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# DENVER RECYCLES

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## 2018 ANNUAL REPORT

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**DENVER**  
PUBLIC WORKS



DENVER RECYCLES



## INTRODUCTION

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Denver Recycles is a program of Denver Public Works, Solid Waste Management. Denver Recycles staff assists Denver Solid Waste Management (DSWM) in overseeing the City's recycling and composting services, and supports education for all waste services. The following report summarizes the recycling, composting and other diversion activities in Denver for 2018.

### Services Offered

Denver Recycles offers a no-fee opt-in recycling collection service to all residents living in single family homes and buildings with seven or fewer units, and an opt-in fee-based compost collection service. DSWM has an intergovernmental agreement with Denver Public Schools (DPS) to provide trash and recycling services to all DPS schools and facilities and composting service to a portion of DPS schools. DSWM also provides trash and recycling collection to City and County municipal facilities, compost collection to a small portion of these facilities and supports Parks and Recreation's recycling program. Additionally, Denver Recycles provides, coordinates, contracts and/or manages the following services in the City:

- Recycling education and communication
- Recycling drop-off center
- Appliance collection and recycling
- Electronics recycling events and drop-off discounts
- Household hazardous waste collection
- LeafDrop
- Learn to Compost classes
- Master Composter training program
- Mulch Giveaway & Compost Sale
- Treecycle
- Waste hauler licensing

DSWM does not provide services to multi-family units with 8 or more units, commercial businesses/properties, institutional generators, Denver International Airport or Denver Arts and Venues.

## 2018 Highlights

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- ❖ *Denver Recycles diverted **51,623 tons** of materials from disposal in the landfill in 2018.*
- ❖ *Participation in the City's residential recycling program **increased to 92%** of all eligible households.*
- ❖ *The number of households enrolled in the Denver Composts program increased by 56% and the **tons of organic materials composted increased by 27%**.*
- ❖ *Solid Waste Management collected a record **898 Tons of leaves** through its annual LeafDrop program.*
- ❖ *Graffiti crews removed more than **1,689,000 ft<sup>2</sup> of graffiti** around the city.*

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## DENVER'S RECYCLING RATE

DSWM/Denver Recycles tracks the tons of materials landfilled, recycled, composted, and otherwise diverted through its services and programs.

In 2018, DSWM recycled and composted a total of 51,623 tons of materials; achieving a 23.1% recycling and composting rate<sup>1</sup>. Each eligible household generated an average of 2,495 total pounds of materials, recycled and composted 577 pounds of materials, and threw 1,917 pounds of materials in the trash. There was a 4% decrease in the residential landfill tonnage, a 2% increase in recycled tonnage, and a 16% increase in compost tonnage in 2018 as compared to 2017.

Figure 1 displays the detailed breakdown of the tons of material landfilled and recycled/composted in 2018.

**Figure 1: Tons Generated, Recycled/Composted and Landfilled in 2018**

Categories	Tons
Residential Landfill	171,516
Residential Recycling	40,638
Residential Composting <sup>2</sup>	8,118
E-cycle Events	23.8
E-cycle Coupons	71.2
Recycle Your Holiday Lights	2.2
LeafDrop	898
Appliance Collection	149
HHW Collections	43.2
Treecycle <sup>3</sup>	180
Backyard Compost <sup>4</sup>	1,500
'Other' Recycling	0
<b>Totals</b>	
Total Landfill	171,516
Total Recycled and Composted	51,623
Total Generated	223,139
<b>Percentages</b>	
% Landfilled	76.9%
% Recycled and Composted	23.1%

<sup>1</sup> The term 'Recycling and Composting Rate' includes *all* material diverted from the landfill in the City of Denver. Figure 1 displays all the materials included in the Recycling and Composting Rate calculation.

<sup>2</sup> Total comprised of residential tonnages and tonnages brought to the Cherry Creek Drop-off.

<sup>3</sup> Estimate based on number of trees collected and average dry weight of a Christmas tree.

<sup>4</sup> Estimate based on number of Denver households assumed to be backyard composting.

Figure 2 displays waste tonnages from residential homes (7 units or less) in 2018.

**Figure 2: Denver Residential Waste Generation in Tons**

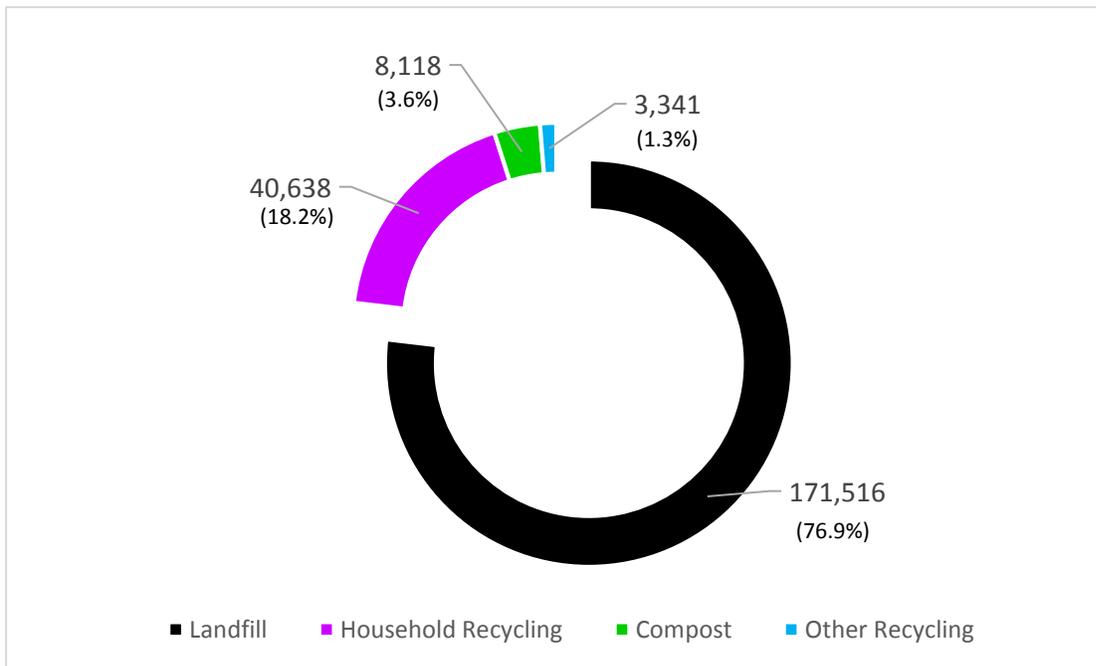
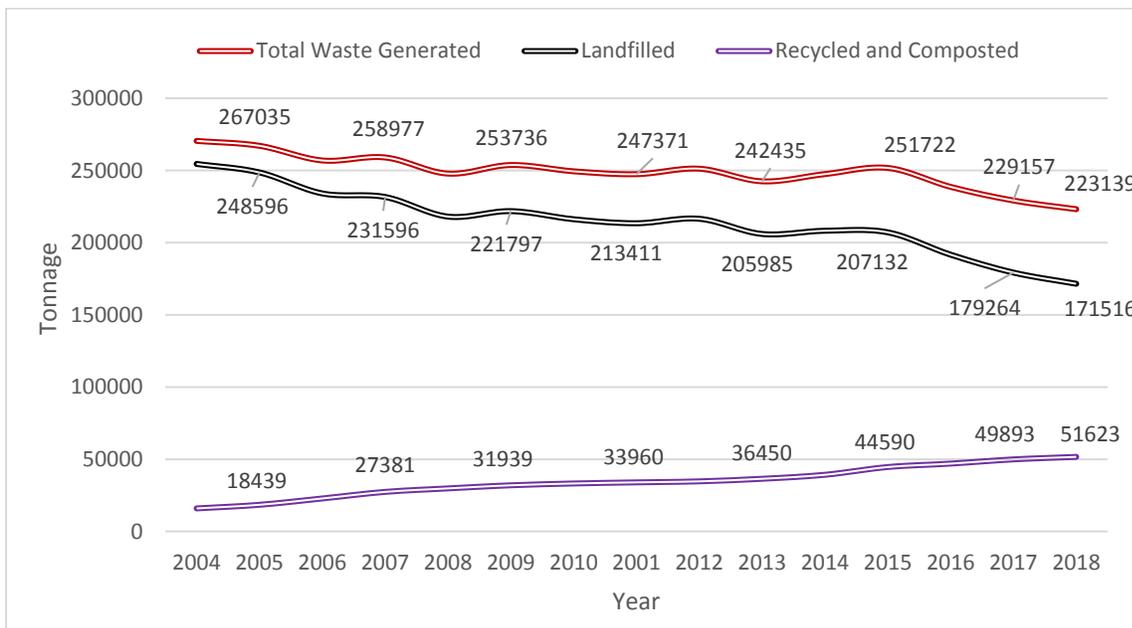


Figure 3 displays Denver’s residential waste generation, material landfilled, material recycled, and material composted since 2004.

**Figure 3: Denver’s Residential Waste Generation, Landfill, Recycling and Composting Tonnages 2004 - 2018**



## COLLECTION PROGRAMS

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### Denver Recycles

Denver Recycles collects single stream recycling in 35, 65 or 95-gallon carts from eligible Denver residential households (7 units or less) every other week. This is a no-charge service to Denver residents.

By the end of 2018:

- The City operated 24 recycling routes five days a week.
- 164,900 of the 178,900 eligible households in the City had signed up for recycling service; yielding a 92% participation rate.
- Each participating household set out approximately 488 pounds of recycling; an average of 18.8 pounds per collection or 9.4 pounds per week.
- Denver ended the opt-in program in December 2018 by automatically delivering recycle carts to homes not already subscribed to the recycling program.

### Denver Composts

Denver Composts is an opt-in fee-based service that collects residentially generated organic material including yard debris, food scraps and non-recyclable paper on a weekly basis in 65 or 95-gallon carts. The fee for this service is \$29.25 per quarter, or \$9.75 per month.



By the end of 2018, Denver Composts:

- Provided service to 18,060 households on 11 collection routes; this is a 56% increase in participation from 2017.
- Collected 8,118 tons of organic materials; a 29% increase in tonnage collected from 2017.
- Each participating household diverted approximately 899 pounds of organics in 2018; an average of 17.3 pounds of organics per week.

### Denver Public Schools

DSWM has an intergovernmental agreement with Denver Public Schools (DPS) to collect trash, recycling and compost from eligible schools and facilities that serve more than 90,000 students. DSWM provides recycling services to 170 different school sites, campuses and administrative offices, and Denver Recycles staff offers assemblies, training and technical assistance to DPS students and staff, and provides classroom recycling containers and posters for these school programs. In 2018, Denver Recycles estimates that:

- 7,645 tons of trash were collected<sup>5</sup> from 170 DPS facilities.
- 1,514 tons of recyclables were diverted<sup>6</sup> by 170 DPS facilities.
- 341 tons of organics were diverted<sup>6</sup> by 39 DPS schools.

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<sup>5</sup> Estimates based on the size and average weight of the trash containers and the number of tips per year.

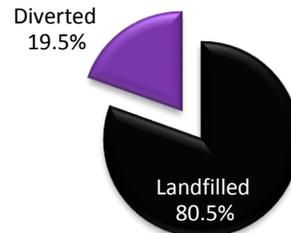
<sup>6</sup> Estimates based on the size and average weight of the recycling and organics containers and the number of tips per year.

Figure 4 displays the DPS diversion data for 2018, and Figure 5 displays the diversion rate for DPS.

**Figure 4: Denver Public Schools 2018 Diversion Data**

Category	Tons	Pounds per Student per Year
Landfilled	7,645	170
Recycled	1,514	33.6
Composted	341	7.6
Diversion rate	19.5%	n/a

**Figure 5: DPS Diversion Rate**



## Denver Facilities

In 2018, Denver Recycles provided recycling collection service to 193 municipal buildings and compost collection service to 39 municipal buildings<sup>7</sup>; this is nearly double the number of facilities that were participating in the compost collection program in 2017.

Denver Recycles added compost collection to 15 fire stations and the Denver Fire Department Headquarters for a total of 21 stations in 2018. This was a 300% increase in participation from 2017, and the average recycling and composting rate for these fire stations was 65%. Denver Recycles and the Denver Fire Department are working towards expanding the compost collection program to all Denver fire stations by the end of 2019. Additionally, City employees are volunteering to improve and maintain recycling and composting efforts in City office buildings through Denver Recycles' Zero Waste Ambassador (ZWA) program. The ZWA program expanded in 2018 to include the Wellington Webb Building, the Castro Building, the McNichols Building and the Waste Water Building. ZW Ambassadors at the Webb Building also established a Terracycle program for Webb employees.

## Parks Recycling

Denver Recycles continued its partnership with Denver Parks and Recreation to provide seven Denver Parks with a total of thirty-five purple recycling dumpsters. Parks included in this program are Berkeley Park, Cheesman Park, City Park, Congress Park, Rocky Mountain Lake Park, Sloan's Lake Park, and Washington Park. The program diverted nearly 50 tons of recyclables in 2018.



<sup>7</sup>Denver Art & Venues main facilities, Denver International Airport and the Denver Coliseum have recycling and compost collection services provided through a private contractor.

## Hauler Licensing

The City and County of Denver requires private waste haulers that operate within the city to obtain a license through Denver’s Excise and License Department. One of the license requirements is to provide data on the tons landfilled, recycled and composted.

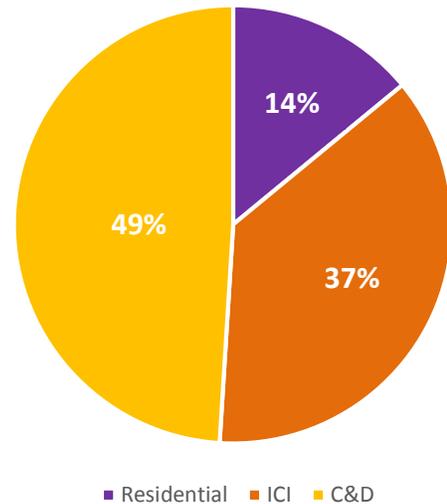
In 2018, licensed haulers collected 1,367,563 tons of waste; 1,091,073 tons were sent to the landfill and 276,490 tons were recycled or composted. The construction and demolition debris (C&D) sector generated 57% of the waste reported, while the institutional, commercial, industrial, and multifamily-residential (ICI) sector generated 43% of the waste reported.

Figure 6 displays the detailed breakdown of the tons of C&D and ICI material landfilled and recycled/composted in 2018. Figure 7 displays total waste generation from residential homes (7 units or less), the construction and demolition sector, and institutional, commercial, and industrial sector in 2018.

**Figure 6: Tons Generated, Recycled/Composted and Landfilled by C&D and ICI sectors in 2018**

Category	Tons
Construction/Demolition (C&D) Landfill	651,292
C&D Recycling/Composting	139,245
Institutional/Commercial/Industrial (ICI) Landfill	452,841
ICI Recycling/Composting	137,913
<b>Totals</b>	
Total Landfill	1,104,133
Total Recycled and Composted	277,158
Total Generated	1,381,291
<b>Percentages</b>	
% Landfilled	79.9%
% Recycled and Composted	20.1%

**Figure 7: Total Waste Generation in Denver by Sector**



## OTHER COLLECTIONS, SPECIAL EVENTS, AND NEW INITIATIVES

Denver Recycles provides services beyond the residential, school, and facility collection programs. These services, events, and programs are described briefly below:

- **Appliance Collection:** The City contracts with a private company to provide a 'no-cost' appliance collection and recycling service to eligible residents. In 2018, the program collected 2,561 appliances and diverted an estimated 149 tons of materials from the landfill.
- **Automatic Recycle Cart Delivery:** In 2018, Denver Recycles began implementing automatic recycle cart delivery to Denver residents that were not subscribed to the recycling program. This delivery was part of the City's Solid Waste Master Plan and will help increase collection efficiency and the diversion of recyclables from the landfill. In total, approximately 8,500 recycle carts were delivered to residents in the North Central, South East and South West portions of Denver.
- **Collection Schedule Reminder and Waste Sorting Game:** By the end of December 2018, 81,679 residential collection reminders had been created (727 of those in Spanish) and 22,564 "Denver Trash and Recycling" smartphone apps had been downloaded. The Waste Sorting Game had been played 9,153 times.
- **Drop-Off Recycling Center:** The Cherry Creek Recycling Drop-Off, is co-located at the Cherry Creek transfer station (7301 E. Jewell) and accepts single stream recyclables, yard debris, food scraps and other organic materials from Denver city residents. In 2018, the site serviced almost 57,000 residents and averaged 1,093 vehicles per week.
- **Education and Outreach:** Annually, Denver Recycles mails the WasteWise publication to all eligible households in the City with the aim of outlining service guidelines and promoting recycling, composting and special programs available to residents. The 2018 newsletter was sent to more than 178,000 residents, and promoted keeping the recycling stream clean. Denver Recycle staff continued to give presentations in DPS schools and conducted employee engagement education workshops and training sessions. Denver Recycles also continued to send out the monthly *Recycling Roundup* newsletter to registered neighborhood organizations, local papers, and city council offices.
- **Electronics Recycling:** In 2018, 1,395 E-cycle Coupons were redeemed for use. This coupon gave a significant discount to residents who wished to drop off electronics for recycling at the City's contracted electronics recycling vendor. A total of 71.2 tons of old electronic material was recycled through the E-cycle coupon program. Additionally, Denver Recycles partnered with the Blue Star to host an electronic collection event in 2018 which collected and recycled 23.8 tons of electronics.



- **Gove Compost Demonstration Site.** In 2018, Denver Recycles continued to maintain the Gove Compost Demonstration Site which actively showcases a wide variety of backyard composting systems and techniques throughout the growing season. This site also serves as an outdoor classroom and is a site where *Learn to Backyard Compost* classes are taught from May through October.
- **Household Hazardous Waste:** In 2018, 493.2 tons of household hazardous waste was collected from Denver residents by the City’s contractor, WM/Curbside, of which 60% was recycled. Home collection appointments totaled 1125 and facility drop off appointments totaled 100; an 11% increase in the number of collection appointments from 2017.
- **Keep Denver Beautiful and Denver Partners Against Graffiti:** Keep Denver Beautiful (KDB) coordinated and/or supported 126 clean-up projects throughout the City with the help of 2,800 volunteers accumulating over 12,500 volunteer hours. Our graffiti crews removed 1,689,646 ft<sup>2</sup> of graffiti.
- **LeafDrop:** LeafDrop collections were held at six sites on Saturdays and Sundays in November and at three weekday sites from October through December. In total, 13,277 cars dropped off bags of leaves (a 54% increase from 2017), and 898 tons of leaves were composted (a 7% increase from 2017). Denver Recycles continued its partnership with Denver Ace Hardware stores to promote the use of compostable brown paper lawn and leaf bags. In total, 76,330 paper bags were given away which is a 168% increase over the number of bags distributed in 2017. Denver Recycles also increased its education messaging encouraging residents to use compostable paper lawn bags instead of plastic bags which resulted in approximately 72% of leaves brought to LeafDrop in 2018 were in paper bags.
- **Learn to Compost Classes:** Denver Recycles partnered with Denver Urban Gardens to host 32 free *Learn to Compost* classes from May through mid-October. A total of 349 people attended these classes in 2018.
- **Master Composter Training Classes:** In 2018, Denver Recycles once again partnered with Denver Urban Gardens (DUG) to offer the Master Composter Training program. A total of 35 volunteers completed the 40-hour training and 40-hour giveback requirements. Master Composter volunteers donated a total of 1,403 hours of outreach. Volunteers taught *Learn to Backyard Compost* classes at the Gove Compost Demonstration Site, led garden-based compost classes at community gardens, provided backyard composting information to Denver residents at farmers’ markets, the Denver Zoo, and other community events. Volunteers also led workshops at Denver schools and offices.
- **Mulch Giveaway & Compost Sale:** In 2018, Denver Recycles hosted this annual Spring event at the Havana Nursery site with four additional satellite “dig-your-own” mulch sites. In total, an estimated 5,000 yd.<sup>3</sup> of mulch was distributed to residents for free and 7,305 ft.<sup>3</sup> of compost was sold with 855 vehicles visiting the Havana site on the event day.



- Social Media and Customer Service:** By the end of 2018, the Denver Recycles Facebook page had almost 3,800 ‘likes’, the Denver Recycles Twitter account had over 660 followers, and Customer Service fielded 129,528 calls. A new Instagram account was created in the Fall of 2018 and had over 300 followers by the end of 2018.
- The Recycling Partnership (TRP) Grant:** Denver Recycles received a grant from TRP to develop and implement a city-wide education campaign focused on increasing aluminum and steel can recycling in Denver. Waste sort data showed that nearly two-thirds of all recyclables generated in an average Denver household were being placed in the purple recycle cart, but that only one out of every two aluminum/steel cans were being placed in the recycle cart. Using this information, Denver Recycles created a city-wide education campaign asking residents to place aluminum and steel cans in recycle carts rather than the trash.
- Treecycle:** During the first two weeks of 2018, residents serviced by Denver SWM were instructed to set out their Christmas trees for collection as part of the annual Treecycle recycling event. A total of 20,125 trees were collected and mulched through the program. The estimated weight of the mulched trees was 180 tons.



## PLANS FOR 2019 AND BEYOND

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Denver Recycles will continue to follow the strategies outlined in the 2010 Master Plan for Managing Solid Waste in the Mile High City in the coming year. Specific initiatives planned for 2019 include:

- **Denver Recycles:** Denver Recycles will expand the number of recycling routes by adding five additional recycling routes in 2019. Denver Recycles will continue to automatically deliver recycle carts to new homes.
- **Expand Organics Collection:** In 2019, Denver Recycles will work to fill our 11 compost collection routes and increase the quality of materials collected. We will also continue our partnership with the National Resource Defense Council (NRDC) and Certifiably Green Denver (CGD) to educate residents on the topic of food waste reduction. Denver Composts will order 13 new trucks in 2019 to allow for 2020/2021 expansions.
- **Expand and Improve Employee Recycling Programs:** Denver Recycles will continue to expand composting services to Fire stations and other municipal facilities in 2018.
- **Grants:** In 2019, Denver Recycles will receive a grant from The Recycling Partnership (TRP) and Coca-Cola that will focus on increasing residential recycling rates and decreasing the contaminants residents place in recycle carts. Denver Recycles will also receive a grant from the Colorado Department of Health and Environment through their Recycling Resources Economic Opportunity program. This grant will allow Denver Recycles to update the 2010 Master Plan for Managing Waste in the Mile High City.
- **Recycling Education:** Denver Recycles will continue to provide education and outreach to the public, DPS, municipal facilities, etc. in order to supply information on how to recycle and how to increase the amount of materials recycled and composted. Education is a key strategy to meet sustainable materials management goals.