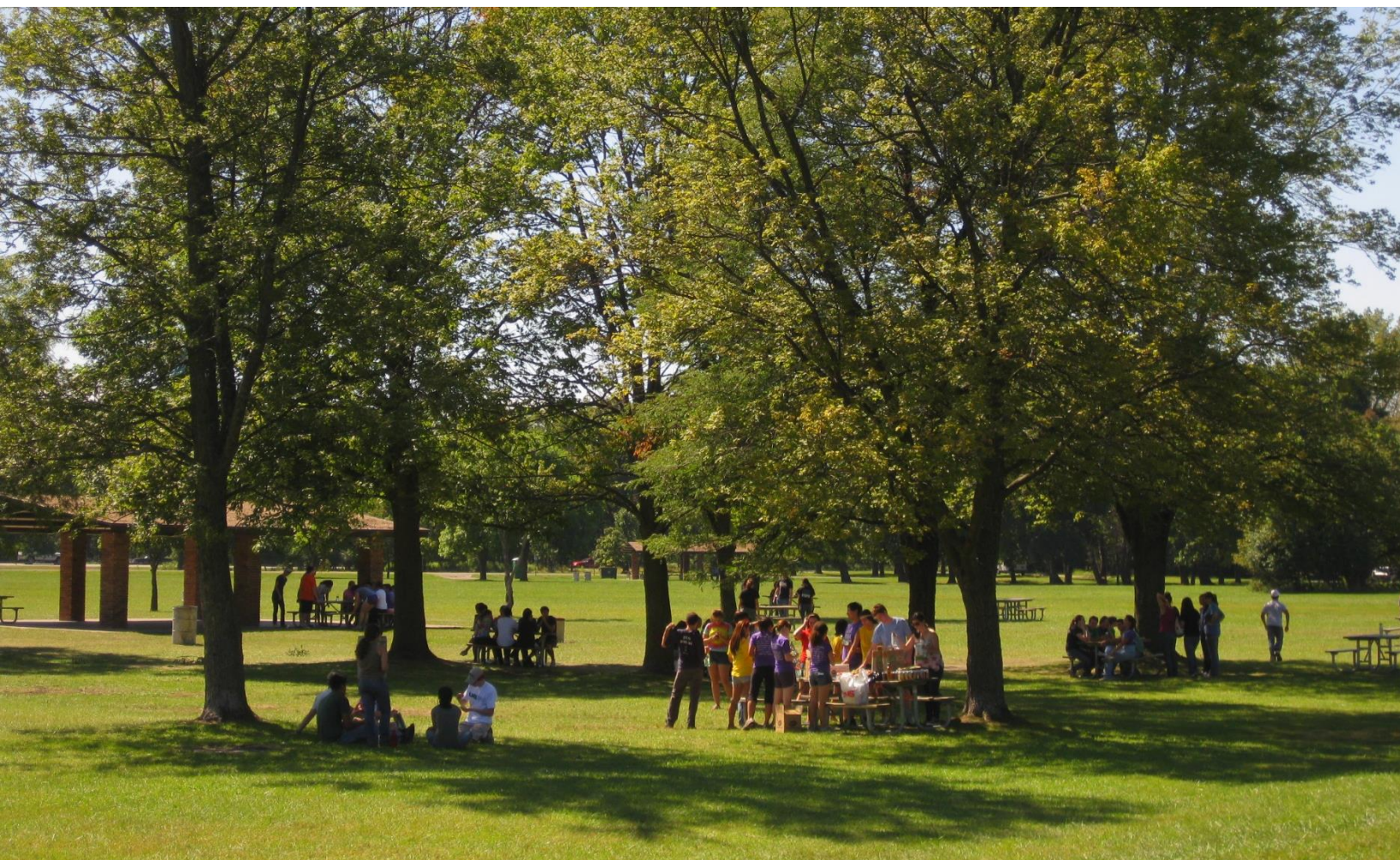




Recycling and Waste Reduction Opportunity Assessment FOREST PRESERVE DISTRICT OF COOK COUNTY



December 2014



A report by the Illinois Sustainable Technology Center
istc.illinois.edu/zerowaste



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INTRODUCTION

The Forest Preserve District of Cook County (District) is committed to protecting Chicagoland ecosystems for future generations to enjoy. Through environmental stewardship and educational programs, the District makes natural areas accessible to all of the region's citizens, classrooms and visitors. Furthermore, the District's 2014 *Next Century Conservation Plan* shows a clear commitment to engaging both staff and the public in caring for our natural resources (**Figure 1**).

When asked about behaviors that help preserve and protect the environment, Americans overwhelmingly cite recycling as something they do¹. Most people confront material waste – from discarded food packaging to unwanted electronics – every single day. Thus, recycling and waste reduction are tangible actions that communicate environmental stewardship and awareness to all people. This is a key reason why the District is working to increase recycling and waste reduction across District operations.

In 2014, the District engaged the Illinois Sustainable Technology Center (ISTC) in launching a project to understand the current state of materials management operations, assess opportunities for improvement and take steps toward making the District a national leader in waste reduction practices.

This report presents findings from project tasks conducted from September to December 2014:

- ➔ **Baseline waste characterization** of key picnic sites and other priority facilities
- ➔ **Research on:**
 - Current waste reduction practices at District properties
 - Current waste reduction practices at peer institutions across the region and nation
 - Grant funding opportunities
- ➔ **Recommended steps for improving:**
 - Recycling and waste reduction throughout the District
 - Recycling and waste collection at events (via permit standards)
 - Recycling and composting infrastructure

Questions about this report and project may be directed to:

ISTC Zero Waste Program | 1 Hazelwood Dr. Champaign, IL 61820 | istc-zerowaste@illinois.edu

Figure 1. Highlights from *Next Century Conservation Plan* –Goals & Priorities

- ✓ *Mobilize people to heal and nurture the land.*
- ✓ *Invite, excite and engage diverse visitors from all walks of life.*
- ✓ *Build the economic case for nature.*
- ✓ *Manage with excellence, transparency and sound financial practice.*
- ✓ *Provide enduring, focused conservation leadership and increased accountability.*

¹ *The Environment: Public Attitudes and Individual Behavior – A Twenty-year Evolution.*

http://www.scjohnson.com/Libraries/Download_Documents/SCJ_and_GfK_Roper_Green_Gauge.sflb.ashx

WASTE CHARACTERIZATION STUDY

In September of 2014, ISTC conducted a characterization of landfill-bound material collected from District properties. Waste samples were collected from the following events/locations:

- Annual Pow Wow at Busse Woods (~5000 attendees)
- Cultural celebration and other permitted events at Labagh Woods (900 participants)
- District-operated hauling truck, picking up from various locations

Table 1. FPDCC Waste Characterization Sampling Schedule

Location	Date	Time	Sample
Busse Woods	13-Sep	4:00 PM	168 lb.
Busse Woods	13-Sep	7:30 PM	142 lb.
Busse Woods	14-Sep	12:00 PM	69 lb.
Labagh Woods	14-Sep	9:00 PM	270 lb.
FPDCC Truck	15-Sep	9:00 AM	182 lb.
Total			831 lb.

A total of 831 pounds of waste was sorted, into 23 material categories, over a three day sampling period.

Sampling Procedure

ISTC worked with the District to coordinate the sample collection for each location. Samples were collected periodically throughout the three day period to ensure a representative waste profile (**Table 1**). The ASTM standard test method for determination of the composition of unprocessed municipal solid waste through manual sorting (ASTM D5231) was used as the guiding document to conduct sampling and sorting.



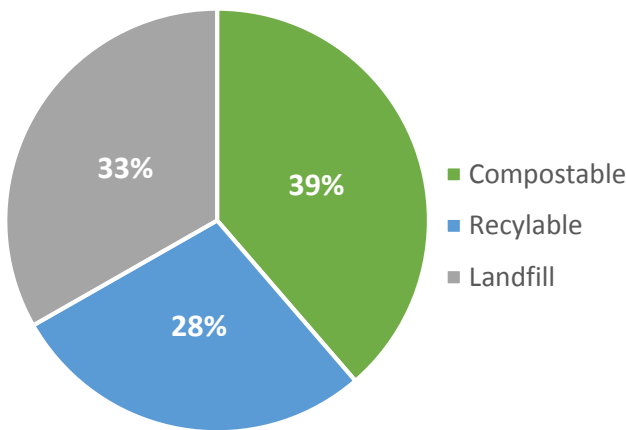
Samples of trash were collected from forest preserve dumpsters, loose and bagged (Left). One sample was taken directly from an FPDCC garbage truck (Right).

Waste Characterization

Waste sorting was conducted at the District’s Facility Garage in Maywood. All samples were sorted into 23 waste categories, described in **Appendix A, Table A-1**. Material was separated into labeled containers with known weights and net material weights were recorded for each sample. **Table 2** shows the observed composition of material sorted.

All sampled and sorted material was collected from trash bins, meaning the material was headed for a landfill. Of all sorted material, 28% was *recyclable*, meaning it is acceptable in the District’s current recycling program. Additionally, 39% of sorted material was *compostable*, meaning it can be processed into compost at Chicago-area compost facilities. The percentage of landfilled waste that is currently recyclable or compostable (by weight) is depicted in **Figure 2**.

Figure 2. Sampled Waste Composition Recoverability by Weight



ISTC waste sort team at Maywood Garage Facility. Busse Woods (Pow Wow) sample pictured.

Table 2. Sampled Waste Composition by Weight

Material Class	Material Composition	Mean
Compostable	Food scraps	21%
	Paper towels and food-soiled paper	7%
	Liquids	5%
	Other paper food-service ware	5%
	Fines	3%
	Green waste	<1%
	Paper cups	<1%
Recyclable	Corrugated Cardboard	7%
	Glass	6%
	Aluminum and tinned food cans	4%
	Non-food service paper	4%
	Plastic beverage containers	4%
	Other plastic containers	3%
	Electronics	1%
Landfill (Non-Recoverable)	Composite organics	9%
	Composite plastic	7%
	Bulky materials	4%
	Expanded polystyrene	4%
	Composite Paper	2%
	Trash Bags	2%
	Other plastic food-service ware	2%
	Composite Metal	<1%
	Regulated materials	<1%

Key findings and observations about the District’s landfill-bound waste stream include the following:

- Approximately 67% (1191 tons/year) of the District waste stream is currently recyclable or compostable in the Chicago area.
- Recyclables represent 28% (501 tons/year) of the waste stream. “Recyclables” includes glass, plastic and aluminum beverage containers, tinned food cans, non-foodservice paper, corrugated cardboard, and other plastic containers.
- Compostables represent 39% (690 tons/year) of the waste stream. “Compostables” includes food scraps, paper towels, food-soiled paper, other paper foodservice ware, paper cups, and liquids.
- Expanded Polystyrene (EPS or “Styrofoam”) represents 4% (71 tons/year) of the waste stream, by weight. Most of the EPS found in District waste is food-soiled, meaning it is not currently recyclable in the Chicago area.
- The remaining third (33%, 593 tons/year) of the waste is materials that cannot be recycled or composted in the Chicago area. This includes film plastic, trash bags, and composite materials. “Composite” materials are those made of multiple material types which are difficult to separate for recycling. For example, a coffee pouch or juice box is made of layers of material which, put together, make it difficult to recycle.
- Disposal cost avoidance scenarios are presented at **Right**. Scenarios assume \$42/ton tip fee for compostables and \$0/ton tip fee for recyclables.

COST SCENARIOS	
<u>Scenario 1: Recover all recyclable materials</u>	
Landfill	1409 tons/year
Recycling	376 tons/year
Avoided cost of disposal: \$30,000/year	
<u>Scenario 2: Recover all divertible materials</u>	
Landfill	807 tons/year
Compost	602 tons/year
Recycle	376 tons/year
Avoided cost of disposal: \$35,500/year	

OPPORTUNITY ASSESSMENT

Beyond the Waste Characterization Study findings, ISTC gathered information and observations about the materials management system at the District, for the purpose of proposing ambitious but achievable changes to District operations. The Recycling and Waste Reduction Opportunity Assessment has two main areas of focus, important to District operations, but different in approach:

- **Collection Improvement** (p. 5 – 8) concerns the collection of recyclable items across District properties. The opportunity lies in increasing availability of collection bins, while controlling contamination of recyclables. Food scrap collection (composting) is an option for further increasing landfill diversion.
- **Permitted Event Improvement** (p. 8 – 10) concerns large events such as the Annual Chicago Pow Wow and regular permitted group events such as company picnics and birthday parties. The opportunity lies in devising permitting standards that encourage Forest Preserve guests to use reusable or recyclable items and arrange for proper collection of separated waste streams.

Collection Improvement

Current Practices

The District collects non-separated waste materials (“Trash”) at all of its facilities as a necessary part of office and forest preserve cleanliness. The District manages its own fleet of garbage trucks that service the collection

containers at least once per week. Trash is hauled by District trucks to several destinations, depending on the area where pickup occurs. The District also collects separated recyclables at most of its facilities. Recycling implementation differs from location to location, but the main differences are between office spaces and forest preserve/event facilities. Differences in these programs are described in **Table 3**.

Table 3. Current Recycling Practices at FPDC Facilities

District Offices	Forest Preserve Areas
<ul style="list-style-type: none"> The Headquarters Building in River Forest has commingled recycling:  <ul style="list-style-type: none"> Recycling bins are well-distributed throughout offices. Not all bins are paired with trash or clearly labeled: 	<ul style="list-style-type: none"> Most Forest Preserve parking lots have at least one recycling bin, with clear signage and markings:  <ul style="list-style-type: none"> Recyclables are self-hauled in District vehicles to the following recyclers, depending on location of pickup: <ul style="list-style-type: none"> American Recycling 3109 Champart St, Zion, IL 60099 Lakeshore Recycling 6132 Oakton St, Morton Grove, IL 60053

Issues & Concerns Identified

Through a series of meetings and work in the field, ISTC gathered observations about current issues, concerns, and opportunities regarding materials management at the District. The below list of observations informed research and recommendations for this assessment. District staff who contributed feedback represent the departments of Landscape Maintenance, Facilities & Fleet, Legal, Conservation & Experiential Programming (CEP), and the General Office.

Recyclable Items

- There is some confusion about what items are acceptable in the District’s recycling program. The parking lot recycling bins are labeled “Glass, Plastic, Aluminum.” However, most recyclers in the area

have co-mingled processing capability and can accept paper products as well. For this study, paper items were classified as *currently recyclable*.

- Recycling loads are often rejected at the recycling drop-off facilities due to “contamination,” but recycling facilities are not clear about what constitutes contamination.
- Some District drivers report being asked to dump recycling loads in the same area as trash, raising suspicions about whether items are actually recycled or not.

Employee Engagement/Involvement

- The District’s garbage and recycling truck drivers are valuable staff. If waste reduction and recycling improvement reduces the need for pickups, there are other waste reduction and maintenance functions that can take advantage of their skills.
- Some District facilities have staff who are particularly excited about and skilled at recycling. These are the District’s “recycling champions” who are finding ways to reduce, reuse, and recycle items. Recycling champions can be found at Nature Centers, District offices, and facilities throughout the District.

Collection Improvement Recommendations

Recommendations (**Table 4**) are divided into **Phase 1** and **Phase 2** categories. Phase 1 recommendations are easier to implement and may be precursor steps to Phase 2 recommendations. Recommendations are further classified as *Planning* (additional data gathering, cost research, etc.) or *Implementation* (program launch, signage, staff training, etc.).

Table 4. Collection Improvement Recommendations, by Implementation Phase

Collection Improvement / Phase I	
Conduct a survey of District staff to identify “Recycling Champions” Conduct an online survey to identify staff that are currently trying, or would like to try, innovative recycling or composting practices at their work sites. Also ask staff for input on ways to improve recycling and waste reduction practices.	Planning
Clarify Recycling drop-off locations and costs. Call all recycling drop-off centers to clarify policies and costs. Conduct ride-alongs with several District pickup routes to observe pickup and drop-off practices.	Planning
Re-label parking lot recycling bins. Once recyclability is clarified, consider adding “Paper and Cardboard” to the parking lot recycling bin labels.	Implementation
Assess options for haulers or drop-off locations for compostable material. Commercial compost service providers are listed at: www.illinoiscomposts.org/resources/service-providers	Planning
Pilot recycling and compost collection at a Nature Center. Provide 3-bin stations, using signage modeled after what has been successful at Chicago Botanic Gardens.	Implementation

Collection Improvement / Phase I (continued)	
Consider waste reduction measures whenever possible. See Appendix B for examples of measures implemented at Brookfield Zoo and Chicago Botanical Gardens.	Planning & Implementation
Apply for funding for recycling and composting collection containers. See <i>Funding Opportunities</i> section.	Planning
Add waste collection programs for: Grease recycling (see Brookfield Zoo example), textiles and event banners (Will County), fishing line (DuPage), and nitrile gloves for food service workers (University of Illinois).	Implementation
Collection Improvement / Phase II	
Roll-out recycling and compost collection at other Nature Centers. Use lessons learned in Phase I pilot to improve staff training and signage for roll-out.	Implementation
Explore development of a compost processing facility on FPDCC property. Brookfield Zoo has explored and tested this option previously. There are now grant funds, available through DCEO, to support on-site commercial-grade composting activities. See <i>Funding Opportunities</i> section.	Planning & Implementation
Use Enevo bin sensor technology for dynamic routing. Dynamic routing means a garbage or recycling truck driver will only service bins when they are full, maximizing their use of time and fuel use. Enevo provides bin sensors and routing software to implement such a system at the District.	Planning & Implementation

Permitted Event Improvement

Current Practices

The District hosts thousands of permitted events on its lands every year. Based on results of this study, these events account for at least \$100,000 in hauling costs each year, representing a considerable opportunity to reduce waste generation and better-utilize operational spending.

Permits for use of District facilities are obtained and managed through an online portal which requires users to meet certain requirements and review District rules and regulations. The permitting process provides a natural opportunity to educate and engage Forest Preserve visitors regarding waste generation and recycling. ISTC researched national and local examples of recycling at Forest Preserves and Park Districts (**Appendix B**), and found many examples of zero waste event guidelines. However, waste minimization and recycling are still rare requirements for event permitting, providing an opportunity for the District to lead the way for forest preserves across the country.

Permitted Event Recommendations

Recommendations (**Table 5**) are divided into **Phase 1** and **Phase 2** categories, and classified as “Planning” and/or “Implementation,” as in the previous section.

Table 5. Permitted Event Recommendations, by Implementation Phase

Permitted Event Improvement / Phase I	
Create an approved vendor/caterer list for special events at FPDCC facilities. Approval should hinge on agreement to recycle and compost food scraps, use only reuseable, recyclable or compostable service ware, minimize the handout of disposable items, etc. <i>Consult Green City Market staff and vendor agreements in City of Boulder's Special Event Permit Application Packet for guidance.</i>	Planning & Implementation
Pilot recycling and compost collection at a permanent concessions location. Train staff on recycling and food scrap collection in back-of-house operations. Provide 3-bin stations in front-of-house, using signage modeled after what has been successful at Chicago Botanic Gardens.	Implementation
Train a cohort of FPDCC volunteers on waste reduction, recycling, and composting, including contamination prevention via manning 3-bin stations at events. Use Village of Oak Park's Green Block Party Program and Hennepin County, MN Master Recycler/Composter Training Program as guidance. Training could involve assistance with the concessions pilot program (see above).	Planning & Implementation
Examine online permit application/facility reservation system for opportunities to insert recycling and composting requirements and/or public information. Identify technical barriers to revision of system to accommodate such insertions.	Planning
Provide public workshops on recycling, food scrap composting, and zero waste events.	Implementation
Apply for funding for portable recycling and composting collection containers to loan out for events on FPDCC properties. See <i>Funding Opportunities</i> section.	Planning
Permitted Event Improvement / Phase II	
Integrate recycling and composting requirements into event permit application process, using Green City Market and City of Boulder Special Events Permit Application Packet for guidance.	Planning & Implementation
Offer a rebate or discount to event coordinators for hosting a zero waste event. See Appendix B for examples of programs implemented in Boulder, CO and Austin, TX.	Implementation
Offer assistance to event coordinators to plan waste reduction and implement waste management. To be made available online and distributed via online application system and/or email at time of application. Offer volunteers from recycling/composting cohort to help reduce contamination of waste streams (see above). Loan portable recycling/composting bins for use at events on FPDCC properties. Use Village of Oak Park's Green Block Party Program; Hennepin County, MN; and Skagit County, WA as guides (See Appendix B).	Planning & Implementation

FUNDING OPPORTUNITIES

Funding opportunities, in the form of grants and loans, exist for most of the recommendations provided in this report. ISTC researched the following opportunities and discussed them in detail with the District's Grants Administrator. Fundable project ideas are described for each funding source:

Research in Sustainable Solid Waste Management through Environmental Research and Education Foundation (EREF) - *Annual, application due January 8 or July 15*

EREF provides funds ranging from \$15,000 to \$500,000 for solid waste research annually.

Project concept: Monitor trash and recycling bin fullness using sensors. Optimize route efficiency, fuel use, and labor deployment.

Recycling Expansion and Modernization (REM) Program through Department of Commerce and Economic Opportunity (DCEO) - *Annual, rolling application*

DCEO provides a matching grant to Illinois organizations to modernize the company's solid waste management methods.

Project concept: Expand the District's recycling processing abilities through capital equipment purchases such as balers and compactors.

Illinois Recycling Grants Program (IRGP) through DCEO - *Annual, application due first week in December*

DCEO provides a matching grant to Illinois organizations in expanding their recycling efforts.

Project concept: Purchase recycling stations for placement across the entire District and for zero waste events.

Food Scrap Composting Revitalization and Advancement (F-SCRAP) through DCEO - *Annual, application due last week of December*

DCEO provides funds to support projects that divert organic materials in Illinois from landfills.

Project concept: Revive the Brookfield Zoo composting program, incorporating food scraps from the nature centers around the district. Invest in bagging equipment and marketing materials to brand the Brookfield Zoo Compost.

Closed Loop Fund (*Annual through 2020, rolling*): The Closed Loop Fund has been formed to provide municipalities zero interest loans and private firms engaged in public-private partnerships access to capital at below market rates in order to spur investments in municipal recycling programs.

Project concept: Long-term capital investments for establishing a large organics processing facility on District land to process all the organic materials generated by the District.

APPENDICES

Appendix A. Waste Characterization Study Data Tables

Figure A-1 Material Class Composition by Weight, Overall

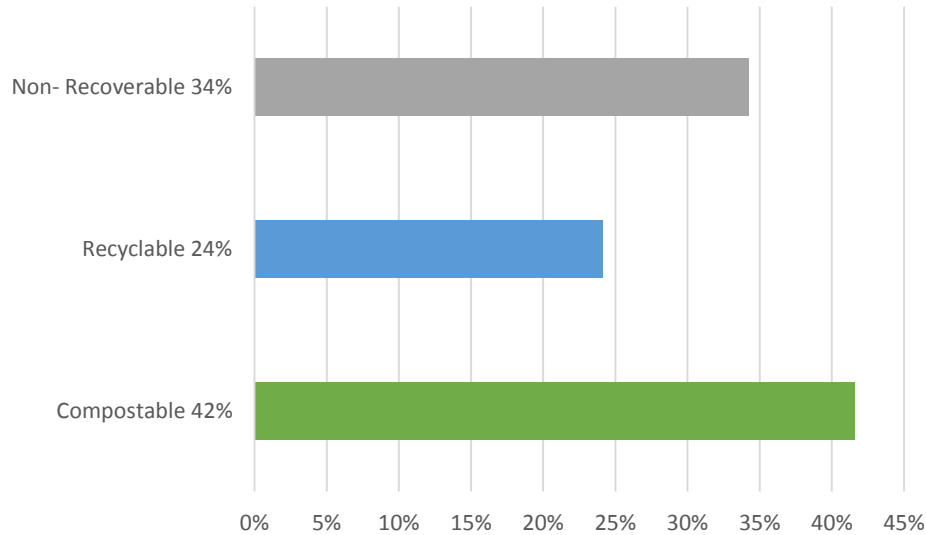


Table A-1 Detailed Composition, Overall

Material	Percent	Material	Percent
Compostable	42%	Non-Recoverable	34%
Food scraps	21%	Composite organics	9%
Paper towels and food-soiled paper	7%	Composite plastic	7%
Liquids	5%	Expanded polystyrene	4%
Other paper food-service ware	5%	Non-food service paper	4%
Fines	3%	Bulky materials	4%
Paper cups	0%	Composite Paper	2%
Green waste	0%	Other plastic food-service ware	2%
		Trash Bags	2%
Recyclable	24%	Composite Metal	0%
Corrugated Cardboard	7%	Regulated materials	0%
Glass	6%		
Aluminum and tinned food cans	4%		
Plastic beverage containers	4%		
Other plastic containers	3%		
Electronics	1%		

Figure A-2 Material Class Composition by Weight, Busse Woods

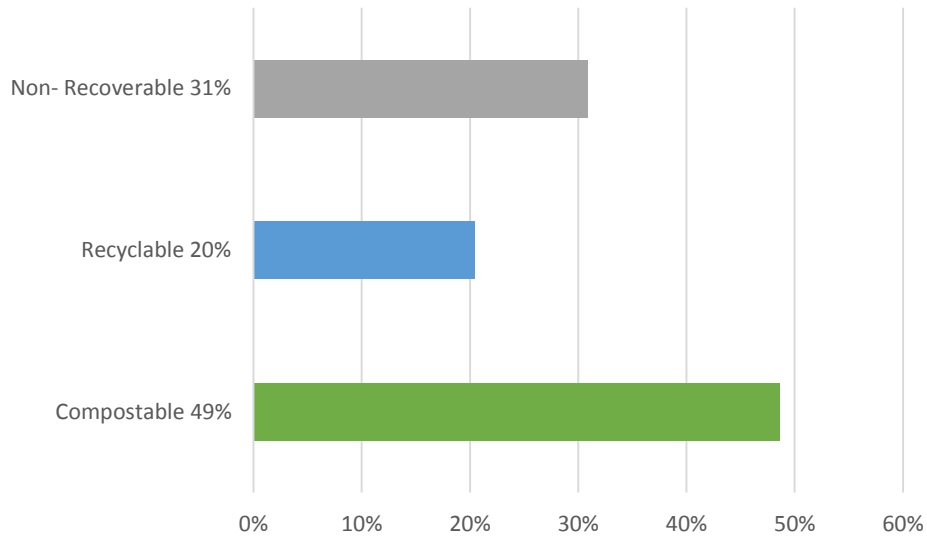


Table A-2 Detailed Composition, Busse Woods

Material	Est. Percent	Material	Est. Percent
Compostable	49%	Non-Recoverable	31%
Food scraps	24%	Composite organics	1%
Paper towels and food-soiled paper	8%	Composite plastic	6%
Liquids	9%	Expanded polystyrene	6%
Other paper food-service ware	3%	Non-food service paper	2%
Fines	4%	Bulky materials	11%
Paper cups	0%	Composite Paper	1%
Green waste	0%	Other plastic food-service ware	2%
		Trash Bags	3%
Recyclable	20%	Composite Metal	0%
Corrugated Cardboard	8%	Regulated materials	0%
Glass	2%		
Aluminum and tinned food cans	4%		
Plastic beverage containers	5%		
Other plastic containers	1%		
Electronics	0%		

Figure A-3 Material Class Composition by Weight, Labagh

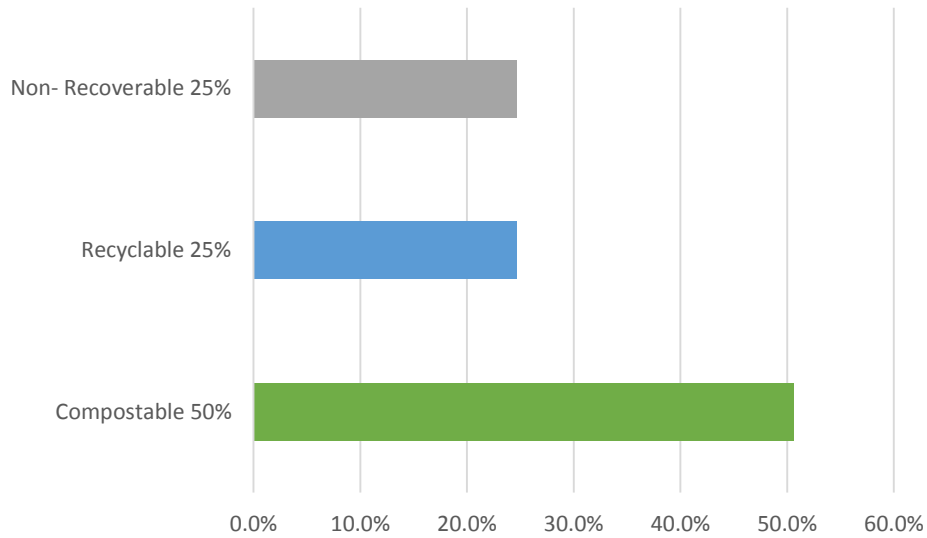


Table A-3 Detailed Composition, Labagh

Material	Est. Percent	Material	Est. Percent
Compostable	50%	Non-Recoverable	25%
Food scraps	29%	Composite organics	3%
Paper towels and food-soiled paper	6%	Composite plastic	8%
Liquids	4%	Expanded polystyrene	3%
Other paper food-service ware	8%	Non-food service paper	4%
Fines	3%	Bulky materials	0%
Paper cups	1%	Composite Paper	1%
Green waste	0%	Other plastic food-service ware	3%
		Trash Bags	2%
Recyclable	25%	Composite Metal	1%
Corrugated Cardboard	5%	Regulated materials	0%
Glass	6%		
Aluminum and tinned food cans	5%		
Plastic beverage containers	3%		
Other plastic containers	5%		
Electronics	0%		

Figure A-4 Material Class Composition by Weight, FPDCC Truck

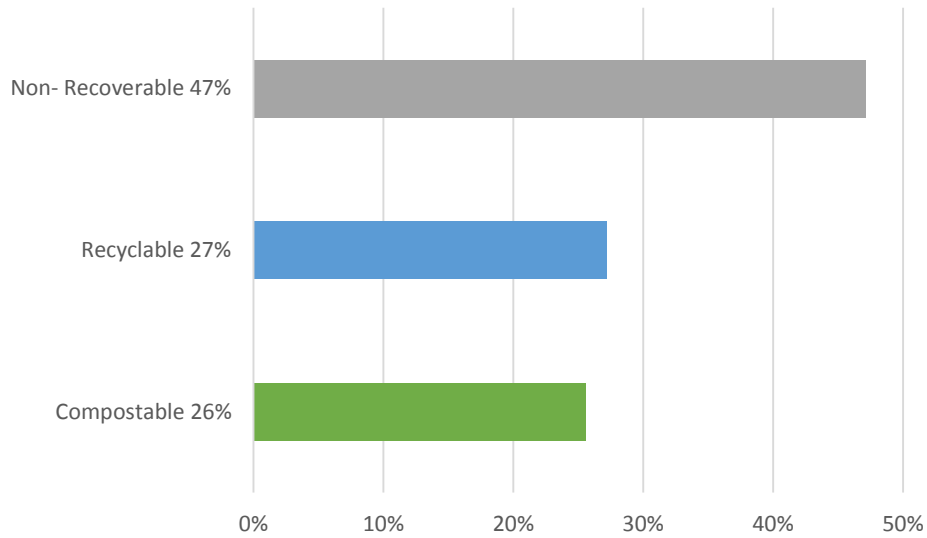


Table A-4 Detailed Composition, FPDCC Truck

Material	Est. Percent	Material	Est. Percent
Compostable	26%	Non-Recoverable	47%
Food scraps	10%	Composite organics	23%
Paper towels and food-soiled paper	8%	Composite plastic	7%
Liquids	2%	Expanded polystyrene	3%
Other paper food-service ware	3%	Non-food service paper	6%
Fines	2%	Bulky materials	0%
Paper cups	0%	Composite Paper	5%
Green waste	0%	Other plastic food-service ware	2%
		Trash Bags	1%
Recyclable	27%	Composite Metal	0%
Corrugated Cardboard	8%	Regulated materials	0%
Glass	8%		
Aluminum and tinned food cans	4%		
Plastic beverage containers	2%		
Other plastic containers	2%		
Electronics	3%		

Table A-5. Material definitions used for Waste Characterization sorting

Material Category	Description
Compostable	
Fines	Remnants left after sorting is complete. Typically consists of dirt, sawdust, small food scraps, etc.
Food scraps	Food preparation wastes, food scraps, spoiled food
Green waste	Debris such as grass clippings, leaves, garden waste, brush, and trees. Yard waste does include tree stumps
Other paper food-service ware	Paper kitchen products except paper cups
Paper cups	Cups made from paper with or without waxy coating
Paper towels and food-soiled paper	Bathroom towels, Food-soiled paper
Recyclable	
Aluminum and tinned food cans	Aluminum beverage cans, and tin cans used for food
Corrugated cardboard	Non-food-soiled corrugated cardboard
Electronic waste	All items that either contain a battery or power cord
Glass bottles and jars	All glass food and beverage containers
Non-food service paper	Newsprint, magazines, office paper
Other plastic containers	Plastic containers not used for containing water, fruit juice, sports drink, ice tea, wine, liquor, beer, soda water or similar carbonated drinks
Plastic beverage containers	Plastic containers used for containing liquid beverages
Non-Recoverable	
Expanded Polystyrene (EPS or “Styrofoam”) food-service ware	EPS plates, cups and containers
Other bulky items	Large materials such as couches and tires
Other plastic food-service ware	Plastic one-time-use cutlery. Includes plates, bowls, forks and knives
Regulated materials	Materials regulated under federal or state solid waste management laws
Remainder/composite glass	Items that contain glass as the predominant category and another material
Remainder/composite metal	Items that contain metal as the predominant category and another material
Remainder/composite organics	Items that contain organics as the predominant category and another material
Remainder/composite paper	Items that contain paper as the predominant category and another material
Remainder/composite plastic	Items that contain plastic as the predominant category and another material
Trash bags	Bags used to contain waste materials



Table A-6. Waste Characterization – Raw Data Table


Location	Date	Time	Sample ID	Material	Weight (lb)
Busse Woods	13-Sep	4:00 PM	1	Aluminum and tinned food cans	10.2
Busse Woods	13-Sep	4:00 PM	1	Composite Metal	1.0
Busse Woods	13-Sep	4:00 PM	1	Composite organics	2.2
Busse Woods	13-Sep	4:00 PM	1	Composite Paper	2.0
Busse Woods	13-Sep	4:00 PM	1	Composite plastic	5.0
Busse Woods	13-Sep	4:00 PM	1	Corrugated Cardboard	6.8
Busse Woods	13-Sep	4:00 PM	1	Expanded polystyrene	7.4
Busse Woods	13-Sep	4:00 PM	1	Expanded polystyrene	2.8
Busse Woods	13-Sep	4:00 PM	1	Fines	4.0
Busse Woods	13-Sep	4:00 PM	1	Food scraps	52.6
Busse Woods	13-Sep	4:00 PM	1	Liquids	10.8
Busse Woods	13-Sep	4:00 PM	1	Non-food service paper	8.2
Busse Woods	13-Sep	4:00 PM	1	Other paper food-service ware	5.2
Busse Woods	13-Sep	4:00 PM	1	Other plastic containers	2.2
Busse Woods	13-Sep	4:00 PM	1	Other plastic food-service ware	5.4
Busse Woods	13-Sep	4:00 PM	1	Paper cups	0.2
Busse Woods	13-Sep	4:00 PM	1	Paper towels and food-soiled paper	24.4
Busse Woods	13-Sep	4:00 PM	1	Plastic beverage containers	7.8
Busse Woods	13-Sep	4:00 PM	1	Regulated materials	0.0
Busse Woods	13-Sep	4:00 PM	1	Trash Bags	4.4
Busse Woods	13-Sep	7:30 PM	2	Aluminum and tinned food cans	5.0
Busse Woods	13-Sep	7:30 PM	2	Composite organics	3.6
Busse Woods	13-Sep	7:30 PM	2	Composite Paper	0.8
Busse Woods	13-Sep	7:30 PM	2	Composite plastic	4.4
Busse Woods	13-Sep	7:30 PM	2	Corrugated Cardboard	1.0
Busse Woods	13-Sep	7:30 PM	2	Expanded polystyrene	5.0
Busse Woods	13-Sep	7:30 PM	2	Expanded polystyrene	4.2
Busse Woods	13-Sep	7:30 PM	2	Fines	9.2
Busse Woods	13-Sep	7:30 PM	2	Food scraps	48.2
Busse Woods	13-Sep	7:30 PM	2	Glass	3.4
Busse Woods	13-Sep	7:30 PM	2	Liquids	20.6
Busse Woods	13-Sep	7:30 PM	2	Non-food service paper	0.2
Busse Woods	13-Sep	7:30 PM	2	Other paper food-service ware	8.2
Busse Woods	13-Sep	7:30 PM	2	Other plastic containers	2.2
Busse Woods	13-Sep	7:30 PM	2	Other plastic food-service ware	5.4
Busse Woods	13-Sep	7:30 PM	2	Paper cups	0.6
Busse Woods	13-Sep	7:30 PM	2	Paper towels and food-soiled paper	9.2
Busse Woods	13-Sep	7:30 PM	2	Plastic beverage containers	17.2
Busse Woods	13-Sep	7:30 PM	2	Trash Bags	3.2


Busse Woods	14-Sep	1:40 PM	3	Aluminum and tinned food cans	0.8
Busse Woods	14-Sep	1:40 PM	3	Bulky materials	21.8
Busse Woods	14-Sep	1:40 PM	3	Composite organics	0.3
Busse Woods	14-Sep	1:40 PM	3	Composite Paper	0.0
Busse Woods	14-Sep	1:40 PM	3	Composite plastic	7.4
Busse Woods	14-Sep	1:40 PM	3	Corrugated Cardboard	13.2
Busse Woods	14-Sep	1:40 PM	3	Expanded polystyrene	3.4
Busse Woods	14-Sep	1:40 PM	3	Fines	2.2
Busse Woods	14-Sep	1:40 PM	3	Food scraps	5.6
Busse Woods	14-Sep	1:40 PM	3	Glass	3.6
Busse Woods	14-Sep	1:40 PM	3	Liquids	5.4
Busse Woods	14-Sep	1:40 PM	3	Non-food service paper	0.4
Busse Woods	14-Sep	1:40 PM	3	Other plastic containers	0.2
Busse Woods	14-Sep	1:40 PM	3	Other plastic food-service ware	0.2
Busse Woods	14-Sep	1:40 PM	3	Paper towels and food-soiled paper	2.6
Busse Woods	14-Sep	1:40 PM	3	Trash Bags	2.0
FPDCC Truck	15-Sep	9:00 AM	1	Aluminum and tinned food cans	7.4
FPDCC Truck	15-Sep	9:00 AM	1	Composite organics	41.8
FPDCC Truck	15-Sep	9:00 AM	1	Composite Paper	9.2
FPDCC Truck	15-Sep	9:00 AM	1	Composite plastic	7.6
FPDCC Truck	15-Sep	9:00 AM	1	Composite plastic	5.6
FPDCC Truck	15-Sep	9:00 AM	1	Corrugated Cardboard	14.4
FPDCC Truck	15-Sep	9:00 AM	1	Electronics	4.8
FPDCC Truck	15-Sep	9:00 AM	1	Expanded polystyrene	5.6
FPDCC Truck	15-Sep	9:00 AM	1	Fines	3.6
FPDCC Truck	15-Sep	9:00 AM	1	Food scraps	18.4
FPDCC Truck	15-Sep	9:00 AM	1	Glass	13.8
FPDCC Truck	15-Sep	9:00 AM	1	Green waste	0.8
FPDCC Truck	15-Sep	9:00 AM	1	Liquids	3.0
FPDCC Truck	15-Sep	9:00 AM	1	Non-food service paper	11.2
FPDCC Truck	15-Sep	9:00 AM	1	Other paper food-service ware	5.4
FPDCC Truck	15-Sep	9:00 AM	1	Other plastic containers	4.4
FPDCC Truck	15-Sep	9:00 AM	1	Other plastic food-service ware	2.8
FPDCC Truck	15-Sep	9:00 AM	1	Paper cups	0.4
FPDCC Truck	15-Sep	9:00 AM	1	Paper towels and food-soiled paper	14.4
FPDCC Truck	15-Sep	9:00 AM	1	Plastic beverage containers	4.2
FPDCC Truck	15-Sep	9:00 AM	1	Trash Bags	1.0
Labagh	14-Sep	9:00 PM	1	Aluminum and tinned food cans	7.2
Labagh	14-Sep	9:00 PM	1	Aluminum and tinned food cans	4.4
Labagh	14-Sep	9:00 PM	1	Composite Metal	2.2
Labagh	14-Sep	9:00 PM	1	Composite organics	7.8

Labagh	14-Sep	9:00 PM	1	Composite Paper	3.6
Labagh	14-Sep	9:00 PM	1	Composite plastic	9.4
Labagh	14-Sep	9:00 PM	1	Composite plastic	10.0
Labagh	14-Sep	9:00 PM	1	Corrugated Cardboard	5.0
Labagh	14-Sep	9:00 PM	1	Corrugated Cardboard	7.4
Labagh	14-Sep	9:00 PM	1	Electronics	1.0
Labagh	14-Sep	9:00 PM	1	Expanded polystyrene	5.6
Labagh	14-Sep	9:00 PM	1	Expanded polystyrene	2.8
Labagh	14-Sep	9:00 PM	1	Fines	7.4
Labagh	14-Sep	9:00 PM	1	Food scraps	71.4
Labagh	14-Sep	9:00 PM	1	Glass	16.2
Labagh	14-Sep	9:00 PM	1	Green waste	1.0
Labagh	14-Sep	9:00 PM	1	Liquids	9.2
Labagh	14-Sep	9:00 PM	1	Non-food service paper	9.2
Labagh	14-Sep	9:00 PM	1	Other paper food-service ware	20.8
Labagh	14-Sep	9:00 PM	1	Other plastic containers	13.2
Labagh	14-Sep	9:00 PM	1	Other plastic food-service ware	6.6
Labagh	14-Sep	9:00 PM	1	Paper cups	1.6
Labagh	14-Sep	9:00 PM	1	Paper towels and food-soiled paper	15.0
Labagh	14-Sep	9:00 PM	1	Plastic beverage containers	7.2
Labagh	14-Sep	9:00 PM	1	Regulated materials	0.5
Labagh	14-Sep	9:00 PM	1	Trash Bags	3.8

Appendix B. Zero Waste Best Practices

FPDCC Properties		
<p>Chicago Botanic Garden</p>  <p>CHICAGO BOTANIC GARDEN</p>	<p>Contact Info</p> <ul style="list-style-type: none"> • Beth Dunn, Dept. of Governmental Affairs, 847-835-6879, edunn@chicagobotanic.org • Darren Bochat, Visitor Programs, DBochat@chicagobotanic.org • Mel Huwe, Custodial Services 	<p>Special Events/Other Notes</p> <ul style="list-style-type: none"> • Wine cork recycling from special events & public • No explicit requirements in permitting, but outside caterers are not allowed, so CBG recycling & composting procedures apply • Waste reduction in café: Use of standard plates/silverware; no bottled water sold; grab & go containers are recyclable or compostable • Seasonal, local sourcing for cafe • Excess produce from gardens sold at farmer's markets, high end grocery stores, or donated to Greater Chicago Food Depository
	<p>Recycling</p> <ul style="list-style-type: none"> • Waste Management handles commingled cans, plastics, etc.; twice weekly pickup • VIM Recyclers regularly handles cardboard (bailed on site), mixed paper, polystyrene; occasionally plastic flower pots (member collection events). Hauls away 6-7 semi-trailer loads annually • 93, 875 lbs. of material recycled in 2013 • Mechanical dept. recycles tires, batteries • Some recycling of special items (cell phones, batteries, etc.) for staff only 	<p>Composting</p> <ul style="list-style-type: none"> • Waste Management picks up approx. 3.89 tons of organics/month. Weekly pickup of 2-yard dumpsters near café dock. • Cost to CBG: \$381/month • Garden View Café & satellite ice cream shop: Food scraps collected from front & back-of-house. 76,000 lbs. composted in 2013. • 3-bin stations, clearly labelled • Leaves, other vegetation debris composted on-site by ground dept. for use in gardens • Public education on composting via workshops, Windy City Harvest program, etc.
	<p>Brookfield Zoo</p>  <p>Chicago Zoological Society Inspiring Conservation Leadership</p>	<p>Contact Info</p> <ul style="list-style-type: none"> • John Kramer, VP of Plant & Facilities, 708-688-8729, John.Kramer@czs.org • Amy Schoenfeld-Lofgren, Plant & Facilities Administrative Manager, 708-688-8400, ext. 8531, AMY.SCHOENFELD@CZS.org • Tim Chromzack, 708-688-8542, cell: 708-703-8197; tim.chromzack@czs.org

		<p>IL Green Block Party Program (see below), is involved in green events for the Green-CAP program</p> <ul style="list-style-type: none"> Occasionally, organic flower centerpieces for special events are reused to feed wild bird populations Collaboration with ComEd: Certain types of vegetation removed as part of maintenance by ComEd's field crew is provided to Zoo for animal feed
	Recycling	Composting
	<ul style="list-style-type: none"> Refuse & recycling handled by Republic Services. Resource Management Co. is 2nd party recycler that works with Republic. No charge for recycling; Republic sells recyclables, profit offsets Zoo's disposal fee for solid waste Commingled for staff & public with exception of cardboard from internal operations (collected in separate roll-off dumpster) Public trash & recycling bins side-by-side throughout Zoo (450 each) Scrap metal sold to a local scrap yard Pallets recycled <u>Still provide limited receptacles for guests to recycle cell phones & batteries.</u> Currently, most recycling of these items & printer cartridges geared toward Zoo staff. Grease recycling by Mahoney Environmental 	<ul style="list-style-type: none"> Past: On-site composting of animal waste (elephants), food scraps, & biodegradable material; facility partially funded by DCEO. 3-bin stations throughout park for public. <i>(Discontinued due to contamination affecting integrity of recyclables.)</i> Current: On-site; limited amount of non-carnivore hoofstock waste + vegetation waste + back-of-house food scraps from a few of the larger food vendors. Waste is put through a tub-grinder before composting.
Peer Institutions--IL		
	Contact Info	Special Events/Other Notes
	<ul style="list-style-type: none"> Kurt Zitzner, Senior Director of Operations, 312-742-2102, kzitzner@lpzoo.org Kevin Limbrick, recycling committee, klimbrick@lpzoo.org 	<ul style="list-style-type: none"> No integration of recycling or composting requirements into permitting Has a list of approved caterers/vendors. Tigerlily Events is required for all daytime events scheduled at venues; no info on their web site regarding composting or recycling.
	Recycling	Composting
	<ul style="list-style-type: none"> Commingled recycling bins for past 3 years (separated streams prior to that) Lakeshore Recycling handles trash & recycling. 	<ul style="list-style-type: none"> Currently compost leaves & wood chips; no animal waste or food scraps

	<ul style="list-style-type: none"> • Zoo pays approx. \$25-30/per recycling dumpster each month. Lakeshore sorts waste at its transfer station, so materials are potentially recovered from Zoo’s trash stream as well. • Collects & sells scrap metal • No “special materials” collected from public for recycling, though some staff collections of batteries or other materials have occurred. • Newly formed committee on recycling interested in exploring new opportunities 	<ul style="list-style-type: none"> • Employee food scrap vermicomposting pilot project was recently started by internal recycling committee • Composting of garden waste at Edible Gardens on “Farm-in-the-Zoo” complex, started & operated by Green City Market (see below)
<p>Green City Market</p> 	Contact Info	Special Events/Other Notes
	<ul style="list-style-type: none"> • Erin Riley-Strong, Communications Officer, 773-880-1266, erin@greencitymarket.org 	<ul style="list-style-type: none"> • Operates at South end of Lincoln Park Zoo, May-Oct. at intersection of Clark & Lincoln; Market is across the street from the zoo • The market has a centralized tent for recycling and compost. Tent is staffed to reduce waste stream contamination. • Vendors must remove trash from their area, use recycling & compost bins provided. Vendor requirement information is currently being revised.
	Recycling	Composting
<ul style="list-style-type: none"> • Recycling is collected in City of Chicago’s blue bins. Only a few recycling bins are filled/weekend since most market waste is compostable • Recycle plastics 1-5 &7, aluminum, glass, cardboard 	<ul style="list-style-type: none"> • Compost paper, food waste, wood products • Compost is handled by the Resource Center, a Chicago non-profit. They compost materials at their City Farm. • Market pays approx. \$100-200/month for composting service. They pay per pound of material. • Market oversees Edible gardens at Lincoln Park Zoo. Composting of garden waste only (no public materials) on site at the garden. They don’t currently have capacity for food scraps from public. They teach composting workshops for the public at the garden. 	
Forest Preserve District of DuPage County	Contact Info	Special Events/Other Notes
	<ul style="list-style-type: none"> • Rachel Reklau, 630-871-6435, rreklau@dupageforest.org • Abby Dean, 630-850-8110 (Recycling Extravaganza event & Fullersburg Woods projects) 	<ul style="list-style-type: none"> • No integration of recycling and/or composting requirements into permitting



• **Jason Berger**, Manager of Structural Maintenance, 630-876-5912

• [Photos of outdoor compost bins, vermicomposting, electronics recycling, view of recycling bins next to solar compactor trash receptacles](#)

Recycling

Composting

- Commingled recycling receptacles provided at camp sites & all preserves with developed facilities
- [Recycling of monofilament fishing line](#) at high volume fishing areas
- HQ employees collect plastic bags for reuse; when large amount accumulates they give them to the [People’s Resource Center](#), a local food bank, for use in distribution of donations
- Hosted free “[Recycling Extravaganza](#)” as part of “Eco 30: 30 Days of Living Green” event at Fullersburg Woods; drive-through event April 2014; [partnered with SCARCE](#). (May not become an annual event due to other recycling events emerging in area during April.)
- Recycling among employees increased by removing standard-sized trash bins & providing “mini-bins” for desks.

- Employee vermicomposting at Fullersburg Woods
- 2 compost bins in garden area at Fullersburg Woods for employees only; interested in extending this to the public
- Fullersburg staff conducted a public vermicomposting workshop as part of Eco 30 month (see below)
- HQ employees collect food scraps in temporary bins; transported when full to the District’s horse farm, to be composted with manure for use on fields, etc.
- Leaf composting & reuse of wood chips from dead trees within preserves
- Deadfall trees salvaged for firewood at campgrounds

School & Community Assistance for Recycling & Composting Education (SCARCE)



Contact Info

Special Events/Other Notes

• **Kay McKeen**, Founder & Executive Director, 630-545-9710, kay@scarce.org

• Seasonal activities, including pumpkin collections after Halloween, grease collection after Thanksgiving, holiday lights

Recycling




Composting



- Non-profit, assists with DuPage county “[Recycling Extravaganza](#)” events
- Coordinates collections of a wide variety of special waste streams, such as [waste vegetable oil for biodiesel production](#), holiday lights, etc.

- Coordinates collections of pumpkins for composting
- [Conducts composting workshops](#), including food scrap composting





Contact Info




Special Events/Other Notes

<p>Forest Preserve District of Kane County</p> 	<ul style="list-style-type: none"> • John Goreth, Director of Operations & Maintenance, 630-232-5983, gorethjohn@kaneforest.com • Laurie Metanchuk, Director of Community Affairs & Environmental Education, 630-232-3955, metanchuklaurie@kaneforest.com 	<ul style="list-style-type: none"> • No integration of recycling or composting requirement into permits. Wording in receipt/reservation confirmation that District encourages recycling at its facilities.
	Recycling	Composting
	<ul style="list-style-type: none"> • Blue 55 gallon recycling bins with lids are provided at each picnic shelter, rental facility & educational centers. • Recycling at picnic shelters is commingled; separated at rental facilities & ed centers. • Recycling dumpsters are strategically located throughout the District; staff empties blue bins into dumpsters. • Waste Management hauls trash & recycling; Charge \$30.00 for pick up on a 4-yard dumpster, \$27.00 for 2-yard dumpster 	<ul style="list-style-type: none"> • No composting program • District provides free wood chips to the public from felled trees
<p>Lake County Forest Preserves</p> 	Contact Info	Special Events/Other Notes
	<ul style="list-style-type: none"> • Nan Buckardt, Director, Environmental Education and Public Affairs, 847-968-3330, nbuckardt@LCFPD.org • Marie Shields, Green Committee, 847-968-3206 	<ul style="list-style-type: none"> • No integration of recycling or composting requirements into permits or approval of vendors/caterers
	Recycling	Composting
	<ul style="list-style-type: none"> • Commingled recycling bins provided at most facilities • Advanced Disposal is hauler 	<ul style="list-style-type: none"> • No composting available for either the public or employees
<p>McHenry County Conservation District</p> 	Contact Info	Special Events/Other Notes
	<ul style="list-style-type: none"> • John Kremer, Director of Operations & Public Safety, Brookdale Administrative Office, 815-338-6223, ext. 1223 • Karen Brabec, 815-338-6223 ext. 1211, kbrabec@mccdistrct.org • Lyn Drathing, 815-338-6223, ext. 1200, ldrathing@mccdistrct.org 	<ul style="list-style-type: none"> • No integration of recycling or composting requirements into camping or picnic shelter permits • District does not currently have an outside group rental program for facilities/rooms (no use of vendors)
	Recycling	Composting
	<ul style="list-style-type: none"> • Commingled recycling bins at facilities for public • Prairieland Disposal handles trash & recycling; District's monthly bill for both refuse & recycling at all facilities is approx. \$2900/mo. 	<ul style="list-style-type: none"> • No composting available for the public • Employees compost food scraps in small outdoor, side-of-the-building bins at Prairieview Education Center & Brookdale Administrative center. Project started by internal sustainability team. • Although MCC District does not use these services, Prairieland does offer collection of food

		scraps & stable wastes. They also have collection locations for unused, unwanted clothing in areas of the Greater Northern Suburbs.
Forest Preserve District of Will County 	Contact Info	Special Events/Other Notes
	<ul style="list-style-type: none"> • Cindy Cain, Public Information Officer, 815-722-5370, CCain@fpdwc.org 	<ul style="list-style-type: none"> • No integration of recycling or composting requirements into permitting for picnics, camping, or facility rental. Clients are encouraged to recycle, but it is not mandatory. • Repurposes special events banners into bags, pet bowls, wallets, and sunglasses cases, which they sell at Sugar Creek Admin. Center • Green construction & practices at Four Rivers Environmental Education Center • Green design features of Sugar Creek Administration Center
	Recycling	Composting
	<ul style="list-style-type: none"> • Plastic, glass, paper, & aluminum cans collected in public bins at preserves; FPDWC staff transport recyclables to a central dumpster which is picked up by Waste Management at an additional cost • WM charges FPDWC \$31.25 to empty an 8-yard dumpster of recyclables weekly. FPDWC has 7 dumpsters, but some are only emptied for a portion of the year. • The same materials are recycled internally at offices. • Partner with USAgain to provide 22 textile recycling bins at 19 preserves throughout the county • Provides residential electronics recycling at two of its visitor centers, in partnership with Will Co. Land Use Department. Vintage Tech is the recycler. 	<ul style="list-style-type: none"> • No composting program, either internal or public.
Village of Oak Park, IL 	Contact Info	Special Events/Other Notes
	<ul style="list-style-type: none"> • Mindy Agnew, Green Block Party & CompostAble Programs, 708-903-9033, mindy.agnew@outlook.com • Karen Rozmus, Solid Waste Manager, 708-358-5707, rozmus@oak-park.us 	<ul style="list-style-type: none"> • Green Block Party Program: Zero waste event program for indoor & outdoor events, year round. When someone signs up, a 96-gal. toter is delivered to site the day before the event. Also on the day before, Mindy sets up self-made signage & smaller waste stations. On the day of the event, Mindy trains “champions” about

		<p>where various items go; 3-bin stations (color-coded, green, blue, & black) are manned to decrease contamination. Champions are also given non-latex gloves & regularly check bins, extracting improperly disposed items. Signage is customized to situation/location. Amount recycled & composted (based on volume of full bags & # of bags collected) is tracked for events. Village residents pay nothing for a Green Block Party event; the Village uses grant funding to provide for this & other Keep Oak Park Beautiful initiatives.</p> <ul style="list-style-type: none"> • No requirements for recycling/composting for vendors at Village events, though it is strongly encouraged & programs are in place to assist • Work with school lunch rooms to reduce waste
	Recycling	Composting
	<ul style="list-style-type: none"> • Single-stream recycling; Waste Management is hauler • Electronics collection at Public Works; Vintage Tech is recycler. • Village public recycling guide 	<ul style="list-style-type: none"> • CompostAble Program: curb side pickup of organics, available to single-family and five-flat households using WM services. \$14/month charge for residents. Participants receive a 96-gallon cart for the weekly collection of organics, an under-sink collection bucket and a box of compostable bags for food scraps. Both food scraps (in compostable bags meeting ASTM 6400 standards) and yard waste may be placed in the organics cart. Multiple pricing plans available (allow neighbors to share refuse or organics totes). As an incentive, participants receive compost & mulch in spring & fall. • Also provide vermicomposting education for the public • Mindy Agnew works with Brookfield Zoo’s Green-CAP program (see above); composting is integrated into community garden projects.
Peer Institutions—Beyond IL		
	Contact Info	BMPs/Programs of Note

<p>Austin, TX Southern US</p> 	<ul style="list-style-type: none"> • eventrecycling@austinrecycles.com 	<ul style="list-style-type: none"> • Incentive based program. • Program also gathers data from qualifying events to use in developing best practices for future city policies. • Limit two rebates per applicant per year. • \$750 rebate available for the purchase of zero waste products
<p>Hennepin County, MN</p> <p>Midwest</p> 	<p style="text-align: center;">Contact Info</p> <ul style="list-style-type: none"> • Carolyn Collopy, Event Recycling Coordinator, 612-596-0993, carolyn.collopy@hennepin.us 	<p style="text-align: center;">BMPs/Programs of Note</p> <ul style="list-style-type: none"> • Public Space Recycling Grant Program geared toward park districts, municipalities, etc. Zero waste events & event venues is an objective for use of these funds. • Master Recycler/Composter Program. Participants commit to 30 hrs. volunteering with County. • Assistance provided to event coordinators, including portable bins, planning guide, collection options, downloadable signs, sample vendor communications, volunteer training, etc. • Free signage available to businesses within County. Some specifically for front and back of the house in kitchens, bars, & other food prep areas.
<p>Sustainable Fox Valley [WI]</p> <p>Midwest</p> 	<p style="text-align: center;">Contact Info</p> <ul style="list-style-type: none"> • Sustainable Fox Valley, Inc., 605 E Hancock St. Appleton, WI, 54911; 920-213-3362, info@sustainfv.org 	<p style="text-align: center;">BMPs/Programs of Note</p> <ul style="list-style-type: none"> • The Big Green Fest: Sustainable music festival at the Sunset Park amphitheater in Kimberly, WI. July 2014 was the 3rd yr. for this “near zero-waste event”; sustainable event policy • Area's first event to adhere to an internationally recognized framework for sustainability, the ISO 20121 Sustainable Event Management System Standard
<p>City of Boulder, CO</p> <p>Western US</p> 	<p style="text-align: center;">Contact Info</p> <ul style="list-style-type: none"> • City of Boulder Community Planning & Sustainability Dept., 1739 Broadway, Boulder, CO, 80302 • Kelle Boumansour, Residential Sustainability Specialist, 303-441-1940, Boumansourk@bouldercolorado.gov 	<p style="text-align: center;">BMPs/Programs of Note</p> <ul style="list-style-type: none"> • Zero waste required of all events open to the public in their parks; 80% compliance • 4 event management companies help event planners with compliance

	<ul style="list-style-type: none"> • Mary McKeehan, 303-413-7221, Mckeehanm@bouldercolorado.gov 	<ul style="list-style-type: none"> • \$250 rebate available for the purchase of zero waste products •
<p>City of Seattle, WA Pacific NW</p> 	<p style="text-align: center;">Contact Info</p> <ul style="list-style-type: none"> • Seattle Public Utilities, 700 Fifth Avenue, PO Box 34018, Seattle, WA 98124-4018, 206-684-3000 • (Richard) Dick Lilly, 206-615-0706, dick.lilly@Seattle.Gov 	<p style="text-align: center;">BMPs/Programs of Note</p> <ul style="list-style-type: none"> • 3 bin stations placed in highly trafficked parks only • 3 bin stations provided by city waste haulers (Recology & Waste Management) for large events, with signage & mobile frame; integrated in contract language • Working toward consistent signage throughout city for materials management across residential, commercial, & public spaces • Styrofoam, plastic water bottles, & single use bags are banned from the city • Food scraps banned from landfill by city ordinance
<p>Skagit County, WA Pacific NW</p> 	<p style="text-align: center;">Contact Info</p> <ul style="list-style-type: none"> • Ryan Walters, Sustainability Administrator, 1800 Continental Place, Ste. 100, Mount Vernon, WA, 98273; ryanw@co.skagit.wa.us 	<p style="text-align: center;">BMPs/Programs of Note</p> <ul style="list-style-type: none"> • Zero waste events rated as “silver” or “gold” if certain criteria are met • Provide logos & promotional materials to events to highlight waste reduction aspects • Free borrowing of portable waste bins & signs
<p>Portland, OR Pacific NW</p> 	<p style="text-align: center;">Contact Info</p> <ul style="list-style-type: none"> • Nate Forst, Research and Development Manager, Community Environmental Services, Portland State University, nforst@pdx.edu 	<p style="text-align: center;">BMPs/Programs of Note</p> <ul style="list-style-type: none"> • Provide free technical assistance to help event planners divert waste from the landfill. • Partnership between City of Portland and Portland State University

