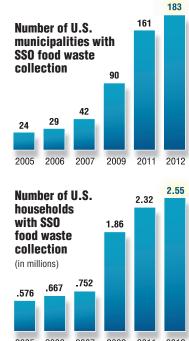
BIOCYCLE NATIONWIDE SURVEY





Residential Food Waste Collection in the U.S.

RESIDENTIAL, commercial and institutional food waste diversion programs continue to pop up around the U.S., but still only make a small dent in the amount of food waste going to landfills and incinerators (still the #1 material disposed in the U.S.). This BioCycle survey looks specifically at municipalities that are aiming to divert the residential organics portion of the MSW stream by offering households curbside collection of food waste. There are also several communities with successful municipal drop-off programs for food scraps, and a dozen or more private haulers who provide household food scraps service (several of which use alternative methods of collection like bicycles).

Looking at past surveys, the growth trajectory for residential food waste collection has been strong, both in terms of the number of municipalities offering the service, and the number of households with access. However, the data for 2012 shows this trend tapering off, at least for the time being (Figure 1). This is due to several factors. First, the survey is now annual, whereas the

Growth of residential food waste collection in the U.S. is steady, with existing programs seeking to increase household participation.

Rhodes Yepsen

data from previous queries was spaced out every few years, which means the timeline has changed. Projects can take 6 months to a year to come to light, so there are likely several that have been missed. Also, most pilot projects lead to full programs, but not all. A few that ended have balanced out the new programs that recently came online.

This survey was conducted in the last quarter of 2012, supplemented with data received in early 2013.

BioCycle has identified 183 communities offering curbside collection of residential food waste, spread out over 18 states (a warm welcome to New York and Vermont). These programs reach over 2.55 million households, which represents a jump of about 200,000 — a sign that communities continue to expand the reach of their services, with many looking at multiunit buildings. The total amount of organics diverted through these programs in

BIOCYCLE 1

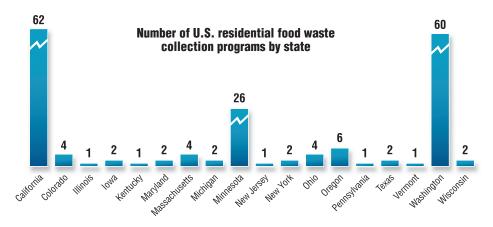
2012 (yard trimmings and food waste), based on about 79 percent providing this data, is 726,250 tons.

Beyond adding more households, communities with source separated organics (SSO) collection are increasingly looking at ways to boost participation (putting any amount of food waste in the green cart), and improve capture rates (higher percentage of available food scraps and soiled paper entering the green cart, instead of the trash). For most of the population, separating food scraps in the kitchen requires a major behavior change, and achieving high capture rates requires careful planning.

The majority of residential programs are located on the West Coast, where food waste has been added to existing yard trimmings programs. This has several advantages, such as building on the initial investment in green carts, trucks, etc. Also, a composting facility contract is already in place (although likely would need a new permit). However, there are some initial disadvantages to simply telling residents they can now place food scraps in with the yard trimmings. Just as with conventional recycling, people need

on TV, radio and sides of collection vehicles, help remind people that it's cool to recycle and compost, and emphasize how much of their kitchen waste is actually not garbage. Communities are also encouraging use of tools like kitchen pails and compostable bags, making it simple, quick and tidy to start collecting food scraps. At last count, 78 percent of the U.S. programs allow or promote the use of BPI-certified compostable bags.

A somewhat new trend, often linked to PAYT, is less-than-weekly (LTW) trash collection, where residents are pushed to divert the majority of their household waste/resources into the recycling and organics carts. This approach shows a clever rethinking of how all MSW streams are handled, whereby weekly trash collection is no longer necessary when the majority of materials, including those with odor generation potential, are being diverted. When paired with LTW garbage, organics collection is not an added service that costs ratepayers more money, but rather a rethinking of how all existing materials can best be managed. And with collection being one of the biggest expenses, reducing the frequency ben-



things explained clearly, including detailed instructions on how and why to participate, including appropriate tools and incentives. Also, it can be difficult to monitor food waste capture rates when it's a small percentage mixed in with mostly yard trimmings.

INCREASING PARTICIPATION

To boost participation and capture rates, communities are looking at several tactics, some more aggressively than others. Providing a financial incentive for recycling and composting, primarily through Pay-As-You-Throw (PAYT) pricing structures, has been successful. With PAYT, residents can save money on monthly bills by reducing the size of their trash can. Creative communication campaigns, with ads

efits the economics of the program (and the environment).

Table 1 summarizes the states and communities with ongoing residential food waste collection service. Information about some of these programs is provided below. Table 2 lists the communities or counties with pilot projects. *BioCycle*'s full 2013 report, "Residential Food Waste Collection In The U.S.," with more complete details, is available online at www.biocycle.net to readers with a paid subscription to *BioCycle* (see box for details).

CALIFORNIA

Arvin: The city of Arvin has been collecting residential food scraps and food-soiled paper (everything except meat) mixed in with yard trimmings

since 2006. Trash and organics are collected weekly from over 3,300 households, with recycling collected every other week. The organics are currently composted at the City of Bakersfield's municipal facility. Bakersfield has an active program for commercial, institutional and industrial food waste, but doesn't currently allow residents to place food scraps in the green bin, contrary to what was published last year.

Alameda County: Alameda County offers all of its households the ability to place food scraps in the green bin, reaching over 420,000 households (the 17 jurisdictions are listed individually in Table 1). StopWaste.org, responsible for Alameda County's waste reduction, has had many innovative ad campaigns to increase participation in the food scraps program, and launched its "Ready Set Recycling" contest countywide in 2011. The contest includes an online sorting game/test, and gets residents to pledge a commitment to recycle and compost, in an effort to get Alameda to its aggressive goal of less than 10 percent of recyclables/compostables in the trash by 2020.

Central Contra Costa: The Central Contra Costa Solid Waste Authority (CCCSWA), located in the eastern San Francisco Bay Area, services approximately 62,500 households with food scraps collection (the 4 jurisdictions with service are listed individually in Table 1). All food scraps are permitted with yard trimmings, including grease and sauces. Based on walking audits, about 35 to 40 percent of residents place food scraps in the cart on a weekly basis. Residents are given a two-gallon kitchen pail when signing up for service, and are permitted to use BPIcertified compostable bags. All material streams are collected weekly. The residential organics program is also available to multiunit buildings.

Los Angeles: The city of Los Angeles has had a pilot project for residential food scraps since 2008, offered to about 8.700 households.

Palo Alto: The city of Palo Alto has announced it will implement an SSO pilot project starting in April. About 600 single-family and 80 multiunit households out of the city's 17,700 households will be included in the pilot. The pilot will be a total divergence from the existing services, eliminating the black trash cart and switching to a two-cart system: Blue Cart (loose recyclables plus bagged trash, including bathroom/pet waste and nonrecyclable materials) and Green Cart (loose yard trimmings plus bagged food scraps and food soiled paper).

San Francisco: The city of San Francisco has been a leader in residential food waste collection, and now

99 percent of its households have green cart service. "In three months we will have 100 percent compliance with our Mandatory Recycling and Composting Ordinance," reports Alexa Kielty, Residential Zero Waste & Special Projects Assistant for SF Environment. Recology now collects over 600 tons/day from households and businesses (Monday through Friday), composted at its Jepsen Prairie Organics facility in Vacaville.

San Mateo County: There are approximately 93,000 households with food scraps collection in San Mateo County's 12 member agencies. The first

to start was San Carlos in 2009; the remainder came online in 2011 when new contracts were signed. About 89,000 tons of residential organics and 20,000 tons of commercial are collected annually, sent to Recology Grover and Newby Island for composting.

COLORADO

Boulder/Louisville: About 33,000 households have food scraps collection in the cities of Boulder and Louisville, as well as unincorporated Boulder County. All single-family households in the city of Boulder have organics and recycling collection (required as part of

trash service) as well as about 63 multiunit properties. A PAYT fee structure provides an incentive for participation, and compostable bags are promoted, but kitchen pails are not distributed. Organics are composted primarily at Western Disposal, with some going to A1 Organics.

Denver: The city of Denver has been collecting residential food waste since 2008, when it launched a pilot program for 3,000 households, funded by a grant. In 2010, the program transitioned to a subscription service (\$9.75/month), and about 2,300 households remained. All food wastes are permitted, collected weekly and composted by A1 Organics. Contamination remains quite low (about 1 percent).

Table 1. Residential food waste collection and composting programs in the U.S.

State/ Municipality	Households Served	Processing Facility
California		
Alameda	22,951	Newby Island (Republic)
Alameda County (unincorporated)	41,724	Recology Grover & Newby Island (RG & NI)
Albany	5,260	Recology Grover
Arvin	3,363	City of Bakersfield
Atherton	2,400	RG & NI
Belmont	6,700	RG & NI
Berkeley	32,982	Recology Grover
Burlingame	6,600	RG & NI
Castro Valley Sanitary District ¹	_	Recology Grover
Dublin	11,454	Newby Island
East Palo Alto	4,200	RG & NI
Emeryville	1,573	Recology Grover
Foster City	6,800	RG & NI
Fremont	55,919	Newby Island
Gilroy ²	10,700	South Valley Organics
Hayward	32,620	Recology Grover
Hillsborough	3,600	RG & NI
Lafayette	7,748	Newby Island
Livermore	25,660	Recology Grover
Menlo Park	7,800	RG & NI
Moraga	4,796	Newby Island
Morgan Hill	9,700	South Valley Organics
Newark	11,433	Recology Grover
Oakland	113,536	Recology Grover
Orinda	6,495	Newby Island
Oro Loma Sanitary District ³	-	Recology Grover
Piedmont	3,853	Newby Island
Pleasanton	21,014	Newby Island
Redwood City	17,300	RG & NI
San Carlos San Fernando	8,600	RG & NI
San Francisco	250 121	- Iongan Brairia Organica & ERMUD
San Leandro	359,121 23,315	Jepsen Prairie Organics & EBMUD Newby Island
San Mateo	20,100	RG & NI
San Mateo County (unincorporated)	7,700	RG & NI
San Ramon	19,500	Recology Grover
Santa Cruz County (4 towns) ²	60,000	Buena Vista Landfill & Monterey Regional Landfill
Sonoma County (9 towns) ^{2,4}	172,403	Sonoma Compost
Stockton ²	76,000	Modesto City & Forward, Inc. (Republic)
Three Rivers	7 0,000	Harvest Power & West Coast Wood Industries (WCWI)
Tulare	_	Harvest Power & WCWI
Union City	17,293	Newby Island
Visalia	10,000	Harvest Power & WCWI
Walnut Creek	15,311	Recology Grover
West Bay Sanitary District	2,200	RG & NI
Colorado	,	
Boulder ²	19,014	Western Disposal & A1 Organics
Boulder County (unincorporated) ²	-	Western Disposal & A1 Organics Western Disposal & A1 Organics
Louisville ²	_	Western Disposal Iowa
		(Continued on page 26)

(Continued on page 26)

IOWA

Cedar Rapids: Residents have been allowed to place vegetative food scraps in their yard trimmings cart in Cedar Rapids since 2001. They are given a 35-gallon trash cart as part of the monthly fee, and must pay extra for additional garbage. A permit restriction only allows 2 tons/week of food waste at the composting facility

Dubuque: The food scraps pilot program is status quo in Dubuque, where about 250 households subscribe for \$0.60/month. Participants are given a kitchen pail and a small curbside cart, with weekly collection. Like Cedar Rapids, a permit restriction only allows 2 tons/week of food waste at the composting facility; food waste from businesses comprises the remaining food waste received.

ILLINOIS, KENTUCKY, MARYLAND

Oak Park, IL: Located just west of Chicago, the town of Oak Park piloted residential food waste collection in 2012, and plans to roll out the service to all 12,500 households in 2013. Collection is weekly, mixed with yard trimmings, and is composted at Land and Lakes. The cost to households is \$12/month, which is less than the cost of one "yard waste" sticker and bag per week, which residents must purchase for the standard yard trimmings program.

Lexington, KY: The city of Lexington continues to pilot food waste collection for about 400 households, which began in 2011. The city is currently at 40 percent waste diversion and has a goal of zero waste by 2020; food waste collection will be key to the success. "We would like to expand the pilot project to 2,000 homes, as a zero waste neighborhood," says Esther Moberly, Recycling Program Specialist for the city of Lexington.

Howard County, MD: Located just to the west of Baltimore, Howard

County began offering residential food waste collection service in 2011. The program continues to be available to 5,000 households, with 1,000 currently subscribed. The county is constructing its own composting facility to receive the food waste.

MASSACHUSETTS

Cambridge: The Massachusetts Department of Environmental Protection has established significant goals to reduce trash, and the City of Cambridge has adopted them — reduce tons disposed by 30 percent by 2020 from 2008 levels, and by 80 percent by 2050. The city of Cambridge has a long-standing residential drop-off program, allowing households without backyard compost piles to bring food scraps to the Recycling Center and the Farmers Market. At the end of 2012, Cambridge City Council approved a pilot project for curbside collection of food scraps, to begin no later than April 2014.

Hamilton: The town of Hamilton piloted residential food waste collection in 2008, and then decided to roll out the program to all 3,600 households, including in the sister city of Wenham in 2011. In a survey conducted in September 2012, approximately 44 percent of residents were participating in the organics program.

Ipswich: The town of Ipswich's pilot started in 2011 and is ongoing, collecting 15 lbs/week/household, composted at Brick Ends Farm.

MICHIGAN

Ann Arbor: The city of Ann Arbor began collecting residential organics in 2006, and now has a widespread program, with about 11,000 "subscribers" out of 43,000 households. Residents must purchase the cart, and then the service is covered by taxes for garbage service. Only vegetative food wastes are currently permitted, mixed with yard trimmings, collected seasonally (April-December).

Mackinac Island: No major changes for the food scraps program on Mackinac Island were reported. The Island has been collecting from residences since 1992. The historic island doesn't allow cars, so collection is done using horse-drawn trailers. Organics are collected in compostable bags (residents are charged per bag), and composted at the municipal facility on the island.

MINNESOTA

Hennepin County: No major changes to the residential food scraps programs in Hennepin County are reported. Several towns continue to offer service to residents. The first to offer service was Wayzata in 2005; Shorewood launched a pilot project in 2012.

Table 1. Residential food waste collection and composting programs in the U.S. (continued)

State/ Municipality	Households Served	Processing Facility
lowa		
Cedar Rapids	39,400	Cedar Rapids SWA
Massachusetts		·
Hamilton & Wenham	3,600	Brick Ends Farm
Michigan		
Ann Arbor	43,000	City of Ann Arbor
Mackinac Island	500	Mackinac Solid Waste
Minnesota		
Carver County ²	_	Specialized Environmental Technologies (SET)
Delano	_	SET
Edina (Morningside) ²	_	SET
Elk River ²	_	SET
Hanover	_	SET
Hutchinson ²	5,958	City of Hutchinson/Creekside
Loretto ²	238	SET
Maple Plain ² Medine Lake ²	545	SET SET
Minnetonka ²	22.200	SET
Orono ²	3,002	SET
Osseo	5,002	SET
St. Bonifacius ²	_	SET
Swift County (8 towns total) ^{2,5}	4,310	Swift County
Watertown	_	SET
Wayzata ²	1,941	SET
Ohio		
Fairborn ²	60,000	Paygro
Huron	3,378	Barnes Nursery, Inc.
Luckey	435	Hirzel Farm
Miami Township ²	10,000	Paygro
Oregon		
Bend ²	_	Deschutes Recycling
Corvallis ²	12,643	Pacific Region Compost (PRC)
Kaizer	11,458	PRC
Portland	153,000	Nature's Need, PRC, Dirthugger, Compost Oregon
Redmond ²	-	Deschutes Recycling
Salem	36,627	PRC (Continued on none 27)
		(Continued on page 27)

Hutchinson: The city of Hutchinson's program continues to serve about 6,000 households. Hutchinson is one of the few programs to provide compostable bags to residents at no cost (the typical European model). Biweekly garbage collection is offered as part of an aggressive PAYT fee structure.

NEW JERSEY, NEW YORK

Princeton, NJ: Princeton piloted a food waste collection subscription service starting in 2010, a program that grew to about 450 households last year. Organics are collected weekly and trucked to the Wilmington Organics Recycling Center in Delaware.

New York, NY: The active Greenmarket composting program in New York City reached a milestone, announcing in January that it had collected over one million pounds of food scraps from businesses and residences. While that popular program will remain, the City's Department of Sanitation is moving forward on an initiative to collect organics curbside from single-

family homes, starting with a pilot on Staten Island scheduled to begin this May.

Watervliet, NY: The Town of Watervliet launched a small pilot program in January 2012 to test collection of residential food waste from 50 households. Residents were given a kitchen pail, compostable bags, and a small 13-gallon cart to collect just food waste. About 5 lbs/week/household were collected. Watervliet Mayor Mike Manning hopes to eventually roll the program out to all 2,500 households currently on garbage service (a population of 10,200). About 100 households will be added in 2013.

OHIO

Huron: The residential organics program in Huron is available to all households (about 3,400) on a subscription basis. All food scraps are accepted, collected weekly and composted at Barnes Huron Composting Facility. Residents must provide their own cart and kitchen pail.

Luckey: The "compostable recycling" program in Luckey was launched in 2009, when a failing conventional recycling program in the small town was replaced by composting. All paper, even traditionally recyclable items, are accepted in the weekly green cart service, along with all food scraps. They are collected by N.A.T. Transportation and composted at Hirzel Farm.

OREGON, PENNSYLVANIA

Marion County, OR: The cities of Salem and Kaizer have been collecting residential food scraps since 2010, with service offered to about 48,000 single-family households. The communities have weekly collection of trash and organics, and biweekly recycling collection. A PAYT pricing structure allows residents to reduce their trash cart to 20-gallons. All organics are permitted in the green cart, but compostable bags are not, as specified by Pacific Region Compost.

Portland, OR: The city of Portland piloted residential food waste collection in 2010 and went citywide in 2011. All 345,000 single-family households (up to four units) now have green carts, along with an aggressive PAYT system where every-other-week trash collection is the standard. Organics are composted at several composting facilities in the area. About 9 out of 10 composting roll carts at the curb contain food scraps, according to a field study conducted last fall.

State College, PA: Pennsylvania's lone residential food waste pilot in State College, started in 2010 with around 560 households, is expanding to the entire Borough in April (3,400). As part of the rollout, residents are receiving new trash carts because the Borough is automating collection of both refuse and organics. All food scraps, including meat, are now permitted in the program, as are compostable bags.

TEXAS, VERMONT

Austin, TX: In January 2013, an 8,000 household pilot was launched for residential food waste. Participants were given a kitchen pail and a 96-gallon green cart for yard trimmings and food waste. Organics are collected weekly and composted at Organics By Gosh. The city plans to have the program adopted citywide by 2016, building off of experiences from the pilot stage.

San Antonio, TX: The City of San Antonio continues to maintain a 30,000-household pilot project for residential food waste collection that started in 2011. Food scraps are commingled with yard trimmings. They collect about 8 lbs/week/household, the majority of which is yard trimmings, com-

Table 1. Residential food waste collection and composting programs in the U.S. (continued)

State/ Municipality	Households Served	Processing Facility
Pennsylvania		
State College	3,400	State College Borough
Vermont		
Brattleboro	2,700	Windham SWMD
Washington		
Airway Heights	_	Barr-Tech, LLC
Algona	768	Cedar Grove Composting (CGC)
Anacortes	2,966	Skagit Soils
Auburn Beaux Art	12,630	CGC CGC
Bellevue	105 27,124	CGC
Bellingham (3 towns)	30,000	Green Earth Technology
Black Diamond	1,108	CGC
Bothell	8,168	CGC
Bremerton	8,776	_
Burien	9,246	CGC
Burlington	2,003	Skagit Soils
Carnation	467	CGC
Clyde Hill	997	CGC
Covington	4,328	- B
Deer Park	1,168	Barr-Tech, LLC
Des Moines	5,619	CGC
Duvall Enumclaw	1,979 3,479	CGC CGC
Federal Way	16,792	CGC
Hunts Point	147	CGC
Issaguah	7,119	CGC
Kenmore	5,326	CGC
Kent	23,691	CGC
King County (unincorporated) ⁶	64,282	CGC
Kirkland	20,859	CGC
Lake Forest Park	3,882	CGC
Liberty Lake	2.100	Barr-Tech, LLC
Lynden Manla Vallov	3,106	Green Earth Technology
Maple Valley Medina	6,121 1,021	CGC CGC
Mercer Island	6,490	CGC
Mount Vernon	7,637	Skagit Soils
Newcastle	2,769	CGC
Normandy Park	1,915	CGC
North Bend	1,316	CGC
Olympia	14,000	Silver Springs Organics
Pacific	1,437	CGC
Port Orchard	2,973	- Cilvan Caninas Onnanias
Rainier	579	Silver Springs Organics
Redmond Renton	11,217 20,287	CGC CGC
Sammamish	13,050	CGC
SeaTac	3,856	CGC
Seattle	300,000	CGC
Shoreline	14,195	CGC
Skykomish	_	_
Snoqualmie	3,243	CGC _
Spokane County	47,151	Barr-Tech, LLC
Sumas, Everson, Nooksack	1,086	Green Earth Technology
Thurston County (unincorporated)		Waste Connections
Tumwater	4,354	Waste Connections
Tukwila Woodinville	2,516 2,550	CGC CGC
Yarrow Point	2,550 359	CGC
Yelm	5,920	Waste Connections
	3,020	

¹Castro Valley Sanitary District is part of the unincorporated county number; ²2011 data; ³Oro Loma Sanitary District is made up of 60% San Leandro and portions of Hayward and the unincorporated county; ⁴Cloverdale, Cotati, Healdsburg, Petaluma, Rohnert Park, Santa Rosa, Sebastopol, Sonoma (City) and Windsor; ⁵Appleton, Benson, Clontarf, Dancers, De Graff, Holloway, Kerkhoven and Murdock; ⁶Includes incorporated areas served by franchise haulers regulated by Washington Utilities & Transportation Commission.

posted by New Earth. All materials are collected weekly, and contamination remains low (about 2 percent). San Antonio plans on expanding the program citywide later this year as a voluntary,

subscription-based service.

Brattleboro, VT: The city of Brattleboro piloted a curbside food waste collection program in August 2012, and is expanding it citywide (2,700 single family houses) in April this year. It will be a subscription program, costing \$10 to subsidize the cost of the curbside cart, with remaining costs funded by taxes. Pilot participants received compostable bags, a kitchen pail and a curbside cart (various manufacturers donated different styles of bags and carts).

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WASHINGTON

Bellingham: About 30,000 households in the Bellingham area have access to FoodPlus!, offered by Sanitary

Table 2. Residential food waste collection and composting pilots in the U.S.

State/	Households	
Municipality	Served	Processing Facility
California		
Exeter	-	Harvest Power & West Coast Wood Industries (Harvest Power & WCWI)
Farmersville Lindsay	- -	Harvest Power & WCWI Harvest Power & WCWI
Los Angeles Palo Alto Woodlake	8,700 680 —	Athens' American Organics Z-Best Harvest Power & WCWI
Colorado Denver	2,300	A1 Organics
Illinois Oak Park	110	Land & Lakes
lowa Dubuque ¹	230	Dubuque Metro SWA
Kentucky Lexington	400	Lexington Municipal Composting
Maryland Howard County ²	5,000	Peninsula
Massachusetts Cambridge Ipswich	800 200	Brick Ends Farm Brick Ends Farm
Minnesota Medina ¹ Minneapolis ^{1,3} Shorewood ¹	1,600 4,500 500	Specialized Environmental Technologies (SET) SET SET
New Jersey Princeton	9,500	Wilmington Organics Recycling Center
New York Staten Island Watervliet	3,500 70	NYC Dept of Sanitation Watervliet Municipal Compost
Texas Austin San Antonio	8,000 30,000	Organics By Gosh New Earth
Wisconsin Fitchburg Madison	300 600	Columbia County Compost (CCC)
Total	76,990	550

¹2011 data; ²Ellicott City and Elkridge; ³Linden Hills, ECCO, Seward, Longfellow, Howe, Hiawassee, Phillips

Service Company, Inc. (SCS). The subscription-based program has roughly 8,500 households currently signed up for the every-other-week organics service, many of whom also have everyother-week trash collection

King County: King County has 38 jurisdictions with residential food scraps collection, implemented between 2004 and 2011, covering over 300,000 households (not including Seattle, which operates separately). Based on 2011 data, participants of the food scraps program are capturing 13.1 percent of available food from the MSW stream.

Olympia: The city of Olympia piloted residential food waste collection in 2007, and currently offers service to all 14,000 households, of which about 7,400 subscribe. Service is also available to multiunit buildings.All materials are collected every-otherweek and processed at Silver Springs Organics, now owned by Waste Connections.

Seattle: The city of Seattle began collecting residential fruits and vegetables in 2005, and has grown the program over time. Currently, all households with garbage service are required to have organics collection, including multiunit buildings, unless they apply for an exemption. In 2011, the city collected 78,768 tons of residential organics, 43 percent of which was food waste.

WISCONSIN

Fitchburg: The City of Fitchburg began a pilot project in April 2012, collecting food waste from about 250 households. Participants were given a 35-gallon curbside cart, kitchen pail and compostable bags, with organics collected weekly and sent to Columbia County's mixed MSW composting fa-

Madison: In 2011 the city of Madison began piloting residential food waste collection, and has continued offering the service, currently to about 550 households. Madison is getting about 13.8 lbs/week/household of organics, which is a 58 percent capture rate. In an attempt to capture the maximum amount of putrescible waste, the city is currently allowing pet waste and diapers in the organics cart, which are sufficiently screened out at the Columbia County mixed MSW composting facility.

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6 BIOCYCLE

Table 3. Residential food waste collection and composting pilots in the U.S.: Households served, percent participation, processing facility

State/ Municipality	Households Served	Participation % ¹	Processing Facility
California Exeter Farmersville Lindsay Los Angeles Palo Alto Woodlake	- - - 8,700 680 -	- - - 70 100	Harvest Power & West Coast Wood Industries (Harvest Power & WCWI) Harvest Power & WCWI Harvest Power & WCWI Athens' American Organics Z-Best Harvest Power & WCWI
Colorado Denver	2,300	100	A1 Organics
Illinois Oak Park	110	100	Land & Lakes
lowa Dubuque ²	230	100	Dubuque Metro SWA
Kentucky Lexington	400	100	Lexington Municipal Composting
Maryland Howard County ³	5,000	21	Peninsula
Massachusetts Cambridge Ipswich	800 200	_ 100	Brick Ends Farm Brick Ends Farm
Minnesota Medina ² Minneapolis ^{2,4} Shorewood ²	1,600 4,500 500	_ 60 _	Specialized Environmental Technologies (SET) SET SET
New Jersey Princeton	9,500	5	Wilmington Organics Recycling Center
New York Staten Island Watervliet	3,500 70	_ 100	NYC Dept of Sanitation Watervliet Municipal Compost
Texas Austin San Antonio	8,000 30,000	_ 100	Organics By Gosh New Earth
Wisconsin Fitchburg Madison	300 600	86 88	Columbia County Compost (CCC) CCC

¹Calculated as percentage of households with green cart service; ²2011 data; ³Ellicott City and Elkridge; ⁴Linden Hills, ECCO, Seward, Longfellow, Howe, Hiawassee, Phillips

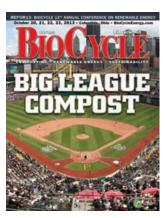
Table 4. Residential food waste collection and composting pilots in the U.S.: Year started, annual tonnage, feedstocks accepted

State/ Municipality	Start Date	Tonnage (Annual)	All Food, Soiled Paper ¹ Green Waste Accepted
California Exeter Farmersville Lindsay Los Angeles Palo Alto Woodlake	2013 2013 2013 2008 2013 2013	- - - 3,000 - -	X X X X X
Colorado Denver Louisville	2008	1,100	X
Illinois Oak Park	2012	983	Χ
lowa Dubuque ²	-	80	X
Kentucky Lexington	2011	48,000	X
Maryland Howard County (2 towns) ²	2010	110	No meat/fish
Massachusetts Cambridge Ipswich	2013 2011	_ 80	X X
Minnesota Medina ² Minneapolis ^{2,3} Shorewood	- - -	- 60 -	No green waste No green waste –
New Jersey Princeton	2010	10 tons/week	Х
New York Staten Island Watervliet	2013 2012	_ 6	X No green waste
Texas Austin San Antonio	2013 2011	- 5,900	X X
Wisconsin Fitchburg Madison	2012 2011	21 180	X X

¹Food-soiled paper includes pizza boxes, carryout containers, etc.; ²2011 data; ³Linden Hills, ECCO, Seward, Longfellow, Howe, Hiawassee, Phillips

8 BIOCYCLE

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