

2014



PARK CITY SOLID WASTE AND RECYCLING BEST PRACTICES INVENTORY

Introduction and Project Background

Like many other U.S. cities, Park City, Utah recognizes the importance of taking a strategic, data-driven approach to selecting programs and policies that will benefit their communities. Park City elected officials and community members have prioritized environmental issues by forming an Office of Sustainability that works towards a variety of goals, including increasing recycling and waste diversion in future years.¹

Park City is similar to many other small- to medium-sized communities in the U.S. facing significant development and population growth: the number of homes in the counties surrounding Park City is projected to increase by up to 10,000 units in coming years.² The City also has many unique characteristics: it is a resort-oriented community famous for winter snow sports and the Sundance Film Festival, and hosting many other special events through the year including the U.S. Freeskiing Grand Prix, and the FIS Freestyle World Cup.³

As a growing community in the national spotlight, Park City recognizes the need to build upon the community's existing waste and recycling efforts. Park City works closely with Summit County, which oversees residential curbside garbage and recycling collection services from the franchised service provider, Republic Services. Republic Services provides weekly collection of residential garbage. Each residence also has a 90-gallon recycling cart, which Republic collects every-other-week. Republic's current residential recycling program accepts a range of materials including all plastics #1-7, aluminum and tin cans, newspaper, cardboard, and mixed paper.⁴ Residential curbside collection of yard waste is not available at this time; however residents may bring yard waste to a public drop-off center located at the Three Mile Canyon Landfill.⁵

Commercial garbage and recycling collection is considered open-market; businesses may select and contract with haulers directly for the collection of garbage and recyclables or they may elect to self-haul material directly to disposal or processing sites. Both residents and businesses have the option of bringing recyclables that are not accepted curbside to drop-off sites, the largest of which is operated by Recycle Utah, a nonprofit organization. Recycle Utah accepts all recyclables that Republic accepts in its curbside residential program, in addition to hard-to-recycle items that are not accepted curbside such as glass, sporting equipment, and Styrofoam.⁶ A small-scale commercial food waste collection program is in place at a number of Park City resorts; food waste from this program is being collected and processed by Park City Compost.

¹ www.parkcity.org/index.aspx?page=241

² Personal communication from PCMC staff

³ www.visitparkcity.com/events/annual-special-events/

⁴ http://www.co.summit.ut.us/waste-recycle/downloads/Curbside_Pickup_Recycle_Packet.pdf

⁵ <http://www.parkcity.org/index.aspx?page=243>

⁶ http://recycleutah.org/materials_accepted.html

Park City Municipal Corporation (PCMC) produces some recycling and waste prevention educational tools and resources in collaboration with the Park City Community Foundation (PCCF) and Recycle Utah. PCMC and the PCCF have partnered to create and manage an easy-to-navigate webpage, ParkCityGreen.org, where residents and businesses can find environmental information and resources spanning energy, water, waste, and other resource conservation practices. ParkCityGreen.org includes pages dedicated to both business and at-home recycling information, including everything from resources for hiring a hauler for commercial recycling pick-up to information about residential junk mail opt-out. Recycle Utah also produces educational tools and resources relevant to Park City, including on-site composting workshops for residents and businesses. Summit County has recently introduced SummitCountyRecycles.org as an additional resource.

In an effort to ultimately increase waste diversion from both residents and businesses, PCMC has partnered with Cascadia Consulting Group (Cascadia) to conduct a study to estimate and assess the potential growth of its waste stream and identify existing diversion opportunities. Specifically, Cascadia obtained waste disposal and recycling data for the residential and commercial sectors from local haulers and processors to model Park City's waste stream quantity and composition. The model estimates that Park City is currently diverting 25% of the community's total waste stream through its recycling and composting programs. Cascadia provided an Excel model that PCMC can use to project disposal over time. PCMC will use this data to frame regional priorities for waste generation, diversion, and disposal.

Additionally, PCMC has requested that Cascadia document recommended best practices for solid waste, recycling, and diversion informed by the estimated residential and commercial composition of Park City's disposed waste. The City will share service and collection recommendations with Summit County for consideration in future collection agreements.

Cascadia assembled a list of recycling, composting, waste prevention, and other diversion best practices recommended for implementation by PCMC. These practices are informed by the results of the waste modeling projections, as well as Cascadia's experience working with communities similar in size and demographics to Park City and its surrounding counties. Cascadia has categorized recommendations by best practice types including: collection service, infrastructure, collection technology, education, regulation, and financial incentive.

Other key considerations specific to Park City that inform and shape these waste diversion recommendations include:

- **Resort, tourism, and service-based economy.** Many businesses in Park City depend on tourism, including a high percentage of restaurants, recreation, and lodging properties.⁷
- **Highly transitory population.** As a resort town with a tourism-based economy, Park City has a large transitory population. Approximately 60% of all homes are owned by secondary homeowners, with nearly one third of those owners living out of state.⁸

⁷ <http://www.visitparkcity.com/includes/media/docs/POPULATION-2014.pdf>

⁸ <http://www.visitparkcity.com/includes/media/docs/POPULATION-2014.pdf>

To the greatest extent possible, Cascadia has also flagged relevant best practices that have been implemented in communities that make up the Western Adaptation Alliance (WAA), including: Flagstaff, Phoenix, and Tucson, AZ; Aspen, Boulder City & County, City and County of Denver, and Fort Collins, CO; Las Vegas, NV; Santa Fe, NM; and Salt Lake City, UT.⁹ These communities, spanning five states, network and share best practices regarding sustainable development in arid region urban adaptation.⁵

The remainder of this report includes a brief summary of the waste model findings and recommended diversion strategies.

Findings

Priority Materials for Residential and Commercial Diversion

Cascadia used waste characterization data from communities with similar demographics, census data, and data provided by Park City's local haulers and processors to model estimated generation rates for specific materials in the PCMC residential and commercial waste streams.

Park City's overall waste generation is nearly evenly split between the residential and commercial sectors: residential generation accounts for approximately 45% of total generation and commercial generation accounts for 55%. Combined, the residential and commercial sectors divert about a quarter of the materials they generate: the residential sector diverts approximately 49% of its generated materials, and the commercial sector diverts about 5% of its generated materials. See Figure 1 and Figure 2 for more details about residential and commercial generation by recoverability group.

⁹ http://www.iscvt.org/where_we_work/usa/article/waa/

Figure 1. Estimate of Residential Generation by Recoverability Group

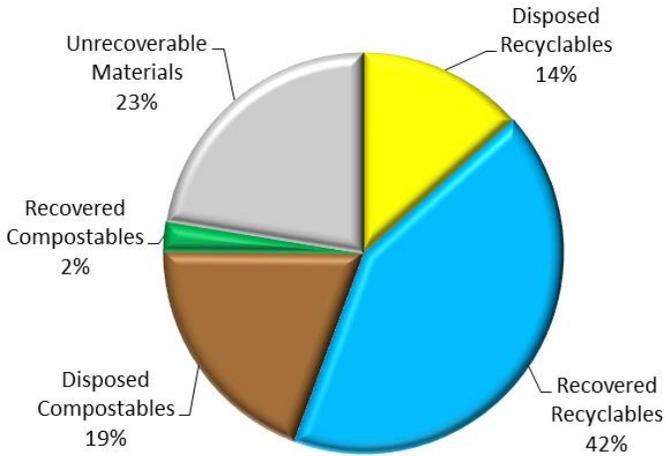
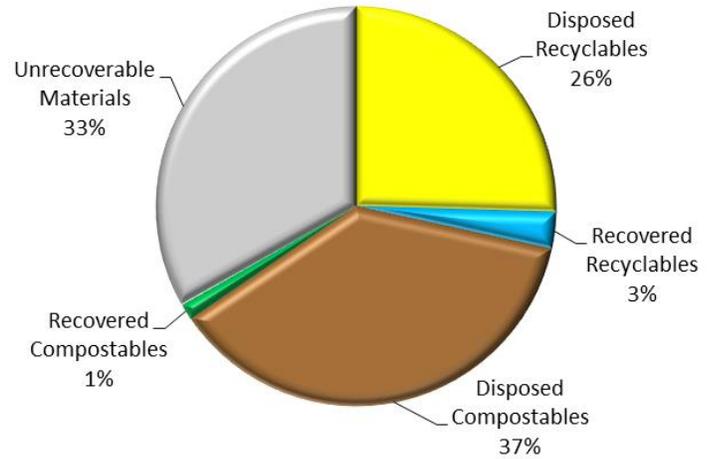


Figure 2. Estimate of Commercial Generation by Recoverability Group



From the modeling and based upon opportunity for diversion, Cascadia identified the following priority materials to target in residential diversion strategies:

1. Food and food-soiled paper
2. Mixed paper
3. Yard waste
4. Cardboard/kraft paper

We estimate that these four material types comprise nearly 50% of Park City’s estimated residential generation.¹⁰

The four material types that Cascadia has identified as priority materials to target in commercial diversion strategies include:

1. Food and food soiled paper
2. Mixed paper
3. Cardboard/kraft paper
4. Newspaper

We estimate that these materials account for more than 55% of the commercial generation.

¹⁰ Glass is one of the most prevalent material types in the residential generation, however, there are not as many opportunities to economically recycle glass so it was not identified at this time as material to prioritize for diversion.

Conclusions

Three key conclusions from the modeling are:

1. Diverting food and food soiled paper from the waste stream could reduce residential garbage disposal by as much as 27% and commercial garbage disposal by as much as 37%.
2. Approximately one quarter of the currently disposed commercial waste is made up of materials accepted in Park City's curbside recycling program.
3. Four material types account for more than half of total generation in both the residential and commercial sectors.

Recommended Strategies

Pairing current waste services and diversion efforts with a mixture of other strategies such as education and outreach, waste infrastructure changes, financial incentives, and regulation tailored to the individual waste streams could accelerate Park City progress towards their waste diversion goals. The following strategies for increasing diversion and waste prevention and were designed to target the top four materials found in the Residential and Commercial generation. Though the waste modeling did not address disposed waste from multifamily residences and events, we have included strategies for diverting materials from those streams as well. Other WAA cities that have adopted these practices are noted in the last column of these tables with the following abbreviations: "F" for Flagstaff, "P" for Phoenix, "T" for Tucson, "A" for Aspen, "BC" for Boulder City & County, "D" for City and County of Denver, "FC" for Fort Collins, "LV" for Las Vegas; "SF" for Santa Fe, and "SL" for Salt Lake City. The WAA information was collected from member city websites.

Increase Residential Recycling, Composting, and Waste Prevention

Residential Curbside Recycling, Composting, and Waste Prevention			Target Material	WAA Cities
Practice Type	Strategy Name	Description		
Collection Service	Review curbside collection frequency	Revisit curbside collection frequency. Consider studying user behavior and determine if alternative collection frequencies would positively impact diversion (i.e. every-other-week garbage; weekly recycling)	1-5	
Collection Service	Add curbside yard waste collection	Work with Summit County and contracted hauler to offer a curbside yard waste collection option when/if processing services can accommodate the material. When processing capabilities allow, add food scraps to yard waste.	1 & 3	A, D BC, FC, SL
Education	Educational materials	<ul style="list-style-type: none"> • Work with hauler and County to ensure all educational materials use consistent terms, colors, materials lists, photo images, and messages. • Increase use of visuals in educational materials and signage. • Hauler or City should mail recycling guidelines annually (with collection calendar) to all existing and new accounts. 	1-5	D, FC, SL
Education	Outreach to multicultural communities	Develop effective outreach materials for limited English-speaking multi-cultural residents. Transcribe materials for cultural relevancy. (Note: According to Census Bureau data, an estimated 18% of Park City residents speak a language other than English at home and 24% of the population identifies as Hispanic or Latino) ¹¹ .	1-5	P, SF
Education	Continue to promote onsite composting	Continue City partnerships with Recycle Utah on natural yard care. Continue to promote grasscycling and onsite composting. Explore opportunities to subsidize cost of home compost kits and mulching mowers.	1 & 3	A, BC, D, FC
Education	Promote food waste reduction and prevention	Consider outreach efforts aimed at food waste source reduction or prevention. Implementation of such a campaign may include a social media component and key promotional partnerships with Park City resorts that are successfully reducing and preventing food waste.	1	A, FC
Education	Work community-wide to promote paper reduction and recycling	Mixed paper represents a major diversion opportunity for both the residential and commercial sector. Consider developing a paper recycling/reduction campaign that addresses behavior at home and at work using a CBSM model.	2, 4, 5	P, D
Financial Incentive	Rate structure review for collection	Work with Summit County to review the rate structure to support and balance key waste prevention, recycling and composting, cost recovery, and equity goals.	1-5	T, FC, SL

¹¹ <http://quickfacts.census.gov/qfd/states/49/4958070.html>

Residential Curbside Recycling, Composting, and Waste Prevention			Target Material	WAA Cities
Practice Type	Strategy Name	Description		
Regulation	[LONG TERM] Ban disposal of recyclables	After ensuring all residents have curbside recycling, consider establishing an ordinance banning the disposal of common curbside recyclables in the garbage. Develop enforcement mechanism; consider fines for recyclables found in garbage.	2, 4, 5	FC

Increase Commercial Recycling, Composting, and Waste Prevention

Commercial Recycling, Composting, and Waste Prevention			Target Material	WAA Cities
Practice Type	Strategy Name	Description		
Collection Service	Work with haulers to expand existing food waste collection service	<ul style="list-style-type: none"> Work with haulers to expand food waste collection to restaurants, grocery stores, schools, and other food generators. Work with the County to ensure that even small businesses have access to affordable food waste collection. Encourage cart-based food waste collection for smaller food-related businesses, especially if residential curbside organics collection becomes available as part of the next hauling contract. 	1 & 4	A, SF, SL
Collection Service	Extend current residential commingled recycling collection service to businesses	<ul style="list-style-type: none"> Work with County and hauler to offer the same cart-based commingled recycling service as is currently offered to residential customers as an affordable alternative for small businesses. 	2, 3, 5	T, F, A, BC, D, SF, SL
Education and Outreach	Expand on-site technical assistance to promote recycling and composting	<p>Provide and promote availability of on-site technical assistance to businesses. Recommended elements are:</p> <ul style="list-style-type: none"> Targeted outreach based on one or more of the following: <ul style="list-style-type: none"> Light-touch visits to all businesses in dense business areas Sector-based outreach focusing on priority materials Educational materials, as described below 	1-5	T, A, BC, FC

Commercial Recycling, Composting, and Waste Prevention			Target Material	WAA Cities
Practice Type	Strategy Name	Description		
Education and Outreach	Expand materials for technical assistance and education	<p>Expand materials for technical assistance and education by:</p> <ul style="list-style-type: none"> • Developing or obtaining a tool for quick on-site waste audits to provide instant feedback and recommendations. Topics to cover: <ul style="list-style-type: none"> ○ Materials in waste and recycling ○ Containers, service levels, costs, and appropriate contact (confirm and adjust if needed) ○ Review indoor and outdoor collection containers, locations, color-coding, and signage ○ Recycling opportunities and cost savings • Coordinating with existing recycling collectors to provide information on services and costs to businesses. • Developing free city resources to offer during site visits such as signage, container decals, posters, and indoor collection containers. • Developing case studies of businesses that have reduced waste and saved money through waste reduction and diversion programs. • Developing tools to support green teams and green champions within businesses. • Building on existing City, County, Park City Chamber of Commerce, or Recycle Utah websites and social media. However, do not develop new social media accounts just for one program. Use social media sites to “check in” at businesses during site visits, share photographs, and praise businesses that are doing well or have improved. 	1-5	T, A, BC, FC
Education and Outreach	Explore integrated on-site technical assistance	<ul style="list-style-type: none"> • Explore coordinating with other City departments and utilities to offer integrated assistance for targeted sectors; for example, food service businesses often have waste, water, and energy conservation opportunities and may have stormwater issues. One lower cost option is to cross-train City outreach staff to recognize the most common conservation opportunities to provide referrals to other departments. 	1-5	FC, A
Education and Outreach	Explore development of a recognition program	<ul style="list-style-type: none"> • Explore development of a recognition program that rewards businesses with effective recycling and/or food waste collection programs with free promotion and marketing of green actions. • Develop potential partnership with an existing business association such as the Park City Chamber of Commerce, especially as a promotional partner. 	1-5	A, SF

Commercial Recycling, Composting, and Waste Prevention			Target Material	WAA Cities
Practice Type	Strategy Name	Description		
Regulation	[LONG TERM] Ban disposal of key recyclable materials	<ul style="list-style-type: none"> After ensuring that recycling services are readily available to all businesses, ban the disposal of key recyclable materials, adding materials in phases. Start with high-grade paper and cardboard because they are clean and easy, then add other key materials such as aluminum cans, plastic bottles, and steel cans. 	2, 3, 5	FC
Regulation	[LONG TERM] Require commercial property owners and businesses to arrange for recycling collection service (subscription or self-haul)	<ul style="list-style-type: none"> Require property owners to provide recycling collection service OR demonstrate self-hauling to a recycling facility. <ul style="list-style-type: none"> An alternative option is to require subscription for only large generators (such as businesses subscribing to 4 yards or more of collection service per week). Ordinance should require property owners and businesses to provide color-coded and clearly labeled indoor and outdoor containers, clear signage, and tenant and employee education. (Note: Mandatory recycling ordinances have been used by Seattle and many municipalities in California.) 	2, 3, 5	
Waste Prevention and Reuse	Promote edible food donation	<ul style="list-style-type: none"> Partner with hunger relief organizations to facilitate donation of edible food from grocery stores, restaurants, and other food service businesses. 	1	FC

Increase Multifamily Recycling, Composting, and Waste Prevention

Multifamily Recycling, Composting, and Waste Prevention			Target Material	WAA Cities
Practice Type	Strategy Name	Description		
Infrastructure / Collection Services	Implement on-site infrastructure best practices	Dedicate PCMC outreach staff to work with hauler to implement a bundle of on-site best practices to make it easier for residents to recycle, including: <ul style="list-style-type: none"> • Co-locating garbage and recycling containers; • Color-coding containers, with recycling containers painted blue; and • Ensuring containers are labeled (on multiple sides as needed) with large, image-based container decals that identify the container as recycling or garbage. 	1-5	A, SL
Education	Provide on-site technical assistance	Help property managers and owners determine the recycling service level that allows for an adequate level of recycling capacity. At least 30% recycling service to 70% garbage service based on experience at other multifamily properties.	1-5	T, FC
Education	Conduct annual multifamily outreach	Conduct annual outreach to multifamily complexes. Key elements include: <ul style="list-style-type: none"> • Maintaining a multifamily complex database with contact information for property manager or condominium board members (update database annually) and data on unit counts, occupancy, and current service levels. • Engaging property managers or condominium board members to obtain their assistance reaching residents and to offer assistance optimizing recycling and garbage service levels. • Ensuring outdoor containers are consistently color-coded (i.e., standardize recycling carts to be all dark blue) and clearly labeled with pictures of accepted and prohibited materials. • Conducting door-to-door outreach with bilingual outreach staff to provide face-to-face education, recycling guidelines sheet (with pictures), and recycling tote bags (for collecting and transporting recyclables). • Recruiting and training one multifamily resident in each complex to serve as volunteer recycling ambassadors who monitor the outdoor waste containers and help educate fellow residents (especially new residents). <p>(Notes: could use summer interns, partnerships with community based organizations, or contractors for door-to-door outreach.)</p>	1-5	FC

Multifamily Recycling, Composting, and Waste Prevention			Target Material	WAA Cities
Practice Type	Strategy Name	Description		
Infrastructure	Bulky item reuse, refurbishment, and recycling	<ul style="list-style-type: none"> Connect property managers with local reuse organizations and recyclers to offer free or low-cost curbside collection of appliances and other bulky items for recycling and reuse. Encourage property managers to include a drop-off opportunity at their existing community events. Provide information to property managers and develop printed materials they can provide to residents who are moving in or out. Explore whether some multifamily complexes have certain high-turnover periods in which hosting a special collection event would be worthwhile. 	N/A	FC
Regulation	[LONG TERM] Require multifamily complexes to arrange for recycling collection service (subscription or self-haul)	<ul style="list-style-type: none"> Require multifamily complexes to provide recycling collection containers that are color-coded, clearly labeled with images, co-located with garbage containers, and adequate to serve the number of tenants onsite. Require complexes to provide recycling collection service OR demonstrate self-hauling to a recycling facility. 	1-5	
Regulation	[LONG TERM] Ban disposal of key recyclable materials	Establish an ordinance banning the disposal of common curbside recyclables in the garbage at multifamily residences.	2, 4, 5	
Education	Outreach to multicultural communities	<p>Develop effective outreach strategies and materials for limited-English multi-cultural communities:</p> <ul style="list-style-type: none"> Use image-based signage and educational materials to cross language barriers. Engage individuals from targeted cultural communities to provide input on the design of outreach strategies and educational materials, as well as to provide face-to-face outreach (e.g., at public events or through door-to-door outreach). <p>(Note: According to Census Bureau data, an estimated 18% of Park City residents speak a language other than English at home and 24% of the population identifies as Hispanic or Latino).¹²</p>	1-5	

¹² <http://quickfacts.census.gov/qfd/states/49/4958070.html>

Increase Event Recycling, Composting, and Waste Prevention

Event Recycling, Composting, and Waste Prevention			Target Material	WAA Cities
Practice Type	Strategy Name	Description		
Collection	Provide recycling collection best practice resources to event organizers	Provide collection best practices to event organizers; including tips for: <ul style="list-style-type: none"> Ensuring that high-traffic areas have sufficient recycling capacity by increasing the number of stations in these areas. Designating a sufficient number of stations per event. Consider waste generation levels for each event, and identify a number of recycling/garbage stations that should be available per hundred attendees. Depending on event size and generation levels, this may be one station per hundred attendees. 	2, 3, 5	A, BC, SL
Collection	Consider piloting food waste collection	Work with event organizers to pilot back-of-house food waste collection programs.	1	BC
Collection, Education	Create stations with co-located, color-coded bins	Create special educational resources for events that can be customized by event organizers with specific materials, logos, etc. Ensure that signage uses consistent color-coding for effective collection. Utilize blue recycling bins placed next to trash cans to reduce contamination and make recycling convenient for attendees. Make sure recycling bins are clearly distinct from the trash bins by using blue color-coding, recycling signage.	2, 3, 5	A, SL
Education	Help develop event recycling volunteer network	Help event organizers recruit and train a network of volunteers (potentially high school students) to staff recycling stations in high-traffic areas at major events. Make sure each volunteer knows which materials can be recycled and where recycling stations are located. Request that event organizers provide incentives such as discounted or free event admission to volunteers.	2, 3, 5	A
Education	Work with events to set annual recycling goals	Help event organizers communicate recycling goals to attendees. A waste diversion goal, or simply a goal to recycle more of a certain item such as bottles, cans, or paper, is a great way to prioritize actions, get internal staff behind recycling, and inspire event attendees to join in the effort.	2, 3, 5	BC
Education	Provide onsite technical assistance to event organizers	Provide onsite technical assistance to event organizers to help them plan for effective recycling collection, including infrastructure and educational tools such as signage. If resources exist, consider offering recycling training to event vendors.	1-5	BC

Event Recycling, Composting, and Waste Prevention			Target Material	WAA Cities
Practice Type	Strategy Name	Description		
Regulation	Require event organizers to provide recycling at public events with over 50 attendees	<p>Require events with over 50 attendees to provide recycling collection.</p> <p>The City may consider developing a template contract for event organizers to use with vendors, requiring vendors to participate in the event’s recycling and waste prevention efforts. Such a contract may encourage vendors to use recycling and waste prevention strategies, and can help vendors plan their activities and purchase appropriate containers to meet event guidelines.</p>	2, 3, 5	SL
Education	Include recycling/garbage procedures in the vendor handbook	City may encourage event organizers to use their vendor handbook to explain the importance of recycling, and to make sure vendors know which items are recyclable at Park City events.	2, 3, 5	

Additional Resources and Samples

Residential	Link	Description of Resources, Samples
Commercial	Link	Description of Resources, Samples
	http://resourceventure.org/foodpluscompostables	
	http://www.calrecycle.ca.gov/recycle/commercial/	
	http://www.kirklandwa.gov/Community/Kirkland_Green/Green_Business_Program.htm	
	http://www.epa.gov/foodrecovery/	
Multifamily	Link	Description of Resources, Samples
	http://www.rethinkwaste.org/residents/multi-family-residences/property-owners-managers	Information, tools, and ideas from the South Bayside Waste Management District (San Mateo County, CA).
	http://wmnorthwest.com/2012summary/multifamily2.htm	Link to an internal multifamily recycling best practices study conducted by Cascadia Consulting for Waste Management in 2012.
	http://www1.toronto.ca/wps/portal/contentonly?vgnnextoid=9a40d187c3b02410VgnVCM10000071d60f89RCRD&vgnnextchannel=e54c433112b02410VgnVCM10000071d60f89RCRD&vgnnextfmt=default	Link to Toronto's 3Rs Ambassador Volunteer Program, that trains and provides tools and resources to multifamily residents that volunteer to lead recycling efforts at their complex.
Events	Link	Description of Resources, Samples
	http://americarecyclesday.org/recyclingatfairs	
	http://www.stopwaste.org/docs/specialevents-	

[swp.pdf](#)

<https://www.folsom.ca.us/documents/PDFA4.pdf>

<http://americarecyclesday.org/wp-content/uploads/2013/11/Green-Events-Planning-Guide-2011.pdf>