#### **BIOCYCLE WEST COAST18: ACCELERATING ORGANICS RECYCLING**

MARCH 26, 27, 28, 29, 2018 • SAN DIEGO, CALIFORNIA • BioCycleWestCoast.com



# Residential Food Collection

Austin, TX, the newest program included in this year's survey, just rolled out curbside service to 52,000 households at the beginning of October, and plans to expand to all households by 2020.

Survey of residential food waste collection programs across the country from June to November 2017 ultimately identified 148 curbside collection and 67 drop-off programs.

Virginia Streeter and Brenda Platt

IOCYCLE and the Institute for Local Self-Reliance (ILSR) undertook a survey of residential food waste collection programs across the U.S. from June to November 2017. BioCycle contracted with ILSR to conduct the 2017 BioCycle Residential Food Waste Collection Access Study, which was last updated in 2014 (see "Residential Food Waste Collection In The U.S.," January 2015). This year's study — the eighth since BioCycle began the national survey in 2005 — includes residential food waste drop-off programs for the first time.

The 2017 survey is utilizing the term "access," defined as number of households able to participate in a given program, regardless of actual participation. Therefore the number of households with access does not necessarily equal the number of households partaking in the service — not all households in ser-

vice areas will choose to participate.

BioCycle intentionally avoided referring to these programs as "composting" programs. While the majority of programs in this study are sending their collected materials to composting facilities, a few are using anaerobic digestion to process their food waste — such as in South Portland, Maine, where collected food scraps go to Exeter Agri-Energy.

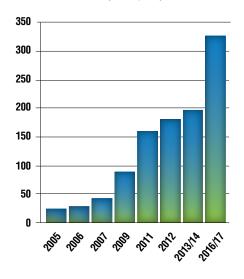
The 2017 BioCycle Residential Food Waste Collection Access Study only includes programs that are actively offered or supported by local government. It

does not cover private haulers offering subscription service for food waste collection independent of the government's involvement. A number of private collection programs offer residential services, providing another means of access to numerous communities, but

Figure 1.

U.S. communities with curbside food waste collection

148 Programs reporting



these programs are outside the scope of this report.

This full report of the 2017 BioCycle Residential Food Waste Collection Access Study includes individual program information, along with data on types and sizes of curbside containers, collection service providers, types of drop-off programs, drop-off site staffing, which programs collect food waste

with yard trimmings, and more. Table 1 is a complete listing of all communities in the U.S. with residential food waste collection access via curbside and/or

drop-off programs. It includes details on program start date, households with access to curbside and/or drop-off collection, and processing facility for collected organics.

*BioCycle* thanks all the residential food waste collection program manag-

Tables referenced in this

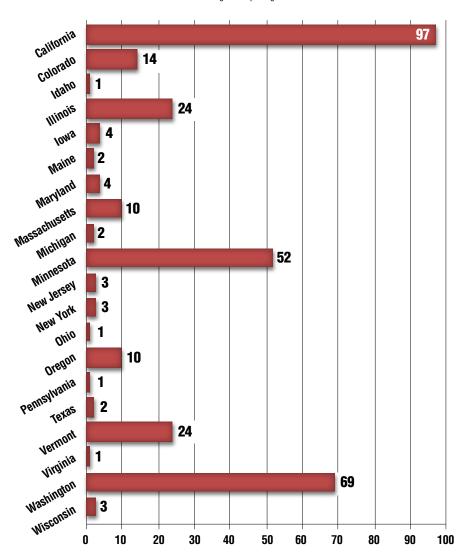
report are featured on

pages 12-28.



Figure 2.

U.S. communities with access to curbside food waste collection by state



Anoka County, MN has two yearround drop-off locations at county yard trimmings sites. Each site has separate drop-off containers for food waste/ soiled paper/compostable plastics, yard trimmings and tree waste.

ers, state organics recycling agencies and many others for their participation in the 2017 *BioCycle Residential Food Waste Collection Access Study. BioCycle* also thanks the Foodservice Packaging Institute and the Biodegradable Products Institute for their underwriting of this study.

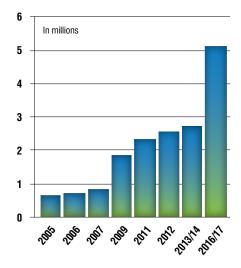
#### **CURBSIDE PROGRAMS**

The number of curbside collection programs has increased 87 percent from 2014 to 2017, from 79 to 148. As many programs are administered by counties or solid waste districts, not individual cities, the number of communities being serviced is also counted. For example, Costa Mesa Sanitary District in California has just one program, but since the sanitary district includes the City of Costa Mesa, parts of Newport Beach, and unincorporated Orange County, it is considered three communities. "Communities" are defined as incorporated cities or towns, which is why New York City (NYC) is considered only one community, despite its large size. In the case of county programs that are also serving the unincorporated areas of the county, the entire unincorporated area is counted as one community (as seen with unincorporated Orange County in the Costa Mesa Sanitary District example).

In 2017, residents of 326 communities have access to curbside food waste collection (Figure 1), up from 198 at the time of the last study (a 65% increase). California, Washington, and Minnesota have programs serving the

Figure 3.

U.S. households with access to curbside food waste collection



most number of communities (Figure 2). Table 2 compares national data between the 2014 and 2017 curbside access studies.

There are curbside programs in 20 states; three of those states (Virginia, Idaho, and Maine) added programs since 2014, and thus are totally new to this study. Two states (Kentucky and Connecticut) were included in the last study, but had very small pilot programs which have since ended although Connecticut now has five drop-off programs, including the one community that had a curbside pilot in 2014 (Bridgewater). Finally, 5.1 million households have access to curbside collection, a growth of 2.4 million since the last study (Figure 3). California, Washington, and New York provide access to the largest number of households (Figure 4).

#### Type and Scale of Curbside

Curbside program types are classified as either standard offering, opt-in, or mandatory. Of 77 programs reporting data for this question, 47 are "standard," meaning organics collection is offered alongside trash and recycling, with no extra steps needed for residents to participate (Table 3, Figure 5). "Opt-in" programs, which represent 21 of the 77, require residents to sign up to receive food waste collection service. Often, these programs are serving only a small portion of households with access. For example, in Bellingham, Washington, 19,000 households have access to curbside collection, but only 5,000 have signed up to participate. Finally, there are the mandatory programs, where all residents must

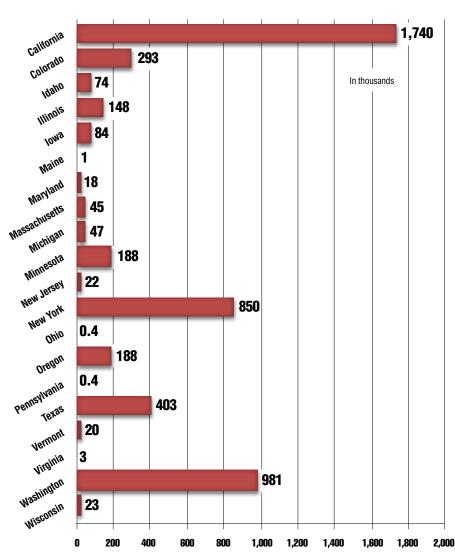


Cambridge, MA (above) is in the midst of expanding curbside collection access from 5,000 to 25,000 households. Falls Church, VA (above right) started a curbside program in June, operated by Compost Crew, a local hauler. The city was able to keep costs low through an innovative cost-sharing program.

Figure 4.

U.S. households with access to curbside food waste collection by state

148 Programs reporting



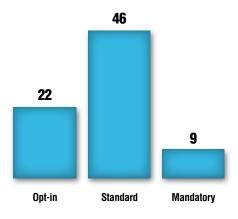




The Department of Public Works in Washington, DC, launched a drop-off program Earth Day 2017. Local partner Compost Cab is contracted to operate the Saturday drop-off sites at a farmers market (top) in each of the city's eight wards. Compost Cab also drops off food scraps at several sites that are part of the DC Department of Parks and Recreation (DPR) Community Compost Cooperative Network. DPR operates 50 compost cooperatives at community gardens throughout the city, giving local residents the opportunity to drop off their own food scraps and participate in the composting process (above).

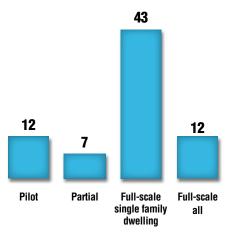
## Figure 5. **U.S. curbside program types**

77 Programs reporting



# Figure 6. Scale of U.S. curbside programs

74 Programs reporting





Chittenden County, VT has operated a drop-off program for 16 years. There are currently eight sites, open to residents year round.

participate. There are 9 mandatory programs, 5 of which are in California (Davis, Fremont, Oakland, Palo Alto and San Francisco). The other 4 mandatory programs are Seattle, WA; North Barrington, IL; North Liberty, IA; and Wenham, MA. Davis, CA is fairly unique in that service is mandatory for everyone in the city: single-family households, multifamily households, and businesses alike.

Programs are also classified by their scale of service — either a pilot, partial, full-scale single-family dwellings, or full-scale all (Table 3). Out of the 74 programs reporting this data, 11 are pilots, serving a relatively small number of households (Figure 6). Seven programs are partially rolled out, with plans to expand service. The majority of programs are full-scale single-family dwellings, meaning all single-family households receive service. (This may include small multifamily dwellings in cities that provide trash service.) Fullscale "all" means every single household has access to service, including multifamily dwellings. Only 12 cities have reached this scale of service.

Another way of classifying programs is through the service provider; either the government (such as the Department of Public Works) is directly providing the service, or curbside collection is contracted out to a private hauler. The vast majority of curbside programs (Table 3) contract out service — 61 of 81 programs reporting. Seventeen programs are government services, and six are either a combination of the two or private haulers provide service under franchise agreement or exclusive ordinance.

#### **Curbside Materials Accepted**

This year, the access study delved further into what materials each program accepts. All 148 programs take fruit and vegetable scraps, and over 90 percent of programs accept meat, fish, and dairy, but after that there is quite a lot of variation (Table 4). The majority of programs (101 of 148 and 105 of 148, respectively) also take paper bags and uncoated food-soiled paper. Most programs (71%) are cocollecting yard trimmings with food waste (Figure 7). For communities already collecting yard trimmings, "ride-along" programs, where residents are allowed to put food waste in with the yard trimmings already being set out for collection, are a fairly easy and low-cost way to begin food waste collection. From the last survey to this one, Illinois grew from one program to 24; much of that growth is directly attributable to the popularity of ride-along programs in Lake County.

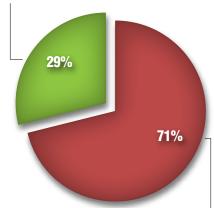
Less than half of programs are accepting any compostable plastic prod-

#### Figure 7.

## U.S. curbside programs co-collecting food waste and yard trimmings

148 Programs reporting

**Collects food waste without yard trimmings** 



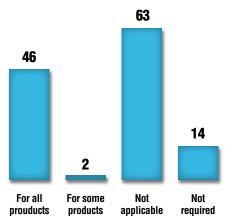
Collects food waste with vard trimmings



Cambridge, MA uses rear-loading, semi-automated trucks for its curbside collection program.

# Figure 8. BPI certification requirements, U.S. curbside programs

125 Programs reporting





Households in communities utilizing Organix Solutions' Blue Bag program have one container where trash and organic waste are co-collected. The blue colored bags of organics are separated at a materials sorting facility.



In order to encourage participation, the drop-off program in Scarsdale, NY provides residents with a starter kit of collection container, compostable plastic bags, and a written guide to the program.

ucts, such as compostable plastic bags, compostable plastic-coated paper products, and compostable plastic packaging and foodservice items. Molded fiber containers and food-soiled paper coated with conventional plastic are the least commonly accepted feedstocks — less than a quarter of all curbside programs accept molded fiber containers, and only 10 of 148 programs will take the conventional plastic-coated paper.

Of 125 programs responding to the question on whether Biodegradable Products Institute (BPI) certification is required for the compostable plastics accepted, 63 don't accept any compostable plastics (Figure 8), so the question is not applicable to them. Fourteen of the programs do not require BPI certification, and the remaining programs do. Although the BioCycle survey specifically asked about BPI certification, some communities in Washington State also require a second certification to meet the stipulations of their composting service provider, Cedar Grove. The composting company has an extensive list of tested and approved compostable products, so many of the programs in the Seattle/King County region in Washington also want compostable plastic products it accepts to be BPI certified and Cedar Grove-approved.

#### **Collection Containers, Vehicles**

Of 60 programs reporting on collection container size, the majority (33) are using containers between 10 and 19 gallons. (Note: programs may have more than one bucket size.) Nineteen of these 33 programs are actually "Blue Bag" programs, so the "container" in these programs is actually a 13-gallon compostable plastic bag. The next most common sizes are 30-39 gallons (21 programs), 60-69 gallons (19 programs), and 90-99 gallons (15 programs).

For the most part, curbside programs

are collecting trash, recycling, and food waste once a week, with few exceptions. Interestingly, Mountain View, California, tested diversion rates with every week trash collection versus every other week trash collection, and found that food waste diversion rates were higher with every other week trash collection (and weekly food waste collection). However, the city decided to stick with every week trash collection when rolling out its permanent program, and to

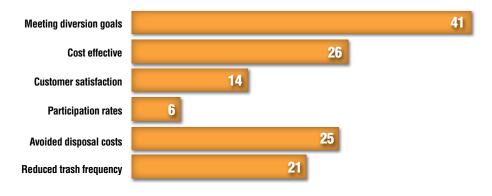


Typically, each waste stream has its own collection container for residents to put at the curb, as seen with these Portland, OR containers.



Davis, CA clearly labels its curbside bins with what materials are and are not accepted.

Figure 9. **Reasons for successful U.S. curbside programs** 



revisit the idea of every other week at a later time.

The 2017 access study collected data on the kinds of trucks used for curbside collection. Based on responses from 64 of the curbside programs, side-loading trucks are the most popular at 39, followed by rear-loading (37) and automated (34). It should be noted that some programs may use more than one style of truck, and some trucks may fall into multiple categories.

#### **Success of Curbside Programs**

Fifty-four out of 71 survey respondents reporting for their programs consider their program successful. Fifty of those programs provided reasons for success (Figure 9). Meeting diversion goals was by far the most prevalent reason (41 of 50), followed by cost effectiveness (26 of 50) and avoided disposal costs (25 of 50). Only five out of 71 consider their program unsuccessful. Survey respondents for Morgan Hill, CA, Brooklyn Center, MN, Maple Plain, MN, and New Hope, MN believe that participation levels are too low for the program to be successful, and the respondent for Elk River, MN believes



Cambridge, MA does not accept yard waste with food scraps; containers emphasize "Food Scraps Only."

that the program is too expensive for residents. All four of the Minnesota communities utilize the "Blue Bag" program where bags of trash and organics are collected in the same curbside bin (using a blue BPI-certified compostable bag for organics). The bags are then sorted at a materials recovery facility.

Twelve of 71 survey respondents reporting for their programs weren't sure whether their programs are successful. Most commonly, this was due to the newness of the program. Five of the programs are still in the pilot phase, and four had just started or were still in the process of rolling out at the time of the survey. The other three programs deemed they did not have the necessary tools to measure success.

#### Case Study: Falls Church, VA

Falls Church, Virginia began its very successful drop-off program in 2016. The City contracted with a local hauler, Veteran Compost, to collect food waste from a drop-off site at the farmers market. The program proved to be so successful — receiving 100 to 125 gallons of food scraps every week — that the City created a permanent drop-off site by City Hall. Since creating the permanent site, the drop-off program collects 325 to 390 gallons weekly.

Due to the success of the drop-off program, the City of Falls Church decided to start a curbside collection program in 2017. The program in Falls Church is especially innovative due to its "cost-sharing" arrangement. Residents pay only \$6/month to participate, or \$66 a year, and the City pays the rest. Costs decrease for the City as more residents sign up, so to incentivize participation, the City paid \$15,000 upfront, in order to give the first 600 participants six months of free service. Compost Crew, a small and local organics hauler, was given

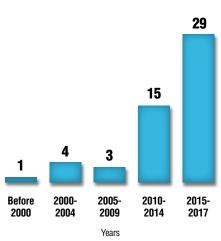


**Wood Chips** 

Residents using the drop-off program in Chittenden County, VT cover their food scraps with wood chips to provide carbon and to avoid odors and flies. This also helps when unloading food scraps.

Figure 10. **Start date of U.S. dropoff programs** 

52 Programs reporting









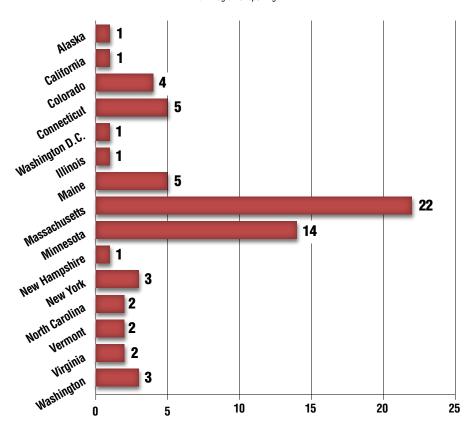


Wake County, NC operates 11 multimaterial recycling "convenience" centers. Four sites offer drop-off for food scraps (up from 2 in 2015); almost 2 tons/month of food scraps are collected. Paid staff operate the centers, open 7 days/week.



Most drop-off programs provide clear outreach materials, like DC's above, explaining how to participate and which materials are accepted.

Figure 11. **U.S. food waste dropoff programs by state** 



the contract to run the program.

The cost-sharing model has allowed the City to keep costs relatively low. Leveraging the existing resources of a small-scale hauler (such as Compost Crew's customer service portal) has also kept costs low. In addition to the \$15,000 for subscriptions, the City paid approximately \$4,000 for bins and marketing. Going forward, it estimates that the total cost for the program will be \$20,000 annually. Falls Church's program has a 15 percent participation rate of residents living in single-family homes.

Starting household food waste collection with a drop-off program was key to the City's success in creating a curbside program. Program director Chris McGough notes that even if growth in participation is modest, investing in the curbside program will still be worthwhile given the powerful momentum that created at the outset.

#### **DROP-OFF PROGRAMS**

As noted, the 2017 BioCycle Residential Food Waste Collection Access Study includes data on drop-off programs — a growing phenomenon — for the first time. While no historic data is available for comparison, according to survey participants, 29 of 52 drop-off programs re-

porting this data have started in the past three years — more than any other time period (Figure 10). Table 5 summarizes the national drop-off program data.

In total, 67 drop-off programs are included in 15 states — five of which have no curbside programs, demonstrating the value of drop-off programs in introducing food waste collection to new areas (Table 6). In some areas, such as in the Falls Church example discussed above, drop-off programs have become the basis of future curbside expansion. Drop-off programs can also be a valuable method of education and outreach for curbside programs; New York City (NYC) has drop-off sites in all 5 boroughs of the city, including at heavilytrafficked locations like subway stops, which has helped NYC raise awareness of its curbside program, which is being rolled out to households in phases.

In terms of number of drop-off programs, Massachusetts and Minnesota far outstrip all other states (Figure 11). The drop-off programs included in the 2017 study serve 318 communities; 6.7 million households have access. (Note: due to NYC's extensive drop-off program, all residents are considered to have access, meaning that NYC accounts for 3.9 million households of the 6.7 mil-



Alexandria's (VA) "resource recovery stations" are located at several farmers markets around the city.



Minneapolis, MN hosts drop-off containers at city parks.

lion.) Like with curbside, programs run by counties or solid waste districts are counted as multiple communities.

Drop-off programs have an advantage over curbside in being relatively easy to start-up and maintain. They also have the ability to address challenges that may be presented by a curbside program. For instance, in Duluth, Minnesota, one of the larger cities serviced by the Western Lake Superior Sanitary District (WLSSD), the steep, narrow streets and large student population would make a curbside collection program fairly difficult to run. Thus, WLSSD began a drop-off program in 2003 — one of the first in the country. Centralized, permanent drop-



The drop-off bins in South Portland, ME have clear signage to explain accepted items.

off locations help avoid the challenges of collecting curbside within Duluth, and allow the city to serve a constantly transient population of students.

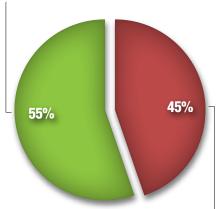
### **Drop-Off Program Types,** Locations, Staffing

The types of drop-off programs are varied, from round-the-clock access to weekly availability at farmers markets. Programs vary widely in where their drop-off sites are hosted (Table 7). Some are located at transfer stations or recycling depots, where residents can bring their food waste along with household recyclables. New York City has been operating drop-off sites at more than 50 farmers markets for

# Figure 12. U.S. dropoff programs co-collecting food waste and yard trimmings

67 Programs reporting

#### Collects food waste without yard trimmings



Collects food waste with yard trimmings



Seattle, WA has posters of materials accepted available in 18 languages.



Outreach efforts around the drop-off program in Scarborough, ME include signage at local grocery stores.

a number of years. Host locations are categorized into farmers markets, community gardens, city parks, multimaterial recycling drop-off centers, transfer stations, and municipal buildings, such as a Department of Public Works office building (Table 7). Of 67 drop-off programs reporting locations, the largest number (32) use multimaterial recycling drop-off centers. Twenty of the programs use transfer stations, six use farmers markets, seven use municipal buildings, five use city parks, four use the composting/yard trimmings facility, and two use community gardens. Seven of the 67 programs utilize "other" locations, such as schools or grocery stores.

Looking at the number of programs using each type of site is a little misleading, however, in determining what type of sites are most prevalent. For instance, only NYC and Washington, DC host their drop-off programs at community gardens, but NYC has a network of around 100 community gardens with drop-off programs, and DC has 50. On the other hand, the 32 programs using multimaterial recycling centers as drop-offs generally just have the one drop-off site.

Of 67 programs reporting on their drop-off locations, 33 staff all drop-off sites, four staff some, and nine do not staff (Table 6). Thirty-four of the 37 programs staffing all or some sites reported additional data on their staff — 31 pay all staff, two pay some, and only

one program is solely volunteer.

Like curbside programs, drop-off program service is provided by either government or contracted private entities. Drop-off programs are the reverse of curbside, though, with the vast majority being serviced directly by government, and relatively few being operated by contracted private organizations (Table 6). Of 63 programs reporting, 48 have drop-off sites run by government, 10 contract with private enterprises, and five have a mix of both.

#### **Drop-Off Materials Accepted**

Like the curbside programs, all dropoff programs accept fruit and vegetable
scraps, and the vast majority also take
meat, fish, and dairy (Table 8). Other
feedstocks that the majority accept include uncoated food-soiled paper, paper bags, and compostable plastic bags.
Yard trimmings is accepted by less
than half of drop-off programs (Figure
12). All compostable plastic items other
than compostable plastic bags are accepted by less than half of drop-off programs. Of those accepting compostable

five of the 30 programs were labeled a success. Among the 25 successful programs, the most commonly cited reasons were meeting diversion goals and avoided disposal costs, which were also two of the top three reasons seen in curbside programs (Figure 13). Every other potential reason had fewer than 10 programs, with participation rates coming in last, as only two of the 25 programs considered that a reason for success.

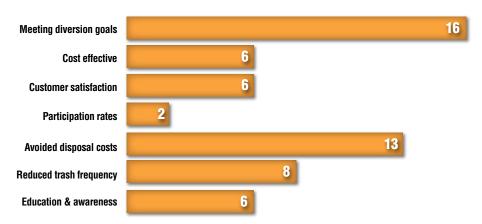
Five of 30 respondents to this success question weren't sure if their programs could be counted as a success. Of these, two believed it is too soon to tell, as the programs are very new. The other three expressed concerns over participation rates and contamination levels.

#### Case Study: Washington, DC

Two agencies in the District of Columbia support drop-off collection of food waste. The Department of Parks and Recreation (DPR) created a community composting cooperative network at community gardens throughout the city, which has been operating

Figure 13. **Reasons for successful U.S. dropoff programs** 

25 Programs reporting



plastics, the majority do require BPI certification. Again, molded fiber containers and conventional plastic-coated food-soiled paper were the least common items accepted, with only about a quarter of programs allowing inclusion of molded fiber containers, and only four allowing conventional plastic-coated paper.

#### **Success of Drop-off Programs**

Of 30 survey respondents reporting on the success of their drop-off programs, not a single one considers their program to be unsuccessful. Twenty-



Falls Church, VA also has a drop-off program run by Veteran Compost, located at City Hall.

successfully for several years, and the Department of Public Works (DPW) started a drop-off program at eight farmers markets in 2017, contracting out collection to Compost Cab, a local hauler. The DPR community garden sites actively engage residents in the composting process. In order to participate, residents take a one-hour compost training, and volunteer at the garden for a total of nine hours a year. Once training is complete, members of the cooperative can drop off their food waste whenever they want.

The DPW program is a very different model, but one that has also proved popular. Each ward in the District has a drop-off site open on Saturdays during the farmers market. Three of the 8 drop-off sites will continue service through the winter; the other 5 will reopen in the spring. While a less handson experience with composting than the DPR program, the farmers market drop-offs have introduced composting to many new people; the sites collectively receive food waste from over 400 households each week. Food waste collected at the farmers markets goes to the community composting sites for processing. Having two types of drop-off programs in the District of Columbia has helped raise the profile of composting in the District, and allows residents to be involved in composting at whatever level they want.

#### **KEY TAKEAWAYS**

The number of households with access to food waste collection continues to grow rapidly. Programs vary widely. Thus local governments looking to replicate the success of early adopters have much to consider: materials



Food scraps from the South Portland, ME program are sent to the Exeter Agri-Energy anaerobic digestion facility.

to accept, type of containers to provide, offering starter kits, whom to provide service, and whether households can opt in or not. The most successful curbside programs provide containers to facilitate participation. Most of these programs collect food waste with yard trimmings. Drop-off programs are proving a good entry point for local government to support food waste recovery. Several communities that started by providing drop-off access at seasonal farmers markets, subsequently established permanent sites and then curbside programs.

Outreach and marketing are common critical features, with a wide range of techniques used (e.g., social media, posters in multiple languages, and engaging signage at drop-off sites). Cities are also trying new initiatives to encourage participation, such as the first six months free service or educational signage at supermarket produce departments. As we were going to press, new programs were coming online. If we missed your program, let us know!

Brenda Platt directs the Composting for Community Project at the Institute for Local Self-Reliance and is the lead author of the State of Composting in the U.S.: What, Why, Where & How. Virginia Streeter is a Research Associate for ILSR's Composting for Community Project. ILSR interns Emily Saba and Colton Fagundes assisted with research for the 2017 BioCycle Residential Food Waste Collection Access Study

Table 1. Residential Food Waste Collection Access in the U.S., 2017

0				Households With	Households With	
State/City/County/ Waste District	Start Date	Curbside (CS)	Drop-Off (DO)	Access To Curbside	Access To Drop-Off	Processing Facility
Alaska	1000				500	The Discount and Describes Contac (DDC)
Gustavus	1996		Χ		500	The Disposal and Recycling Center (DRC)
<b>California</b> Alameda	2002	x		30,708		Recology Grover, Newby Island Resource Recovery Park (RRP)
Albany		Х		7,377		Recology Grover
Berkeley Central Contra Costa	2007 2006	X X		23,000 66,000		Recology Blossom Valley Organics North West Contra Costa (Richmond) Compost Fac.
Sanitary District (13) <sup>1</sup> Costa Mesa Sanitary District (3) <sup>1</sup>	2015	Х		18,124		CR&R anaerobic digester (Perris)
Cupertino	2010	X		14,051		South Valley Organics
Davis	1970	Χ		24,873		Napa Recycling composting facility in Zamora (Upper Valley)
Dublin	2005	X		13,338		Recology Blossom Valley Organics
Emeryville Fremont	2003	X X		6,205 43,057		Newby Island RRP
Hayward	2003	X		46,713		Newby Island IIIII
Livermore		X		30,182		
Marin County (12) <sup>1</sup>	2012	X		102,633		WM Earth Care Compost Facility, Redwood Landfill
Modesto	2011	X		55,000		City of Modesto Compost Facility
Morgan Hill Mountain View	2017	X X		10,000 14,500		South Valley Organics South Valley Organics
Napa County (2) <sup>2</sup>	2017	X		26,500		Napa Materials Diversion Facility
Newark	2017	X		13,436		Nupa Materiale Biversion Lacinty
Oakland	1995	X		159,601		Redwood Regional Composting Facility, Recology Grover
Oceanside	2017	Х		1,600		Agri Service, Inc. El Corazon Compost Facility
Palo Alto Piedmont	2015 2014	X X		28,000 3,757		Zero Waste Energy Development Company West Contra Costa Sanitary Landfill Organics Material Processing Facility
Pleasanton		Χ		26,020		Waterial Frocessing Facility
San Francisco	1998	X		350,000		Jepsen Prairie Organics & EBMUD
San Leandro	2005	X		21,000		Newby Island RRP
San Luis Obispo County (8) <sup>1</sup>	2016	Х		50,000		Engel & Gray Inc.
Santa Clara County (unincorporated)	2015	X		16,500		Zero Waste Energy Development Company
Santa Monica Sonoma County (10) <sup>1</sup>	2013	X X		11,000 187,782		Agromin Sonoma Compost
South Bayside Waste	2009	X		93,000		Recology Grover, Newby Island RRP
Management Authority (12) <sup>3</sup> South San Francisco	2003	X		21,136		South San Francisco Scavenger Company/
						Blue Line Transfer anaerobic digester
Stockton	2005	Х		90,000		Modesto City & Forward, Inc. (Republic)
Sunnyvale	0000	X		55,094		
Tulare County (9) <sup>1</sup> Union City	2009 2004	X X		18,295 20,000		Newby Island RRP
Visalia	2004	X	Х	41,730	41,7304	Newby Island Tittl
Colorado						
Boulder County (11) <sup>1</sup>	CS, 2000- 2016; DO,	Х	X	180,000	290,000	A1 Organics
Denver	varies CS, 2008; DO, 2016	Х	X	100,000	275,795	A1 Organics
Golden	-0, -010	Χ		7,225		A1 Organics
Lafayette	2015	X		6,100		A1 Organics
Longmont Pitkin County (4) <sup>1</sup>	2010 2010		X X		29,500 6,000	A1 Organics Pitkin County Solid Waste Center
Connecticut						
Bridgewater	2013		Х		735	New England Compost
New Fairfield	2016		X		4,919	New England Compost
					10,098	New England Compost
Newtown	2015		Χ		10,090	New England Compost
Newtown Redding Ridgefield	2016 2015 2015		X X		3,811 8,801	New England Compost New England Compost New England Compost

Table 1. Residential Food Waste Collection Access in the U.S., 2017 (cont.)

State/City/County/	Start	Curbside	Drop-Off	Households With Access To	Households With Access To	Processing
Waste District	Date	(CS)	(DO)	Curbside	Drop-Off	Facility
<b>District of Columbia</b> Washington	2017		x		255,000	Community composting sites in DC
Idaho						
Boise	2017	X		73,738		Boise City Twenty Mile South Farm Composting Facility
Arlington Heights Bannockburn <sup>5</sup> Barrington <sup>5</sup> Deer Park <sup>6</sup> DeKalb Fox Lake <sup>5</sup> Glen Ellyn Glenview Grayslake <sup>5</sup> Hawthorn Woods <sup>5</sup> Highland Park <sup>6</sup> Highwood <sup>5</sup>	2016 2016 2016 2016 2017 2017 2016 2016 2016 2016 2016 2016 2017	X X X X X X X X X		18,169 451 3,390 978 87 3,912 27,761 14,843 6,674 2,099 9,300 979		Lakeshore Groot Groot Waste Management, Inc. (WMI) Groot WMI Lakeshore Lakeshore
Island Lake <sup>5</sup> Lake Bluff <sup>5</sup> Lake County (53) <sup>1</sup> Mill Creek Special Service Area <sup>6</sup> Mundelein <sup>5</sup> North Barrington <sup>5</sup> Northfield Oak Park Port Barrington <sup>5</sup> River Forest Riverwoods Tower Lakes <sup>5</sup> Volo <sup>5</sup>	2016 2017 2016 2017 2017 2015 2016 2013 2016 2015 2016 2016 2016 2016 2017	x x x x x x x x x x x x	X	2,892 21,000 2,300 11,630 1,300 2,155 12,055 518 3,000 1,228 430 1,297	207,000	Prairieland DK Organics Midwest Organics Recycling Compost Supply Groot Midwest Organics WMI Land & Lakes Prairieland Roy Strom Collection Lakeshore Prairieland Groot
Iowa Cedar Rapids Dubuque Iowa City North Liberty	1999 2017 2014	X X X		41,150 23,901 15,500 3,050		Cedar Rapids Linn County Solid Waste Agency Dubuque Metro SWA Iowa City Landfill & Recycling Center Iowa City Landfill & Recycling Center
Maine Falmouth Freeport North Yarmouth Scarborough South Portland Yarmouth	2015 2017 2017 2017 2016	x x	x x x	258 668	4,000 3,550 1,297 <sup>4</sup> 10,524 <sup>4</sup> 3,641	We Compost It/MB Bark We Compost It/MB Bark Kay-Ben Farms Ecomaine Ecomaine, Exeter Agri-energy Yarmouth Transfer Station Recycling Center
<b>Maryland</b> Howard County <sup>7</sup> Prince George's County	2011 2017	X X		14,000 200		Alpha Ridge Landfill Municipal Composting Prince George's County Organics Composting Facility (OCF)
Takoma Park University Park	2013 2011	X X		3,300 925		Prince George's County OCF Prince George's County OCF
Massachusetts Acton Amherst Barnstable Beverly Boston Cambridge	2015 2013 CS, 2014;	x x	x x x x	360 5,600	8,720 <sup>4</sup> 10,145 <sup>4</sup> 287,571 45,779	Martins Farm, 360 Recycling Watts Family Farm North Shore Farms Rocky Hill Farm Rocky Hill Farm
Chatham Chilmark	DC, 2012		X X		3,160 420	Watts Family Farm Beetlebung Farm, Morning Glory Farm & Goodale Construction
Dennis Dover	2012	Х	X	2,008	6,8834	Watts Family Farm Hidden Acres Medway

Table 1. Residential Food Waste Collection Access in the U.S., 2017 (cont.)

				Households With	Households With	
State/City/County/ Waste District	Start Date	Curbside (CS)	Drop-Off (DO)	Access To Curbside	Access To Drop-Off	Processing Facility
Massachusetts (cont.) Edgartown			X		1,200	Beetlebung Farm, Morning Glory Farm &
Egromont	2013		V		900	Goodale Construction Egremont Transfer Station
Egremont Greenfield	2013		X X		7,731 <sup>4</sup>	Martins Farm, 360 Recycling
Hamilton	2012	Χ		2,950	•	Brick Ends Farm
lpswich Leverett	2011 2014	Х	V	5,200	717	Brick Ends Farm Martin's Farm
Manchester By The Sea	2014	Χ	Χ	2,3694	717	Town of Manchester Compost Facility
-				•		(operated by BEC)
Mashpee Medfield	2015		X X		9,786 4,090 <sup>4</sup>	Compost With Me
Natick	2016	Χ	^	10,450	4,030	Another municipality
New Salem	2011		Χ		427	Clear View Composting
Newburyport Northfield	2015 2011	Χ	V	400	1,141	North Shore Farms Martin's Farm
Northampton	2011		X X		11,4844	Martins Farm, 360 Recycling
Orange	2011		Χ		2,459	Clear View Composting
Salem	2014 2016	Χ	v	14,578	374	Black Earth Compost
Wendell Wenham	2016	Х	Χ	1,404	3/4	Clear View Composting Brick Ends Farm
West Tisbury	2012	^	X	1,101	800	Beetlebung Farm, Morning Glory Farm & Goodale Construction
Whately	2003		Χ		568	Clear View Composting
Winchester	2016		X		7,748	JRM Hauling and Recycling-Organics Collection
Michigan	0000			47.470		07
Ann Arbor Mackinac Island	2006 1992	X X		47,179 240		City of Ann Arbor/WeCare Mackinac Solid Waste
Minnesota						
Anoka County (18) <sup>1</sup>	2016		X		124,477	Specialized Environ. Technologies (SET), Shakopee Mdewakanton Sioux Community Compost Site (SMSC)
Brooklyn Center <sup>9</sup>	2016	Χ		10,996		Randy's Transfer Station, SET
Buffalo	2015	Χ		4,990	05.000	Randy's Transfer Station, SET
Carver County (11) <sup>1</sup> Columbia Heights <sup>8</sup>	2007 2015		X X		35,000 6,440	SET SMSC Compost Site
Corcoran <sup>9</sup>	2010	Χ	^	1,157	0,110	Randy's Transfer Station, SET
Delano	0000	Χ		1,843		Randy's Transfer Station, SET
Elk River Ham Lake <sup>8</sup>	2008 2017	Х	X	7,600	16,073	
Hennepin County (43) <sup>1</sup>	2017		X		361,896 <sup>4</sup>	
Hutchinson	2001	Χ		4,000		Creekside Organics Processing Facility
Lake Crystal Lino Lakes <sup>8</sup>	2017		X		1,200 6,706 <sup>4</sup>	
Linwood Township8	2016		X X		2,008	SET
Loretto <sup>9</sup>		Χ		268		Randy's Transfer Station, SET
Mankato	2016	V	Х	4.650	11,500	Full Circle Organics Randy's Transfer Station, SET
Maple Grove <sup>9</sup> Maple Plain <sup>9</sup>	2012	X X		4,659 501		Randy's Transfer Station, SET
Medicine Lake <sup>9</sup>		X		160		Randy's Transfer Station, SET
Medina <sup>9</sup>	2013	X		1,902	100.005	Randy's Transfer Station, SET
Minneapolis Minnetonka <sup>9</sup>	2015	X X	Χ	106,000 6,406	168,385	SET SET
Montrose		X		1,084		Randy's Transfer Station, SET
New Hope <sup>9</sup>	2016	Χ		8,265		Randy's Transfer Station, SET
North Mankato Orono <sup>9</sup>		v	Χ	1,211	5,858 <sup>4</sup>	Riverbend Recycling Center SET
Osseo <sup>9</sup>		X X		1,211 1,128		Randy's Transfer Station, SET
Plymouth <sup>9</sup>		X		6,474		
Ramsey County (20) <sup>1</sup>	2014		Χ	704	219,000	Dandida Transfer Ctation CCT
Shorewood <sup>9</sup> St. Bonifacius <sup>9</sup>	2017 2014	X X		784 760		Randy's Transfer Station, SET Randy's Transfer Station, SET
St. Louis Park <sup>9</sup>	CS, 2013; DO, 2017	X	X	12,300	13,300	SET
Swift County (30) <sup>1</sup> Wayzata <sup>9</sup>	2000 2013	X X		4,231 1,296		Swift County Randy's Transfer Station, SET

Table 1. Residential Food Waste Collection Access in the U.S., 2017 (cont.)

State/City/County/ Waste District	Start Date	Curbside (CS)	Drop-Off (DO)	Households With Access To Curbside	Households With Access To Drop-Off	Processing Facility
Minnesota (cont.) Western Lake Superior Sanitary District (WLSSD) (17) <sup>1</sup>	2004		х		115,173	WLSSD
New Hampshire Portsmouth	2016		x		5,244	Mr. Fox Composting
New Jersey Lambertville Lawrence Township Princeton	2014 2011	X X X		1,958 12,363 7,200		Ag Choice
<b>New York</b> New York City	CS, 2013; DO, 2007	х	х	790,000	3,113,5354	Staten Island Compost Site, Newtown Creek WWTP, multiple additional regional processors
Scarsdale Tompkins County (11) <sup>1</sup> Watervliet	2017 2013 2017	х	X X	90	5,500 40,000	Cayuga Compost Anaerobic digester
North Carolina Orange County (6) <sup>1</sup> Wake County (14) <sup>1</sup>	2016 2015		X X		57,000 452,000	Brooks Contractor McGill Compost
Ohio Luckey	2010	X		443		Hirzel Farms
Oregon Eugene Forest Grove Hood River Keizer Lake Oswego Portland	2016 2017 2016 2011	X X X X X		1,500 5,500 2,100 4,497 12,000 157,000		Rexius  Dirt Hugger  Pacific Region Compost  Nature's Need, Pacific Region Compost,  Dirt Hugger, Compost Oregon
Silverton Stayton Turner Woodburn		X X X		1,558 2,599 671 1,016		
Pennsylvania State College	2013	X		3,600		State College Borough Composting Facility
<b>Texas</b> Austin San Antonio	2013 2017	X X		52,000 351,000		Organics by Gosh New Earth
<b>Vermont</b> Chittenden County (20) <sup>1</sup> Windham County (24) <sup>1</sup>	2001 2013	X	X X	19,767	67,000 26,840	Green Mountain Compost Windham Solid Waste Management District
<b>Virginia</b> Alexandria Falls Church	2013 2017	х	X X	3,025	20,000 5,166	Prince George's County (MD) OCF Compost Crew farm & Veteran Compost
Washington Bellingham Burlington Deer Park¹º Edmonds King County (40)¹ Kitsap County (5)¹ Lake Stevens Monroe Mukitteo Olympia Redmond Seattle	2006 2004 2008 2004 2007 2008 2004 2005	x x x x x x x x x x x x	X	19,000 824 1,394 8,500 337,462 70,000 10,213 4,777 7,900 23,000 11,313 296,633	1,3944	Green Earth Technology Skagit Soils Barr-Tech, LLC Cedar Grove Cedar Grove  Cedar Grove  Silver Springs Organics Cedar Grove Composting Cedar Grove Composting

Table 1. Residential Food Waste Collection Access in the U.S., 2017 (cont.)

State/City/County/ Waste District	Start Date	Curbside (CS)	Drop-Off (DO)	Households With Access To Curbside	Households With Access To Drop-Off	Processing Facility
Washington (cont.)						
Spokane County (13) <sup>1</sup>	CS, 2010; DO, 2003	Χ	Χ	134,562	197,228	Barr-Tech, LLC
Tacoma	2012	X	х	55,000	55,000	Waste Connections, Compost Factory
Wisconsin						
Madison	2011	X		3,000		Blue Ribbon Organics
Milwaukee	2016	Χ		20,076		The Farms
Shorewood	2017	X		100		Blue Ribbon Organics
Total		148	67	5,073,069	6,701,927	

¹Number of communities with residential food scraps collection programs. ²Full county is not serviced—only City of Napa plus unincorporated area immediately surrounding the city. ³Twelve member agencies: Atherton, Belmont, Burlingame, East Palo Alto, Foster City, Hillsborough, Menlo Park, Redwood City, San Carlos, San Mateo, the County of San Mateo and the West Bay Sanitary District. ⁴Number based on census data; otherwise provided by program contact. ⁵In Lake County. ⁵Mill Creek is a community within the City of Geneva, but the curbside pilot is administered by Kane County. ⁵Howard' County's pilot area spans several unincorporated towns such as Ellicott City, however the pilot spans 3 routes, which are not specific to any community. Thus, it is counted here as serving just one community. ⁵Community in Anoka County but has its own program. ⁴Located in Hennepin County. Each of these cities and towns has its own curbside program. Hennepin County is listed separately for its countywide drop-off programs. ¹¹Deer Park is in Spokane County but has its own curbside and drop-off programs.

Table 2. Curbside collection, 2013/14 vs. 2016/17 *BioCycle* studies

Year	2013/14	2016/17
Number of programs <sup>1</sup>	79	148
Number of communities	198	326
Number of states	19	20
Number of households	2,740,000	5,073,069

<sup>&</sup>lt;sup>1</sup>In some cases, one program covers multiple communities

Table 3. Curbside collection: Program scale, type and collection provider (77 programs reporting)

City/County/ Waste District	Curbside Scale <sup>1</sup>	Curbside Type²	Curbside Collection Provider
California			
Berkelev	Full-scale all	Std.	Government (Govt)
Costa Mesa Sanitary District(3) <sup>3</sup>	Full-scale all	Std.	Contractor
Davis	Full-scale SFD	Mand.	Contractor
Dublin	Full-scale SFD	Std.	Contractor
Fremont	Full-scale SFD	Mand.	Contractor
Modesto	Partial	Std.	Contractor
Morgan Hill	Full-scale SFD	Std.	Contractor
Mountain View	Full-scale SFD	Std.	Contractor
Napa County(2) <sup>4</sup>	Full-scale all	Std.	Contractor
Oakland	Full-scale all	Mand.	Contractor
Oceanside	Pilot	Std.	Govt
Palo Alto	Full-scale all	Mand.	Govt
San Francisco	Full-scale all	Mand.	Exclusive collector
San Leandro	Full-scale SFD	Std.	Contractor
Santa Monica	Full-scale SFD	Std.	Govt
Santa Monica	ruii-scale srd	Siu.	GOVI
Colorado  Roulder County (11)3	Full apple CED	Ont in	Contractor/1 Court
Boulder County(11) <sup>3</sup> Denver	Full-scale SFD Partial	Opt-in	Contractor/1 Govt Govt
	Partial Full-scale SFD	Opt-in Opt-in	GUVI
Lafayette	ruii-scale srd	Орт-ш	
<b>Idaho</b> Boise	Partial	Std.	Govt
Illinois			
Lake Bluff <sup>5</sup>	Full-scale SFD	Std.	Contractor
Mill Creek Special Service Area <sup>6</sup>	Pilot	Std.	Contractor
Mundelein <sup>5</sup>	Full-scale SFD	Std.	Contractor
North Barrington⁵	Full-scale SFD	Mand.	Contractor
Northfield	Pilot	Opt-in	Contractor
Oak Park	Full-scale SFD	Opt-in	Contractor
lawa		•	
lowa	Full apple CED	C+4	Court
Cedar Rapids North Liberty	Full-scale SFD Full-scale SFD	Std. Opt-in	Govt
-	Tun Sould Of B	Opt III	
Maine Scarborough	Pilot	Mand.	Contractor
South Portland	Pilot	Std.	Contractor
Maryland			
Howard County <sup>7</sup>	Pilot	Opt-in	Contractor
Prince George's County	Pilot	Opt-in	Contractor
Takoma Park	Full-scale SFD	Opt-in	Govt
University Park	Pilot	Opt-in	Govt
Olliversity I ark	THOU	Opt-III	dovi
Massachusetts Beverly			Contractor
Cambridge	Pilot	Std.	Govt
Dover	i iiUl	otu.	Contractor
	Full cools all	Ont in	
Ipswich	Full-scale all	Opt-in	Govt + contractor
Manchester By The Sea			Contractor
Newburyport	F. H I H	NA I	Contractor
Wenham	Full-scale all	Mand.	Contractor
Minnesota	F. II	0	0
Brooklyn Center <sup>8</sup>	Full-scale SFD	Std.	Contractor
Buffalo	Full-scale SFD	Std.	Contractor
Corcoran <sup>8</sup>	Full-scale SFD	Std.	Contractor
Delano	Full-scale SFD	Std.	Contractor
Elk River	Full-scale SFD	Opt-in	Contractor
Hutchinson	Full-scale SFD	Std.	Contractor
Maple Grove <sup>8</sup>	Full-scale SFD	Std.	Contractor
Maple Plain <sup>8</sup>	Full-scale SFD	Std.	Contractor
Medina <sup>8</sup>	Full-scale SFD	Std.	Contractor
Minneapolis	Full-scale SFD	Std.	Govt + contractor
Minnetonka <sup>8</sup>	Full-scale SFD	Std.	Contractor
Montrose	Full-scale SFD	Std.	Contractor
	<del>-</del>	-	*** *

Table 3. Curbside collection: Program scale, type and collection provider (cont.)

City/County/ Waste District	Curbside Scale <sup>1</sup>	Curbside Type <sup>2</sup>	Curbside Collection Provider
Minnesota (cont.)			
New Hope <sup>8</sup>	Full-scale SFD	Std.	Contractor
Orono <sup>8</sup>	Full-scale SFD	Std.	Contractor
Plymouth <sup>8</sup>	Full-scale SFD	Std.	Contractor
Shorewood <sup>8</sup>	Full-scale SFD	Std.	Contractor
St. Bonifacius <sup>8</sup> St. Louis Park <sup>8</sup>	Full-scale SFD Full-scale SFD	Std. Opt-in	Contractor Contractor
Wayzata <sup>8</sup>	Full-scale SFD	Std.	Contractor
New Jersey			
Lambertville		Opt-in	
Princeton	Partial	Opt-in	Contractor
New York			_
New York City	Partial	Std.	Govt
Ohio		Std.	Contractor
Luckey		510.	Contractor
Oregon			
Eugene	Pilot	Std.	Contractor
Hood River	Full-scale SFD	Std.	Contractor
Lake Oswego	Full-scale SFD	Std.	Contractor
Portland <sup>9</sup>	Full-scale SFD	Std.	Franchise haulers(14)
Pennsylvania State College	Full-scale SFD	Std.	Govt
· ·	i uli-scale di D	Siu.	dovi
Texas	B I	0.1	2
Austin	Partial	Std.	Govt
San Antonio	Full-scale SFD	Std.	Govt
Vermont Windham County(24) <sup>3</sup>	Full cools CED	Std.	Contractor
windham County(24)	Full-scale SFD	510.	Contractor
Virginia	F. II I. OFD	0.11	0
Falls Church	Full-scale SFD	Opt-In	Contractor
Washington		0	<b>2</b>
Bellingham	F. H	Opt-in	Contractor
King County(40) <sup>3</sup>	Full-scale all	Std.	Contractor
Olympia Seattle	Full-scale all Full-scale all	Opt-in Mand.	Govt Govt
Spokane County(13) <sup>3</sup>	Full-scale SFD	Std.	Govt + Contractor
Tacoma	Full-scale all	Opt-in	Govt
Wisconsin			
Madison	Partial	Opt-in	Contractor
Milwaukee	Pilot	Opt-in	Contractor
Shorewood	Pilot	Opt-in	Contractor

¹Partial = program not fully rolled out to entire community. Full-scale all = fully rolled out community-wide including all multifamily households. Full-scale SFD = single family (all single-family households OR all households with city trash service). ²Opt-in = households must sign up to take part. Std. = standard offering, offered along with trash and recycling, but participation is optional. Mand. = mandatory, offered along with trash and recycling, but participation is required. ³Number of communities with residential food scraps collection programs. ⁴Full county is not serviced — only City of Napa plus unincorporated area immediately surrounding the city. ⁵In Lake County. ⁵Mill Creek is a community within the City of Geneva, but the curbside pilot is administered by Kane County. ¬While Howard's pilot area spans several unincorporated towns such as Ellicott City, this pilot spans 3 routes, which are not specific to any community. Thus, it is counted here as serving just one community, the county (which has no incorporated communities.) ⁵Located in Hennepin County. Each of these cities and towns has its own curbside program. Hennepin County is listed separately for its countywide drop-off program. ³Households contract directly with hauler to provide collection.

Table 4. Materials accepted, curbside programs

			Yard			Food Soiled Pa		Molded Fiber		
State/City/County/ Solid Waste District	Fruit & /egetable Scraps	Meat, Fish & Dairy	Trimmings/ Green Waste	Paper Bags	Uncoated	Coated w/ Conventional Plastics	Coated w/ Compostable Plastics	Containers (e.g. bagasse)	Foodservice Items & Packaging	Compostable Plastic Bags
California										
Alameda	Χ	Х		Х	X					
Albany	Χ	Х	X	Χ	X		Χ		X	
Berkeley	Χ	Х	X	Χ	X	X	X	X	X	X
Central Contra Costa	Χ	Х	X	Χ	Х					
Sanitary District	.,		.,	.,						.,
Costa Mesa Sanitary Dist. Cupertino	X X	Х	X	Х						Х
Davis	X	Х	Χ	Х	Х	Х	Х	X	Χ	Х
Dublin	X	X	x	X	X	X	X	X	x	^
Emeryville	X	Х	X	X	X					
Fremont	Χ	Х	X	Χ	X	Х	X	X	X	Χ
Hayward	Χ	Χ	Χ	Χ	X					
Livermore	Χ	Х	X	Χ	X					
Marin County	Χ	Х	X	Х	Х			X		
Modesto	X	X	X	X	X	Х	Х		Х	Х
Morgan Hill Mountain View	X X	X X	X X	X X	X X		V	V		v
Napa County	X	X	X	X	X	Х	X X	Х	Х	X X
Newark	X	X	x	X	X	^	^		^	^
Oakland	X	X	X	.,	~					
Oceanside	Χ		X							
Palo Alto	Χ	Х	X	Χ	X	X	Χ	X	X	X
Piedmont	Χ	Χ	Χ	Χ	X		X		X	X
Pleasanton	Χ	Χ	Х	Χ	Х					
San Francisco	X	X	X	.,	X		X	X		Х
San Leandro San Luis Obispo County	X X	X X	Χ	Х	Х		Х	Х		
Santa Clara County (uninc		X		Х	Х				Х	
Santa Monica	., x X	X	Χ	X	X				^	
Sonoma County	X	X	X	^	X			Х		
South Bayside WMA	X	Х	X	Χ	X		X	X	X	X
South San Francisco	Χ	Χ	X	Χ	X		X			
Stockton	Χ	Χ								
Sunnyvale	Χ	Х								
Tulare	Χ	Х	X	Χ	Х					
Union City Visalia	X	Х	X	Х	X					
Visalia	Χ		Х		Х					
Colorado										
Boulder County	Χ	Х	X	Х	х		Х	Х	X	X
Denver	X	Х	X	X	X				X	X
Golden	Χ	Х	X	Χ	X		Χ		X	X
Lafayette	Χ	Χ	Χ	Χ	X		X	X	X	X
14.6.										
<b>Idaho</b> Boise	.,		v	.,						
Boise	Χ		Х	Х						
Illinois										
Arlington Heights	Х		Χ							
Bannockburn	X	Х	X							
Barrington	X	Х	X							
Deer Park	Χ	Χ	X							
DeKalb	Χ	Х	X							
Fox Lake	Χ	Χ	Χ							
Glen Ellyn	Χ	Х	X							
Glenview	X	Х	X							
Grayslake	X	X	X							
Hawthorn Woods	X	X	X							
Highland Park Highwood	X	X	X							
Island Lake	X X	X X	X X	Х	Х		Х			
Lake Bluff	X	۸	X	^	^		^			
Mill Creek Special Service A			X	Х						
Mundelein	X		X	^						
North Barrington	X	Х	X	Х						
Northfield	Χ	Х	Χ	Х	Χ					

Table 4. Materials accepted, curbside programs (cont.)

State/City/County/	Fruit & Vegetable	Meat, Fish &	Yard Trimmings Green	Paper		Food Soiled Pap Coated w/ Conventional	oer ——— Coated w/ Compostable	Molded Fiber Containers (e.g.		Compostable Plastic
Solid Waste District	Scraps	Dairy	Waste	Bags	Uncoated	Plastics	Plastics	bagasse)	Packaging	Bags
Illinois (cont.)										
Oak Park	X	X	X	Х	Х		X			X
Port Barrington River Forest	X X	X X	X X		х		X		х	Х
Riverwoods	X	X	X		Α		X		Α	^
Tower Lakes	Χ	Χ	Χ							
Volo	Х		Χ							
lowa										
Cedar Rapids	Χ		Χ	Χ	X					
Dubuque Iowa City	X	X	X	X	X		v	v	<b>V</b>	
North Liberty	X X	X X	X X	X X	X X		X X	X X	X X	X X
-			^				^	^		
Maine	V	.,			V		v			v
Scarborough South Portland	X X	X X		Х	X X		Х			Х
oddii i ordana	,	^			^					
Maryland										
Howard County Prince George's County	X X	Х	X X	X X	X X		Х			X X
Takoma Park	X	X	^	X	X		Х		Χ	X
University Park	Х									
Massachusetts										
Beverly	Х	Х		Х	Х		Х	Х	Χ	X
Cambridge	Х	Х		Х	Х			X	Х	X
Dover	X	Х								
Hamilton Ipswich	X X	X X	Х	х	Х	Х	X X		X X	X X
Manchester-by-the-Sea	X	X	Χ	X	x	^	x	Х	x	x
Natick	Χ	Х		Х	X		X		X	X
Newburyport Salem	X	X		X	X		X	X	X	X
Wenham	X X	X X		X X	X X		Χ	Х	Х	Х
<b>Michigan</b> Ann Arbor	v	V	v							V
Mackinac Island	X X	X X	X X		Х					X X
			~							
Minnesota										
Brooklyn Center Buffalo	X	X		X X	X				X X	
Corcoran	X X	X X		X	X X				X	
Delano	Χ	Х		Х	X				X	
Elk River	X	X	.,	X	X		X		X	X
Hutchinson Loretto	X X	X X	Х	X X	X X		Х		X X	Х
Maple Grove	X	X		X	X				X	
Maple Plain	X	Х		Х	Х				Χ	
Medicine Lake Medina	X	X		X	X				X	
Minneapolis	X X	X X		X X	X X		Х	Х	X X	Х
Minnetonka	X	X		X	X		^	^	X	-•
Montrose	Х	Х		Χ	Х				Χ	
New Hope Orono	X X	X X		X X	X X				X X	
Osseo	X	X		X	X				X	
Plymouth	X	X		X	X				X	
Shorewood	X	Х	Χ	Х					X	X
St. Bonifacius St. Louis Park	X X	X X	v	X X	X X		Х	v	X X	Х
Swift County	X	X	X X	٨	X		X	Χ	X	X
Wayzata	X	X	^		Х		Х		Χ	Х
Now Jorgey										
<b>New Jersey</b> Lambertville	Х	Х	х	Х	x		Х	X	х	Х

Table 4. Materials accepted, curbside programs (cont.)

State/City/County/ Solid Waste District	Fruit & Vegetable Scraps	Meat, Fish & Dairy	Yard Trimmings Green Waste	Paper Bags	——— Uncoated	Food Soiled Pap Coated w/ Conventional Plastics	oer ——— Coated w/ Compostable Plastics	Molded Fiber Containers (e.g. bagasse)		Compostable Plastic Bags
<b>New Jersey (cont.)</b> Lawrence Township Princeton	X X	X X	X X	X X	X X					x x
<b>New York</b> New York City Watervliet	X X	X X	X		Х	х	х	х		Х
<b>Ohio</b> Luckey	х	Х	х	x	Х		Х	х	x	X
<b>Oregon</b> Eugene Forest Grove Hood River	X X X	X X	X X X		x					х
Keizer Lake Oswego Portland Silverton	X X X	X X X	X X X	X X	X X			Х		
Stayton Turner Woodburn	X X X	X X X	X X X							
<b>Pennsylvania</b> State College	Х	Х	х	Х	Х		x	Х	Х	x
<b>Texas</b> Austin San Antonio	X X	X X	X X	X X	X X		х	х	х	Х
<b>Vermont</b> Windham County	х	х		х	х	х	х	Х	х	X
<b>Virginia</b> Falls Church	х	х		Х	х		Х		х	X
<b>Washington</b> Bellingham Burlington Deer Park	X X X	X X	X X	X X	X X		X X	x	X X	X X
Edmonds King County Kitsap County	X X X	X X X	X X X	X X X	X X X		х	x	х	X X
Lake Stevens Monroe Mukilteo Olympia	X X X	X X X	X X X	X X X	X X X			x	X	x x x x
Redmond Seattle Spokane County Tacoma	x x x x	X X X	X X X	X X X	X X X		X X		x x	X
<b>Wisconsin</b> Madison Milwaukee	X X	X X	X	X X	X X		x x	Х	X	x x
Shorewood  Totals	X 148	X 135	105	X 101	X 105	10	51	33	63	60

#### **Table 5. Drop-off programs summary**

#### Drop-off Programs, 2016/17

Number of programs <sup>1</sup>	67
Number of communities	318
Number of states	15
Number of households	6,701,927

 $<sup>^{1}</sup>$ In some cases, one program covers multiple communities

**Table 6. Drop-off program characteristics** 

tate/City/ ounty	Number of Sites	Number of Participants Per Week	Year Round	Pilot	Service Provider	Staffed	Paid Staff
laska							
Gustavus	1	125-150	Yes		Government (Govt)	Yes	Yes
alifornia	0		NI.		0		
/isalia	2		No		Contractor		
<b>olorado</b> Boulder County	6		Yes		Govt	Yes	Yes
Denver	1	450	103		Govt	Yes	Yes
ongmont	i	40	Yes		Govt	Yes	Yes
Pitkin County	1	25	Yes		Govt	Yes	Yes
nnecticut							
Bridgewater	1	70	Yes		Govt	Yes	Yes
lew Fairfield	1	50	Yes		Govt	Yes	Yes
lewtown	1	510	Yes		Govt	Yes	Yes
Redding	1	50	Yes		Govt	Yes	Yes
Ridgefield	1	140	Yes		Govt	Yes	Yes
istrict of Columbia Washington	58	400	Mix		Govt + contractor	Mix	Yes
linois Lake County	2				Govt + contractor	No	
•	2				GOVE + CONTRACTOR	NO	
aine	4		V		04		
almouth	1 1		Yes Yes		Govt Govt		
reeport Vorth Yarmouth	1		Yes	Yes	Contractor		
South Portland	1		165	Yes	Contractor	Yes	Yes
armouth	i			103	Govt	Yes	Yes
assachusetts							
Acton	1		Yes		Govt		
Amherst	1						
Barnstable	1				Govt		
Boston	6			Yes	Govt	No	
Cambridge	4				Govt	No	
Chatham Chilmark	1		Yes		Govt		
Jillillark Dennis	1		res		GOVI		
Edgartown	1				Govt		
gremont	i		Yes		Govt	Yes	Mix
Greenfield	i				Govt		
_everett	1		Yes		Govt	Yes	Yes
/lashpee	1		Yes		Contractor	Yes	Yes
/ledfield	1		Yes		Govt		
lew Salem	1		Yes		Govt	Yes	Yes
lorthampton	1		Yes		Govt		
lorthfield	1		Yes		Govt	Yes	Yes
Orange	1		Yes		Govt	Yes	Yes
Vendell	1		Yes		Govt	Yes	Yes
West Tisbury Whately	1		Yes Yes		Govt Govt	Yes	Yes
Vinchester	1	200-300	162		Govt	Yes	Yes
innesota							
noka County	2		Yes		Contractor	Yes	Yes
Carver County	1	40	Yes		Contractor	Yes	Yes
Columbia Heights	1		Yes		Govt	Yes	No
łam Lake	1		Yes	Yes	Govt		
lennepin County	1				Govt	_	
ake Crystal	1			Yes	Govt + contractor	No	
ino Lakes	3	0.5			Govt	<b>A.</b> '	
inwood Township	1	65	V	V	Govt	No	
/lankato	3 7		Yes No	Yes Yes	Govt	No	
			I/IO	247	Govt	No	
⁄linneapolis Iorth Mankato	1		140	103	Govt	140	

Table 6. Drop-off program characteristics (cont.)

State/City/ County	Number of Sites	Number of Participants Per Week	Year Round	Pilot	Service Provider	Staffed	Paid Staff
Minnesota (cont.) St. Louis Park Western Lake Superior Sanitary District	3 7	55	No Yes	Yes	Contractor Govt	No Mix <sup>1</sup>	
New Hampshire Portsmouth	1		Yes	Yes	Contractor	Yes	Yes
<b>New York</b> New York City Scarsdale Tompkins County	100 1 11	800 200-300	Yes Yes Yes		Govt + contractor Govt Contractor	Mix Yes Yes	Yes Yes
<b>North Carolina</b> Orange County Wake County	2 4		Yes Yes	Yes	Govt Govt	Yes Yes	Mix Yes
<b>Vermont</b> Chittenden County Windham County	8 11		Yes Yes		Govt Govt + contractor	Yes Mix	Yes
<b>Virginia</b> Alexandria Falls Church	4 1	580	Yes Yes		Govt Contractor	Yes No	Yes
<b>Washington</b> Deer Park Spokane County Tacoma	1 4 1		Yes		Govt Govt	Yes Yes	Yes Yes

<sup>&</sup>lt;sup>1</sup>Mix = Both staffed and unstaffed

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City/County State	Multimaterial Recycling Drop-off Center/Site	Transfer Station	Municipal Building¹	Farmers Market	City Park	Composting Site	Community Garden	Othe
<b>Alaska</b> Gustavus	x			х				
<b>California</b> Visalia	X							
<b>Colorado</b> Boulder County								
Denver	X X							
Longmont	x							
Pitkin County						Х		
Connecticut Bridgewater								Х
New Fairfield	X							^
Newtown		X						
Redding	X							
Ridgefield	Х							
District of Columbia Washington				х			X	
<b>Illinois</b> Lake County	X							
Maine								
Falmouth		X						
Freeport		X						
North Yarmouth South Portland	V		X					
Yarmouth	X X							
Massachusetts								
Acton		Χ						
Amherst		X						
Barnstable Boston		Χ						v
Cambridge	X				Χ			X X
Chatham	~	X						
Chilmark	X							
Dennis	X							
Edgartown	X	.,						
Egremont Greenfield		X						
Leverett		X X						
Mashpee	Χ							
Medfield		X						
New Salem		X						
Northampton Northfield		X X						
Orange		X						
Wendell		X						
West Tisbury	X							
Whately Winchester		X X						
Minnesota								
Anoka County						Х		
Carver County	Χ							
Columbia Heights	X							
Ham Lake			X					
Hennepin County Lake Crystal	X		v					
Lino Lakes			X X		Х			
Linwood Township	X		^		^			
Mankato	X		Х					
Minneapolis	Χ				X			
Millioapolis								
North Mankato Ramsey County	X				х	Х		

Table 7. Drop-off locations (cont.)

City/County State	Multimaterial Recycling Drop-off Center/Site	Transfer Station	Municipal Building¹	Farmers Market	City Park	Composting Site	Community Garden	Other
Minnesota (cont.) St. Louis Park Western Lake Superior Sanitary District	r x				х			x
New Hampshire Portsmouth	x							Λ.
New York New York City Scarsdale Tompkins County	х			x	х			x x
North Carolina Orange County Wake County	X X				х	х		
<b>Vermont</b> Chittenden County Windham County	X X							
<b>Virginia</b> Alexandria Falls Church					x x			
<b>Washington</b> Deer Park Spokane County Tacoma	Х		X X	x				X
TOTALS	32		20	7	6 5	4	2	7

<sup>&</sup>lt;sup>1</sup>Examples include Department of Public Works building, municipal office building

Table 8. Materials accepted, drop-off program

State/City/County/ Solid Waste District	Fruit & Vegetable Scraps	Meat, Fish & Dairy	Yard Trimmings/ Green Waste	Paper Bags	———Uncoated	Food Soiled Pap Coated w/ Conventional Plastics	oer ——— Coated w/ Compostable Plastics	Molded Fiber Containers (e.g. bagasse)		Compostable Plastic Bags
Alaska Gustavus	х	х	х	х	х		х	Х	х	х
<b>California</b> Visalia	х		x	X	х					
Colorado		.,		.,	.,			.,	.,	
Boulder County Denver	X X	X X	X X	X X	X X		Х	Х	X X	X X
Longmont	X	X	X	X	X		Х		x	X
Pitkin County	X	X	x	X	x	Х	x	Х	X	X
Connecticut										
Bridgewater	Χ	Χ	X		X					
New Fairfield	X	Х	X		Х					
Newtown	X	Х	X		X					
Redding Ridgefield	X	X	X		X					
-	Х	Х	Х		Х					
District of Columbia Washington	Х									
Illinois Lake County	х	х								
Maine										
Falmouth	X	Χ			X					
Freeport	X	Х			Х					
North Yarmouth	X	Х			X					
South Portland Yarmouth	X X	Х	Х		X					
Massachusetts										
Acton	Х	Х	Х	Х	Х					
Amherst	X	X	X	X	X		Х		Х	Х
Barnstable	Х	Х			X					
Boston	X			Χ						X
Cambridge	X	Х		Χ	Х			X	X	Χ
Chatham	X	.,			.,					
Chilmark Dennis	X X	X X	Х		X X					
Edgartown	X	X	^		X					
Egremont	X	Α	X		^					Х
Greenfield	Х	Х								
Leverett	X	Χ	X	Χ	X					
Mashpee	X	Х	X	Х	X		X		X	Х
Medfield New Salem	X X	Х								
Northampton	X	Х			Х					
Northfield	X	X	X	Х	^					
Orange	X	Х	X	Х	X					
Wendell	X	Х	X	Χ	X					
West Tisbury	Х	Х			X					
Whately Winchester	X X	X X	X	Х	X					Х
										•
Minnesota Anoka County	х	v		Х	v			Χ	Х	v
Carver County	X	X X	Х	X	X X			X	X	X X
Columbia Heights	X	X	^	X	X		Х	x	x	X
Ham Lake	X	X		X	X		X		X	X
Hennepin County	Х	Х		Х	X		X		Х	Х
Lake Crystal	Χ	Х	X	Χ	Χ	X	X	X	X	X
Lino Lakes	X	Х							X	Х
Linwood Township	X	X		X	X		X	X	Χ	X
Mankato Minneapolis	X X	X X		X X	X X		X X	X X	X	X X
νιπιτισαμυπο	٨	^		۸	۸		^	^	^	^

Table 8. Materials accepted, drop-off program (cont.)

State/City/County/ Solid Waste District	Fruit & Vegetable Scraps	Meat, Fish & Dairy	Yard Trimmings Green Waste	Paper Bags	———Uncoated	Food Soiled Pap Coated w/ Conventional Plastics	oer ——— Coated w/ Compostable Plastics	Molded Fiber Containers (e.g. bagasse)	Compostable Plastic Foodservice Items & Packaging	Compostable Plastic Bags
Minnesota (cont.)										
North Mankato	X	Χ		Χ	Х		X		X	Χ
Ramsey County	X	Χ		Χ	X		X		X	X
St. Louis Park Western Lake Superior	X	Х	Χ	X	Х		Χ	Х	Х	Χ
Sanitary District	X	Х		Χ	Х		Χ	X	Х	Χ
New Hampshire										
Portsmouth	X	Χ		X	Χ					Χ
New York										
New York City	Χ	Χ	X		X		X	Χ		X
Scarsdale	Χ	Χ		Χ	X		X	Χ	Χ	X
Tompkins County	X	Х			Χ					Х
North Carolina										
Orange County	Χ	Χ		Χ	Χ	Χ	Χ	Χ		Χ
Wake County	X	Х		X	Χ	X	X			X
Vermont										
Chittenden County	X	Χ	X	Χ	X		Χ	X	Χ	X
Windham County	X	Χ		X	Χ		X	Χ	Χ	Χ
Virginia										
Alexandria	X				X					X
Falls Church	X	X		Χ	X		X		Χ	X
Washington										
Deer Park	X	Χ	X	Χ	X					X
Spokane County	X	Χ	X	Χ	X				X	
Tacoma	X	Χ	Χ							
Totals	67	59	30	38	54	4	24	18	26	36