

Appendix L - Outreach and Marketing Analysis: Phase One

Purpose: To give an overview of the District's existing strategies for providing education, outreach, marketing, and technical assistance to address five target audiences.

Minimum Required Education Programs

Goal 3 of the 2009 State Plan requires solid waste districts to provide four minimum education requirements. This section details how the Hamilton County Recycling and Solid Waste District meets the four minimum education goals: website, resource guide, infrastructure, and speaker/presenter.

Website and Resource Guide

The District strives to maintain a comprehensive website at HamiltonCountyRecycles.org. The District chose an easy to remember URL and organizes the website by self-identifying user (resident, business, school, etc.). Although the website has an extensive amount of information, the District has organized it into logical pages and sections using drop down menus. The page also features a search function and site text can be quickly translated into nine additional languages. The website includes Ohio EPA's required resource guide and infrastructure inventory.

In 2014, the District received 106,444 unique visitors to the website. This is almost double the unique visits in 2013.

Two District staff members fill the primary function of keeping the website up to date. Staff regularly updates lists and information, in many cases actively contacting outside organizations to make sure the information is accurate.

One of the most-viewed pages on the website is the ["Recycling and Reuse" outlets page](#). This comprehensive resource guide lists regional organizations accepting materials by material type. The District also maintains several infrastructure inventory lists:

- [Community waste and recycling programs](#)
- [Community drop-off programs](#)
- [Community yard trimmings programs](#)



The District promotes its website in all literature and almost all outreach materials. Staff members regularly reference the website during programs, presentations, and telephone interactions with the public.

Since the last redesign of the website was in 2011, the District website is beginning to feel outdated. In 2016 Hamilton County plans to hire a website developer to assist county departments in updating and standardizing websites of different departments. The District could potentially benefit from this agreement by gaining a redesign of the website and improving functionality. If the District can piggyback on the Hamilton County contract, we would expect to have a website redesign (including mobile friendly functionality) in 2017 and possibly new apps created by 2018.

Changes the District would like to make to the website in the next five years include the following:

- Simple and fast search tools, especially for materials.
- Less text, more graphics.
- Easy-to-share pages on social media.
- Better URL addresses for non-homepage pages.

- Search by zip code function for recycling drop-off locations with a map.
- Search by zip code function for our “Recycling and Reuse Outlets” page.
- Printer friendly pages.
- Mobile-friendly format.
- Applications for smart phone usage.
- More focused organization.

Regardless of how the Hamilton County contract works out, the District intends to work on the website to simplify language, improve organization, and add more graphics in the second half of 2016.

Speaker/ Presenter

Five District employees are ready and able to give presentations to residents, businesses, communities, schools and other groups in Hamilton County. These presentations are sometimes coordinated by District staff and sometimes prepared on request. In addition to District staff, the District also contracted with two presenters to offer assemblies and school programs in 2014. Table 1 shows the speaking programs offered by the District in 2014. Most of the District’s speaking programs focus on recycling and backyard composting.

| Table 1: District Presentations in 2014 | | |
|--|--------------------------------|-----------------------|
| | Number of Presentations | People Reached |
| PreK - 12 classroom programs | 111 | 2,483 |
| K-12 Field Trips | 30 | 1,763 |
| K-12 Assemblies | 9 | 4,528 |
| Backyard composting seminars | 13 | 557 |
| Vermicomposting workshops | 5 | 49 |
| General adult presentations | 12 | 279 |
| Total | 180 | 9,659 |

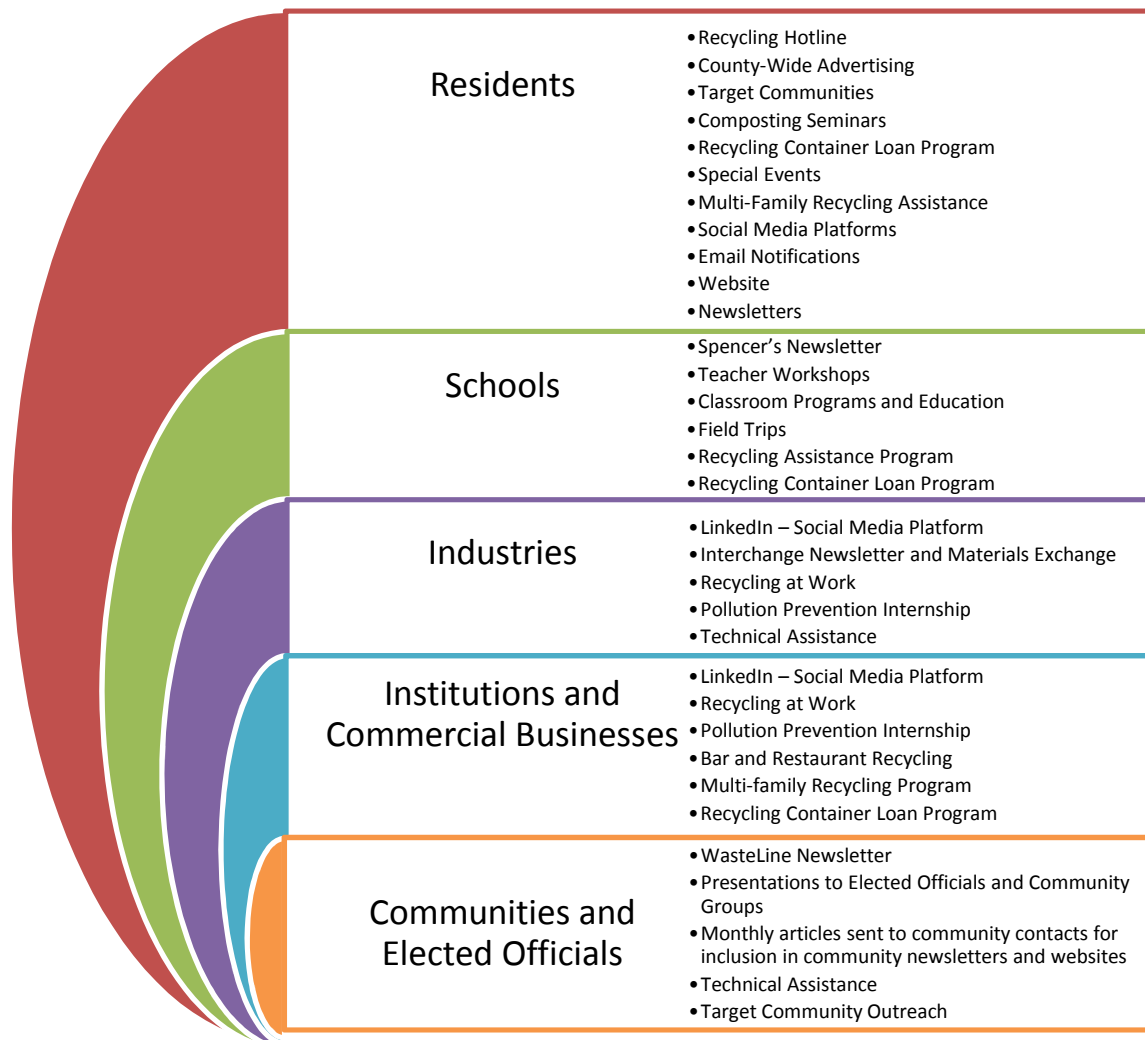
Evaluation of Existing Outreach and Technical Assistance Programs

This section of Appendix L evaluates the effectiveness of the District’s existing education, outreach, and technical assistance efforts while addressing the five target audiences. Figure 1 summarizes how these programs relate to the five target audiences of residents, schools, industries, commercial businesses, and communities/ elected officials. The District sets yearly goals for reaching each of these target audiences and evaluates programs on a quarterly basis.

Many of the programs listed in Figure 1 were evaluated in Appendix H. This section will evaluate programs not previously examined in depth, including:

- County-wide residential advertising
- Targeted community outreach
- Special event
- Backyard composting seminars
- Classroom programs
- Field trips
- Teacher workshops
- Wasteline newsletter

Figure 1: Existing Ways the District Addresses Five Target Audiences



Reaching the Audience: Residents

County-Wide Residential Advertising Campaign

Overview and Employing Social Marketing Principles

Most years, the District conducts a county-wide marketing campaign to promote residential recycling. The campaign often involves paid advertising, public relations, social media, and outreach to communities. In 2011, the District hired a social marketing consultant to gather feedback on why people are not recycling, test marketing materials, and ask about media consumption habits. Several rounds of focus groups were conducted. The District determined that the target audience mindset was:

- They know recycling is beneficial but have some barriers, including:
 - cost of collection
 - hassle of sorting
 - bias against corporate profit from public work
 - lack of knowledge of what is recyclable
- They will recycle more with a clearer understanding of recyclable materials and the recycling process.
- They feel a connection to neighbors and community.

In 2014, the District spent \$21,680 on general recycling awareness advertising with the target audience of residents. The goal was to give residents the information and encouragement to recycle. The key message: Recycling is easy and we can all do it. No matter who you are, you can contribute. The supportive message: If we all recycle, we create jobs, conserve resources, and protect our community. The “One Thing” campaign ran November 3 through December 14, 2014, and included the elements outlined in Table 2.

| Medium | Cost |
|--|-----------------|
| Billboard (14) | \$6,178 |
| Community Press strip ads and Cincinnati.com | \$8,752 |
| WLWT Ch. 5 Online homepage takeover | \$1,750 |
| The Buzz (1230 AM) and Old School (100.3 FM) | \$5,000 |
| Facebook and Twitter | \$0 |
| | \$21,680 |

In the current *Hamilton County Solid Waste Management Plan Update 2012-2027*, the District allocates resources, both financial and staff time, to develop a comprehensive social marketing campaign. The District has followed through on this commitment and continues to use the “One Thing” campaign developed in 2012.

Tracking Results

The District gathered and analyzed media clips, social media posts, website traffic, and hotline calls to measure the success of the campaign. During the campaign period (11/3/14 to 12/14/14) the District received:

- 1,916 unique page views for the District homepage
- 156 unique views for the campaign page (versus 98 in the previous period)
- 69 sessions referred from the WLWT component
- 13 new followers on Facebook and 1,360 engagements
- 48 new Twitter followers and a total reach of 7,451 people
- 538 calls to the recycling hotline
- No increase in recycling tonnage attributable to the campaign

Billboard and radio advertisements consistently included the District homepage. The 1,916 page views represents a decrease of 39 percent compared with the previous 42-day period. However, it is important to note that the District held a one-day Household Hazardous Waste event during the previous period. On November 12, the District paid WLWT for a “homepage takeover” which directly resulted in 69 visitors to our website. The Facebook and Twitter reach and engagement was consistent with non-campaign time periods.

Measuring Effectiveness

The primary goal of the campaign was to encourage residents to recycle more and increase the feeling among residents that recycling is a normative behavior. Measuring the effectiveness of such an advertising campaign is difficult because there is no readily obtainable data to indicate a correlation in behavior change and attitude. As far as increasing traffic to our website and increasing social media reach, the 2014 campaign was ineffective. The District measures increases in recycling tonnage but cannot directly attribute increases to promotion since many factors contribute to recycling fluctuations.

In 2012, the District conducted its largest advertising campaign in at least a decade, spending around \$80,000. Analyzing the results of the 2012 campaign revealed that the most effective element for changing behavior was the “Recycling Guide” direct mail piece with a magnet. Communities receiving this piece experienced a 9 percent increase in their recycling rates while communities not receiving this piece experienced a 3 percent decrease in recycling rates during the same period. Although this piece proved costly to print and mail, the District could adopt a more focused approach to outreach by targeting communities with promotion rather than attempting to reach every resident in Hamilton County.

During the first year of the campaign (2012) we met with the target communities and provided a communication toolkit to help them share our messaging. In future years, the District plans to re-launch the toolkit and re-engage the communities as part of an outreach campaign.

Table 3 shows the strengths and weaknesses of the District’s current residential outreach campaign.

| Table 3: Strengths and Weaknesses of County-Wide Residential Outreach Campaign | |
|--|---|
| Strengths | Weaknesses |
| <ul style="list-style-type: none"> • Increases recycling awareness. • Residents and communities provide positive feedback. • No cost to communities. • Comprehensive multi-media approach. • Partnership with communities to leverage campaign. • Campaign is based on research and background information. • Encourages residents to recycle more when away from home. • Durable magnet has led to a number of residents contacting the District for recycling and disposal information years later. • Consistent recycling message throughout the county. | <ul style="list-style-type: none"> • Difficult to claim overall Hamilton County increase in recycling as a result of campaign. • Wasted impressions with radio. • Inconsistent, not offered every year. • Cannot send something to every resident- too costly. • The direct mail is wasteful if not used and/or recycled. • Printed pieces can be dated if acceptable recyclables list expands in future. • Only target 1-4 family buildings, not large multi-family properties. • Current funding levels are not suitable for a countywide campaign. |

Targeted Community Outreach

Overview

Each year, the District works with up to two communities to increase their recycling rates (typically communities with a recycling rate less than 10 percent). The District’s approach involves meeting with the community to assess their needs and working together to develop a plan. Some communities need infrastructure improvement first; others need outreach to residents. For example, in 2014 the District worked with Sharonville to contract for curbside recycling for the first time. The District works to improve the residents’ access to recycling in target communities before beginning residential outreach.

Outreach generally focuses on direct mail, public relations, and presentations to business, community, and school groups. This approach promotes District business and school programs alongside the residential programs.

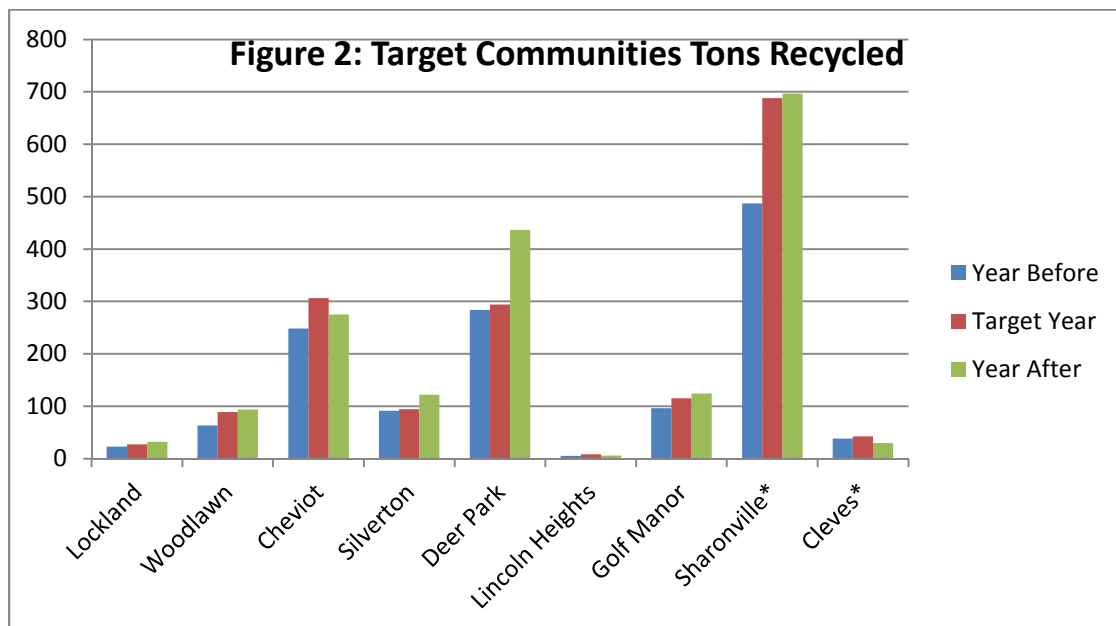
In the current *Hamilton County Solid Waste Management Plan Update 2012-2027*, the District states that we will partner with two communities per year to conduct a comprehensive recycling campaign. While the District has partnered with two communities per year, sometimes the partnership involves in-depth technical assistance in improving the recycling infrastructure in the community rather than traditional outreach.

Employing Social Marketing Principals

One of the principles of social marketing involves removing barriers, in this case, to recycling. The District’s approach to the target community outreach over the last few years has been to improve recycling infrastructure and remove those barriers to increase participation in at least one community. The District also uses social marketing principles in outreach, drawing on social norms and using tools like prompts to increase residents recycling in the targeted communities.

Tracking Results

Figure 2 shows all of the communities the District targeted between 2010 and 2014 and the tons recycled by residents of those communities for the year before, the year of, and the year after the targeted outreach or assistance. Golf Manor and Sharonville received enhanced technical assistance. The other communities received targeted outreach and technical assistance.



*Year After data for Sharonville and Cleves is estimated based on first half of 2015.

Measuring Effectiveness

In 2014, the District spent \$2,691.22 and used 99.75 hours of staff time on targeted outreach.

Overall, the technical assistance the District offers to communities to improve infrastructure results in a consistent improvement of recycling participation. District staff offers advice on waste and recycling bid specs, cart delivery, and drop-off locations. Although the technical assistance is available to any community requesting this assistance, targeting specific communities can lead to stronger relationships and positive outcomes.

Target communities with non-subscription curbside recycling access see greater increases in their recycling than communities relying on drop-off recycling. Lockland, Cheviot, Silverton, Lincoln Heights and Cleves all rely on drop-off recycling, with Cleves and Silverton also offering subscription based recycling service. When selecting communities as targets, the District considers not only their recycling rate but also the opportunity for improvement of their recycling and the political will of the community to take the necessary actions.

Table 4 shows the strengths and weaknesses of targeted outreach.

| Table 4: Strengths and Weaknesses of Targeted Community Outreach | |
|---|--|
| Strengths | Weaknesses |
| <ul style="list-style-type: none">• Provides technical assistance to communities.• Provides education and resources to areas with the lowest recycling rates.• Provides recommendations on improving recycling programs.• Staff works hand-in-hand with the community as partners.• Involves all aspects of District programs (community, business, schools).• Increases community's recycling rate.• Improves awareness of the District.• Develops stronger relationship between the District and community.• Helps community earn more RRI funds.• Communities continue to increase after initial target year. | <ul style="list-style-type: none">• Limited staff resources require use of communities' volunteers to help with marketing (such as door-to-door outreach). Volunteers are difficult to recruit.• Subscription communities need "free" infrastructure to make program effective. |

Special Event Participation

Overview

District staff attends a special event such as a health fair or farmer’s market upon request if staff believes the event will have enough attendees to be worth the time commitment. Depending on the event, staff may set up a booth with information or may prepare a specialized activity for participants. Waste reduction, reuse, recycling, and composting, as well as information about District programs, are generally covered in the booth unless the event requires specialized information.

According to social marketing principals, once convenience behaviors have been removed, one-on-one interaction with others is the most effective strategy for changing behavior. Special Events give the District an opportunity for that face-to-face interaction. The District offers community-specific recycling information depending on where the resident visiting the booth lives. Special Events give the District the opportunity to reach not only residents, but business owners, educators, and public officials.

The current *Hamilton County Solid Waste Management Plan Update 2012-2027* does not list participation in Special Events as a strategy.

Tracking Results

District staff measures results of Special Events by recording the number of actual one-on-one interactions as seen in “People Reached” in Table 5. Nearly all participants walk away having learned something new, updated old ways of thinking, clarified misconceptions, or answered questions.

| Year | Events Attended | People Reached |
|------|-----------------|----------------|
| 2010 | 24 | 6,714 |
| 2011 | 14 | 1,261 |
| 2012 | 25 | 3,791 |
| 2013 | 21 | 2,611 |
| 2014 | 14 | 1,737 |

The main inducement at events is not learning about waste reduction but the event itself. Therefore, it is necessary to offer incentives to lure people to participate in discussion. In the past, flyers, magnets, and a worm bin were used. As the District moves from print information to online access in keeping with its mission of reducing, changes are made to material presented at special events.

Measuring Effectiveness

As the nature of special events is to engage individuals and small groups for a short time, no formal feedback is asked of them. The District markets at events while in conversation, finding out what specific target audience has approached the booth. At that time, staff discusses specific programs and provides further information. It is not easily detectable if these efforts are sufficient as there is no immediate action taking place.

| Strengths | Weaknesses |
|--|---|
| <ul style="list-style-type: none"> Increases visibility of District. Promotes current District programs. Teaches residents proper disposal and recycling. | <ul style="list-style-type: none"> No guarantee event will draw a large audience. Not all attendees stop by booth. No measurement of impact. |

In 2014, the District spent \$66.48 on supplies and registration fees for special events and used 264.25 hours of staff time. Most of the supplies needed were purchased from the 2013 budget.

All Hamilton County residents, businesses, and schools are targeted during special events. The prize wheel is a motivating factor to bring participants to the booth. Improvements to programming include using additional staff to engage more people and to make it possible to attend more events. Having access to internet resources at the touch of a screen would allow people to have information instantaneously as well as sign up for programs of interest.

Backyard Composting Seminars

Overview

For many years, the District held compost bin sales on a near annual basis. Backyard compost bins were historically difficult to purchase as most local stores did not carry the bins. However, now several stores sell bins.

In 2012, the District began taking a different approach to promoting backyard composting. In an effort to not directly compete with the private sector, the District works with communities and garden clubs to hold one-hour seminars about backyard composting. Attendees of the seminars receive a printed guide to backyard composting, tips on how to set up and maintain a bin, a small container designed for collecting food scraps in the kitchen, and an “I heart composting” bumper magnet.

The District targets the audience of homeowners with backyards for this program. The program gives an overview of several types of composting, including free and low cost options that any resident can access.

The current *Hamilton County Solid Waste Management Plan Update 2012-2027* does not list Backyard Composting Seminars as a strategy. Staff developed this program after the plan went into effect.

Employing Social Marketing Principals

Backyard composting seminars make use of face-to-face interaction allowing residents to ask questions and learn how to start composting. District staff gives them all of the information and the inspiration they need to change their behavior. The kitchen collector given to every participant acts as a prompt to save food scraps and helps overcome the barrier of not having a place to collect food scraps in the kitchen. Finally, the bumper magnet reinforces the resident’s identification as a composter and helps create a social norm around composting.

Marketing Backyard Composting Seminars

The District marketed this program to prospective residents in 2014 through the following means:

- Backyard composting email list
- Composting blog
- Direct mail to targeted zip codes
- Social media
- Website
- Host community promotion
- Retail store promotion
- News releases

The District requests that the host community promote the seminars in their newsletters, email lists, websites, and community bulletin boards.

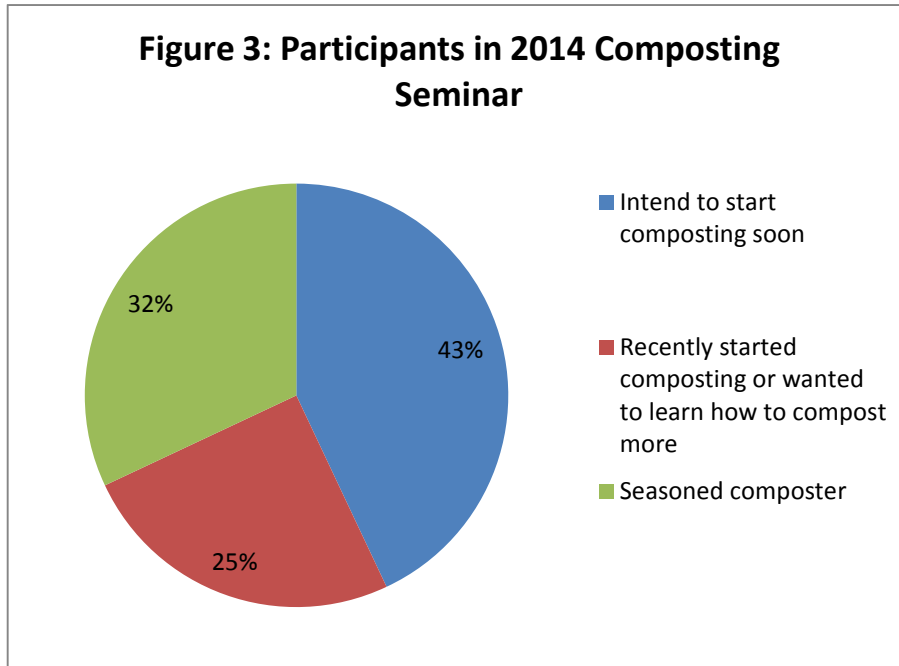
Tracking Results

Table 7 shows that from 2012 through 2014 the number of people reached has remained consistent. The District piloted a Saturday and presented to several smaller garden clubs in 2014, leading to a slightly higher number of seminars.

| Year | Seminars | People Reached |
|------|----------|----------------|
| 2012 | 9 | 520 |
| 2013 | 9 | 558 |
| 2014 | 13 | 557 |

Measuring Effectiveness

Figure 3 shows the breakdown of participants in the 2014 seminar according to an online survey. The seminar was highly regarded in 2014 with 96 percent of participants giving either a good or excellent rating. The seminars were designed to help non-composters become composters and to provide tips to residents who were underutilizing their backyard bins.



In 2014, the District spent \$2,480.88 in supplies for the seminars and used 386.25 hours of staff time. The registration process for this program requires considerable staff time (approximately 34 percent of the hours).

Table 8 highlights the strengths and weaknesses of the Backyard Composting Seminars.

| Table 8: Strengths and Weaknesses of Backyard Composting Seminars | |
|--|---|
| Strengths | Weaknesses |
| <ul style="list-style-type: none"> • Gives residents knowledge they need to successfully begin backyard composting. • Allows residents to ask questions. • Makes residents aware of resources (website, hotline, blog) available. • Brings the seminar out to the communities to be more convenient for residents. • Communities help promote the seminar to their residents. • Well received by residents. • Raises District’s visibility with residents. • Meets a need of residents to learn more about composting. | <ul style="list-style-type: none"> • Some communities can only offer a limited space which fills up quickly. • Difficult to measure how many people are implementing what they learn. • Approximately 1/3 of registrants do not show up. |

Reaching Residents: Suggestions for Improvement

1. **Focus annual campaign to areas of the county.** With a limited budget for advertising the District could be more effective at changing behavior by focusing efforts to a few communities rather than trying to reach the whole county every year. Focusing efforts will also make attributing results of the campaign more realistic. The District should develop strategies specific to the target area, but this outreach could include the effective direct mail recycling guide or community-based social marketing techniques. The Residential Recycling Infrastructure Analysis in Appendix H includes suggestions on improved outreach.
 - **Focus annual campaign on different sections of county.**
2. **Conduct a robust, countywide campaign.** Using social marketing principles, appropriately budget for a large-scale campaign. Funding should be used on new, different media such as paid advertising on social media platforms while also using what has worked, such as a direct mailer with a magnet. This suggestion correlates with the Economic Incentive Analysis in Appendix H to set aside more funding and staff resources to extensively target the underperforming communities in the long term.
 - **Increase advertising budget for a large scale campaign.**
 - **More extensively target underperforming communities in improving their rates.**
3. **Focus on waste reduction and reuse as well as recycling.** The District's residential outreach has traditionally focused on recycling. In 2016, the District will conduct our first reuse awareness campaign. Waste reduction and reuse fall higher in the 3R hierarchy than recycling, so the District should continue to develop ways of promoting waste reduction and reuse to residents.
 - **Promote reuse and waste reduction to residents.**
 - **Use strategies to shift the idea of waste to materials management.**
4. **Develop a more targeted, strategic approach to special events.** Currently, special events are not considered during the county-wide residential outreach plan. Incorporating special events into our outreach strategy will give the outreach a more targeted approach. District staff will develop which audiences we need to reach and what messages need to be conveyed. For example, if the District focuses on food waste, staff could develop booth materials for that campaign and attend events targeted to that audience.
 - **Incorporate special events into the District outreach strategy.**
 - **Develop targeted audience and message for booths.**
5. **Ensure events attended have recycling.** Although some of the events the District attends offer recycling, this is not always the case. Reinforcing that recycling behavior at events makes the District's presence more effective. Event presence would be even more effective if volunteers were also staffing the waste and recycling stations.
 - **Create guidelines that event must have recycling for District presence.**
6. **Expand topics of seminars.** The District could assess the need on a regular basis of other topics besides composting that may benefit residents and communities. Topics could include basics of recycling, waste reduction, reuse, or food waste reduction and donation. This would require a dedication of staff time and possibly financial resources.
 - **Offer seminars on other focus topics as needs arise.**

Reaching the Audience: Schools

Classroom Programs and Assemblies

Overview

The District offers 21 different classroom programs and assemblies presented by both in-house staff and contracted educators. The goal for the classroom programs is to engage teachers and students in an interactive experience to inspire them to adopt behaviors that reduce waste. A detailed list of the programs with descriptions as well as state and archdiocese standard correlation can be found on our [website](#).

Subsidized classroom programs and assemblies from contractors are available only to schools participating in the School Recycling Assistance Program (RAP) but District staff will provide classroom programming to schools regardless of their recycling status. Composting programs are offered to schools regardless of whether or not they compost in the school. Offering in-house programs to non-recycling schools gives District staff an opportunity to encourage the school to adopt recycling.

The District has classroom programs and assemblies available to pre-K schools through the university level. Staff and contracted educators tailor each program to be age-appropriate to the audience. Teachers act as classroom models and having the most up-to-date information allows them to teach others the correct behavior.

In the current *Hamilton County Solid Waste Management Plan Update 2012-2027*, the District states that we will offer presentations to schools and assistance in setting up recycling programs.

Employing Social Marketing Principles within the Program

Classroom programs and assemblies apply social marketing principles by emphasizing recycling and reuse behavior. The presenter (either District staff or contractor) gives students a take-home card or a durable refrigerator magnet to act as an in-home prompt to recycle. The cards and magnets list what to recycle and how to find recycling information (District's phone and website).

Students and teachers also fall into the target audience of residents so classroom programs and assemblies improve recycling awareness at home as well. The District customizes classroom programming based on the residential recycling options available to the audience. District staff also includes waste reduction and reuse in all programming.

Marketing Classroom Programs and Assemblies

Schools are informed of our classroom programs using the following outlets:

- Spencer's newsletter
- Website and social media
- Recycling Assistance Program (RAP) meetings
- Greater Cincinnati Environmental Educators
- The Ultimate Educator Expo
- Leave No Child Inside – Greater Cincinnati
- Girl Scouts of Western Ohio Program Events Guide
- Word of mouth

These marketing tools have been sufficient to support the current level of programming given District staffing and funding available for education outreach.

Generally, feedback for in-house classroom programs and assemblies comes in the form of thank you notes and return visit invitations. In the past, District staff left evaluation forms with teachers after programming but discontinued this because return rate for the forms was very low.

In 2014, contractors left evaluation forms for teachers to fill out and return (with pre-stamped envelopes). The 2014 evaluations were all very positive. In 2015, the District switched to an online survey for the evaluation.

Tracking Results

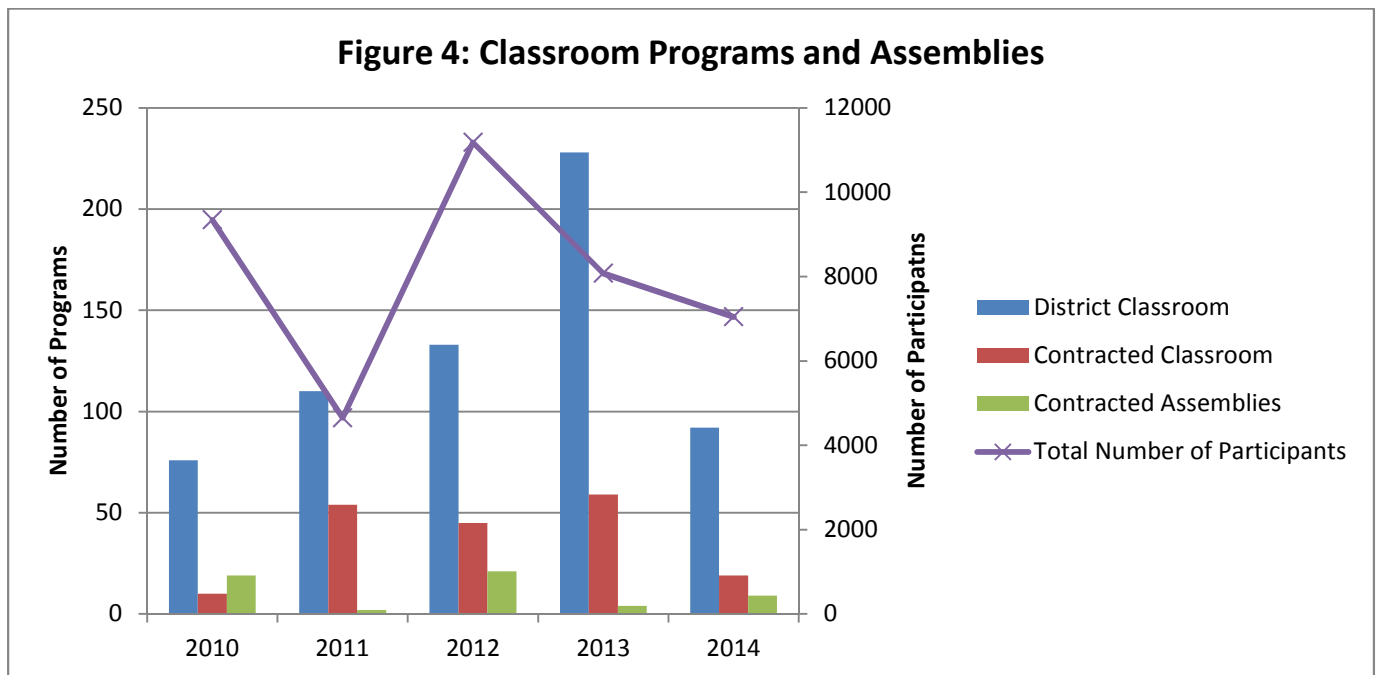
The District tracks the number of classroom programs and assemblies presented, as well as how many students and adults are in attendance. When presenting at a school that does not currently recycle, staff delivers a packet of information to school administrators describing the technical assistance, supplies, and extra programs available to the school if they begin recycling.

In 2014, the District reached 7,047 students through both in-house and contract classroom programs and assemblies. Table 9 and Figure 4 give an overview of classroom programs and assemblies participation from 2010 to 2014.

| Table 9: District Classroom Programs and Assemblies | | | | | | |
|---|--------------------|--------------|----------------------|--------------|-----------------------|--------------|
| Year | District Classroom | | Contracted Classroom | | Contracted Assemblies | |
| | Programs | Participants | Programs | Participants | Programs | Participants |
| 2010 | 76 | 2,412 | 10 | 206 | 19 | 6,726* |
| 2011 | 110 | 2,354 | 54 | 1,122 | 2 | 1,176 |
| 2012 | 133 | 3,404 | 45 | 1,256 | 21 | 6,520* |
| 2013 | 228 | 5,146 | 59 | 1,413 | 4 | 1,520 |
| 2014 | 92 | 2,266 | 19 | 487 | 9** | 4,294 |

*2010 and 2012 assemblies include "Garbage is My Bag" special assemblies

**District staff presented one of the 2014 assemblies reaching 520 participants



Measuring Effectiveness

According to the 2010 U.S. Census, there are 160,836 residents aged 5 to 19 in Hamilton County. In 2014, our classroom programs and assemblies reached 7,614 students or 4.73 percent. Most of the District classroom programs and assemblies target the grade school level children of which we reached approximately 14 percent. The District does not have the goal to reach every student every year.

While the District reached 14 percent of grade school children, other organizations in Hamilton County also offer grade school programs about recycling and composting. These include:

- Keep Cincinnati Beautiful
- Cincinnati Parks
- Rumpke
- Hamilton County Soil and Water Conservation District
- Cincinnati Zoo
- Green Acres
- Great Parks
- Cincinnati Museum Center
- Civic Garden Center of Greater Cincinnati

In addition, Ohio’s new learning standards require that public elementary schools teach third grade children about limited resources on Earth and how they can be conserved (such as waste reduction, reuse, and recycling). Sometimes teachers fulfill this requirement by having the District offer programs or field trips but more often, teachers develop their own lessons for the classroom.

In 2014, the District:

- Spent \$5,547.92 on contracted outreach and supplies,
- Used 38.5 hours of staff time on contractor management for classroom programs and assemblies,
- Spent \$314.97 on District classroom outreach and supplies, and
- Used 409 hours of staff time on classroom programs and assemblies.

Table 10 summarizes the strengths and weaknesses of the current classroom programs and assemblies the District offers.

| Table 10: Strengths and Weaknesses of Classroom Programs and Assemblies | |
|--|---|
| Strengths | Weaknesses |
| <ul style="list-style-type: none"> • Ability to use multiple learning techniques (e.g., videos, hands-on tasks, etc.). • Reduce, reuse, recycle incorporated into most programs. • Ohio New Learning Standards: Science have been investigated and incorporated into programming. | <ul style="list-style-type: none"> • Lack of staff time to research and identify Common Core math, social studies, and language arts standards that fit into the curriculum. • One class period is too short to allow for development and skills assessment. • Follow-through on the subject is teacher dependent as curriculum dictates available time on each subject. • Difficult to evaluate effectiveness. |

Teacher Workshops

Overview

The District offers teacher workshops on a request basis to Hamilton County educators only, unless room allows for out-of-county teachers. The District does not limit workshop attendance to only teachers from schools with recycling programs.

Teachers are an important audience to reach as they disseminate the information learned to a wide audience of students, parents, and colleagues. Teachers are often the impetus behind incorporating recycling at schools and being sure the behavior is followed. The District offers the following educator workshops on an as-requested basis:

- Vermicomposting Workshops
- School Recycling Workshops
- Project Learning Tree's (PLT) curriculum
 - *Pre-K through 8 Environmental Education Activity Guide*
 - *Secondary Environmental Education Program, Exploring Environmental Issues: Municipal Solid Waste*
- Project Wild's *Growing Up Wild*

The *Hamilton County Solid Waste Management Plan Update 2012-2027* does not list teacher workshops as a strategy.

Marketing Teacher Workshops

The District markets workshops via Spencer's e-newsletter, listings on our website, and through promotion when meeting with administrators and teachers. A partnership with the Hamilton County Soil and Water Conservation District allows the District to further promote specific workshops and make efficient use of staff time.

During the workshops, teachers become "master recyclers" and learn the current trends related to waste reduction, recycling, and composting. In addition to the general informational session, the District gives teachers the opportunity to collaborate on their grade levels thus ensuring a synthesis of the information.

Measuring the effectiveness of current marketing efforts is difficult. Many factors may keep a teacher from attending a workshop related to solid waste, but certainly the message is sent to the correct audience.

Tracking Results

The results and effectiveness of our workshops have been measured according to number of workshops held and teachers reached. Exact impact is difficult to measure as teachers may or may not use specific lessons learned in the classroom; however, their improved knowledge base allows for incidental learning in and outside of the classroom.

In 2014, the District held 5 teacher workshops reaching 40 teachers.

Measuring Effectiveness

Table 11 gives an overview of the strengths and weaknesses of District teacher workshops.

| Table 11: Strengths and Weaknesses of Teacher Workshops | |
|--|--|
| Strengths | Weaknesses |
| <ul style="list-style-type: none"> • Creating knowledgeable, positive role models for students who are committed to changing wasteful behavior. • Creating a forum to share ideas and ask questions of experts and their peers. • Using vermicomposting in the classroom allows students hands-on learning. | <ul style="list-style-type: none"> • Workshop material may not fall under a teacher’s professional development plans. • Teachers may not be able to attend as substitute teachers are not available or the school is unwilling to pay for replacement workers. • Teacher pay is partially contingent on college credit attainment and we do not offer this option. • Difficult to track effectiveness. |

Threats to the program include the difficulty of getting teachers to commit their time. Different schools have varying policies on when, where, and how a teacher can leave and have classes covered during the work day. Some do not have funding to allow school day training opportunities. Workshops in the evening are difficult due to teachers not having the same work hours, so start and end times are not agreeable to all. Weekend training works for some, while others are unwilling or unable to dedicate an off day.

In 2014, the District spent \$982.81 on supplies for workshops and used 207.5 hours of staff time. Workshop supply costs include residential worm bin supplies. Over \$300 in revenue from workshop fees was received by the District to cover book costs.

There has not been a request for a School Recycling Workshop that is focused on learning about recycling and implementing it at school in many years. This workshop topic may not be reaching the correct audience. Vermicomposting workshops tend to have limited interest as it requires keeping a worm bin in the classroom and caring for it outside of the school year.

Field Trips

Overview

The District covers the cost of transportation and any related program costs for students to go on solid waste, recycling or composting related field trips. Participating schools must currently recycle to qualify for the District's field trips.

Field trips reach the audiences of students, teachers, and chaperones. Educating students encourages children to form habits early and to bring that behavior home. Educating the educators and chaperones ensures they have updated information and are able to reinforce what the children learn about reducing waste.

The field trips offered are specific to certain grade levels. Each field trip centers on at least one waste reduction topic. Field trip descriptions can be found on our [website](#).

In the current *Hamilton County Solid Waste Management Plan Update 2012-2027*, the District states that we will continue helping schools set up recycling programs and field trips.

Tracking Results

Table 12 shows that the District has almost doubled the number of field trips since 2010 and has almost tripled the number of people reached.

| Year | Field Trips | People Reached |
|------|-------------|----------------|
| 2010 | 17 | 624 |
| 2011 | 19 | 669 |
| 2012 | 33 | 1724 |
| 2013 | 26 | 1092 |
| 2014 | 30 | 1763 |

In the past, the District asked students to complete pre- and post-trip tests for field trips. These short quizzes proved ineffective in evaluating what students took away from the field trip. Students now submit student reflections after the field trips which take the form of posters, writing, videos or other mediums.

Marketing Field Trips

The District markets field trips through the following avenues:

- Spencer's newsletter
- District Website
- Facebook
- Partnering organizations
- During one-on-one meetings with administrators and teachers.

These efforts have generated a sufficient number of interested schools in line with how much the District budgets for the program.

Measuring Effectiveness

To measure the effectiveness of the field trips, the District requires teachers to submit student reflections shortly after the completion of the trip. This ensures students synthesize information learned. Many of the same teachers return year after year with their next class of students.

| Table 13: Strengths and Weaknesses of Field Trips | |
|---|---|
| Strengths | Weaknesses |
| <ul style="list-style-type: none"> • All grades of students have access to field trips. • Provides experiential learning, which is an important component of acquiring knowledge. • Students get opportunities to see first-hand how compost is made, how landfills work, or how recyclables are processed. • Student reflections are a valuable processing tool when learning new information. | <ul style="list-style-type: none"> • School must complete forms and prove payment to bus company before reimbursement (cumbersome). • Field trip opportunities are limited by partner availability. • Administration of program requires a great deal of staff time. |

In 2014, the District spent \$3,773.21 on student registrations and bus transportation for field trips and used 181.5 hours of staff time.

Reaching Schools: Suggestions for Improvement

1. **Focus on changing behavior through technical assistance.** Research has shown that the most important factor determining an individual's recycling behavior is how easy it is for that individual to recycle. Improving the infrastructure in schools for recycling is a crucial first step, one that many schools have already taken. The District can encourage waste reduction and reuse techniques while also assisting schools in setting up recycling.
 - **Invest more staff and budget into school recycling programs (e.g. technical assistance, collection containers, and signage).**
 - **Offer stipends to the school for recycling coordinators (similar to athletics stipends).**
 - **Continue to work with all levels of school staff and administration.**
 - **Create short video to inspire students and school staff at program kick-off.**
 - **Use assemblies as inspirational tool at program kick-off.**
 - **Provide on-going waste reduction assistance at the beginning of the school year to enforce desired behaviors.**

2. **Promote a curriculum or guide.** A curriculum would assist teachers in incorporating lessons that focus on reducing, reusing, and recycling. Promoting a curriculum accessible through the Ohio Department of Education's website, would likely result in more students reached with staff time than individual classroom programs. A guide for teachers that includes standards and complete units of study would assist teachers in applying conservation material to their curriculum. This would also encourage units rather than lessons dedicated to waste reduction, reuse, and recycling and open possibilities for more student driven experiments and other problem solving lessons.
 - **Research available curriculums and develop or promote accordingly.**

3. **Improve data on the waste characterization specific to schools.** Conducting several waste assessments at different types of schools, would give the District valuable information to advise schools on how to reduce waste.
 - **Standardize and assist or train schools how to conduct waste assessments.**
 - **Fund several school waste assessments.**

4. **Improve desirability of workshops.** In order to have a successful workshop program, the District would need to promote the workshops more and dedicate more staff and funding to make the workshops more appealing. Taking teachers on tours appears to motivate them to attend. Funding to pay for substitute teachers, lost pay, per diem, and/or university credit hours would also increase the attendance of teachers.
 - **Dedicate more staff hours and budget to improve workshops.**
 - **Pay for substitute teacher or stipend.**
 - **Offer university credit for the workshop.**
 - **Offer tour of relevant facilities during the workshop.**
 - **Find existing webinars for teachers on waste reduction topics and promote.**

5. **Ensure reduce, reuse, recycle message is clear in all field trips.** Currently most field trips include the message of resource use or changing behavior by reducing, reusing, and recycling. District staff should review field trips on a regular basis to make sure the desired message is being communicated.
 - **Require field trips to include reduce, reuse, and recycle message.**

Reaching the Audience: Community Officials

WasteLine Community Newsletter

Overview

The District publishes a semi-annual newsletter to target elected officials and community representatives. Topics generally include residential recycling trends in Hamilton County, important news about recycling or waste reduction in Hamilton County, and upcoming District programs. One article each newsletter is dedicated to how a community can increase their recycling rate.

The District maintains a list of elected officials and community contacts that receive the email newsletter. The list includes elected officials from every community in the District. The District does not market this program.

The current *Hamilton County Solid Waste Management Plan Update 2012-2027* does not list the WasteLine as a strategy.

Measuring Results

The District uses an online mailing list tool that helps the graphic designer create professional-looking emails and tracks if the emails were opened. Of the two newsletters emailed in 2014, an average of 544 government officials opened the WasteLine (500 for spring edition and 588 in fall edition). The WasteLine email list contains about 1,425 emails so the newsletter achieves a 38 percent open rate; this is comparable to the District's other newsletters.

Very little costs go into the WasteLine since the WasteLine shares the online email mailing list tool program with other programs. The District used 19 hours of staff time towards the WasteLine in 2014.

Table 14: Strengths and Weaknesses of WasteLine Newsletter

| Strengths | Weaknesses |
|---|---|
| <ul style="list-style-type: none">• Regularly updated email list hits target audience.• Newsletter highlights ways communities can increase recycling.• Gives community officials relevant information about District programs.• Low cost and use of staff time. | <ul style="list-style-type: none">• May get lost in an email box with many other emails.• Audience may be too busy to read email.• Audience may not recognize WasteLine or District name. |

Reaching Community Officials: Suggestions for Improvement

- 1. Create and offer webinars and workshops for community officials.** Many topics involved in the community technical assistance might be of interest to community officials. Offering this information through webinars or in larger groups at workshops could be a more efficient use of staff time.
 - **Consider webinar and workshop topics that could be of interest to communities.**

| Table 15: Summary of Suggestions for Improvement | |
|---|--|
| Residents | 1. Focus annual outreach campaign on different sections of county. |
| | 2. Conduct a robust countywide campaign. |
| | 3. Promote reuse and waste reduction. |
| | 4. Develop targeted, strategic approach to special events. |
| | 5. Ensure events attended have recycling. |
| | 6. Offer seminars on other focus topics as needs arise. |
| Schools | 1. Focus on changing behavior through technical assistance. |
| | 2. Promote curriculum or guide for teachers. |
| | 3. Improve data on waste characterization for schools. |
| | 4. Improve desirability of workshops. |
| | 5. Ensure reduce, reuse, recycle message is clear. |
| Community Officials | 1. Offer webinars and workshops for community officials. |

Staff will complete phases two, three, and four of Appendix L by January 2016.