

Public Education and Outreach for Recycling Consortium

Montgomery County Recycling Consortium
Borough of Hatboro
414 S. York Rd
Hatboro, PA 19040

SCS ENGINEERS

02217011.01 – Task 41 | September 30, 2021

11260 Roger Bacon Drive
Reston, VA 20190
703-471-6150

Table of Contents

Section	Page
1 Project Description	1
2 Summary of Work	1
3 Current Program	2
Overview	2
4 Findings	6
Best Practices for Education	6
Example Program Elements	7
Recycling Guide	7
Notification Systems	9
Mascots.....	10
Social Media	12
Face-to-Face Interaction	12
Recycling Apps	13
Options.....	13
Considerations.....	16
5 Conclusion	17

Tables

Table 1.	Consortium Member Recycling Program Specifics.....	3
Table 2.	Components of Each Consortium Member’s Recycling Education Program.....	4

Figures

Figure 1.	Cheltenham Township Recycling Guide.....	8
Figure 2.	Cheltenham Township E-Notification Screenshot.....	9
Figure 3.	Upper Moreland Township Notification System Screenshot.....	10
Figure 4.	Examples of Recycling Mascots	11
Figure 5.	iRecycle Interface.....	15
Figure 6.	Recycle Nation Interface	16

Appendices

- Appendix A – Municipal Recycling Requirements from Act 101
 - Appendix B – Example Recycling Graphics
-

1 PROJECT DESCRIPTION

The Borough of Hatboro is an Act 101 mandated recycling community. The Borough collects single-stream recyclable materials curbside from about 2,400 households on a weekly basis. The Borough is part of the Montgomery County Recycling Consortium (Consortium) that comprises seven municipalities, including: Abington, Cheltenham, Hatboro, Plymouth, Springfield, Upper Dublin and Upper Moreland. The Consortium owns a transfer station in Upper Dublin Township where recyclable materials collected by all Consortium communities are consolidated prior to being transported to a processing facility in Birdsboro. The Consortium contracts with a private company to process the materials under a long-term contract that is currently being re-bid. Approximately 15,000 tons of recyclable materials are brought to the transfer station annually by Consortium member communities.

Recycling technical assistance was requested to provide guidance on recycling education as it is a critical component of each community's program to reduce contamination and help residents properly prepare materials for recycling. The Consortium originally anticipated having selected a new recyclable materials processor by September 2021; however, due to circumstances outside their control the procurement process is still ongoing. Thus, the scope of work was modified slightly to provide some best practices in recycling education along with example recycling education program case studies. Additionally, SCS identified some recycling web-based applications (Apps) and evaluated their applicability for use by Consortium member communities.

2 SUMMARY OF WORK

The following summarizes the tasks completed for this project.

Task 1 – Data Collection and Site Visit

For this task, SCS Engineers staff met with Consortium staff to discuss the scope of work for this project. Additionally, SCS visited and interviewed the Consortium's current material processor (J.P. Mascaro) to understand contamination or other recycling issues that may be mitigated through improved education and outreach by Consortium members.

Task 2 – Review Existing Educational Materials

This task included the review of select educational and outreach materials used and distributed by each Consortium community member. Educational materials reviewed included websites, flyers/annual mailings, and social media posts. Unique educational activities were noted and included in the case study section of this report.

Task 3 – Recommend Education and Outreach Program Improvements

For this task, SCS provided the following information for Consortium members to consider:

- **Best Practices** – Drawing on our decades of experience supporting recycling education programs, we identified key best practices for Consortium members to consider as they continue recycling education activities.
- **Example Program Elements** – SCS identified example community recycling education programs that have unique and effective features that could be implemented in communities across the Consortium. Case studies include examples from Consortium members and other communities throughout the state.

- **Recycling Apps** – More and more communities are using recycling apps to help residents recycle correctly. SCS identified some apps in use that could be used by Consortium members.

Task 4 – Final Report

Information, data, and recommendations obtained and identified as part of Tasks 1-3 are included in this report.

3 CURRENT PROGRAM

OVERVIEW

The seven municipalities that comprise the Consortium each provide direct solid waste and recycling collection services to residents in their respective jurisdiction. Recyclable materials are collected using municipal equipment and collection crews. Six of the seven municipalities collect materials using a single stream collection program. The seventh municipality, Abington Township, utilizes a dual stream collection system whereby paper materials (including cardboard) are collected in one cart while plastic containers, metal cans, and glass bottles are collected separately in a different cart.

Consortium members direct-haul single-stream recyclable materials to the Consortium owned recycling transfer station located at 1030 Fitzwatertown Road in Abington Township. Abington Township, operating a dual-stream collection program, direct hauls their mixed containers to the recycling transfer station, while paper is transported to their Public Works Facility for consolidation in transfer trailers for shipping to Newman and Company, Inc. in Philadelphia. After consolidation of single stream materials at the transfer station into open top trailers, recyclable materials are transported to Total Recycle, Inc. in Birdsboro where the materials are then sorted, baled, and marketed.

The Borough, along with other consortium members, experienced an increase in their processing rate for recyclable materials of nearly 37 percent from \$98.78 per ton to \$135 per ton. In addition, the cost to dispose of residue from recyclable materials increased from \$80 to \$84 per ton. The rising processing and collection costs, together with contamination issues and the depressed recycling market, necessitated a closer examination of the way the Borough and other consortium members collect and process recyclable materials.

Table 1 summarizes the characteristics of each Consortium member’s municipal recycling program. **Table 2** provides a summary of each Consortium members recycling education program, which includes key elements, effective features, and potential opportunities for improvement.

Table 1. Consortium Member Recycling Program Specifics

Consortium Member	Households Served	Program Type	Automated or Manual	Containers	Collection Frequency	2019 Recycling Quantities (tons)
Abington	18,200	Dual Stream	Automated	35- or 65-gallon carts	Weekly	2,910
Cheltenham	9,467	Single Stream	Automated	35-, 65-, or 95-gallon carts	Weekly	3,008
Hatboro	2,200	Single Stream	Manual	32-gallon containers	Weekly	660
Plymouth	4,900	Single Stream	Manual	32-gallon containers	Weekly	1,265
Springfield	6,900	Single Stream	Manual	32-gallon containers	Weekly	2,222
Upper Dublin ¹	8,500	Single Stream	Automated	64-gallon carts	Weekly	2,803
Upper Moreland	7,200	Single Stream	Automated	96-gallon carts	Weekly	2,029
Totals	57,367					14,897

¹ Upper Dublin operates a cardboard only collection route one day per week in addition to two recycling routes four days per week.

Table 2. Components of Each Consortium Member's Recycling Education Program

Consortium Member	Key Educational Program Elements	Model Educational Program Aspects	Potential Educational Program Improvements	Website
Abington	<ul style="list-style-type: none"> • Website • Facebook • Twitter • YouTube 	<ul style="list-style-type: none"> • Useful FAQs • Website organized well and easy to navigate 	Include graphics for residents to easily understand materials that can/cannot be recycled	https://www.abingtonpa.gov/departments/recycling
Cheltenham	<ul style="list-style-type: none"> • Website • Facebook 	<ul style="list-style-type: none"> • Relevant information that is easy to understand • Includes graphics that are simplistic and informational • Uses bullets and numbers for ease of reading • Website includes processors "Dirty Dozen" handout 	Expand social media presence	https://www.cheltenhamtownship.org/pview.aspx?id=3299&catid=29
Hatboro	<ul style="list-style-type: none"> • Website • Facebook • Bindy – Recycling Mascot 	<ul style="list-style-type: none"> • Simple and easy to navigate website with relevant information • Bindy is a creative mascot that makes program unique 	Include additional details on preparation instructions; include recycling graphics in addition to words/narrative	https://myhatboro.org/public-works/recycling/
Plymouth	<ul style="list-style-type: none"> • Website 	<ul style="list-style-type: none"> • Contains recycling day information 	Lots of words; could use bullets and visuals on website	https://www.plymouthConsortium.org/dpw

Consortium Member	Key Educational Program Elements	Model Educational Program Aspects	Potential Educational Program Improvements	Website
Springfield	<ul style="list-style-type: none"> • Website • Facebook • Instagram • YouTube 	<ul style="list-style-type: none"> • Organized website • Clear instructions on managing specific materials • Includes video of sorting processes at recycling center 	<p>Include informational graphics for acceptable and non-acceptable materials</p>	<p>https://www.springfieldmontco.org/departments/public-works/trash-recycling/</p>
Upper Dublin	<ul style="list-style-type: none"> • Website • E-newsletter for info government wide, citizen engagement center 	<ul style="list-style-type: none"> • Multiple Waste guides • Clear website • Good use of processing video • 	<ul style="list-style-type: none"> • Use visuals • Expand social media presence 	<p>https://www.upperdublin.net/departments/public-works/recycling/</p>
Upper Moreland	<ul style="list-style-type: none"> • Website 	<ul style="list-style-type: none"> • Organized website • Detailed FAQs page • Specific information on preparation instructions 	<p>Include more graphics to the detailed information to increase awareness; consider consolidating some webpages into one (i.e. one webpage that has the details for all program acceptable materials)</p>	<p>https://www.uppermoreland.org/181/Recycling-Regulations</p>

4 FINDINGS

Public education and outreach are central to the success of each Consortium member’s recycling program. Recycling education is also required by Act 101 to occur at least two times each calendar year at six-month intervals. Consortium members are in a unique position to update their educational materials with the anticipated selection of a new material processor in the fall of 2021. Updating recycling education programs provides an opportunity to refresh and expand existing activities and implement new ideas. It also provides an opportunity for a more coordinated recycling education program among Consortium member communities. A new processing contract also allows Consortium members to start fresh and establish an effective partnership with the processor to reduce recycling contamination and facilitate the proper preparation of materials, thereby reducing costs for the processor and Consortium members. This section contains ideas and options that could be implemented in each community’s specific education program. This section is organized as follows: 1) Best Practices; 2) Example Materials; and 3) Recycling Apps

BEST PRACTICES FOR EDUCATION

Based on SCS’ extensive decades-long experience assisting communities with recycling education, SCS provides the following best practices for each Consortium member to consider as they evaluate their current education program and strive for increased effectiveness. These best practices include:

- Consistent** – The programs within the Consortium can share information and language, which would help facilitate consistency. This is useful as residents from each community may live, work, and/or shop in different places. No matter what community they are in the same consistent recycling messages would be seen and heard. Even though recycling programs in all Consortium member communities are not identical, educational materials can still be consistent and have the same look and feel.
- Clear** – Clear educational materials that provide relevant information on accepted recyclable materials and proper preparation guidelines gives residents the information needed to successfully participate in the program. Consortium members should refrain from using industry jargon or acronyms in recycling education materials. Language and visuals used should only include simple, clear text
- Visual Appeal** – Consortium members should use simple, visually appealing graphics to reinforce recycling messages. Graphics must also be clear and often can be used to supplement or compliment narratives describing acceptable recyclable materials or proper preparation instructions. Appendix B includes sample recycling graphics that were created using the tools and resources from the Recycling Partnership.¹



¹ <https://recyclingpartnership.org/>

- **Concise** – Recycling education materials must be concise and not contain added words or information that could make understanding the material’s message more difficult. Oftentimes, educational materials can become cluttered and busy when too much information is provided. Consortium members should aim to produce educational materials that are concise and easy to read and understand.
- **Accessible** – A good practice for recycling education is to make materials accessible. This includes providing recycling information in easy to locate places on a website, newsletter/flyer, or on social media. Additionally, Consortium members may consider producing educational material, such as a refrigerator magnet, that can be distributed to residents for placement in an easy-to-find or convenient location. Recycling information that is hard to find will result in residents giving up and deciding on their own how to participate in a recycling program.
- **Target Businesses** – Consortium members should consider developing and distributing separate educational materials for business owners and entities. Act 101 recycling requirements for businesses are different than for residents. Additionally, businesses in most Consortium member jurisdictions are serviced by the private sector and not the municipality. These differences require separate recycling education activities be completed in order to provide tailored recycling education to the business community.
- **Multi-Media** – Consortium members should use multiple media outlets such as newsletters, social media, billing and newspaper inserts, and websites to communicate about recycling education. Using a variety of media to educate the public about recycling increases the impact of the recycling education program by reaching more residents who obtain information in different ways.
- **Face-to-Face Interaction**– Communities in the Consortium should identify opportunities to meet face-to-face with residents and business owners to encourage recycling. Similar to why politicians hold rallies and knock on doors, face-to-face interaction is effective at prompting people to action! Meeting with residents face-to-face is an important way to educate people in the Consortium on how to recycle. Face-to-face interaction can be at community events or festivals, presentations in schools, or participation in meetings held by local non-profit entities such as the local Rotary Club or Chamber of Commerce.

EXAMPLE PROGRAM ELEMENTS

Recycling Guide

A recycling guide is an easy to understand tool that communities can use to encourage recycling. Recycling guides can take on many different forms, but should be simple, visually attractive, and convey concise messages. In an effort to keep recycling guides concise, the guide can direct residents or business owners to other sources (i.e. website) for more detailed recycling information. Cheltenham Township developed a simple visually-attractive one-page recycling guide to distribute to residents. The guide provides the list of materials that are accepted as part of the Township’s curbside recycling program along with a list of materials that are not acceptable. The guide provides the contact information for the Township if there are questions and a link to the Township’s website for additional information on recycling. **Figure 1** includes Cheltenham Township’s recycling guide.

Figure 1. Cheltenham Township Recycling Guide

CHELtenham TOWNSHIP GUIDE TO SINGLE STREAM RECYCLING

Plastics #1 - #7
(Jugs, bottles, etc.)

Aluminum & Metal Cans

Paper
(Office Paper, Junk Mail & Newspaper, etc)

Glass Bottles & Jars

Cardboard & Food Boxes

Magazines, Cartons & Aseptics

THE FOLLOWING ITEMS SHOULD NOT BE INCLUDED IN SINGLE STREAM

- Plastic Bags
- Scrap Metal
- Window Panes Or Mirrors
- Ceramics Or Dishware
- Bio-Hazardous Waste
- Electronic Waste
- Paint, Pesticides Or Oil
- Food Or Yard Waste
- Fabrics Or Clothing
- Waxed Paper
- Waxed Cardboard
- Styrofoam
- PVC
- VHS/VCR Tapes
- Plastic CD Cases

Cheltenham Township
Public Works Facility
8101 Old York Road
Elkins Park, PA 19027
215-635-4600
www.cheltenhamtownship.org

Electronics Drop-Off Recycling
Weekdays 8AM-3:30PM
Saturdays 10AM-2PM
Except Holidays

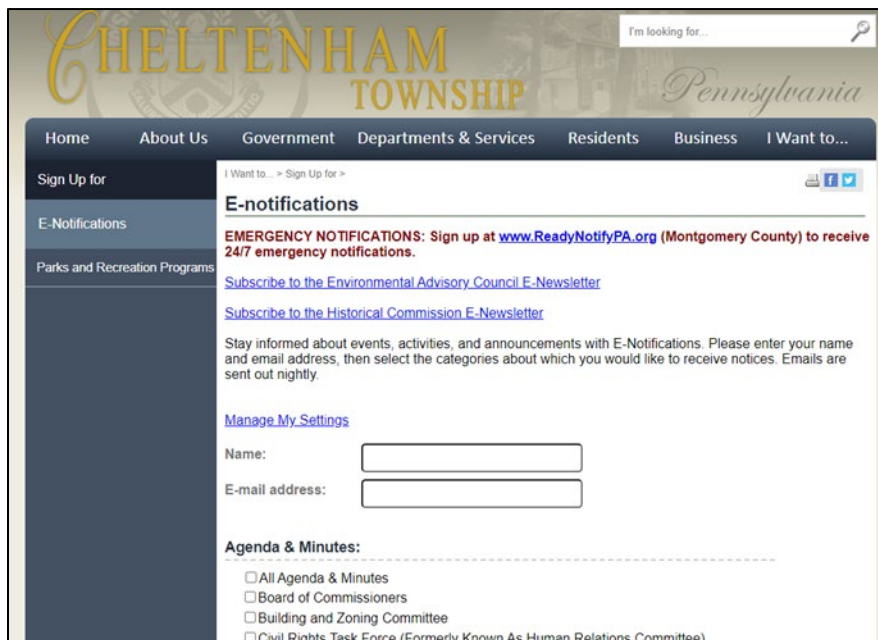
Additional examples of recycling guides include the following:

- Hennepin County, MN - <https://www.hennepin.us/-/media/hennepinus/business/work-with-hennepin-county/environmental-education/recycling.pdf>.
- Fairfax County, VA - <https://www.fairfaxva.gov/home/showpublisheddocument/11759/636718440967330000>.

Notification Systems

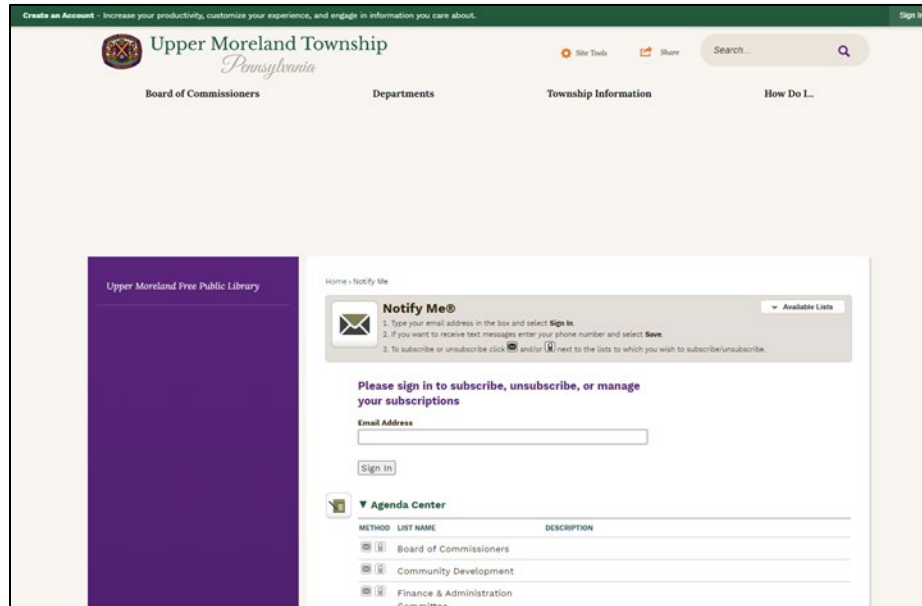
Both Upper Moreland and Cheltenham townships have implemented notification systems that allow residents to sign-up to receive alerts and information pertaining to waste and recycling. Upper Moreland's Notify Me ® system allows residents to sign-up for either emails or text alerts on a number of different topics. Residents can sign-up for alerts on trash and recycling collection, leaf collection, and bulky pick-up events. Residents can opt out of the notification system at any time. Cheltenham Township's e-notification system is similar to Upper Moreland in that residents can opt to receive email and text message notifications. These types of systems facilitate the accessibility of information. **Figures 2 and 3** contain screenshots of each community's webpage where residents can sign-up for notifications.

Figure 2. Cheltenham Township E-Notification Screenshot



The screenshot shows the Cheltenham Township website's e-notification sign-up page. The header features the township name 'CHELTENHAM TOWNSHIP Pennsylvania' and a search bar. A navigation menu includes 'Home', 'About Us', 'Government', 'Departments & Services', 'Residents', 'Business', and 'I Want to...'. A left sidebar lists 'Sign Up for', 'E-Notifications', and 'Parks and Recreation Programs'. The main content area is titled 'E-notifications' and includes an emergency notification alert, subscription links for the Environmental Advisory Council and Historical Commission newsletters, a sign-up form with fields for 'Name' and 'E-mail address', and a section for 'Agenda & Minutes' with checkboxes for 'All Agenda & Minutes', 'Board of Commissioners', 'Building and Zoning Committee', and 'Civil Rights Task Force (Formerly Known As Human Relations Committee)'.

Figure 3. Upper Moreland Township Notification System Screenshot



Mascots

One of the more creative public education tools available to communities is to adopt a mascot to promote recycling. Mascots are entertaining, visually-appealing, and leave a lasting impression on a community's recycling program. Mascots are particularly effective at engaging children and young people on the importance of recycling. This is particularly important as oftentimes children and young people have an outsized influence on encouraging recycling in homes, particularly if adults are not engaged or interested in recycling. Mascots can be deployed in many different settings, including at schools for recycling presentations, in public TV announcements, and at community events or fairs. Recycling mascots can come in all shapes and sizes, but their purpose remains the same: impact and influence people to recycle.

Hatboro Borough created "Bindy," the recycling mascot, a number of years ago. Bindy is a green recycling container that the Borough uses to promote recycling throughout the community. The Borough has used Bindy to produce a number of videos promoting the Borough's recycling program. Additionally, Bindy is brought into schools and other community events to promote recycling.

With the establishment of a new recycling processing contract, SCS believes there may be an opportunity for a more coordinated recycling education program among Consortium members. SCS encourages Consortium members to consider making Bindy the mascot of the entire Consortium recycling program to provide more consistency across all communities. SCS understands that Hatboro Borough would need to support using Bindy Consortium-wide and that communities would need to coordinate Bindy's schedule to make such an arrangement work. **Figure 4** provides examples of recycling mascots used in communities throughout the country.

Figure 4. Examples of Recycling Mascots



Bindy
Source: Borough of Hatboro



Scout the Green Raccoon
Source: City of New Braunfels, Texas



Bobby and Pattie Paper
Source: Waste and Recycling Workers Week



Recycling Mascot
Source: R3 – Central Virginia Waste Management Authority

Social Media

Social media is an important component of an effective recycling education program. The opportunity exists for Consortium members to expand their presence on social media to reach younger residents who increasingly rely on social networking sites to get information. Social media platforms include Facebook, Twitter, Instagram, You Tube, TikTok, and Snapchat. Each social media functions differently and SCS encourages Consortium members to use a variety of sites to reach multiple audiences.

Social media is designed to communicate quick and often instantaneous messages to recipients. Consortium members should use these platforms to educate constituents on recycling issues. For example, each community can use the results of their 2021 material audit to communicate messages specific to the recycling contamination issues identified during the audit. Upper Dublin Township uses Facebook to communicate changes to recycling, yard waste, and trash collection schedules. Lancaster County Solid Waste Management Authority recently took to Twitter® to remind residents that expanded polystyrene coffee cups are not recyclable and should be placed in the trash. As another example, the Solid Waste Authority of Palm Beach County, Florida took to Twitter® to tell residents that cardboard that is too big for their curbside collection cart can be brought to one of their convenience centers for recycling. Consortium members can use similar messages to communicate quick and specific requirements to residents about recycling.



Social media can also be used for “human interest” stories about recycling and waste diversion. For example, Consortium communities could report the annual tons of aluminum cans recycled and connect the energy savings to what it takes to power a TV. The opportunities to share information on social media are endless.

Face-to-Face Interaction

Face-to-face interaction with the public is one of the most effective ways to promote and encourage participation in recycling programs. Identifying community events that solid waste and recycling staff can participate in to share information about recycling is useful in spreading the word about recycling. This would be especially important if the new recycling processing contract for the Consortium results in changes to the types of materials accepted for recycling in the curbside programs. Opportunities to meet with residents and provide information on recycling might include hosting a booth at local special events such as the Roslyn Memorial Day Parade in Abington Township or the Montgomery County Fair. The Montgomery County Chamber of Commerce includes a calendar of events that Consortium members may be able to participate in to share recycling information. Additionally, the Consortium might consider hosting an annual “Recycling Day” to celebrate recycling in their communities. The event could include entertainment, kid activities, and food. Prince William County, Virginia holds a similar event each fall at their solid waste complex. County employees lead activities on why recycling is important. Local environmental organizations are invited to have displays on how residents can live more sustainably. Ample entertainment and

food is also available as well as drawings for prizes. More information on Prince William County's recycling day can be found at www.pwcgov.org.

The Consortium members should publicize their availability and interest in providing displays and presentations to groups and at events throughout the community. Planned participation in such events can be advertised in newsletters and on social media.

RECYCLING APPS

Recycling applications (Apps) have grown in popularity and can be useful tools to promote and educate residents on recycling. Subscribing to or developing your own recycling app does not take the place of traditional public education activities, but having an app can complement existing public educational efforts and provides another opportunity to connect and communicate with residents about recycling. Many of the larger waste and recycling companies have developed their own app for use by their customers. Companies such as Waste Management, Republic Services, and County Waste and Recycling all have apps to help their customers recycle better. Once the Consortium selects a material processor, SCS encourages the Consortium to explore if the selected processor uses an app and what options and costs exist for rolling it out to residents across all communities in the Consortium. This section describes some of the more common recycling applications that the Consortium may wish to explore further and encourage their residents to use.

Options

Recycle Coach

Recycle Coach is a communication tool that makes it easy for residents to get fast information on their local recycling program. Municipalities subscribe and enter into a contract with Recycle Coach to provide the recycling app service to residents. Residents can use the app for free to get personalized collection schedules, acceptable materials lists, and activities to make recycling fun and engaging. The following details the steps and features of the Recycle Coach app:

- 1) **Initial Set-up** – Community uploads the details of their recycling program into the Recycle Coach database. The Recycle Coach team sets-up schedules and a “What Goes Where” database. Communities review the data to confirm accuracy. Upon confirmation program specifics are accurate the app is launched.
- 2) **Web App** – Recycle Coach staff work with each community to place the web app on their website to maximize usage and app downloads. Residents can simply install the app directly from the website to access all local recycling program information.
- 3) **Mobile App** – The app is also available for download to a mobile phone giving residents recycling information at their fingertips. Each resident gets a customized schedule and recycling tips based on their community's recycling program.
- 4) **Recycle Coach Website** – The Recycle Coach website serves as a resource for recycling information, which includes a dedicated webpage for each community's recycling program that participate.
- 5) **Admin Portal** – Community's that subscribe to Recycle Coach receive access to an administration portal where information on the community's recycling knowledge and

challenges are tracked. This background information allows a community to tailor their education program around the most common recycling challenges. The community can also use the admin portal to send emergency or non-emergency messages to their users as required.

Recycle Coach provides two government packages to choose from based on local recycling program features and the community's budget. These packages include:

- **Essentials Package** – The essentials package includes both the web and mobile apps and includes calendar features, “What Goes Where” search tool, launch assistance, and the report-a-problem assistance.
- **Pro Package** – The Recycle Coach Pro Package emphasizes education and assists residents in understanding recycling problems exist and provides the information/resources to overcome the issues. The Pro Package includes everything in the Essentials Package, plus the following features: educational sessions on recycling contamination, identifies the ten common contaminants in the local recycling program, details on common materials that cause recycling challenges, activities to provide residents with detailed information on recycling and measurement of what residents are learning, and real time notifications.

The Recycle Coach website (www.recyclecoach.com) provides additional details on the functionality and services provided through the app. The website also gives interested parties the option of scheduling a demo of the service to further explore its utility to the Consortium.

iRecycle

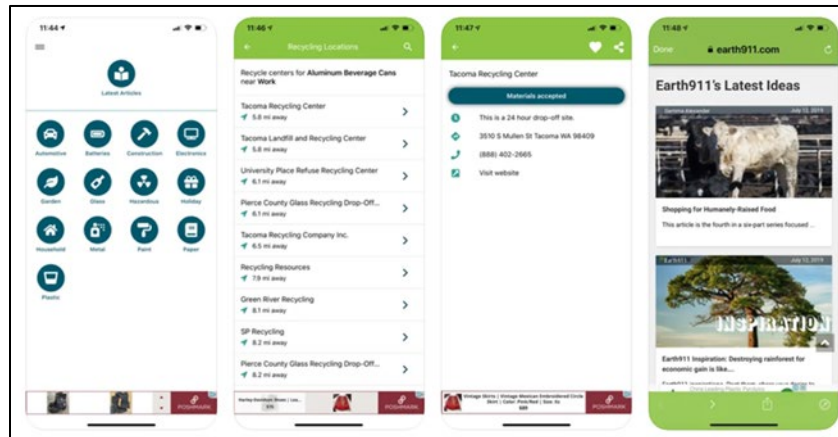
The iRecycle app is a product of Earth911.com that helps individuals find local recycling opportunities at home, work, or while traveling. iRecycle boasts that it provides recycling information on over 350 materials.² The goal of the app is to increase recycling rates in the U.S. by providing quick, easily-accessible recycling information. The app identifies recycling locations, including whether or not a material is accepted as part of a residential curbside recycling program. Additionally, the app provides contact information for recyclers and allows users to map directions to the recycling location. Some other key features of the app include:

- Minimalist interface to facilitate use
- Access to Earth911 articles, podcasts,
- Location preferences for home, work, or current location
- Add “favorite” recycling locations

The iRecycle app is available for Apple and Android devices and is available for free. **Figure 5** shows various screenshots of the iRecycle app.

² <https://earth911.com/irecycle/>

Figure 5. iRecycle Interface



Recycle Nation

Established in 2007, Recycle Nation provides web and mobile app based search features that allow users to find locations to recycle over 50 different materials. The Recycle Nation app is available to the public at no charge and currently helps over 300,000 unique customers per month find answers to their recycling questions.

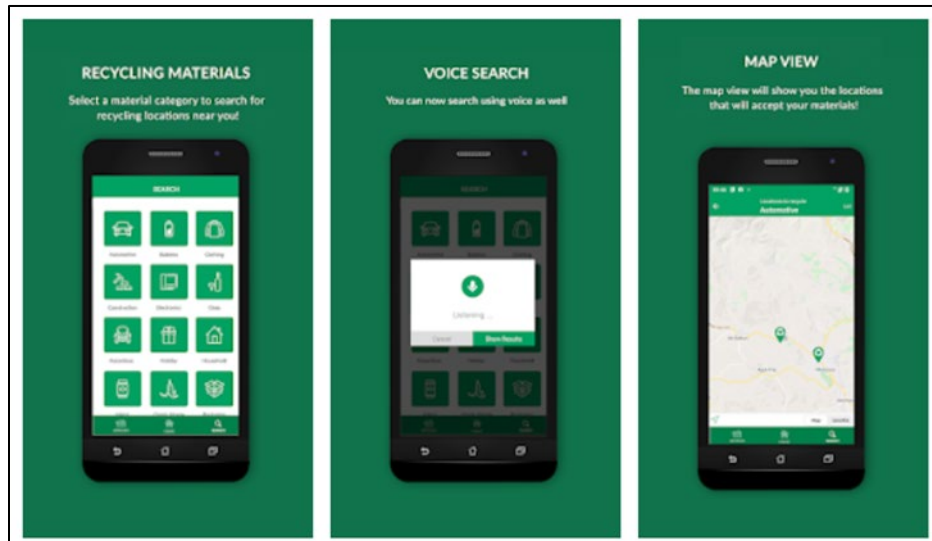
The search feature of the Recycle Nation app gives users the option of searching for recycling opportunities through drop-off, curbside, mail back, or pick-up services. Users simply enter their zip code and either select from a list or enter in the material they have to recycle. The search feature will return results based on the criteria entered. The search feature will list communities that have a curbside recycling program if the material is accepted curbside. Recycle Nation hosts a webpage with basic details of the curbside recycling program that can be accessed from the list of recycling options. In many cases the Recycle Nation webpage provides a link to the community's website. For example, when searching for curbside recycling options for aluminum cans in zip code 19034, the Abington Township curbside recycling program is listed as an option. However, when navigating to the Recycle Nation website for Abington Township no recycling details are made available. Additionally, the link to the Township's website also does not work.

Recycling Nation allows their partners to customize the interface for a more tailored recycling search feature based on local recycling program characteristics. Additional features of the Recycle Nation app include the following:

- Reporting and tracking capabilities to gather recycling data
- State and federal regulatory requirements and guidance
- Functions that allow for data validation and discrepancy reporting

Figure 6 shows various interfaces of the Recycle Nation app. Additional information on the Recycle Nation app is available at www.recyclenation.com.

Figure 6. Recycle Nation Interface



Considerations

Based on a review of the recycling apps discussed above, SCS provides the following recommendations for the Recycling Consortium moving forward:

- **Evaluate Need for an App** – Although apps can provide concise and easily accessible recycling information to residents, Consortium members should evaluate the impact an app will have on communicating and educating residents that may not be reached by existing methods. If an app has the potential to educate additional residents or facilitate reduced contamination through the availability of more convenient information, it may be prudent to consider launching a recycling app. If Consortium members cannot identify how a recycling app will reach additional residents or reduce contamination the investment may not be worthwhile.
- **Explore Options with Processor** – As discussed above, many large waste and recycling companies have developed recycling apps for use by their customers. Once the Consortium has established a contract with a processor and the Consortium has documented how an app will improve education, the Consortium should speak with the processor to understand if they have an app that could be offered to residents and how much it will cost. Working directly with the processor to use their app should facilitate consistency between the app and the actual recycling program.
- **Consider Consortium Partnership** – In some cases the costs of subscribing to a recycling app are based on community size. There may be opportunities for the Consortium to work together to procure the services of a recycling app provider that may provide a discount to all communities when compared to each individual community establishing an agreement on their own.
- **Measure Impacts** – If Consortium members move forward with launching an app in their communities, it will be important to track and measure its impact. Most apps track user data so that communities can see how many people are using it and what issues they are using it to address. Additionally, before an app is released, Consortium members should benchmark current conditions such as recycling contamination (using data from their recently completed material

audit) and illegal dumping to understand how the app may mitigate these issues.

- **Update Information with Third-Party Apps** – A number of independent third-party apps (i.e. iRecycle, Recycle Nation) have incomplete recycling information for Consortium members. Even if Consortium members decide not to partner with or pursue agreements with owners of these apps, there is a good chance some residents will still consult the apps for recycling information. Consortium members should consider reviewing their program information provided through these apps and update it as necessary. SCS’s review of these recycling apps indicate communities can update their information at no charge.

5 CONCLUSION

Recycling education remains a critical component of each Consortium member’s program. Additionally, recycling education is required by Act 101 for mandated municipal recycling communities. Communities in the Consortium are in a unique position to retool their education programs to conform to the recycling requirements of the anticipated new material processor. With education having an important impact on recycling contamination and the price Consortium members pay for material processing and residual disposal, SCS recommends that all Consortium members agree to an educational program baseline that goes beyond the requirements of two times per year as required by Act 101. The Consortium is encouraged to follow the best practices discussed in Section 4 for all educational materials produced. This report also provides unique and impactful educational activities that could be implemented on a Consortium-wide basis that should be considered. Finally, implementing a recycling app has the potential to increase recycling, reduce contamination, and improve program efficiencies. The Consortium should further evaluate the use of a recycling app. If the Consortium decides to launch a recycling app, SCS suggests working with the new processor to explore what app options they have available.

Appendix A
Municipal Recycling Requirements of Act 101

Summary of Act 101 Mandatory Municipal Recycling Requirements

Overview

Chapter 15, Section 1501 of the Pennsylvania Municipal Waste Planning Recycling and Waste Reduction Act (Act 101), outlines the requirements for large Consortium to recycle. Consortium, other than counties, with a population of 10,000 or more people or with a population of more than 5,000 but less than 10,000 people, and a population density of more than 300 people per square mile, are mandated to recycle.

Recycling Ordinance

An Act 101 mandated local government must adopt an ordinance that requires recycling. The ordinance shall require the following:

- 1) Recycling at single-family homes and apartments; commercial, municipal, and institutional establishments; and at community activities.
- 2) A scheduled day, at least once per month, when separated recyclable materials are to be placed at the curb or similar location for collection.
- 3) A collection system, including trucks and related equipment, to pick-up separated recyclable materials from the curb or similar location at least once per month from homes and businesses in the Consortium. The Consortium shall explain how the system will operate, the dates of collection, the responsibilities of persons within the Consortium and incentives and penalties.
- 4) Provisions to ensure compliance with the ordinance, including incentives and penalties.
- 5) Provisions for the recycling of collected materials.

Residential Recycling

Residents must separate for recycling at least three materials deemed appropriate by the Consortium from municipal waste generated at their homes, apartments, or other residential establishments. Separated materials must be stored at the property until collection. The three materials must be selected from the following:

- Clear glass;
- Colored glass;
- Aluminum;
- Steel and bimetallic cans;
- High-grade office paper;
- Newsprint;
- Corrugated paper;
- Plastics.

Leaf waste must also be separated from municipal waste generated at residential properties and stored for collection, unless residents have already provided for the composting of the materials (i.e. backyard composting).

Owners or landlords of multi-family rental properties with four or more units must establish a recycling collection system at each property. The collection system must include suitable containers for collecting and sorting materials, easily accessible locations for the containers and written instructions to the occupants concerning the use and availability of the collection system. Owners or landlords that comply with these requirements shall not be liable for noncompliance by occupants of their buildings.

Commercial, Municipal, and Institutional Recycling

Occupants of commercial, municipal, and institutional establishments are required separate and store for recycling of the following materials at a minimum:

- High-grade office paper
- Aluminum;
- Corrugated paper;
- Leaf waste.

Occupants of commercial, municipal, and institutional establishments may be exempt from the requirements of this law if those persons have otherwise provided for the recycling of materials they are required to recycle. To be eligible for an exemption, the commercial, municipal, or institutional generator must provide written documentation to the Consortium annually.

Community Activity Recycling

Organizers of community events must provide for the separation, storage, and collection of high-grade office paper, aluminum, corrugated paper, and leaf waste at the events. Community activities required to recycle include events sponsored in whole or in part by a Consortium or held within a Consortium and sponsored privately. Events include fairs, bazaars, picnics, or sporting events that will be attended by more than 200 or more people each day of the event.

Leaf Waste Diversion

Consortium mandated to recycle under Act 101 must require residential and commercial establishments to separate and store leave waste for collection. Leaf waste includes leaves, shrubbery, tree trimmings, and similar materials, excluding grass clippings. These materials must be collected at least monthly. In order to comply with Act 101, mandated Consortium must at a minimum:

- 1) Implement an ordinance that requires leaf waste to be separated from municipal waste for recycling at residential and commercial, municipal, and institutional establishments, AND
- 2) Establish a scheduled day, at least once per month, when leaf waste is collected curbside or similar location, OR
- 3) Establish a scheduled day, no less than two times per year and preferably in the spring and fall, when leaf waste is collected curbside or similar location from residential and commercial establishments, AND facilitate a drop-off location or other collection alternative approved by the Pennsylvania Department of Environmental Protection that allows persons to drop-off leave waste for composting at least once per month. A leaf waste drop-off site can be in a neighboring Consortium or at a private establishment provided there is an agreement in place to utilize the site, and residents and occupants of commercial establishments are informed of the drop-off location at least every six months.

Consortium are encouraged to manage source separated Christmas trees as leaf waste for processing at DEP approved composting facilities.

Public Education and Outreach

Consortium subject to the requirements of Act 101 must implement a comprehensive and sustained public education program. This program is to provide residents and owners/tenants/occupants of commercial, municipal, and institutional establishments with information on recycling program features and requirements. The educational program includes two features:

- **Initial Education** – At least 30-days prior to the start of a recycling program notify all persons occupying residential, commercial, municipal, and institutional establishments of the recycling requirements as contained in the ordinance.
-

- **Sustained Education** – Every six months the Consortium must inform and remind all persons occupying residential, commercial, municipal, and institutional establishments of the recycling requirements.

Numerous forms of educating the public are acceptable and include:

- Newspaper advertisement circulating in the Consortium;
- Public notice posted where such notices are customarily posted;
- Notices in other official notifications (i.e. utility bills);
- Website;
- Newsletter;

A combination of forms are acceptable and at least one form must be in print annually.

Implementation

Consortium may implement their responsibilities for the collection, transportation, processing, and marketing of recyclable materials in one or a combination of the following ways:

- 1) Collect, transport, process, and market recyclable materials themselves;
- 2) Enter into a contract(s) with other entities for the collection, transportation, processing, or marketing of recyclable materials. If contracting for recycling services, the entity being contracted is responsible to the Consortium for implementing of recycling activities.
- 3) Contract with a landfill or material recovery facility, in lieu of a curbside recycling program, that guarantees by contract that at least 25 percent of the waste received is recycled. The technology utilized in this program must have prior approval from DEP.
- 4) Utilize a recycling facility that demonstrates that the materials separated, collected, recovered, or created by the facility can be marketed as readily as materials collected through a curbside recycling program. In addition, the mechanical separation technology used by the facility has been demonstrated to be effective for the life of the facility.

Exceptions

The Consortium is not required to collect, transport, process, or market recyclable materials or contract for these services if all of the following conditions are met:

- 1) The Consortium is not collecting and transporting municipal waste from such establishment or activity.
- 2) The Consortium has not contracted for the collection and transportation of municipal waste from such establishment or activity.
- 3) The Consortium has adopted an ordinance as required, and the establishment or activity is in compliance with the provisions of the ordinance.

Act 140 Requirements for Section 904 Recycling Performance Grants

Overview


Act 101 was amended in 2006 by Act 140 to establishment requirements for the use of Section 904 Recycling Performance Grants.

Requirements:

Consortium mandated to recycle under Act 101 and receive more than \$10,000 in funding from recycling performance grants must meet the following requirements:

- 1) Requires, through ordinance, that all residents have waste and recycling service.
- 2) Has an implemented residential recycling program and facilitates a commercial recycling program or participates in a similar county or multi-municipal program.
- 3) Has a residential and business recycling education program.
- 4) Has a program of enforcement that periodically monitors participation, receives complaints and issues warnings for required participants and provides fines, penalties, or both, in its recycling ordinance.
- 5) Has provisions, participates in a county or multi-municipal program or facilitates a private sector program for the recycling of special materials.
- 6) Sponsors a program, facilitates a program or supports an organization to address illegal dumping and/or littering problems.
- 7) Has a person or entity designated as recycling coordinator who is responsible for recycling data collection and reporting recycling program performance in the municipal or Consortium.

If these requirements are not satisfied by the Consortium, then the grant funds awarded under this section must be expended by the Consortium only to satisfy these requirements. If all these requirements are satisfied, then the grant funds awarded may be used for any expense as selected by the Consortium.



Appendix B
Example Recycling Graphics

RECYCLE THANK YOU FOR RECYCLING THESE:

Paper



**Cereal Boxes,
Mixed Paper,
Newspapers, and
Magazines**
(all colors and types)

Cartons



Cartons
(empty and dry)

Cans



**Aluminum and
Steel Cans**
(empty and dry)

Plastic



**Plastic Bottles, Jars
and Tub**
(clean, empty and dry)
#1- #7

Glass



**Glass Bottles
and Jars**
(empty and dry)

THESE ITEMS ARE NOT RECYCLABLE



No Bagged
Materials



No Paper towels, tissue
paper, or Styrofoam



No Scrap metal, or
Ceramics/Porcelain/
Pyrex



No Books or Toys



No Mirrors or
Window glass



No Plastic bags or
Plastic food wrap



No Liquids or
Diapers



No Computers and
Electronic equipment,
Light bulbs, or Batteries



No Syringes/Needles
or Hazardous waste



No Textiles, fabric,
or clothing