| Project Eden Garden | South Capitol St SE & Martin Luther King Jr Ave SE |
| The Arc | 1901 Mississippi Ave SE |
| Palisades Garden | 5200 Sherrier PI NW |
| Newark Street Garden | 39th & Newark St NW |
| Friendship Garden | 45th & Van Ness St NW |
| Fort Stevens Garden | 1327 Van Buren St NW |
| Takoma Garden | 300 Van Buren St NW |
| Hamilton Garden | 1340 Hamilton St NW |
| Twin Oaks Garden | 14th & Taylor St NW |
| Bruce Monroe Garden | 3000 Georgia Ave NW |
| Wangari Gardens | Kenyon and Park PI NW |
| Turkey Thicket Gardens | 1100 Michigan Ave NE |
| Noyes Gardens | 10th & Franklin St NE |
| Harry Thomas Gardens | 1743 Lincoln Rd NE |
| West End Garden | 25th & N St NW |
| Common Good City Farm | 3rd & V St NW |
| Brain Food Youth Garden | 941 K St NW |
| Emery Community Garden | 9th St. & Missouri Ave NW |
| Lovejoy Garden | 12th & E St NE |
| Virginia Ave Garden | 9th & L St SE |
| Lederer Garden | 4801 Nannie H. Burroughs Ave NE |
| Hillcrest Garden | 3100 Denver St SE |

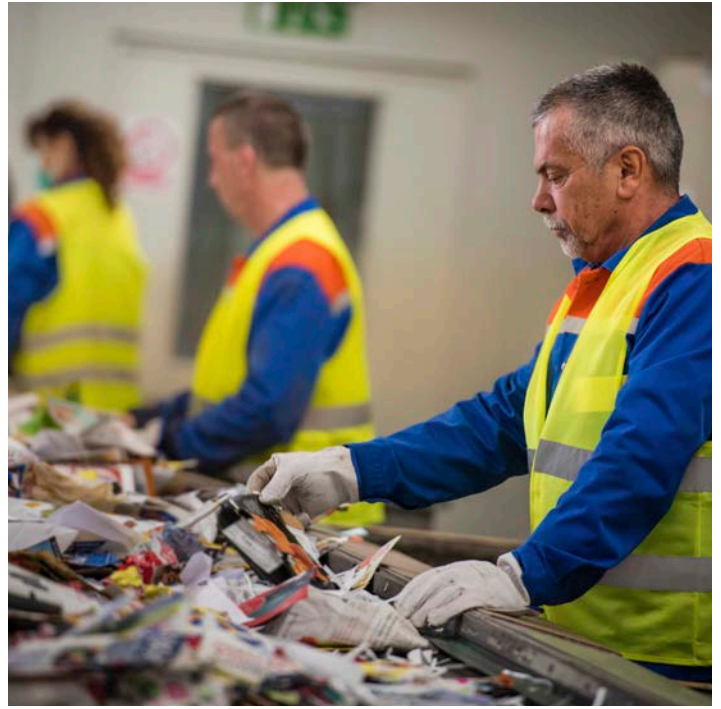
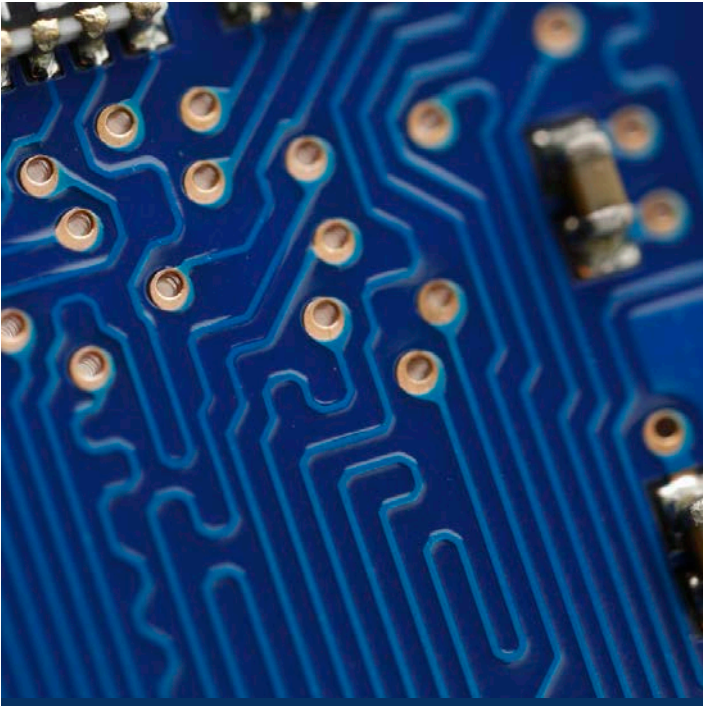
APPENDIX E: DC PUBLIC SCHOOLS 2015 & 2016 RECYCLING HONOR ROLL LIST

| Name | Address | DCPS Recycles! Honor Roll | | Organics Recycling Program | |
|--|----------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| | | FY2015 (School year 2014-2015) | FY2016 (School year 2015-2016) | FY2015 (School year 2014-2015) | FY2016 (School year 2015-2016) |
| Aiton Elementary School | 533 48th PL N.E | | | | x |
| Amidon-Bowen Elementary School | 401 I ST SW | | | | |
| Anacostia High School | 1601 16th ST SE | | | | |
| Ballou High School | 3401 4th ST SE | | | | |
| Ballou STAY High School | 3401 4th ST SE | | | | |
| Bancroft Elementary School | 1755 Newton ST NW | x | x | x | x |
| Barnard Elementary School | 430 Decatur ST NW | x | | | |
| Beers Elementary School | 3600 Alabama AVE. SE | | | | |
| Benjamin Banneker High School | 800 Euclid ST NW | | x | | |
| Brent Elementary School | 301 North Carolina Ave. SE | | | | |
| Brightwood Education Campus | 1300 Nicholson ST NW | | | | |
| Brookland Middle School | 1150 Michigan Ave NE | | | | |
| Browne Education Campus | 850 26th ST NE | | | | |
| Bruce-Monroe Elementary School @ Park View | 3560 Warder ST NW | x | x | x | x |
| Bunker Hill Elementary School | 1401 Michigan AVE. NE | | | | |
| Burroughs Elementary School | 1820 Monroe St. NE | x | x | | |
| Burrville Elementary School | 801 Division AVE NE | x | | | |
| C.W. Harris Elementary School | 301 53rd ST SE | x | x | x | x |
| Capitol Hill Montessori @ Logan | 215 G ST NE | x | x | x | x |
| Cardozo Education Campus | 1200 Clifton St. NW | x | x | | x |
| CHOICE Academy @ Wash Met | 300 Bryant St NW | | | | |
| Cleveland Elementary School | 1825 8th ST NW | x | x | | |
| Columbia Heights Education Campus | 3101 16th ST NW | x | x | | |
| Coolidge High School | 6315 5th ST NW | | | | |
| Deal Middle School | 3815 Fort DR NW | x | x | x | x |
| Dorothy I Height Elementary School | 1300 Allison St NW | | x | | |
| Drew Elementary School | 5600 Eads ST NE | | | | |
| Duke Ellington School of the Arts @ Garnet-Patterson | 2001 10th St NW | | | | |

| Name | Address | DCPS Recycles! Honor Roll | | Organics Recycling Program | |
|---|------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| | | FY2015 (School year 2014-2015) | FY2016 (School year 2015-2016) | FY2015 (School year 2014-2015) | FY2016 (School year 2015-2016) |
| Duke Ellington School of the Arts @ Meyer | 2501 11th ST NW | | | | |
| Dunbar High School | 1301 New Jersey AVE. NW | x | | | x |
| Eastern High School | 1700 East Capitol ST NE | | | | |
| Eaton Elementary School | 3301 Lowell ST NW | | | | |
| Eliot-Hine Middle School | 1830 Constitution Ave NE | | | | |
| Fillmore Arts Center | 1819 35th ST NW | | | | |
| Garfield Elementary School | 2435 Alabama AVE SE | x | x | x | x |
| Garrison Elementary School | 1200 S ST NW | | | | |
| H.D. Cooke Elementary School | 2525 17th ST NW | x | x | x | x |
| H.D. Woodson High School | 540 55th St. NE | | | | |
| Hardy Middle School | 1819 35th ST NW | | | | |
| Hart Middle School | 601 Mississippi AVE SE | x | | | |
| Hearst Elementary School | 3950 37th ST NW | | x | | x |
| Hendley Elementary School | 425 Chesapeake ST SE | | x | | |
| Houston Elementary School | 1100 50th PL NE | | x | | |
| Hyde-Addison Elementary School | 3219 O ST NW | x | | | |
| Incarcerated Youth Program Correctional Detention Facility | 1901 D. St SE | | | | |
| J.O. Wilson Elementary School | 660 K ST NE | x | x | x | |
| Janney Elementary School | 4130 Albemarle ST NW | x | | x | x |
| Jefferson Middle School Academy | 801 7th ST SW | | | | |
| Johnson Middle School | 1400 Bruce PL SE | | | | |
| Kelly Miller Middle School | 301 49th ST NE | x | | | |
| Ketcham Elementary School | 1919 15th ST SE | x | x | | x |
| Key Elementary School | 5001 Dana PL NW | x | x | x | x |
| Kimball Elementary School | 3375 Minnesota AVE SE | x | | | |
| King Elementary School | 3200 6th ST SE | | x | | |
| Kramer Middle School | 1700 Q ST SE | | | | |
| Lafayette Elementary School | 5701 Broad Branch Road, NW | x | x | | |
| Langdon Elementary School | 1900 Evarts ST NE | x | x | | x |
| Langley Elementary School | 101 T ST NE | | | | |
| LaSalle-Backus Education Campus | 501 Riggs RD NE | | | | |
| Leckie Elementary School | 4201 Martin Luther King AVE. SW | x | | x | x |
| Ludlow-Taylor Elementary School | 659 G ST NE | | | | |

| Name | Address | DCPS Recycles! Honor Roll | | Organics Recycling Program | |
|--|-----------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| | | FY2015 (School year 2014-2015) | FY2016 (School year 2015-2016) | FY2015 (School year 2014-2015) | FY2016 (School year 2015-2016) |
| Luke C. Moore High School | 1001 Monroe ST NE | | | | |
| MacFarland Middle School | 4400 Iowa Ave. NW | | | | |
| Malcolm X Elementary School @ Green | 1500 Mississippi Ave. SE | | | | |
| Mamie D. Lee School (Closed) | 100 Gallatin ST NE | x | | x | |
| Mann Elementary School | 4430 Newark ST NW | x | x | x | x |
| Marie Reed Elementary School | 2201 18th St. NW | | x | | |
| Maury Elementary School | 1250 Constitution AVE NE | x | x | x | x |
| McKinley Middle School | 151 T ST NE | | x | | |
| McKinley Technical High School | 151 T ST NE | x | x | | |
| Miner Elementary School | 601 15th ST NE | | | | |
| Moten Elementary School | 1565 Morris RD SE | x | x | x | x |
| Murch Elementary School | 4810 36th ST NW | | | | |
| Nalle Elementary School | 219 50th ST SE | | x | | x |
| Noyes Elementary School | 2725 10th St. NE | | | | |
| Orr Elementary School | 2200 Minnesota AVE. SE | x | x | x | x |
| Oyster-Adams Bilingual School (Adams) | 2020 19th St NW | | x | | x |
| Oyster-Adams Bilingual School (Oyster) | 2801 Calvert ST NW | | | | |
| Patterson Elementary School | 4399 South Capitol Terr. SW | | | | |
| Payne Elementary School | 1445 C St. SE | x | | | |
| Peabody Elementary School | 425 C ST NE | x | x | | x |
| Phelps Architecture, Construction, and Engineering High School | 704 26th ST NW | x | | | |
| Plummer Elementary School | 4601 Texas AVE SE | | | | x |
| Powell Elementary School | 1350 Upshur ST NW | x | x | x | x |
| Randle Highlands Elementary School | 1650 30th ST SE | | x | | x |
| Raymond Education Campus | 915 Spring RD NW | | | | |
| River Terrace Education Campus | 420 34th St NE | | x | | |
| Ron Brown College Preparatory High School | 4800 Meade Street, NE | | | | |
| Roosevelt High School | 4301 13th Street, NW | x | | | |
| Roosevelt STAY High School | 4301 13th Street, NW | | | | |
| Ross Elementary School | 1730 R ST NW | x | x | | |
| Savoy Elementary School | 2400 Shannon PL SE | | | | |

| Name | Address | DCPS Recycles! Honor Roll | | Organics Recycling Program | |
|--|---------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| | | FY2015 (School year 2014-2015) | FY2016 (School year 2015-2016) | FY2015 (School year 2014-2015) | FY2016 (School year 2015-2016) |
| School Without Walls @ Francis-Stevens | 2425 N St NW | x | x | x | x |
| School Without Walls High School | 2130 G ST NW | | | | |
| School-Within-School @ Goding | 920 F St., NE | x | x | x | x |
| Seaton Elementary School | 1503 10th ST NW | x | x | | x |
| Shepherd Elementary School | 7800 14th St NW | x | | | |
| Simon Elementary School | 401 Mississippi AVE SE | | | | |
| Smothers Elementary School | 4400 Brooks ST NE | | | | |
| Sousa Middle School | 3650 Ely PL SE | x | | | |
| Stanton Elementary School | 2701 Naylor RD SE | x | | | |
| Stoddert Elementary School | 4001 Calvert ST NW | x | x | x | x |
| Stuart-Hobson Middle School | 410 E ST NE | x | | | |
| Takoma Education Campus | 7010 Piney Branch RD NW | x | | | |
| Thomas Elementary School | 650 Anacostia AVE NE | x | | x | |
| Thomson Elementary School | 1200 L ST NW | x | x | x | x |
| Truesdell Education Campus | 800 Ingraham ST NW | x | x | x | x |
| Tubman Elementary School | 3101 13th ST NW | x | x | | |
| Turner Elementary School | 3264 Stanton RD SE | | x | | |
| Tyler Elementary School | 1001 G ST SE | x | | | |
| Van Ness Elementary School | 1150 5th Street Southeast | | x | | x |
| Walker-Jones Education Campus | 1125 New Jersey AVE NW | | | | x |
| Washington Metropolitan High School | 300 Bryant ST NW | | | | |
| Watkins Elementary School | 420 12th ST SE | | | | |
| West Education Campus | 1338 Farragut St. NW | | | | |
| Wheatley Education Campus | 1299 Neal ST NE | | | | |
| Whittier Education Campus | 6201 5th ST NW | | | | |
| Woodrow Wilson High School | 3950 Chesapeake St. NW | x | x | | x |
| Youth Services Center | 1000 Mt. Olivet Rd. NE | | x | | |



Department of Public Works | Frank D. Reeves Municipal Center
2000 14th Street, NW | Washington, DC 20009
Twitter (@DCDPW) | Facebook (/DPWDC) | Phone: (202) 673-6833